

# War Stress – Effects of the War in the Area of Former Yugoslavia

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## **Outline**

War is the multifaceted threat to human existence. The war in the area of former Yugoslavia has a complex historical background. The war has disturbed the population by forced migrations and deprivation of basic existential needs. War stress has increased the mortality and the incidence of specific diseases. Changes in behavior, PTSD, and a higher incidence of suicide reflect the psychological impact of war stress.

## **Glossary:**

PTSD: posttraumatic stress syndrom

## **I. War stress causes complex and long lasting consequences**

War is the multifaceted threat to human existence. It exposes people to the health damaging psychological, physical, chemical, biological, and mechanical stressors. The war has a deep and devastating social and economic impact on the population involved, thus producing additional and lasting repression. It is too soon to make quantitative estimates of the damages caused by the progressively moving and still active war theatre within the area of former Yugoslavia. However, the limited data concerning increased social and health impairments due to the war in Croatia are indicative for the whole area and show the level and the type of human vulnerability when exposed to the stress of war. War integrates deprivation of basic existential needs and of all human rights and values, it eliminates emotional comfort, it causes irreversible material and kin losses, physical exhaustion, psychological breakdowns, and makes futile all everyday routines. The first and the only benign response to stress is the escape, but there is no possibility to run away from stress experiences in war: one stressor can only be substituted by an other one. This is why the full display of adaptation mechanisms takes place in subjects experiencing war stress: changes in behaviour, hormonal impairments, neurological disorders, metabolic changes, genetic shifts and all kinds of diseases. Stress induced consequences, depending on the severity and the duration of the exposure to the stress experience, could be identified as PTSD, interrupted pregnancies, susceptibility to malignant diseases, cardiovascular insults, suppressed immune response, hormonal disorders and all types of emotional instabilities or psychological impairments including suicide, homicide and other types of violence.

## **II. Historical and political background of the conflict**

The Federal republics of pre-war Yugoslavia had national and cultural identities with different historical backgrounds. Sometimes in the past they were sovereign states and they have been trying to reestablish their independence ever since they lost it. Neither

the first, royal, nor the second, communist Yugoslavia were an expression of the peoples' will. When the Berlin wall collapsed, the Soviet block was dismantled, the Soviet Union disintegrated and the ruling communism was defeated. The sweeping changes in the East of Europe provided an opportunity for national republics constituting Yugoslavia to divorce freely as the Czech and Slovak republics have done. Instead, the Yugoslav army under the command of the Serbian generals tried to annul the free and democratic decision to separate from Yugoslavia by the electorate in four of the six Yugoslav republics. The Serbs, inspired by the idea of Greater Serbia, were the only nation to support the continuation of Yugoslavia. The Serbian idea of turning Yugoslavia into a greater Serbia triggered off the outburst of the latent but strong mistrust and intolerance between the Serbs on one side and all other nations on the other side. The Communist Party of Serbia, subsequently reformed into the Socialist party, having control over the powerful Yugoslav army, turned into an aggressive Greater Serbian force which started to conquer and ethnically cleanse as much as possible of the territory of the republics whose majority of the population had voted for independence. The local people, if not ethnic Serbs, had to leave the occupied territories. Deprived of all goods and rights they had to experience the misery of homeless and jobless refugees. Those who tried to defend their homes were either massacred and killed or put into concentration camps, tortured and raped. The process started in 1991 and is still going on in Kosovo. Instead of democratization and prosperity, first Croats, then Bosniaks and now Albanians, have experienced war, violence, fear, exile, or loss of kin. Macedonia and Montenegro are experiencing the menace of social and economic turbulence introduced by hundreds of thousands of refugees pouring into their countries. Only the Slovenians succeeded to withstand the austerities of Serbian aggression. With NATO air strikes in Serbia the traumatic war experience seems to have entered its last phase with the destruction and adversities of war having reached the Serbian population in Serbia proper. However, at least 2,5 million of victims (including almost the total population of Kosovo) expelled from their homes are in exile or temporary housing and in years to come they will suffer from the long lasting and health threatening consequences of war trauma.

