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Short communication

Self-Assessment of Well-Being as an Indicator of Quality of Life of Former War Prisoners – A Croatian Study

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ABSTRACT

The impact of war on the population is vast, especially when it comes to those who were directly affected by war, among other things as concentration camp detainees. Because of the specific war experience of this population it is important to better understand the possible contribution of key socio-demographic variables, war traumatization and acute disturbances in mental health to their subjective assessment of their own well-being, which represents a psychological category and is based on a subjective assessment. The starting point is a theoretical precept according to which individual characteristics, together with war experience, can have repercussions on mental health, and eventually on the general well-being of an individual and their quality of life. The study comprised 184 participants who had given their informed consent for participation and filled out complete questionnaires. The participants were a convenience sample of male persons who had survived war captivity in the Homeland War in the period from 1991 to 1995. The study was conducted as part of the physical examinations at the University Hospital »Fran Mihaljević« in Zagreb. The data was collected using several self-evaluation measuring instruments one of which served to collect socio-demographic data, two to collect data on the participants' mental health, one for the data on the participants' combat and war experiences and one to assess the participants' well-being. The data obtained suggest that only avoidance and arousal symptoms and psychosomatic difficulties are predictors of the well-being of persons who have experienced war captivity.

Key words: *war prisoners, quality of life, well-being, Homeland War, posttraumatic stress disorder*

Introduction

As of lately there has been growing interest among experts in research into the consequences of torture and genocide, and long-term psychological and general health consequences in persons who had survived war captivity in concentration camps. After World War II, many who had survived captivity emigrated to democratic countries all over the world, especially to USA, where the best known studies on these issues originate. Not long ago Croatia suffered a war which left behind negative consequences for its demographic development, but also for the quality of life of its citizens. One of the important consequences of the war is also an increased number of health and psychological problems in the population in postwar communities[1]. The consequences of war on the population are vast, especially when it comes to those citizens who were directly affected by war, among other things as concentration camp detainees. The detainees who have survived have a hard time adapting to normal

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life in the community and face new people with the same fear they had felt in the camp. They carry the same fears, doubts and find themselves unable to get closer to people, including to their own families[2]. Research has shown that in the majority of prisoners mental disorders appear during the first year after release, but there have been reports of disorders appearing after 10 years or more[3]. The question is how the individuals who have survived the experience of being detained in a concentration camp cope with the everyday stress in peaceful conditions, whether there are long-term consequences of such experience and what those consequences are. Research shows that their mechanisms of coping with stress will be less successful than in people who have not been through the experience of concentration camps[4]. Moreover, it has been shown that in former war prisoners the likelihood of a permanent and progressive decline of psychological capacities is increased tenfold[5]. Research has also been conducted into the prevalence of posttraumatic stress disorder (PTSD) and other psychiatric diseases in former prisoners, and it has been established that PTSD was diagnosed in two thirds of participants, and was associated with older age, lower income, longer captivity, other traumatic experience, and a history of psychiatric diseases[6]. Worldwide research to date suggests that the psychiatric problems of former war prisoners documented over three decades ago still persist[7]. All of the above mentioned consequences of war captivity have a long-term effect on the quality of life and on the well-being of the individual and their everyday functioning[8,9]. In addition to the already mentioned health problems and difficulties in everyday functioning, there is also the problem of transgenerational transfer of traumas, which is why research in this field is of extreme importance, enabling us to provide adequate psychological and social support to former war prisoners, and at the same time to act preventively on the future generations. It is well known that individual characteristics such as age, socio-economic and health status, have a significant impact on the self-assessment of the quality of life. If there are also aggravating circumstances, whether on the individual and/or global social level, such as direct and/or indirect exposure to traumatic events, which has been the case with Croatia including in the still ongoing postwar transitional period, we consider it justified to research possible predictors of general well-being in former war prisoners of Serbian camps.

