

**Research Article**

# **Evidence of the Effectiveness of Behavioral Therapy Psychoeducation in People with Post-Traumatic Stress Disorders from the former Yugoslavia**

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The main research goal is to examine the effectiveness of psychoeducation on war refugees from the former Yugoslavia who today suffer from PTSD or PTSD with depression. A culture-specific question is integrated as a subordinate question. It investigates differences in the intervention results depending on the host countries Austria and Germany. Data is collected from a random sample (N = 64; 50% of them female; average age 52.6 years) of war refugees from the former Yugoslavia. Half of them respectively live in Germany and Austria. Instruments are the questionnaires GHQ-28, BDI, WHOQOL and HTQ. Reliabilities have been proven. The intervention consists of a manualized psychoeducation. The control group receives psychotherapeutic talk therapy over the same period. Outcomes prove statistically significant that psychoeducation can improve the quality of life of war refugees; that depression symptoms can be reduced by the intervention; that symptoms of depression are more severe before psychoeducation than afterwards; that the quality of social relationships improves over time. Assumptions about significant culture-specific differences had to be rejected completely. One of the most important findings of the study is that psychotherapeutic psychoeducation can help war refugees to improve their quality of life with reduced symptoms of depression. At the same time, it has been confirmed that psychoeducation alone is not sufficient as therapy.

**Key words:** Psychoeducation; Cognitive-behavioral therapy; Post-traumatic stress disorder; Refugees from Bosnia and Herzegovina

Post-Traumatic-Stress Disorder (PTSD) results from experiences that deviate so greatly from what is perceived as normal reality that people with their personal resources cannot successfully cope with them. PTSD can develop shortly after a traumatic event or after a latency period of months to years. PTSD is characterized by recurring flashbacks that contain images of the

traumatic experience and can occur suddenly and unexpectedly. Symptomatically, people with PTSD can show vegetative overarousal, which is accompanied by a permanent willingness to react, sleep disorders, high irritability, affect intolerance and centration problems [1].

Traumatized individuals tend to avoid trauma-associated stimuli. Emotional numbness is also frequently reported, which manifests itself in social withdrawal, a lack of motivation to participate in life and a loss of interest. Commonly, people with PTSD develop

anxiety, depression, and suicidal thoughts. The traumatic events to which people with PTSD react include not only physical and sexualized experiences of violence, catastrophes, accidents or diagnoses of life-threatening diseases, but also war, imprisonment during war, imprisonment in concentration camps and other influences [2].

PTSD often severely affects the lives of those affected. In addition, even after a long period of time, there is still a risk that traumatization will become chronic and PTSD will develop from it. Fast and effective treatment of those people who have had traumatic experiences can therefore not only prevent a possible cornification, but also help to relieve the suffering and promote the well-being of people with traumatization. In addition, it has been shown that traumata have the potential to be passed on to the next generation [3], so greater efforts to treat traumatized people also appear particularly important from this perspective. War refugees often suffer from traumatization and PTSD due to the often extreme experiences of fleeing, but also due to the experiences in their home country [4]. This also still applies to war refugees from the former Yugoslav war in 1995.

A longitudinal analysis from 2014 shows that even after three years, 24 to 30 percent of war refugees from the former Yugoslavia have comorbid PTSD and depression. Another four to six percent of the sample were found to have PTSD alone, and 19 percent still suffered from depression [4]. According to this, about 50 percent of all war refugees from the Yugoslav war are still suffering considerably from the psychological consequences of this war. Djuretic, Crawford, and Weaver (2007) [5] noted, that the reasons for flight are important to the determination of PTSD: Economic war refugees who leave their homeland of Yugoslavia voluntarily and for economic reasons face different problem situations than war refugees. Economic war refugees are often younger and physically and mentally healthy. They have usually adapted to the cultural conditions in the host country. In contrast, fleeing war and coercion affects people of all ages who have had to leave their homeland suddenly and unprepared. A presumption of difference with regard to psychical vulnerability is therefore obvious.

The therapy of PTSD is often lengthy and complicated [6]. The present study investigates a cognitive-behavioral psychoeducation used in addition to PTSD therapy, also known as adjuvant cognitive-behavioral psychoeducation. Within the present research work, the following research questions are examined:

- To what extent does cognitive behavioral psychoeducation among war refugees from the former Yugoslavia with PTSD achieve more effective and sustainable results than psychological conversational therapy?

- To what extent does cognitive-behavioral psychoeducation among war refugees from the former Yugoslavia with PTSD achieve more lasting results than psychological conversational therapy?