### **III. Migrations, ethnic cleansing and social impact**

The first victim of the Serbian aggression were the Croats, who similarly to the present destiny of Kosovo Albanians, were removed from 30% of the Croatian territory. That territory was not only occupied by the Yugoslav army and the local Serbs and ethnically cleansed of Croats, but in addition Serbs from other parts of Croatia or Bosnia were persuaded to resettle into abandoned Croatian homes in the cleansed territory for the Greater Serbia. Such behavior escalated national animosities as the aggression spread on and on. In Bosnia and Herzegovina 70% of the territory was ethnically cleansed from Croats and Bosniaks and only with the Dayton Agreement and NATO intervention the war in Bosnia was stopped and the Serbs forced to restrict their control to Serbian Republic (Republika Srpska) encompassing 49% of Bosnian territory.

In 1991 Bosnia had 4,364 600 inhabitants. 250 000 men were killed during the war, 35 000 women were raped. At the peak of the war almost 2,000 000 people were displaced. In the meantime this number has been reduced to 500 000. Croatia alone is still hosting 100 000 refugees from Bosnia.

The total population of Croatia (1991) was 4 760 000. It is estimated that 260 000 people left the country during the war. The war in Croatia killed 14 000 people, among whom 43.4% civilians and 213 children; 34 000 veterans, 9 890 adult civilians and 1142 children were injured; 7 551 subjects were detainees of concentration camps and 23 000 children lost one or both parents. 389.433 civilians were displaced within the country (It is estimated that this number is 6% larger because of unregistered subjects. More than 100 000 houses were destroyed. Hospitals, schools, and many plants and farms were demolished raising drastically the unemployed and retired part of the population and putting exhausting pressure on the working population. There are 870.000 retired, 260000 jobless, and only 970000 employed from whom 80% are on delayed pay (compared to 1650000 regularly paid employees before the war). The collapse of order, poverty, insecurity, and hopelessness are widely reported throughout the population.

#### **IV. Effects on Health**

One of the major problems in the interpreting of the effects of war on the health of the population is the high extent of migration associated with the war. Croatia is the only country in the region where health parameters can be followed before, during and after the war. Although migrations out of Croatia and within Croatia are large, the number of displaced persons never exceeded 12% of the total population, and all the victims of migrations within Croatia are included in the official statistics.

The statistical parameters depict a very gruesome picture of the effects of war on the health of the population in Croatia. Several diseases that are known to be associated with stress, like diabetes, tumors, cardiovascular diseases and gastric ulcers increased sharply during and immediately after the war (Figs 1,2). Infectious diseases also increased significantly, probably due to the stress - induced decrease in the immune system. Most other diseases displayed a slight decrease in 1991/1992 (depicting the temporary population decrease at the peak of the war in Croatia), and subsequently returned to the pre-war values. Perceptible exception is rheumatoid arthritis, which stayed significantly decreased for several years, and then increased rapidly to over 150% of pre-war values (Fig 2.). During all this time infant mortality was continuously declining, indicating that there was no significant decrease in the general quality of the health-care system. Despite the preserved level of health-care, the post-war health of the population has significantly deteriorated due to stress and other effects of war when compared to the year 1990. In 1994 Croatia had 60,000 more cases of infective diseases, 40,000 more people with Diabetes mellitus, 32,000 higher incidence of various neoplastic diseases, 30,000 more patients with heart diseases, 40,000 more with kidney diseases and 24,000 additional patients with duodenal or gastric ulcers. Since the total population of Croatia is approximately 4.5 million, additional 200 000 ill people represent a substantial burden for an already over-loaded health system.

Stress due to the war condition had a particularly strong impact on pregnancy and prenatal development. In addition to a decreased birthrate, as is usual in the time of hardship, there is a continuous increase in extrauterine pregnancies, and other complications during pregnancy and delivery. In addition, what was completely unexpected, there is a sharp increase in various inborn defects.

#### **V. Effects on Mortality**

In addition to the decreased birth rate the war diminishes the population by increasing the mortality. (Fig. 3) Not taking into account the 14 000 people killed during the war, the most prominent immediate effect of war on the Croatian territory was more than double the rate of mortality from ischemic heart diseases, resulting in unexpected death of over 6,000 people during the two war-years 1991-92. The prolonged effects of war manifested in ruined economy and pre-war social structures, still kills people with an annual rate of approximately 4 000. The increase in the ischemic heart disease alone has taken more human lives than were killed during the whole war in Croatia. Unfortunately, due to the massive migrations in Bosnia and Kosovo, it is not possible to determine the exact numbers for Bosnia or Kosovo, but if the relations to the number of people killed is similar to those in Croatia, several hundred thousands people probably died because of stress.

