

TRAUMA AND POSTTRAUMATIC STRESS IN WAR IDPs IN MACEDONIA

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Abstract: We assessed traumatic experiences and long-term psychological consequences in war IDPs in Macedonia, four years after displacement, and found a high rate of PTSD symptomatology. Nearly third of the IDPs have current PTSD and every sixth has past PTSD. Participants suffer mostly from intrusive symptoms, although a high number of avoidance and hyperarousal symptoms were also reported. We also found that gender, age and education are associated with PTSD symptomatology. Female participants, as well as older participants and IDPs with lower education show a higher rate of PTSD symptoms, especially intrusive and hyperarousal symptoms. This is a highly traumatized sample with over half of the participants having experienced more than three traumatic events in their lifetime, although the number of traumas experienced before, during and after the conflict varies. We found that during the conflict IDPs have experienced more traumatic events compared to previous and later periods. The types of experienced traumas are very diverse. No significant association was found between the number of experienced traumas and PTSD, which suggests that further investigation into the structure of experienced traumas and the mediating effect of certain risk or protective factors is necessary.

Key words: *trauma, posttraumatic stress, PTSD, displacement, war*

In the past three decades the number of studies dedicated to research of the effects of traumatic events over mental health has rapidly grown. These studies have shown that being exposed to one traumatic event is a risk factor for occurrence of several mental health problems, among which PTSD is only one possibility [1].

After the inclusion of PTSD in the diagnostic nomenclature in 1980, traumas have been defined as events outside the range of usual human experience, although empirical studies on trauma prevalence in the general population have demonstrated that potential traumatic events are neither rare nor unusual. On the contrary, the percentage of people in the general population who have experienced at least one traumatic event ranges from 25% to 84%, depending on the strictness and specificity of the definition of a potential traumatic event [2,3].

A universally accepted definition of trauma does not exist, but generally the events that face individuals with demands surpassing their coping repertoire and adaptation abilities are defined as traumatic. Researchers agree that the most important features of traumatic events are the feeling of life threat, unpredictability and incapability to control the event [4].

The consequences of traumatic experiences are complex and in most cases persist for over 12 months after the initial trauma, but findings suggest that symptoms can occur several years after the experienced event and remain chronic in the following years [5]. On average, persons with chronic PTSD experience three episodes, each lasting about 7 years, when they suffer intensively from symptoms and meet PTSD criteria, suggesting that generally symptoms can be active and present for over 20 years [2,6]. Long-term posttraumatic stress is usually accompanied with increased risk of depression, dystimia, anxiety disorders, suicidality, panic attacks, phobia, obsessive thoughts, compulsion, psychosis, somatization, as well as alcohol or substance abuse or addiction [4,5,6].

The occurrence and duration of psychological consequences result from a multifaceted interaction of trauma characteristics, personality traits and social surrounding aspects. Risk factors for PTSD are type, duration and intensity of trauma; early traumatic experiences and multiple traumatization; coping mechanisms; previous history of mental health problems; availability of social support and appropriate treatment of acute trauma [2,3,4,7,8]. The following demographic variables have also been identified as predictors of posttraumatic stress: gender, age, education, marital and employment status [4,6,7,9].

War-related traumas are one of the most complex traumatic experiences. Being exposed to several consecutive potential traumatic events for a relatively short time can lead to significant psychological consequences, which can last even for decades [10]. For persons who have experienced forced migration (refugees and internally displaced persons), the number,

type and duration of stressors, as well as of the consequences, become additionally complicated.

Over the last 15 years the consequences of war-related traumatic experiences have been one of the most widely investigated area in the field of traumatic stress, but most studies have included war veterans, refugees or subjects from the clinical population. Very rarely the attention has been focused to the experiences of the internally displaced persons, although it is estimated that there are at least 24 million people internally displaced due to violence in their homelands [11].

During the armed conflict in Macedonia in 2001, a large proportion of the population was exposed to potentially traumatic events that included exposure to war-zone stressors, kidnapping, witnessing the death of close persons, lack of food and shelter etc.

