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**Adjustment to Trauma Exposure in refugee, displaced and non-displaced Bosnian
Women**

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Suggested running headline: Posttraumatic stress in Bosnian women

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Abstract

This study aimed to compare women having fled from the civil war to a country with a high living standard with women who were displaced in their country of origin. Posttraumatic stress (PTS) and self concept were assessed in three samples of Bosnian female civilians 10 years after the civil war: refugees (n=29), internally displaced (n= 26), and non-displaced (n=32). Data were collected by means of self-report questionnaires. A classification of PTS-cases resulted according to DSM-IV criteria. The prevalence of PTS-cases was 73.1% for displaced, 10.3% for refugee and 15.6% for non-displaced women. The proportion of PTS-cases was significantly higher among displaced women than among refugee and non-displaced, as were externality of control attribution and perceived incompetence. Self esteem was significantly lower for these women. Persistence was high in all samples without significant differences between them. These results support previous implications that contextual factors may influence the development of longterm psychopathology among war refugees.

Key words: posttraumatic stress, self concept, Bosnia, women, war

Introduction

In recent history, civilian populations have often become target of political violence. Many of those surviving are forced into flight to different parts of the country or abroad. Considering the current magnitude of global refugee movements, a thorough and research-based investigation of the mental health consequences of forced displacement is indispensable. After the acute, life-threatening stress of the pre-flight period and after the flight itself, refugees experience an ongoing accumulation of stressors and adaptional pressures during exile (Martin, 1994). High rates of Posttraumatic Stress Disorder (PTSD) were found across different host countries and refugee groups (Favaro et al, 1999). Mental health impairment in these samples seems to be more severe than in non-refugee as well as internally displaced civilians (Porter & Haslam, 2001). Persisting clinical levels of trauma were found in studies conducted several years after resettlement in a refugee camp or host country (Miller et al, 2002; Momartin & al, 2003). Most prominent is the finding that 2 decades after the resettlement of Cambodian refugees in the United States, 62% were diagnosed as suffering of PTSD (Marshall et al, 2005).

A meta-analysis of mental health among a world-wide study sample of refugees and internally displaced (hereafter simply referred to as displaced) persons yielded contrary implications (Porter & Haslam, 2005). The authors found that a longer period of time between the date of study and time of displacement was associated with better mental health for refugees relative to non-refugees. Moreover, refugees had relatively positive mental health outcomes compared to displaced and repatriated refugees. Of all groups, European refugees showed the poorest mental health. Female refugees attained slightly worse mental health outcomes than male refugees – a relevant finding considering that 80 percent of the world's refugees and displaced persons are women and their children (Ashford & Huet-Vaughn, 2000), thus making them the most common long-term victims of civil war (Ghobarah et al, 2003).

Kommentar [UE1]: Hier wäre eine Literaturangabe ganz gut (z.B von einem Politologen oder Historiker)

During the civil war in Bosnia-Herzegovina, about half of the regions population was driven from their homes, most of them being women (United Nations High Commissioner for Refugees UNHCR, 1995). Although many took refuge in other countries, the majority was displaced within the former republic. High rates of posttraumatic stress have been consistently reported in refugee as well as displaced Bosnian civilians (Bell, 2000; Weine et al, 1998). No study is known comparing these specific groups. We therefore aimed at comparing posttraumatic stress and self concept among women displaced within their nation of origin with refugee women in a country with a high living standard 10 years after the demise of the former Yugoslavia.

Materials and Methods

Subjects

Displaced women were recruited by the Bosnian nongovernmental organization *Vive Zene*. Founded in 1993 after the outbreak of the civil war, the organization offers psychosocial and legal support primarily to displaced women and their children. Unable to return home due to the destruction of their houses, landmine danger and poverty, these women are housed in overcrowded rooms under insanitary conditions. From 4 refugee settlements in Northern Bosnia, 28 women were recruited. They were approached in the settlements and asked to participate by staff of *Vive Zene*, and not recruited due to proactive help-seeking. Ages ranged from 17 to 57 years. Two women had to be excluded retroactively due to incomplete data. The refugee sample comprised 29 Bosnian women recruited by the 'Service for Foreigners Basel-Landschaft' and by word of mouth. All of them had fled their country after the outbreak of the war and taken refuge in Switzerland or the Principality of Liechtenstein, where they are currently residing in own private households. Ages ranged from 20 to 69 years.