It is worth noticing that, in addition to the stress imposed by the war, the transition from a centralized socialistic economy to a free-market economy introduced stressful existential problems to a part of the population, which probably also contributed to the increased mortality from ischemic heart disease. One recent study in Lithuania reported that breakup of the Soviet Union resulted in a quadruple increase in the mortality rate from ischemic heart diseases for some age groups. However, in other countries, e.g. Hungary and Poland, this pattern is not so prominent. The transition in Croatia is expected to be less stressful than in other socialist countries because even during socialism Croatia was open to the West and had accepted a few elements of the market economy. Thus the war and its consequences remain the major factor influencing the increased mortality from ischemic heart disease in Croatia.

## **VI. Effects on social behavior and violence**

Quantitative analysis of the psychological effects of war on the Croatian population is limited to the subjects who were/are seeking medical help. However, only a small number of individuals suffering from psychological disorders are under medical surveillance. There are more than 10500 diagnosed cases of PTSD patients. Many more are unregistered. Studies estimated that patients suffering from PTSD have up to seven-fold increased incidence of suicides, and four-fold increased risk of death from all external sources (Bullman and Kang, 1994, *J. Nerv. Ment. Dis.* 182:604-610). Violence in general has increased but it is very hard to know the exact figures because the health monitoring statistics do not include violent behavior in their reports and official policymakers in Croatia refuse to acknowledge the incidence of violence and suicides to be disturbing. However, some trends are clearly visible. During and immediately after the war (1991-1992) there was a twofold increase in the level of violence, both as reported in police statistics, and in hospital admissions. Though, according to the same sources, the reported homicides and violent crime returned to pre-war values in the subsequent years, there is a disquieting increase in suicides and other self-inflicted injuries, in young people. The number of young people committing suicide is continuously rising, and compared to 1990, in 1997 this rate is doubled or quadrupled, depending on the age-group (Fig. 4). In the last four years primary and secondary schools report on rapidly growing number of hyperactive and aggressive children which need special care in the classroom. The incidence of depressive symptoms and insomnia is widely reported in the group of elderly and veterans. Drug abuse is disturbingly frequent compared to the pre-war statistics but the number of treated addicts has remained constant. It is rightful to attribute these changes in behavior to the stress imposed by the war and it is interesting how different target

groups (children, elderly, veterans etc.) within the population have differently responded to the stress.

### **Conclusion**

The majority of the population in each of the states originating from the former Yugoslavia has experienced war stress. Various health and social disorders evolved from that experience. Though the data presenting the consequences of the war stress are incomplete, and though they are, because of the availability, reduced to Croatia only, they provide a unique evidence of human vulnerability in living through the war.