The conflict, which lasted from February until September, affected three regions of the country (Skopje, Northeast – Kumanovo and Polog – Tetovo), out of the existing eight statistical regions. As the conflict intensified a considerable proportion of the population living in these regions was forced to abandon their homes and became internally displaced (IDP) or refugees. According to the Ministry of Labour and Social Policy, during the eight months of conflict, there were over 140.000 displaced persons in Macedonia.

The population that was directly affected by the conflict could be categorized in the following manner:

1. *IDPs*:
 - a. ethnic Macedonians, as well as Serbians and Bosniaks, that left their homes and settled in families or in collective centers, mainly in Skopje and Kumanovo;
 - b. ethnic Albanians who left their homes, but remained in Macedonia and settled mostly in families in Skopje and other cities;
 - c. Micro IDPs, persons who returned to their settlements during working hours, and stayed with the caregiving family during the night;
2. *Refugees*: ethnic Albanians who migrated to Kosovo, where they mostly settled in with relatives;
3. *Not displaced/remained at home*: ethnic Macedonians, Albanians, Serbs, Roma and Bosniaks who remained in their settlements in the areas affected by the conflict.

As the intensity of combat fluctuated, so the number of IDPs and type of displacement altered also. In the first two months of conflict (February-March 2001), there were 22.000 IDPs registered in Macedonia, but a large number of them returned to their homes in the following month (April

2001). In May the situation worsened and over 70.000 persons were registered as temporarily displaced (60% of those were ethnic Macedonians). In July the number of IDPs increased to 74.000. According to the International Committee of the Red Cross during July-August 2001, further 8.400 persons abandoned their homes and settled with relatives (over 6.300) or in Collective Centers (over 2.000) in Skopje and Kumanovo.

Although in the year after the conflict ended, approximately 90% of the population gradually returned to their homes, four years later, in 2005, when this study was conducted, over 1.400 people still remained internally displaced and accommodated in collective centers and families. Of them, 56% are ethnic Macedonians, 28% Serbs, 8% Roma, 7% Albanians and 1% Bosniaks.

Considering the fact that so far research studies in Macedonia have assessed posttraumatic stress mostly six months after the conflict, the aim of this study is to identify the traumatic events and migration stressors experienced by IDPs and to assess long-term posttraumatic stress. This study is part of the CONNECT project [12], that assesses components, organization, utilization, costs and outcomes of health care and community based interventions for people with posttraumatic stress following war and migration in the Balkans. The project is conducted in seven countries – four western Balkan states that used to be part of former Yugoslavia: Bosnia-Herzegovina, Croatia, Republic of Macedonia, and Serbia, and three EU member states with high numbers of refugees from that area: Germany, Italy and the United Kingdom.

Method

Participants

The sample consists of 54 randomly selected IDPs (27 men and 27 women). For the sample selection we obtained a list from the Ministry of Labour and Social Policy of all IDPs (N=1424) accommodated in collective centers (N=956) and in families (N=468). From this list we selected a random sample of IDPs accommodated in eight collective centers (four in Skopje and four in Kumanovo).

In order to be included in the sample the participants had to satisfy the following criteria that are mandatory for the CONNECT study: to be born within the territory of former Yugoslavia; age between 20 and 65 years; no mental retardation or severe mental disorder as a result of brain injury or other organic illness; having experienced at least one war-related traumatic event [12].

Instruments

Life Stressor List was used to assess the nature and frequency of experienced traumatic events – prior, during, and after the conflict. The instrument also provided data on years when an event had happened and the

level of traumatization it had caused – for the first, last and most stressful time the event had happened. The list consists of 23 potential traumatic events.

List of Migration Stressors was used to obtain a more specific insight into displacement related experiences (separation from family, adequacy of accommodation, financial difficulties etc.).

Mini International Neuropsychiatric Interview [13] is a brief structured clinical interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10. In the study only the data from the PTSD module is used for assessment of current and past posttraumatic stress disorder.

