



ACUTE POST-TRAUMATIC STRESS DISORDER IN PRISONERS OF WAR RELEASED FROM DETENTION CAMPS

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UDK: 616.89-054.65(497.5 Vukovar)

Izvorni znanstveni rad

Primljeno: 22. 4. 1997.

The aim of the present study was to assess acute psychiatric disturbances in Croatian prisoners of war (POWs) released after 6-9 months of detention. Immediately (1-3 days) after exchange with the other side, 47 prisoners of war were examined at the Zagreb University Clinic for Infectious Diseases by a team of medical professionals to assess their physical and psychological health, and therapeutic needs. The team consisted of a general practitioner, surgeon, infectious diseases specialist, psychiatrist and clinical psychologist. All prisoners were active soldiers from Vukovar, and were of similar age, social background, combat activity and duration of detention. All were severely physically and psychically maltreated in the detention camp. Sixteen (34%) had symptoms of current post-traumatic stress syndrome as assessed by the Watsons PTSD questionnaire. In a structured clinical interview, all POWs reported at least 2 (average 8-9) symptoms of psychological disturbance. All POWs ranked the withdrawal of information on their families and the situation in Croatia as the most painful experience during detention. Minnesota Multiphasic Personality Inventory (MMPI-201 version) profiles of the prisoners of war showed a significant difference between the POWs with and without diagnosed PTSD on the paranoia scale. In conclusion, although only one third of the POWs released after 6-9 months of detention and torture had manifest PTSD, most had several symptoms of psychological disturbances with dominating anxiotic-depressive and psychosomatic reactions. Careful follow-up is needed to assess the extent and late consequences of polytrauma experienced by this high-risk group.

INTRODUCTION

The research on the psychological sequelae of torture of prisoners of war (POWs) has been concentrated mostly on the long term effects, particularly chronic post-traumatic stress disorder, PTSD (Burke and Mayer, 1985; Kluznik et al., 1986; Miller et al., 1989). As opposed to general population, where the incidence of PTSD is 1.3% (Helzer et al., 1987), 18-54% of the Vietnam War veterans suffered from PTSD (Kulka et al., 1988). Research into the Second World War POWs revealed that 67% of them suffered from PTSD after release and 8% had chronic PTSD many years after the war (Kluznik et al., 1986; Miller et al., 1989). Symptoms of PTSD have been shown to differ in combat veterans (Strange and Brown, 1970), prisoners of war concentration camps (Thygessen, 1980) and physically and psychically tortured political prisoners (Turner and Gorst-Unsworth, 1990; Ramsay et al., 1993).

The 1991/92 war in Croatia and later in Bosnia-Herzegovina brought enormous suffering to all population groups, (Hiršl-Hečej and Fattorini, 1992; Marcikić et al., 1992; Kozarić-Kovačić et al., 1995; Gregurek et al., 1996), among them especially to the prisoners of war (Novotny, 1992; Borčić et al., 1992; De Zan et al., 1992; Kozarić-Kovačić et al., 1993). There is evidence that detention camps for the prisoners of war existed in Serbia and occupied areas of Croatia and Bosnia and Herzegovina (Kostović and Judaš, 1992; Amnesty International 1991 and 1992; Helsinki Watch, 1992; Kouchner, 1992). Up to February 15, 1993, 5,261 Croatian POWs were exchanged after negotiations with the opposite side (source: Division of Information and Investigation, Croatian Ministry of Health). All POWs were examined by a Croatian Medical Corps (CMC) team immediately upon their exchange in order to determine their physical health status, needs for medical, psychological and psychiatric help, as well as to plan future preventive and therapeutic actions. The CMC team consisted of a general practitioner, surgeon, infectious diseases specialist, psychiatrist and clinical psychologist. Other specialists were engaged where necessary. Clinical examinations and laboratory tests were performed at the Zagreb University Hospital for Infectious Diseases.

This report presents the psychological status of a group of POWs from Vukovar immediately upon their release from a detention camp.