The non-displaced sample consisted of 32 women between the ages of 20 and 67 from an industrial town in Northern Bosnia. The town had been under a 10-month siege in 1993 and

it's inhabitants not spared the atrocities of war. However, all women of this sample had been able to remain in their homes throughout the war. Recruitment was conducted by word of mouth.

Data was collected between November 2003 and December 2004. For sociodemographic information see Table 1.

- Table 1 -

Instruments & Procedure

Identical questions were answered by all subjects. Questionnaires were completed singly or in small groups. In the few cases of illiteracy among the displaced sample, support was provided by a female psychologist and a female social worker of *Vive Zene*.

PTSD symptoms were measured using a Bosnian trauma questionnaire (Pavlovic, 1998) designed in accordance with DSM-IV (American Psychiatric Association APA, 1994) criteria. Traumatic events experienced should be listed initially. Twenty one items assess the frequency of symptoms of reexperiencing, avoidance, hyperarousal and impairment in social and occupational functioning for the previous month on a 6-point scale (0= never, 1= once, 2= 2-3 times, 3= once a week, 4= 2-4 times a week, 5= 5-7 times a week). The questionnaire does not include all DSM-IV symptoms, namely the 'inability to recall an important aspect of the trauma' and 'exaggerated startle response' are not listed. However, high correlations with the Impact of Event Scale (Horowitz et al., 1979) have been found ($r=.78$; $p<.01$). The questionnaire has been used previously in research with combat experiences during the Bosnian war (Pavlovic & Sinanovic, 2000).

Four scales were applied to measure aspects of self concept. Each consists of 10 Likert scaled items assessing the extent of consent given to the statements presented. Validation of all 4 scales was conducted on Bosnian and Croatian student samples (Bezinovic, 1988a; Bezinovic

& Savcic, 1987). For all scales item values were cumulated additively, resulting in scores ranging from a minimum of 0 to a maximum of 40.

The Locus of Control Scale (Bezinovic, 1990c; Rotter, 1966) measures the degree of externality in control attribution, i.e. of a fatalistic orientation where solely destiny, luck and chance determine one's experiences (e.g. "In life, those people succeed who are predestined to do so"). The smallest item-total correlation reported is .48 (Bezinovic & Savcic, 1987).

The Scale of Persistence (Bezinovic, 1990e) assesses the extent of endurance in problem solving (e.g. "Despite the difficulties that I might encounter, I don't give up") The smallest item-total correlation reported is .32 (Bezinovic, 1988a).

The Scale of Perceived Incompetence (Bezinovic, 1990d) measures self-perception of personal mastery and expectations of favourable outcomes of one's own activity (e.g. "At the beginning of a task I already assume that I will fail"), which also constitutes Bandura's (1977) concept of self-efficacy. High internal consistency of the scale (alphas between .83 and .90) and sufficient test-retest reliability ($r=.70$) have been reported (Bezinovic 1990a, Puklek & Vidmar, 2000). The smallest item-total correlation to the whole scale is .46 (Bezinovic, 1988b).

For measures on self-esteem, a Croatian version of Rosenberg's (1965) scale was applied (Bezinovic, 1990b). Cronbach's alpha for this scale has been reported at .72 (Lackovic-Grgin et al, 1996).