Impact of Event Scale-Revised [14] comprises 22 items measuring current posttraumatic symptoms, 8 of them pertaining to Intrusion, 8 to Avoidance and 6 to Hyperarousal. Participants answered the IES-R with regard to their most traumatic life event.

Socio-demographic questionnaire was used to obtain general socio-demographic data (gender, age, education, nationality etc.), and data on migration experiences (duration of displacement, months taken to achieve status etc.).

Procedure

The participants were interviewed by psychologists at the collective centers where they lived that time. Researchers approached potential interviewees, explained the aims and nature of the study and asked for written informed consent. All interviewees were reimbursed for their time. The data collection was conducted during two weeks in April-May 2005.

Results

More than half of the participants declared themselves as Macedonian by nationality (displaced from Skopje region), and the rest as Serbian (displaced from Kumanovo region). The average age of the participants is 41.3 years and the average years of education they have completed is 9.5 years. They have all been internally displaced for four years and it took them on average less than a month to acquire this status. Most of them are currently unemployed (69%). The participants are mainly married (78%), whereas a small proportion are single and widowed. Regarding living arrangements, most of the participants live with their partner (78%) and with child/children under 18 years (44%). The average number of persons living in one household is 3.8, whereas the average monthly income in the household is 114 Euros, with most of the participants having less than 100 Euros available per month for all living expenses.

Table 1. Socio-demographic characteristics of the sample

Nationality	n	%
Macedonian	32	59
Serbian	22	41
AGE	n	%
20-29 years	12	22
30-39 years	18	33
40-49 years	8	15
50-65 years	16	30
Education	n	%
0-4 years	5	9
5-8 years	22	41
9-12 years	26	48
13-16 years	1	2
Months taken to achieve status	n	%
0 months	35	65
1 month	12	22
2-7 months	7	13
Employment status	n	%
Unemployed	37	69
In paid employment	10	18
Retired	7	13
Marital status	n	%
Single	10	18
Married	42	78
Widowed	2	4
Living arrangement*	n	%
Live alone	1	2
Live with partner	42	78
Live with parents	11	20
Live with child/children under 18	24	44
Live with child/children over 18 years	10	18
Live with others	9	17
Total monthly household income	n	%
<100 Euros	29	56
101-200 Euros	14	27
201-300 Euros	8	15
>300 Euros	1	2

* multiple choice question

Traumatic experiences

The participants have experienced on average three traumatic events in their lifetime (range 1-11). Of them, 24% have experienced one traumatic event, 22% two events and more than half (54%) have experienced three or more traumatic events (Table 2).

Before the conflict more than half of the participants have not experienced any potential traumatic events (n=34). A significant proportion (n=13) has experienced one traumatic event, whereas seven participants have experienced two and more events (Table 2).

Table 2. Number of traumatic events experienced by the participants before, during and after the conflict

Number of traumas	Before Conflict (n)	During Conflict (n)	After Conflict (n)
0	34	0	29
1	13	32	20
2	5	12	3
>3	2	10	2

The situation is different during the conflict. All participants have experienced some kind of traumatic event. More than half of them have experienced one traumatic event (i.e. displacement), the rest have experienced two events or three or more. The maximum number of experienced traumatic events by a single participant during the conflict is seven.

After the conflict the number of experienced traumatic events decreases and is very similar to the number before the conflict. More than half of the IDPs did not experience any traumatic event, but over a third have experienced one event. The rest have experienced two or more traumatic events during the four years of displacement. The maximum number of experienced traumatic events by a single participant before and after the conflict is four.

The types of traumatic events experienced by the participants are presented in Table 3. Before the conflict a low number of participants have experienced the following six events: serious accident, fire, or explosion (n=8); natural disaster (n=7); sudden unexpected, non-violent death of a dear person (n=7); serious injury (n=3); life-threatening illness (n=2) and non-sexual assault by a family member or someone familiar (n=1).