METHODS

Subjects

On 14 August, 1992, a group of 47 prisoners of war was exchanged and transferred to Zagreb. As a part of the medical assessment by a CMC team immediately upon arrival (1-3 days after the release), they were examined by a psychiatrist

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and clinical psychologist after informed consent. All POWs were males, active members of the Croatian Police or Croatian National Guard, aged up to 35 years, being born and living in Vukovar prior to the war, actively participating in the defence of Vukovar in 1991, captured and detained in the same camp. Active police or army service was an important factor because it eliminated possible pre-existing mental disturbances or pathological personality traits, since all applicants for police or army service pass rigorous medical physical and psychological testing. Members of the group were informed about the study and agreed to participate in it. Their age ranged between 23 to 35 years (mean 29.5 ± 2.7). The time of their imprisonment in a detention camp (Stara Gradiška in the occupied area of Croatia) was 6 to 9 months.

Measuring Instruments and Clinical Examination

The POWs were first subjected to a structured clinical interview, with the objective to establish possible needs for immediate psychiatric help, and to define their symptoms. We also wanted to get their opinion regarding their near and distant future, as well as a description of the place of detention and the treatment during imprisonment. They were given plenty of time to talk, especially about the subject they considered most important. It was also important to create a positive transfer situation during the interview. The interview also provided the possibility of screening and diagnosing psychological disturbances, and deciding on incipient medication or psychotherapeutic treatment. General psychiatric symptoms were measured by the Brief Symptom Inventory (Derogatis and Spencer, 1982), which has an overall score reflecting general psychiatric distress, as well as subscales for specific symptom clusters such as anxiety and depression.

The existence of current post-traumatic stress disorder as defined in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1987) was assessed by the use of a PTSD-I questionnaire (Watson, 1991; Watson et al., 1991). PTSD questionnaire was performed by experienced professionals with more experience in treating war-traumatized persons. Psychometric characteristics of the Questionnaire were good: internal consistency, $\alpha=0.92$; test-retest reliability, $r=0.95$ (Marušić et al., 1995).

Minnesota Multiphasic Personality Inventory (MMPI) was used to assess major personality characteristics that affect personal and social adjustment (Hathaway and McKinley, 1951). The MMPI-201 version with 201 questions, eight clinical scales and three validity scales, was chosen because it had been standardised for the population of ex-Yugoslavia (Biro and Berger, 1985 and 1986).

A psychiatrist and clinical psychologist performed their examinations independently of each other. After such individual work, the team met to discuss each case and the incipient treatment. The kappa index of the correlation between the psychiatric and psychological diagnostic method was 0.87.

RESULTS

TABLE 1 
Types of torture experienced by Croatian prisoners of war in concentration camps

According to the auto-anamnestic data, all POWs were physically and psychologically maltreated during imprisonment in the detention camp (Table 1). Some detainees were subjected to starvation and reported a loss of up to 22 kilograms and absence of bowel movements for up to 50 days.

Type of torture	No. of examinees (%)
Beating, kicking, slapping	47 (100.0)
Withholding of information	47 (100.0)
Forced body positions	
Forced to stand with head pointed downwards and hands on the back; not allowed to look at the guards.	44 (93.6)
Withholding or restriction of food	
One meal per day, consisting usually of a piece of bread and some water.	43 (91.5)
Mock executions	41 (87.2)
Hard physical labour	36 (76.6)
Verbal threats and/or blackmail	36 (76.6)
Sleeping on the floor	31 (66.0)
Forced salt eating	
Tied to a chair and forced to eat salt without drinking water.	
Combination of incisive wounds and application of salt and forced salt eating was reported by 12 examinees (25.5%).	24 (51.5)
Incision of thigh muscles and incisive wounds of thigh muscles inflicted by knife and salt applied to the wound.	
Combination of incisive wounds and application of salt and forced salt eating was reported by 12 examinees (25.5%).	19 (40.4)
Giving false information	16 (34.0)
Torture by cold	
Kept in chambers refrigerated at -20C. One prisoner was kept in such a chamber for a month, with interrogations during night.	11 (23.4)
Isolation in solitary cell	9 (19.1)
Blood sampling	
Blood was taken for transfusions for wounded Serbian soldiers, with only water given afterwards.	6 (12.8)
Mutilation	
Circumcision, amputation of fingers.	5 (10.6)
Forcing to robbery	
Forced to loot Croatian houses on occupied territories.	4 (8.5)

The gradation of the personal painful traumatic experience during detention differed among the POWs, but the withdrawal of information on the situation in Croatia, the fate of Vukovar and their families was ranked first by all (Table 1). Apart from the imprisonment, they had experienced many

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other traumatic events, such as destruction of their homes, displacement of families, and loss or killing of family members.