## Further reading

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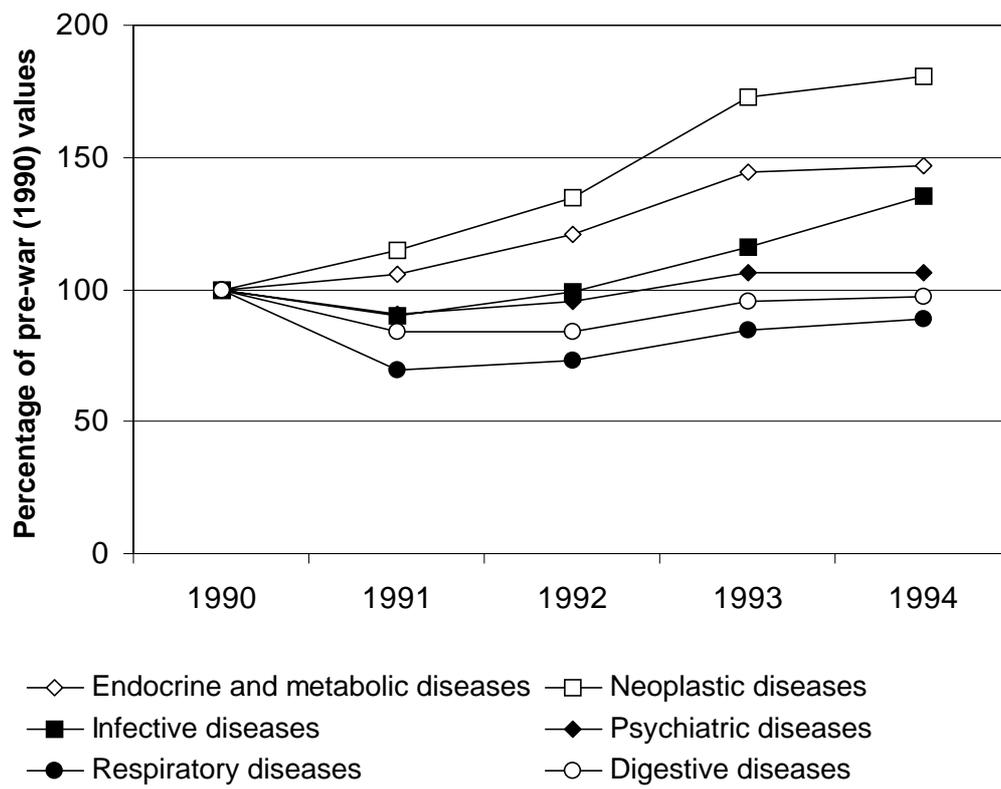
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Fig. 1. Number of cases of various disease groups registered in general hospitals in Croatia from 1990 to 1994 (Croatian Health Service Yearbook 1997, Zagreb, 1998).

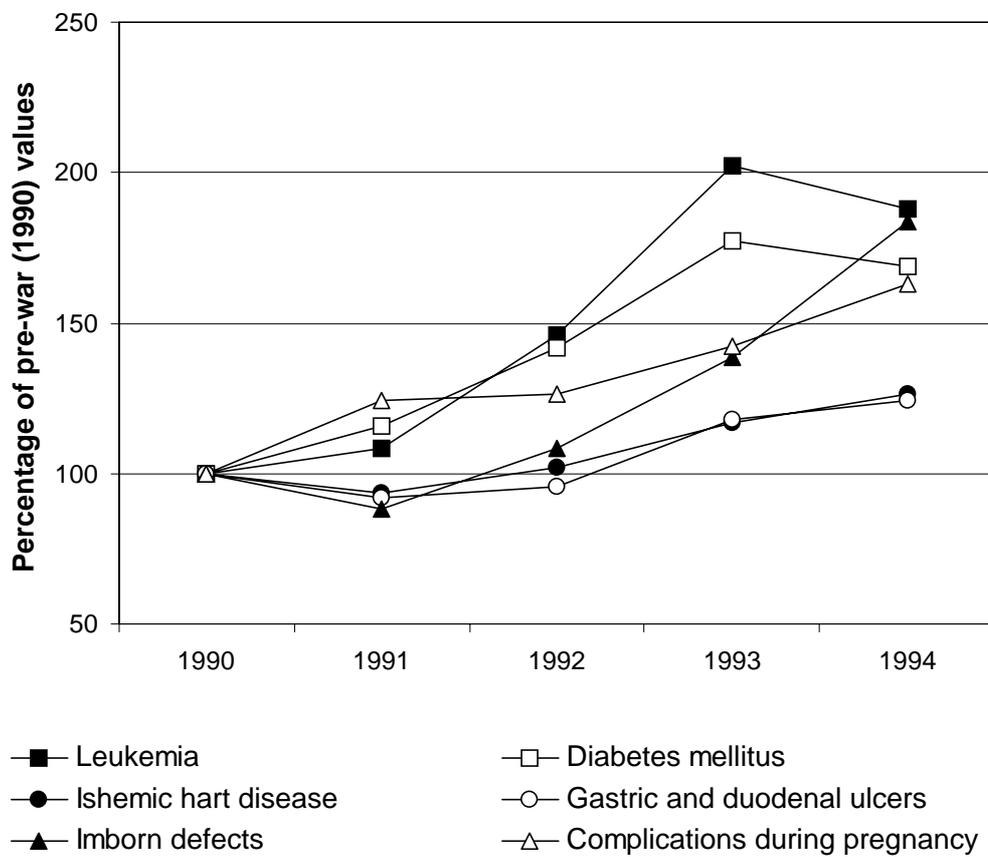
Fig. 2. Number of cases of specific diseases registered in general hospitals in Croatia from 1990 to 1994. Only diseases with the highest increase of incidence are presented (Croatian Health Service Yearbook 1997, Zagreb, 1998).