Table 3. Traumatic events experienced by the participants at least once before, during or after the conflict

Traumatic event	Before conflict (n)	During conflict (n)	After conflict (n)
1. Serious accident, fire, or explosion (industrial, farm, car, plane or boating accident)	8	4	8
2. Natural disaster (flood, major earthquake, hurricane)	7	0	6
3. Non-sexual assault by a family member or someone familiar to you (being mugged, physically attacked, shot, stabbed, or held at gunpoint)	1	1	1
4. Non-sexual assault by a stranger (being mugged, physically attacked, shot, stabbed, or held at gunpoint)	0	1	1
5. Sexual assault by a family member or someone familiar to you (rape or attempted rape)	0	0	0
6. Sexual assault by a stranger (rape or attempted rape)	0	0	0
7. Imprisonment (as civil or war detainee, as hostage etc.)	0	1	0
8. Life-threatening illness	2	1	4
9. Sudden unexpected, non-violent death of a dear person	7	3	9
10. Lack of food or water	0	3	1
11. Ill health without access to medical care	0	0	0
12. Lack of shelter (e.g. not being able to take a cover during a combat or shelling attack) *	/	3	/
13. Expelled from home under violent threat (e.g. ethnic cleansing) *	/	54	0
14. Combat situation *	/	6	/
15. Shelling, bombardment (e.g. airraids) *	/	6	/
16. Siege*	/	2	/
17. Serious injury	3	0	0
18. Witnessed an assault, murder or death of another person	0	4	1
19. Learned about the murder or violent death of a dear person	0	0	0
20. Disappearance or kidnapping of family member or friend	0	8	1
21. Torture (infliction of physical and mental suffering)	0	1	0
22. Lost	0	0	0
23. Kidnapped	0	0	0
24. Any other situation that was very frightening or in which you felt your life was in danger.	2	2	1
25. Was afraid and felt life in danger, due to witnessing one of the above mentioned events	0	0	0

* *Conflict related traumatic events*

During the conflict, apart from the displacement, the participants have experienced additional ten conflict-related traumatic events: disappearance or kidnapping of family member or friend (n=8); shelling and bombardment (n=6); combat situation (n=6); witnessed an assault, murder or death of another person (n=4); lack of food or water (n=3); lack of shelter (n=3); siege (n=2); torture (n=1); imprisonment (n=1) and non-sexual assault by a stranger (n=1). Few participants also experienced four events that were not conflict-related: serious accident, fire, or explosion (n=4); sudden unexpected non-violent death of a dear person (n=3); non-sexual assault by a family member or someone familiar (n=1); life-threatening illness (n=1).

After the conflict the participants experienced nine potentially traumatic events: sudden unexpected death not due to violence of a dear person (n=9); serious accident, fire, or explosion (n=8); natural disaster (n=6); life-threatening illness (n=4); non-sexual assault by a family member or someone familiar (n=1); non-sexual assault by a stranger (n=1); witnessed an assault, murder or death of another person (n=1); disappearance or kidnapping of family member or friend (n=1) and lack of food or water (n=1).

Migration stressors

Due to the displacement the participants have also been exposed to several migration stressors (Table 4). Half of the participants have been separated from the family after the displacement and every sixth participant is still separated at the time of assessment.

Table 4. Number of participants who have experienced migration stressors

Type of stressor	Has experienced this event after displacement (n)	Currently experiencing this event (n)
Has been separated from family for a long time	27	9
Difficult to get a working permission (if needed)	29	27
Difficult to find job in one's profession	20	20
Had inadequate accommodation for a long time	21	17
Have not received medical help when needed	6	5
Had significant financial difficulties	48	47
Any other problem experienced because of war and/or migration	4	4

Regarding possibilities to work or to find employment, more than half found it difficult to get a working permission and more than a third to find a job in their profession. Approximately the same proportion of participants still experience these problems. The accommodation had not been adequate for a long time for more than third of the participants and for most of them these conditions have not changed. Small proportion of the participants did not have the opportunity to receive medical help when needed, and

nearly all of them are currently experiencing this problem. Financial difficulties are the most frequent stressor experienced during the four years of displacement. These difficulties are reported by almost all participants as present immediately after displacement and four years later.