According to the PTSD interview, 16 (34%) of the tested POWs fulfilled the criteria for a current PTSD (Table 2). Psychiatric help (psychotherapy and psychopharmacotherapy) was immediately recommended to all of them. POWs with PTSD had significantly higher scores on all of the symptom groups in the PTSD questionnaire, except for the score on the item C.2. (avoidance of activities or situations that arouse recollections of the trauma), which was similar in the two groups.

TABLE 2 ➔
PTSD scores of
Croatian prisoners of
war tortured in a
detention camp

(a) The data were compared using a standard t-test when the variance of the samples did not differ significantly, and with a Cochrane and Cox t-test when the variance of the samples differed significantly at $p < 0.05$

* $p < 0.05$

** $p < 0.01$; d.f. = 45

Scale	Score		Statistics ^(a)	
	POWs+PTSD (N=16)	POWs – PTSD (N=31)	t	t (Cochrane and Cox)
B.1.	4.20 ± 0.79	2.96 ± 1.28	3.514**	
B.2.	4.90 ± 0.56	3.19 ± 1.78		4.764**
B.3.	4.01 ± 0.81	2.94 ± 2.01		2.520*
B.4.	4.02 ± 0.56	2.90 ± 1.91		2.937**
C.1.	4.33 ± 0.96	2.81 ± 1.71		3.819**
C.2.	3.86 ± 1.27	2.90 ± 1.89	1.814	
C.3.	4.93 ± 1.04	3.09 ± 1.12	5.407**	
C.4.	5.00 ± 0.98	3.22 ± 1.09	5.428**	
C.5.	5.40 ± 0.82	3.72 ± 0.89	6.228**	
C.6.	4.53 ± 0.76	3.09 ± 1.15	4.486**	
C.7.	5.06 ± 1.15	3.78 ± 1.54	2.902**	
D.1.	6.06 ± 1.72	4.62 ± 1.98	2.442*	
D.2.	5.53 ± 1.23	3.43 ± 1.25	5.425**	
D.3.	5.80 ± 0.95	4.03 ± 1.86		4.223**
D.4.	4.73 ± 0.78	3.28 ± 1.45		4.362**
D.5.	5.06 ± 1.11	3.19 ± 1.72	3.912**	
D.6.	5.93 ± 1.32	4.65 ± 2.01	2.284*	

In the group of symptoms related to the trauma re-experiencing (group B), all POWs with PTSD reported painful, sudden memories of their traumatic experience. They occurred spontaneously, most often at night, accompanied by a disturbed sleep rhythm (bad dreams, memories, nightmares). All had intrusive memories during the day. In such occasions they would have to get up and walk. They experienced neuro-vegetative symptoms such as increased sweating, tremor, tachycardia, increased blood pressure and headache. Some felt the need to smoke and consume alcohol.

The group of symptoms related to avoidance of stimuli associated with trauma was characterised by psychic numbing, loss of interest for all sorts of information, even TV and radio news, and by difficulties in communication, especially regarding the conversation about their traumatic experience.

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Many showed signs of intense suspicion. Self-isolation and social withdrawal were the most prevalent symptoms in this group of symptoms.

Permanent symptoms of increased excitement included sleep disturbances (difficulties in falling asleep and alterations in the sleep rhythm). Most POWs had bad dreams or nightmares and some symptoms of somnambulism. They also reported mood oscillations during the day, accompanied by increased irritability, fits of rage, hypervigilance, difficulties in concentration, feeling of exhaustion, apathy, and difficulties in self-control. Symptoms of depression, anxiety, fear, appetite disorders and digestive and/or respiratory disturbances were most common in this group of symptoms.

POWs who did not meet the requirements for the PTSD diagnosis (31 subjects, 64%) nevertheless reported a number of psychological, cognitive and neuro-vegetative symptoms (Table 3). Each POW had at least two of the symptoms, and 8 to 9 were reported on average. The dominating symptoms in POWs with PTSD were guilt feeling, psychic numbing, headache and lack of energy. (Kozarić-Kovačić et al. 1997). Except for appetite disorders, sleep disturbance and depression, POWs without PTSD did not report other major disturbances in the clinical interview.