In the present study, we decided to use a regression model because it reflects the theoretical precept according to which individual characteristics, together with war experience, can have repercussions on mental health, and eventually on the general well-being of the individual and his/her quality of life. To obtain necessary information, we used five different instruments (scales). Subjects were asked to fill-in the questionnaires themselves, rather than having the investigator taking their anamnesis etc. In this way, we were able to obtain more structured set of information, appropriate for statistical and other analyses. Due to the specific war experience of this population it is important to understand possible contribution of key socio-demographic variables, war traumatization and current disturbances in mental health to the subjective assessment of their own well-being.

Subjects and Methods

The study comprised 184 participants who had given their informed consent for participation, and filled out the questionnaires. The group was a convenience sample of male persons who had survived war captivity in the Homeland War in the period from 1991 to 1995. The study was conducted as part of physical examinations at the University Hospital »Fran Mihaljević« in Zagreb in 2008 and 2009. The data was collected using five different self-evaluation measuring instruments, one of which served to collect socio-demographic data, two to collect data on the participants' mental health, one for data on the participants' combat and war experiences and one to assess the participants' well-being.

The questionnaire for the collection of socio-demographic data was designed for the purposes of this study, included information on age, economic status, education and participation in the war and time spent in captivity. The scale of impact of events measures the presence of difficulties in three groups of symptoms characteristic of traumatization: avoidance, reliving and arousal[10]. The scale consists of 22 statements examining the difficulties people experience after stressful life events. The task of the participant is to assess on a scale from 0 (not at all) to 5 (very much) how upset he was by each of the listed difficulties over the previous seven days [10]. The overall result is determined as a sum of assessments and an indicator of exposure to traumatization. Cronbach's α coefficient for the subscale of avoidance symptoms in our sample is 0.773, for the subscale of reliving symptoms 0.908, and for the subscale of arousal symptoms 0.881. The Los Angeles Symptom Checklist (LASC) consists of 44 items which establish and measure the strength of symptoms of posttraumatic stress disorder in line with the diagnostic criteria of DSM-IV[11]. One part of the items pertains to PTSD symptoms, and the other to psychosomatic difficulties that frequently occur along with PTSD symptoms. It was precisely the subscale of psychosomatic difficulties that was used in this paper, and Cronbach' á in our sample is 0.852. The Questionnaire on Traumatic Combat and War Experiences (USTBI-M) was used for the assessment of stressful events and was designed specifically for the war stressors in Croatia. It consists of 40 items rated on a 3-point scale (1 – never, 2 – once, 3 – more than once)[12]. The overall result on that scale represents the total number of experiences by the subjects and it was precisely that data that was used in our paper (theoretical range is 0–40).

Cronbach's α for the entire scale of stressful traumatic war experiences in our sample is 0.837[12]. The WHO-Five Well-being Index is a brief questionnaire with 5 items which is filled in by the participant[13]. The 5 items reflect the presence and absence of positive well-being re-

lated to quality of life. The measurement of positive well-being rather than depressive symptomatology is shown to be more effective and in addition considered to be more acceptable to the patient[13]. Lack of positive well-being is an indication of possible depression. Notice that higher numbers mean better well-being. The raw score is calculated by totaling the figures of the five answers. The raw score ranges from 0 to 25, 0 representing the worst possible and 25 representing the best possible quality of life[13]. Cronbach's α in our sample is 0.905.

Statistics

Several statistical analyses were performed. Standard statistical methods were used to calculate means and standard deviations (X±SD). In correlation analysis Pearson coefficient correlation (r) was used. As a prediction method for the criterion variable hierarchical regression analysis was used. Significance was set at $p<0.05$. Analysis was performed using SPSS, version 18[14].

Results

The socio-demographic data of the participants are shown in Table 1. Considering the objective of the study a hierarchic regression analysis was conducted, with variables being included through three blocks: the first block consisted of socio-demographic variables (age, educational qualification, material status), the second block of variables relating to war experience defined by deployment on the front line, length of captivity and total number of stressful traumatic experiences, while the third block consisted of three groups of symptoms characteristic of traumatization (avoidance, reliving and arousal) and psychosomatic difficulties. Descriptive data for the variables from all three blocks are shown in Table 2. The subjective assessment of well-being on the total scale of the WHO-Five Well-being Index was used as the criterion variable.