Posttraumatic Stress

Levels of posttraumatic stress were assessed using a clinical interview – MINI and a self-report measure – IES-R. On MINI almost – one third of the participants (30%) meet the criteria for current PTSD and 17% for past PTSD (Table 5).

Table 5. Prevalence of current and past PTSD on MINI

PTSD	n	%
Current	16	30
Past	9	17
Non-PTSD	29	53

All participants meet PTSD criteria A and over half meet criteria B, as assessed by MINI (Table 6). In the avoidance symptom cluster most participants suffer from four or more symptoms, whereas one third also suffer from four or more hyperarousal symptoms.

Nearly half of the non-PTSD group meets criteria B and most of these participants have past PTSD. Two thirds of the non-PTSD group doesn't suffer from any avoidance or hyperarousal symptoms.

The PTSD group experiences higher number of symptoms in the past month in all symptom clusters when compared to the non-PTSD group.

Table 6. Frequency of symptoms in PTSD and non-PTSD group on MINI

	All (N=54)	Non-PTSD (n=38)	Current PTSD (n=16)
PTSD symptom cluster			
Criterion B	31	15	16
Criterion C			
0	24	24	0
1	4	4	0
2	3	3	0
3	3	1	2
4	7	4	3
5	7	2	5
6	4	0	4
7	2	0	2
Criterion D			
0	31	31	0
1	0	0	0
2	1	0	1
3	5	1	4
4	6	3	3
5	11	3	8

On IES-R the participants scored highest on Intrusion (M=14.5), then on Avoidance (M=12.6), and finally on Hyperarousal (M=9.4). The average total score is 36.5 (Table 7).

Table 7. Average scores and standard deviations on IES-R

	All (N=54)	Female (n=27)	Male (n=27)	Non-PTSD (n=38)	Current PTSD (n=16)
Avoidance	12.6 (5.9)	13.6 (5.6)	11.6 (6.1)	12.5 (6.3)	12.9 (4.8)
Intrusion	14.5 (7.8)	16.9 (7.0)	12.1 (7.9)	12.1 (7.9)	20.1 (3.6)
Hyperarousal	9.4 (5.5)	10.8 (5.0)	7.9 (5.7)	7.7 (5.0)	13.4 (4.4)
Total score	36.5 (15.0)	41.3 (14.4)	31.6 (14.2)	32.3 (14.9)	46.4 (9.8)

When comparing female and male participants significant differences were found regarding overall symptom intensity and intrusive symptoms. Females show a higher rate of overall PTSD symptomatology ($t(52) = -2.49$, $p < 0.05$), and suffer more intensely from intrusion ($t(52) = -2.36$, $p < 0.05$).

Significant differences were also found between the PTSD and the non-PTSD group. Participants who meet PTSD criteria have a higher total score ($t(52) = -3.48$, $p < 0.01$), experience intrusion symptoms more often ($t(52) = -3.82$, $p < 0.01$) as well as hyperarousal symptoms ($t(52) = -3.97$, $p < 0.01$).

No significant correlations were found between the number of experienced traumatic events and long-term posttraumatic stress. From the demographic variables only age and years of educations are (cor)related with posttraumatic stress. Age is (cor)related with intrusion ($r = .40$) and hyperarousal symptoms ($r = .31$), whereas level of education is (cor)related with hyperarousal ($r = -.28$).

Discussion

We assessed traumatic experiences and long-term psychological consequences in war IDPs in Macedonia, four years after displacement, and found a high rate of PTSD symptomatology, which is consistent with previous findings [15]. Nearly third of the IDPs have current PTSD and every sixth has past PTSD. Participants suffer mostly from intrusive symptoms, although a high number of avoidance and hyperarousal symptoms were also reported. Living in a collective center for four years surrounded by others who share the same or similar traumatic experiences and are displaced from the same region might explain why intrusion is the most intense reaction among the IDPs.