TABLE 3
Psychological
disturbances of
Croatian prisoners of
war released from
concentration camps
reported during a
structured clinical
interview

Symptoms	No. of examinees (%)
Appetite disorders	45 (95.7)
Sleep disturbances	45 (95.7)
Depression	44 (93.6)
Fear	41 (87.2)
Anxiety	32 (68.1)
Digestive and/or respiratory disturbances	31 (66.0)
Lack of energy	23 (48.9)
Headache	19 (40.4)
Irritability	17 (36.2)
Intrusive recollections	17 (36.2)
Recurrent dreams	16 (34.0)
Psychic numbing	14 (29.8)
Guilt feeling	11 (23.4)
Poor concentration	11 (23.4)
Aggression	9 (19.1)
Apathy	7 (14.9)
Reduced communicative ability	6 (12.8)
Lack of interest	6 (12.8)
Readiness to cry	4 (8.5)

The MMPI-201 scale (Table 4) showed that POWs with or without PTSD were an emotionally disturbed group. Fourteen POWs had an increase on the scales of hypochondria, depression, hysteria, psychopathic deviations, psychosthenia and hypomania, and two had an increase on the scales of psy-

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TABLE 4 ➔
Minnesota Multiphasic
Personality Inventory
(MMPI, version 201)
profiles of Croatian
prisoners of war with
or without diagnosed
post-traumatic stress
disorder (T score,
mean±S.D.)

* $p < 0.05$
(Student t-test)

chopathological deviations, paranoia and hypomania. In the group of 31 POWs who had not fulfilled the criteria for a current PTSD, the individual deviations on the MMPI-201 scales were found, but they did not exceed the limits for normal data except on the hypochondria and depression scales. Statistical difference between the POWs with and without diagnosed PTSD was found only for the paranoia scale. Pronounced paranoid reactions in the group of POWs with PTSD were sometimes presented with a psychotic clinical picture.

Symptoms	PTSD (N=16)	non-PTSD (N=31)
L-control scale	52.1 ± 7.7	49.7 ± 8.2
F-control scale	72.3 ± 15.4	67.3 ± 9.6
K-control scale	42.1 ± 6.1	40.1 ± 7.2
Hypochondria	78.2 ± 13.9	71.1 ± 12.7
Depression	84.5 ± 14.1	76.9 ± 12.3
Hysteria	76.5 ± 12.1	68.1 ± 10.5
Psychopathic deviations	68.2 ± 13.8	63.2 ± 11.5
Paranoia	65.5 ± 7.9	62.2 ± 6.9*
Psychosthenia	75.6 ± 13.2	69.3 ± 11.6
Schizophrenia	62.3 ± 10.6	62.4 ± 13.2
Hypomania	75.2 ± 23.5	65.6 ± 19.2

DISCUSSION

Each captivity situation, with its experiences of physical and psychical trauma or of other stressful events during war, is specific on its own. The intensity of psychic disturbances in the prisoners of war depends on the location and duration of capture (Miller et al., 1989). For example, German and Japanese-held American POWs have been shown to differ in the conditions experienced during captivity and consequent psychical disturbances (Miller et al., 1989). The group of Croatian POWs described in this study differ from all previously reported in several attributes. The main difference was that Croatian POWs had been examined immediately upon release, so that their acute psychic state was assessed. Moreover, post-detention external factors affecting their mental condition were excluded during their examination by a CMC team because of hospital isolation for quarantine reasons for the first 1-5 days after release (Borčić et al., 1992). On the other hand, Croatian POWs were also a multiply stressed group: they all came from Vukovar which had been under siege and systematically destroyed for months, their families had been destroyed or displaced and they had no knowledge on their whereabouts and fate; all took part in active combat and were held and tortured in the same camp. Our study included only young POWs from active police or national guard formations, involved in the defence of Vukovar, thus making the group