Fig. 3. Number of live births and deaths per 1000 people from 1990 to 1997 (Statistical Yearbook 1998, Republic of Croatia Central Bureau of Statistics, 1998).

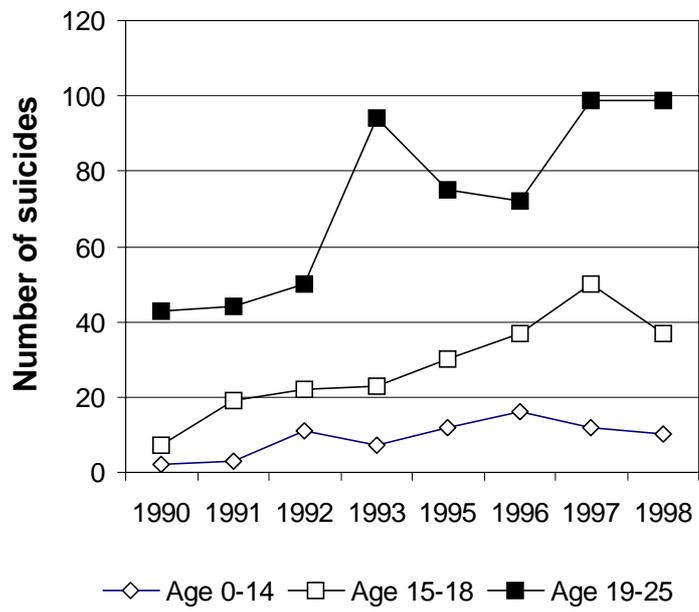
Fig. 4. Number of suicides and attempted suicides in different age groups in Croatia from 1990 to 1998 (Official statistics of the Ministry of Interior of the Republic of Croatia).



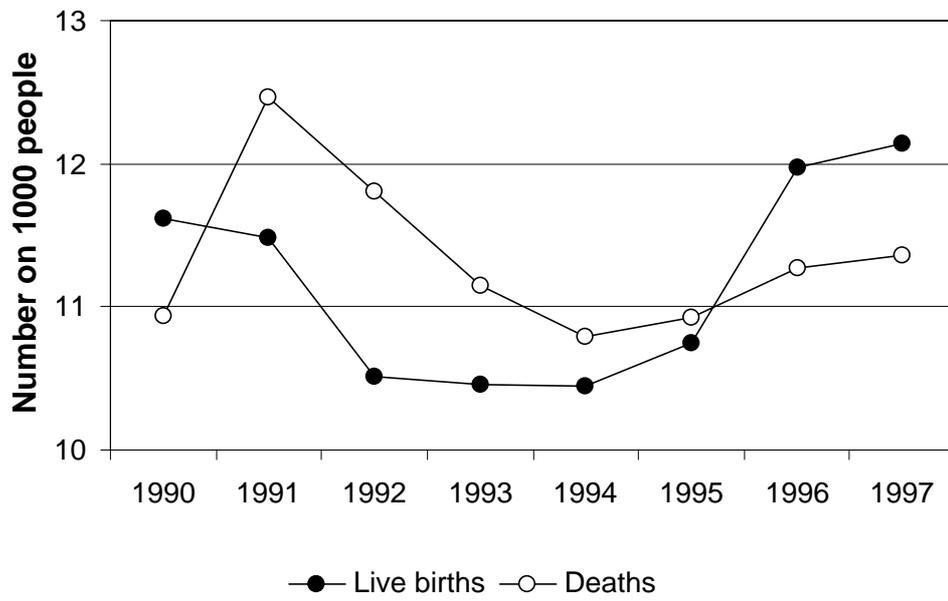
Flögel and Lauc, Fig. 1.



Flögel and Lauc, Fig. 2.



Flögel and Lauc, Fig. 4.



Flögel and Lauc, Fig. 3.