In accordance with previous findings [7,9,15], we also found that gender, age and education are associated with PTSD symptomatology. Female participants, as well as older participants and IDPs with lower educa-

tion show a higher rate of PTSD symptoms, especially intrusive and hyperarousal symptoms.

This is a highly traumatized sample with more than half of the participants having experienced more than three traumatic events in their lifetime, although the number of traumas experienced before, during and after the conflict varies. We found that during the conflict IDPs have experienced more traumatic events compared to previous and later periods. The types of experienced traumas are very diverse. Most often experienced traumatic events not related to conflict are unexpected death of a dear person, serious accidents (traffic, fire etc.) and natural disasters. But, during the conflict most often experienced traumatic events, although by a small proportion of participants: disappearance or kidnapping of family member or friend; shelling, bombardment; and participation in combat. No significant association was found between the number of experienced traumas and PTSD, which suggests that further investigation into the structure of experienced traumas and the mediating effect of certain risk or protective factors is necessary.

One possible explanation is that these IDPs have left their homes shortly after the beginning of conflict and have been accommodated in collective centers in non-conflict areas ever since. Thus, the collective center has become a protective factor against the experience of severe trauma, although at the same time the prolonged exposure to migration stressors might have become the primary source of distress. The separation from the family, the limited possibilities for employment and the continuous financial deprivation have all contributed to high posttraumatic stress symptomatology. Participants originate from rural areas where the main occupation for most of them was agriculture, so due to the displacement they have not only lost their homes and property, but also their main source of financial support. The prolonged displacement, in general not satisfying living conditions, has become the key traumatic experience that overlaps other experienced traumas and transforms existential difficulties into main stressors.

Furthermore, these IDPs were faced with the unpredictability of the moment when will they be able to return to their homes, but also with the expectation to be evicted from the collective center. They feel betrayed and forgotten by their own state and government, which has not been able to find an appropriate housing solution for them. The loss of control over their own lives and the increased feeling of existential insecurity are currently the most prevalent features of traumatization among the IDPs.

In spite of important findings, the generalisability of the study is limited due to the low number of participants and the scope of consequences studied. Further research into the specific experiences of IDPs is required to assess long-term distress, needs and social functioning so that appropriate assistance could be designed and delivered.

TRAUMA I POSTTRAUMATSKI STRES KOD INTERNO RASELJENIH LICA U MAKEDONIJI

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Apstrakt: Bavili smo se traumatskim iskustvima i dugoročnim psihološkim poslasticama po interno raseljena lica u Makedoniji, četiri godine nakon raseljavanja, i otkrili visok stepen simptoma PTSP. PTSP je prisutan kod skoro trećine interno raseljenih lica, a svako šesto lice je patilo od PTSP u prošlosti. Ispitanici uglavnom pate od simptoma nametanja, ali je utvrđen i veliki broj simptoma izbegavanja i povišene razdražljivosti. Takođe smo utvrdili da su pol, starost i obrazovanje povezani sa simptomatologijom PTSP. Ispitanici ženskog pola, kao i stariji ispitanici i interno raseljena lica sa nižim stepenom obrazovanja pokazuju viši stepen simptoma PTSP, posebno simptoma nametanja i povišene razdražljivosti. Reč je o visoko traumatizovanom uzorku u kome je više od polovine ispitanika doživelo više od tri traumatska događaja tokom života, mada broj trauma doživljenih pre, za vreme i posle sukoba varira. Utvrdili smo da su za vreme sukoba interno raseljena lica doživela više traumatskih događaja u poređenju sa periodom pre i posle sukoba. Doživljene traume vrlo su različite po tipu. Nije pronađena značajna povezanost između broja doživljenih trauma i PTSP, što sugerise da je neophodno dodatno istraživanje strukture doživljenih trauma i posredničkog uticaja određenih faktora rizika i zaštitnih faktora.

Ključne reči: *trauma, posttraumatski stres, PTSP, raseljavanje, rat*

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