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more homogenous in comparison to other studies on Croatian POWs. Other studies included very heterogeneous groups of POWs, since the former Yugoslav Federal Army regarded all captured Croatian males as active soldiers, regardless of their age or whether they carried weapons or not (Kostović and Judaš, 1992). In the case of Croatian POWs, active soldiers were subjected to more brutal maltreatment in the camp than the "civilian" prisoners (Kostović and Judaš, 1992). The heterogeneity of the Croatian POWs may explain the differences between our data and those of De Zan et al. (1992) on the Croatian POWs from Manjača concentration camp in Bosnia and Herzegovina. They reported that POWs as a group did not show deviation from a normal range on the MMPI-201 scale and PIE questionnaire, although individual variations existed in those individuals in which psychiatric examination revealed psychic disturbance symptoms. Also, more systematic torture, more frequent interrogations and longer period of detention (6-9 months vs. up to 2 months in the report of De Zan et al.) may account for the differences in the intensity of symptoms. Moreover, the stressors in the Manjača POWs (de Zan's study) were mostly psychological whereas POWs from Stara Gradiška suffered from both psychological and physical torture.

Croatian POWs with or without diagnosed PTSD had all signs of torture and/or concentration camp syndrome, as described in literature (Thygessen, 1980). However, it is difficult to reduce their reactions to a common syndrome because of a great variety of individual reactions. Our experience supports the notion of Turner and Gorst-Unsworth (1990) that there is no single "torture syndrome" and that individual reactions are very complex and associated with the effects of torture on the whole society. However, one common denominator of torture survivors is poor defence against psychological methods of torture (Agger and Jensen, 1992). This was clearly expressed by all Croatian POWs who ranked the withdrawal of information on their families and homeland as the most painful experience during detention and torture.

It is too early to make conclusions on the dominant symptoms of PTSD or psychological disturbances in Croatian POWs, especially with regard to their poly-traumatisation (combat experience, detention, torture, displacement and destruction of families and homes). We may expect the experiences and reactions of Croatian POWs to differ from other wars and other torture victims, for several reasons. Although cultural factors may be involved (Westermeyer, 1985), the characteristics of the war played an important role, placing the Croatian POWs somewhere in between the combat and

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torture survivors, which have been shown to differ in their reactions to trauma (Yager et al., 1984; Turner and Gorst-Unsworth, 1990). Croatian POWs, fighting a defensive war for the homeland and treated as heroes after repatriation, had the strength of personal commitment lacking in many combat troops. The effects of combat vs. detention and torture trauma in Croatian soldiers are under current investigation.

Psychiatric follow up of Croatian POWs will be necessary in order to treat their current symptoms, diagnose new ones, and prevent their social isolation and psychic disturbances in the future (Folnegović-Šmalc et al., 1994). This is particularly important in view of the fact that acute response to the intensive war stress or traumatic experience may be accompanied by a silent period during which the victim does not show clear signs of psychological problems associated with the trauma (Christienson et al., 1981; Dismsdale, 1974). Although all POWs in this report had psychic symptoms, only 34% fulfilled the criteria for the PTSD. During the period of 5 months after the first examination, a deterioration of psychological health was found in 2 POWs without diagnosed PTSD and additional psychiatric help was necessary. Also, psychotherapy should be directed not only to the POWs, but their families, more so because most of them, particularly those from Vukovar, have been heavily traumatised (Arcel et al., 1995).

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Akutni posttraumatski stresni poremećaj kod ratnih zatočenika puštenih iz zatočeničkih logora

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Cilj ove studije bilo je utvrditi akutne psihičke poremećaje kod hrvatskih ratnih zatočenika puštenih nakon šest do devet mjeseci pritvora. Odmah nakon razmjene (jedan do tri dana) s drugom stranom, 47 ratnih zatočenika pregledala je