Data Analyses

Subjects were categorized as posttraumatic Stress Symptom cases (PTS-cases) according to DSM criteria. Refugee and displaced subjects all came from parts of Bosnia where the civil war was intense and were considered having suffered hardships adequate to meet criterion A. Subjects labeled as PTS-cases were those who had experienced the following symptoms at least once a week in the past month: Criterion B (symptoms of reexperiencing) on at least 1

out of 5 items; Criterion C (symptoms of avoidance) on at least 3 out of 6 items; Criterion D (symptoms of hyperarousal) on at least 2 out of 5 items and Criterion F (distress and impairment) on at least 1 out of 3 items.

For the level of posttraumatic stress (PTS-level) the sum of scores on criteria B,C,D and F was calculated.

Data analyses were conducted using SPSS version 11 for Mac OS X (2003). For differences in PTS-cases, symptom criteria and sociodemographic variables, chi-square tests or Kruskal-Wallis with post-hoc Mann-Whitney U- tests were applied. One-way ANOVAS with post hoc t-tests were performed for differences in self concept. All analyses were 2-tailed, with the level of significance set at $p < .05$. Odds ratios are reported with a 95% confidence interval.

Unless indicated, all results shown are means \pm standard error of means (SEM).

Results

Samples did not differ significantly in age and number of children (see Table 1 for sociodemographic variables). Displaced women reported significantly lower levels of education and financial income, a higher unemployment rate and more widowhood than both refugee and non-displaced women.

Reported traumatic events are listed in Table 2. Reportings of family members killed and imminent starvation were significantly more frequent in the displaced than in the refugee sample ($\chi^2(1, N=55)=11.3, p < .01$; $\chi^2(1, N=55)=4.0, p < .05$ resp.). No significant differences were found between displaced and refugee women regarding other traumatic events.

However, it must be taken into consideration that whereas all of the displaced women gave account of traumatic events, 13 women of the refugee sample did not respond due to the high distress caused by remembering. Comparative calculations for the non-displaced sample were renounced due to small subsamples in the majority of traumatic events.

- Table 2 –

- Table 3 -

Proportions of PTS-cases are shown in Table 3. The proportion in the displaced sample exceeded both other samples significantly. No significant differences were found between the refugee and the non-displaced sample. All diagnostic criteria were met most frequently in the displaced sample. Significantly more intrusion, avoidance, hyperarousal and impairment in social and occupational were reported than in both other samples. Hyperarousal was more frequent in the refugee than in the non-displaced sample ($\chi^2 (1, N=61)=5.8, p<.05$), no significant differences emerged between refugees and non-displaced regarding the other criteria.

Mean sample scores for measures of self concept are shown in Table 4. Samples did not differ significantly in the degree of persistence. Externality of control attribution and perceived incompetence were significantly higher in the displaced than both other samples. Samples differed significantly in self esteem, with non-displaced attaining the highest scores, refugees significantly lower and displaced lower than both groups.

- Table 4 -

Discussion

Results of this study yielded significantly more PTS-cases in displaced than in refugee and non-displaced Bosnian women. Displaced women showed more symptoms of intrusion, avoidance, hyperarousal and impairment in social and occupational functioning than did both

other other samples. Refugee women reported more hyperarousal than did non-displaced women, otherwise these two groups did not differ significantly in any of the diagnostic criteria. According to the augmented rate of PTS-cases, displaced women also showed more externality in control attribution, higher perceived incompetence and lower self-esteem than both other groups. Refugee women showed lower self-esteem than non-displaced women. Persistence was high in all three samples.

These findings are consistent with meta-analytic findings that refugees had relatively positive longterm mental health outcomes compared to displaced civilians (Porter & Haslam, 2005). It is however contradictory to previous findings in different host countries, where persisting clinical levels of PTSD were found in Bosnian war refugees several years after resettlement (Weine et al., 1998).

In interpreting these findings, certain limitations of our study should be considered. Results rely solely on self-report questionnaire data, the validity of which can be termed questionable. The relatively small sample sizes do not allow for reliable conclusions on relationships among variables. Furthermore, having reported less death in the family and less imminent starvation, the refugee sample differs from the displaced regarding 2 of the 9 documented traumatic events. It must however be taken into account that one third of the women of the refugee sample did not report events due to the high distress caused by remembering. In addition to this underreporting in the refugee sample, it seems rather to be the witnessing of violence that is etiologically linked to the development of PTSD symptoms, whereas loss is more likely to be associated with the development of depressive symptomatology (Miller et al., 2002). Finally, it can be argued that several crucial pre- and postdisplacement conditions such as acculturative stress or bereavement were not taken into consideration.