TABLE 1
SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS (N=184)

Characteristic	Participants No. (%)
Age	
40 and less	30 (16.3)
41–50	83 (45.1)
51–60	53 (28.8)
Over 60	18 (9.8)
Education	
Primary school	20 (10.9)
Secondary school	135 (73.4)
College	21 (11.4)
University	8 (4.3)
Material status	
Poor	13 (7.1)
Average	115 (62.5)
Good	56 (30.4)
Deployment on the front line	
No	7 (3.8)
Occasionally	19 (10.3)
Majority of service in the Croatian Army	50 (27.2)
All the time	108 (58.7)
Time spent in captivity	
Up to 1 month	20 (10.9)
1 to 6 months	95 (51.6)
6 months to 1 year	69 (37.5)

The results of the analysis are shown in Table 3. In step 1 socio-demographic variables were included (age, education and assessment of current material status),

TABLE 2
DESCRIPTIVE DATA FOR PREDICTOR AND CRITERION VARIABLES (N=184)

Predictor	R^2	R^2	F change	Total F	β in Step 1	β in Step 2	β in Step 3
Step 1	0.227	0.051	3.255*	3.255*			
Age					0.049	0.043	0.089
Educational qualification					0.027	0.033	–0.011
Material status					0.226**	0.224**	0.0817
Step 2	0.279	0.078	1.686	2.489*			
Deployment on the front line						0.042	–0.005
Length of captivity						0.036	0.033
Total number of stressful traumatic experiences						–0.166*	–0.001
Step 3	0.612	0.374	20.473**	10.340**			
IES Avoidance							0.263**
IES Intrusion							–0.182
IES Hyperarousal							–0.335**
Psychosomatic difficulties							–0.219**

which helped explain the 5.1% variance of the subjective assessment of well-being (Table 3). Here only material status (β=0.226) has a statistically significant contribution to the explanation of the subjective assessment of well-being, and in the expected direction – a higher score on the scale of well-being is associated with a higher assessment of the material status (Table 3).

In step 2 we added three variables pertaining to war experience (time spent on the front line, time spent in captivity and total number of stressful traumatic war experiences). The percentage of the explained criteria variance explained by the variables from the first and second block together was 7.8% (Table 3). A statistically significant direct contribution is shown only for the total number of stressful traumatic experiences (β=–0.166), with the direct contribution of material status (β=0.224) still being statistically significant (Table 3). The direction of correlation confirms expectations, where a higher score on the scale of well-being is still associated with a higher material status, but with a smaller total number of stressful traumatic experiences as well.

In step 3, by adding variables relating to mental health (3 subscales of PTSD symptoms and the score on the psychosomatic symptoms scale), the said variables, together with the variables from the first and second block, explain a total of 37% criteria variance, but all variables from the first and second step cease to be statistically significant, i.e. both material status and the total number of stressful traumatic experiences. The symptoms of avoidance (β=0.272) and arousal (β=–0.326), as well as psychosomatic difficulties (β=–0.213) have a statistically significant contribution to the explanation of the subjective assessment of well-being (Table 3). A higher score on the scale of well-being is associated with a higher score on the scale of avoidance symptoms, while a lower score on the scale of arousal symptoms and less

TABLE 3
PREDICTION OF WELL-BEING – RESULTS OF THE HIERARCHICAL REGRESSION ANALYSIS

Predictor	R^2	R^2	F change	Total F	β in Step 1	β in Step 2	β in Step 3
Step 1	0.227	0.051	3.255*	3.255*			
Age					0.049	0.043	0.089
Educational qualification					0.027	0.033	–0.011
Material status					0.226**	0.224**	0.0817
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Psychosomatic difficulties							–0.219**

TABLE 4
MATRIX OF INTERCORRELATIONS OF PREDICTOR VARIABLES (N=184)