DRUŠ. ISTRAŽ. ZAGREB
GOD. 7 (1998),
BR. 3 (35),
STR. 485-497

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na Zagrebačkoj sveučilišnoj klinici za zarazne bolesti skupina medicinskih stručnjaka kako bi utvrdila njihovo tjelesno i psihičko zdravlje te odredila liječenje. Skupinu je činio liječnik opće prakse, kirurg, stručnjak za zarazne bolesti, psihijatar i klinički psiholog. Svi su zatočenici bili pripadnici redovnih vojnih snaga iz Vukovara, bili su podjednake starosti, društvenog podrijetla, borilačke aktivnosti i trajanja pritvora. Svi su bili izloženi teškom tjelesnom i umnom zlostavljanju u zatočeničkom logoru. Šesnaest zatočenika (34 posto) pokazivalo je znakove akutnog sindroma posttraumatskog stresa utvrđenog Watsonovim PTSD upitnikom. U strukturiranom kliničkom upitniku svi su ratni zatočenici potvrdili bar dva (u prosijeku osam do devet) znakova psihološkog poremećaja. Svi su zatočenici rangirali nedostatak obavijesti o svojim obiteljima i stanju u Hrvatskoj kao najbolnije iskustvo za trajanja pritvora. MMPI-201 (Minnesota Multiphasic Personality Inventory) profili ratnih zatočenika pokazali su značajnu razliku između zatočenika kojima jest i nije dijagnosticiran PTSD na ljestvici paranoje. U zaključku valja reći da je, iako je samo kod jedne trećine ratnih zatočenika puštenih nakon šest do devet mjeseci pritvora i mučenja utvrđeno postojanje PTSD, većina pokazivala nekoliko znakova psiholoških poremećaja s prevladavajućim anksiozno-depresivnim i psihosomatskim reakcijama. Potrebno je pažljivo pratiti ove rezultate kako bi se procijenili opseg i zakašnjele posljedice politraumatskih iskustava te visoko-rizične skupine.

Akutes post-traumatisches Streßsyndrom bei ehemaligen Kriegsgefangenen

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Ziel dieser Studie war, akute seelische Störungen bei kroatischen Kriegshäftlingen, die nach 6 bis 9 Monaten Internierung freigelassen wurden, zu ermitteln. Gleich nach dem Gefangenenaustausch (1-3 Tage später) untersuchte man in der Zagreber Universitätsklinik für Ansteckungskrankheiten 47 kroatische Kriegshäftlinge, um ihren körperlichen wie seelischen Zustand zu prüfen und erforderliche Behandlungsverfahren festzulegen. Das zuständige Ärzteteam bestand aus einem allgemeinen Arzt, einem Chirurgen, einem Facharzt für Ansteckungskrankheiten, einem Psychiater und einem klinischen Psychologen. Sämtliche ehemalige Kriegshäftlinge waren Mitglieder regulärer Militäreinheiten aus Vukovar, hatten annähernd dasselbe Alter und denselben gesellschaftlichen Status, waren in den Kampfsportarten ausgebildet und verbrachten gleich lange in Kriegsgefangenschaft. Als Inhaftierte waren sie denselben

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körperlichen und seelischen Mißhandlungen ausgesetzt. 16 der ehemaligen Kriegshäftlinge (34%) wiesen Symptome eines akuten post-traumatischen Streßsyndroms auf, das anhand des Watson-Fragebogens ermittelt wurde. Nach diesem strukturierten, klinischen Fragebogen zeigten alle ehemaligen Kriegsgefangenen mindestens 2 (im Durchschnitt 8 bis 9) Symptome seelischer Störungen. Auch erklärten alle ohne Ausnahme, es sei die schmerzlichste Erfahrung während der Haft gewesen, daß sie nichts über ihre Angehörigen und über die Lage in Kroatien wußten. Gemäß dem MMPI-201 (Minnesota Multiphasic Personality Inventory) ergaben sich bedeutende Unterschiede zwischen den ehemaligen Kriegsgefangenen, denn gemessen an der Skala zur Ermittlung von Paranoia zeigten bestimmte Kriegsgefangene ganz klar das Bestehen von post-traumatischem Streßsyndrom, andere wiederum nicht. Abschließend muß gesagt werden, daß zwar nur ein Drittel der nach 6 bis 9 Monaten Kriegshaft und schweren Mißhandlungen freigelassenen kroatischen Soldaten Symptome eines post-traumatischen Streßsyndroms bekundete, daß aber bei den meisten von ihnen Anzeichen seelischer Störungen vorlagen, bei denen Angst- und Depressionszustände mit psychosomatischen Reaktionen überwogen. Diese Umfrageergebnisse müssen sorgfältig überwacht werden, um Umfang und verspätete Folgen mehrfacher traumatischer Erfahrungen dieser ausnehmend gefährdeten Risikogruppe beurteilen zu können.