Conclusions

The aim of our study was to compare the mental health of civilians displaced inside their nation of origin with refugees resettled in a country with a much higher living standard. The results support implications that longterm psychopathology among war refugees does not result from war-related stressors alone, but reflects contextual factors which can be largely avoided by generous support on the part of governments and agencies - and that for future refugees of war, asylum policies should be evaluated in consideration of resources needed for sustainable support regarding the well-being of this population.

Future research is needed to identify salient variables in the prevention and reduction of war-induced psychopathology in refugees. Comparing the mental health of newly resettled with repatriated refugees would contribute additionally to the elaboration of efficacious interventions regarding refugees of war.

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Table 1: Sociodemographic variables among displaced, refugee and non-displaced

Bosnian female samples					
	Displaced (n=26)	Refugee (n=29)	Non- displaced (n=32)	Statistic χ^2 (df=2)	<i>p</i> value
Age in years	39.3±9.3	41.0±11.4	41.8±13.0		n.s.
Number of children	2.31±1.6	1.86±1.5	1.53±.9		n.s
Unemployed	96.2%	51.7%	34.4%	23.4	.000
Substandard income	54.2%	17.2%	12.5%	14.0	.001
Education on elementary level or lower	69.2%	10.3%	12.5%	29.4	.000
Widowed	61.5%	17.2%	21.9%	14.8	.001

Table 2: Traumatic events reported among displaced, refugee and non-displaced**Bosnian female samples**

Traumatic event reported	Displaced		Refugee		Non-displaced	
	(n=26)		(n=29)		(n=32)	
	N	%	N	%	N	%
Internment camp	2	7.6	6	20.7	0	0.0
Displacement	26	100.0	29	100.0	0	0.0
Separated from family members	9	34.6	9	31.0	1	3.1
Exposed to violence	6	23.1	5	17.2	2	6.3
Witnessed violence	18	69.2	13	49.8	2	6.3
Witnessed violence towards family members	7	26.9	6	20.7	1	3.1
Witnessed killing	13	50.0	11	37.9	6	18.8
Family member(s) killed	17	65.4	6	20.7	7	21.9
Imminent starvation	12	46.2	6	20.7	3	9.4

Table 3: Number and proportions of PTS-cases and PTSD symptoms among displaced, refugee and non-displaced Bosnian female samples

	Displaced		Refugee		Non-displaced		Statistic χ^2 *	<i>p</i> value
	(n=26)		(n=29)		(n=32)			
	N	%	N	%	N	%		
PTS-cases	19	73.1	3	10.3	5	15.6	30.8	.000
Intrusion	25	96.2	11	37.9	8	25.0	31.8	.001
Avoidance	19	73.1	6	20.7	7	21.9	21.0	.001
Hyperarousal	22	84.6	16	55.2	8	25.0	20.5	.001
Impairment	19	76.0	6	20.7	6	20.0	23.4	.001

* Displaced sample compared to Non-Displaced and Refugee samples

Table 4: Measures of self concept among displaced, refugee and non-displaced Bosnian female samples

	Displaced (n=26)	Refugee (n=29)	Non- displaced (n=32)	Statistic F *	<i>p</i> value
Locus of Control	26.1±0.9	20.0±1.0	20.0±1.2	10.5	.001
Persistence	29.3±1.1	28.6±1.5	29.7±0.9		ns
Perceived Incompetence	25.5±1.9	14.1±1.9	12.7±1.4	15.8	.001
Self-Esteem	23.5±1.2	27.1±1.7	29.3±1.1	4.9	.05

* Displaced sample compared to Non-Displaced and Refugee samples