N=184	Age	Educational qualification	Material status	Deployment on the front line	Length of captivity	Number of stressful traumatic experiences	IES Avoidance	IES Intrusion	IES Hyperarousal
Age	1								
Educational qualification	–0.045	1							
Material status	–0.210**	0.155*	1						
Deployment on the front line	–0.054	–0.031	0.006	1					
Length of captivity	–0.146*	–0.035	0.108	–0.024	1				
Number of stressful traumatic experiences	–0.082	0.022	0.023	0.250**	0.066	1			
IES_Avoidance	0.105	0.004	–0.114	0.002	–0.009	0.187*	1		
IES_Intrusion	0.097	–0.019	–0.234**	–0.020	–0.028	0.312**	0.490**	1	
IES_Hyperarousal	0.117	–0.100	–0.251**	–0.037	–0.006	0.276**	0.481**	0.865**	1
Psychosomatic difficulties	0.174*	–0.117	–0.271**	0.045	–0.034	0.218**	0.261**	0.600**	0.655**

psychosomatic difficulties suggest higher scores on the scale of well-being. The matrix of intercorrelations among predictors is shown in Table 4.

Regarding the direct correlation of predictors with the criterion, the link between the material status variable from the first block and the criterion variable of well-being was proven to be statistically significant in the expected direction – a higher assessment of the material status is associated with a higher score on the self-assessment of well-being (Table 5). Furthermore, in the second block of variables, the correlation between the total number of stressful traumatic experiences variable and the criterion variable was shown to be statistically significant in the expected direction – a higher number of such experiences was associated with a worse self-assessment of well-being (Table 5). The variables from the third block that are correlated with the criterion variable to a statistically significant degree are reliving symptoms, arousal symptoms and psychosomatic difficulties, in the following direction – more pronounced symptoms and difficulties, worse well-being (Table 5). A statistically significant direct correlation was not shown between avoidance symptoms and the criterion variable (Table 5), however, the results of the regression analysis have shown that this variable, when observed together with other predictor variables, has a statistically significant contribution in the prediction of criteria.

Discussion and Conclusion

In our study well-being represents a psychological category and is based on subjective assessment. The results obtained suggest that from all the chosen variables only avoidance and arousal symptoms and psychosomatic difficulties were predictors of well-being of persons with the experience of war captivity. Namely, material status establishes itself as a predictor variable for well-being in step 1, and maintains this status when variables are added in step 2 along with the total number of stressful traumatic experiences, which also turns out to be a predictor variable for well-being. Both variables show a logical direction, with better material status and lower total number of stressful traumatic experiences suggesting a higher assessment of individual's own well-being, which is in line with the existing literature[15]. An important finding is that the effect of traumatization is probably moderated by current psychological difficulties and that the amount of stressful traumatic experiences itself has been shown to be an insignificant predictor, including material status as well. This is confirmed by numerous other studies on the quality of life of people suffering from different mental illnesses, especially from depressive and anxious disorder, including posttraumatic stress disorder[16,17]. Moreover, it was shown that even 12 to 20 years after the trauma persons who had been through the experience of war captivity display significantly more psychiatric problems, problems of adjustment and mortality in comparison with the control group and with persons who have not had the experience of being in captivity[18–20]. It is precisely the universality and stability of those symptoms that are characteristic of the victims of concentration camps[21]. Two dimensions of mental state occur: reliving which includes repeating thoughts, nightmares, divided attention, strong emotions; and denial or avoidance which includes lack of attention, amnesia and emotional numbness, as well as social withdrawal, weak interest and insomnia. It has been shown that symptoms of reliving are subject to change over time, while the symptoms of avoidance are resistant to change over time[22,23]. An important and interesting finding of our study is the correlation between avoidance symptoms and the assessment of well-being of a former prisoner in such a way that the more the avoidance symptoms are pronounced, the better the well-being of the individual, which is logical if one takes into consideration the fact that this is a specific, highly traumatized population. This data is the result of the regression model, but individual correlation between avoidance symptoms and the assessment of well-being was not statistically significant, whereas considering them separately it was shown that more symptoms of reliving mean a lower assessment of well-being. In the regression model the direct contribution of reliving in the prediction of well-being becomes insignificant, while the contribution of avoidance symptoms in the prediction of an individual's well-being becomes significant in a positive direction. Such a finding can be supported by theory if avoidance symptoms are seen as a sort of a defense mechanism[24]. Namely, some authors state in their papers that one year after intensive therapy significant progress was observed in victims of captivity both in their everyday functioning and in the changes in the intensity of the symptoms, stressing that the symptoms such as social isolation, shame, and avoidance remained more resistant and long-term[24]. There is also the avoidance of thoughts and experiences that remind one of the traumatic past, which is presumed to serve as a defense mechanism protecting from intrusive memories and thoughts [24]. Although symptoms subside over time, victims of captivity are sensitive and vulnerable to stress. Hence it remains

TABLE 5
MATRIX OF CORRELATIONS BETWEEN THE PREDICTOR AND CRITERION VARIABLES (N=184)

Predictors	Correlations with well-being criterion
Age	0.000
Educational qualification	0.060
Material status	0.220**
Deployment on the front line	–0.003
Length of captivity	0.041
Number of stressful traumatic experiences	–0.151*
IES_Avoidance	–0.044
IES_Intrusion	–0.484**
IES_Hyperarousal	–0.517**
Psychosomatic difficulties	–0.485**

unclear whether those symptoms have disappeared completely or are only in remission, and if there is a possibility of their reappearance in more difficult or stressful situations[24]. One should also take into consideration the data suggesting that morbidity is higher in this population compared with the control group, as is the mortality in the period of over 20 years[18,25]. This fact precisely attests that for persons with the experience of concentration camps, in addition to the usual medical care and treatment it is necessary to provide psychological counseling and emotional support through life[4].

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SAMOPROCJENA DOBROBITI KAO INDIKATORA KVALITETE ŽIVOTA BIVŠIH RATNIH ZATOČENIKA – HRVATSKA STUDIJA

SAŽETAK

Posljedice rata na građanstvo su ogromne, posebice kada su u pitanju oni građani koji su direktno bili pogođeni ratom, između ostalog i kao zatočenici logora. Zbog specifičnog ratnog iskustva ove populacije važno je što bolje razumjeti mogući doprinos ključnih sociodemografskih varijabli, ratne traumatizacije i aktualnih smetnji na planu mentalnog zdravlja njihovoj subjektivnoj procjeni vlastite dobrobiti, koja predstavlja psihološku kategoriju i temelji se na subjektivnoj procjeni. Polazište je teorijska postavka prema kojoj se individualna obilježja zajedno s ratnim iskustvom mogu odražavati na mentalno zdravlje, a u konačnici na opću dobrobit pojedinca, odnosno njegovu kvalitetu života. U istraživanju je sudjelovalo 184 sudionika koji su dali informirani pristanak za sudjelovanje u istom, te koji su u cijelosti ispunili upitnike. Riječ je o prigodnom uzorku muških osoba koje su preživjele ratno zarobljeništvo u Domovinskom ratu u periodu od 1991. do 1995. godine. Ispitivanje je provedeno u sklopu sistematskih pregleda u KB »Fran Mihaljević« u Zagrebu u periodu od 2008. do 2009. godine. Podaci su prikupljeni korištenjem nekoliko samoocjenskih mjernih instrumenata od kojih je jedan služio prikupljanju sociodemografskih podataka, dva za prikupljanje podataka o mentalnom zdravlju sudionika, jedan za podatke o borbenim i ratnim iskustvima sudionika i jedan za procjenu dobrobiti sudionika. Dobiveni podaci ukazuju da su jedino simptomi izbjegavanja i pobuđenosti, te psihosomatske poteškoće prediktori dobrobiti osoba koje imaju iskustvo ratnog zatočeništva.