### **Cognitive-Behavioral Psychoeducation**

Cognitive-behavioral psychoeducation was developed in United States of America (USA) in the 1950s. Cognitive-behavioural psychoeducation aims to enable patients to actively deal with problems [7]. Bäuml and Pitschel-Walz (2002) [8] describe the goal of cognitive-behavioral psychoeducation as a measure to bring patients out of their ignorance about their illness and thus open up a way out of the illness. In a therapeutic context, the characteristics of cognitive-behavioral psychoeducation are:

- Education for the purpose of diagnosis and treatment
- Objective information transfer, taking place in a disturbance-free setting, with appropriate models
- Therapy-relevant information transfer to support procedures, mechanisms of action, awareness of the challenges and opportunities [9].

The theoretical basis of cognitive-behavioral psychoeducation can be located in at least four different health-behavior models:

- Health-Belief-Model
- Salutogenesis Model
- Social-cognitive learning model and self-efficacy expectancy model
- Social-cognitive process model of health behavior

### **Modular Psychoeducation**

The adjuvant therapy method used in this study is the 10-module psychoeducation manual according to [7]. The following contents were taught within the framework of 10 modules:

- Providing information about trauma and viewing trauma as a wound.
- Providing knowledge about PTSD with description of symptoms and causes of symptoms.
- Searching for triggers for flashbacks and imparting knowledge about relaxation exercises.
- Explanation of dissociation and search for triggers. Exercises and information to avoid dissociation.
- Knowledge transfer on the relationship between pain and PTSD.
- To provide knowledge about the relationship between depression and PTSD.

- To provide knowledge about the relationship between sleep disorders and PTSD. Relaxation exercises.
- Knowledge transfer about symptoms of anxiety and the development of anxiety.
- Knowledge transfer about grief and stages of grief in the context of PTSD.
- Knowledge transfer on integration and acculturation.

The following hypotheses were tested:

**H1a:** Cognitive-behavioral psychoeducation reduces depressive symptoms (measured with the Becks Depression Inventory [BDI]) in traumatized war refugees from the former Yugoslavia more than psychological conversations.

**H1b:** These changes can still be detected 3 months after the end of treatment (follow-up).

**H2a:** Cognitive-behavioral psychoeducation improves general health status (measured with the General Health Questionnaire [GHQ]) of war refugees from former Yugoslavia more than psychological conversation.

**H2b:** These changes can still be detected 3 months after the end of treatment (follow-up).

**H3a:** Cognitive-behavioral psychoeducation improves trauma-specific symptoms (Harvard Trauma Questionnaire [HTQ]) of war refugees from the former Yugoslavia more than psychological conversation.

**H3b:** These changes can still be detected 3 months after the end of treatment (follow-up).

**H4a:** Cognitive-behavioral psychoeducation improves the quality of life (World Health Organization Quality of Life [WHOQOL]) of war refugees from the former Yugoslavia more than psychological conversation.

**H4b:** These changes can still be detected 3 months after the end of treatment (follow-up).

## Methodology

The study design was a randomized experiment with a control group (psycho-logical interviews) and an experimental group (cognitive-behavioral psychoeducation) with three measurement time points (T1 = baseline before the start of the intervention, T2 = survey after the end of the intervention, and T3 = 3 months after T2). The project was presented in two medical practices - one in Erlangen, one in Vienna - with patients from the former Yugoslavia. War refugees from the former Yugoslavia with PTSD without depression or PTSD with depression were sought.

Potential subjects could register for the study if interested. Individuals who agreed to participate and met the inclusion criteria or the exclusion criteria were randomly assigned to the therapy or control group. Individuals in the experimental group received behavioral psychoeducation for PTSD without depression or PTSD with depression. Psychological interviews were conducted with the subjects in the control group.

The following questionnaires were completed before the beginning and at the end of therapy, as well as three months later (follow-up survey). The HTQ, parts 1 and 2, the BDI, the GHQ-28, and the WHOQOL-BREF. The questionnaires have been validated and are available in Serbian and Croatian language [10-12].

A total of 32 subjects were included in the experimental group and 32 patients in the control group.

Cognitive-behavioral psychoeducation in the context of this study was per-formed in the author's psychotherapeutic consultation in Erlangen and in the specialized pain outpatient clinic of a private clinic in Vienna.

Details on the composition of the sample can be found in Table 1.

	N	%	M	SD
Total sample				
Women	32	50.0		
Men	32	50.0		
Men and Women	64	100		
Age			52.61	6.63
Bosnia	40	62.5		
Croatia	24	3.5		
Secondary school	10	15.6		
Vocational school	54	84.4		
Married	50	78.1		
Divorced	12	18.8		
Single	2	3.1		

Note: N = sample size, M = mean, SD = standard deviation.

**Table 1:** Description of the sample total, Germany and Austria.

There were no group differences before the intervention in the expression of depression, quality of life, expression of trauma, or general health.

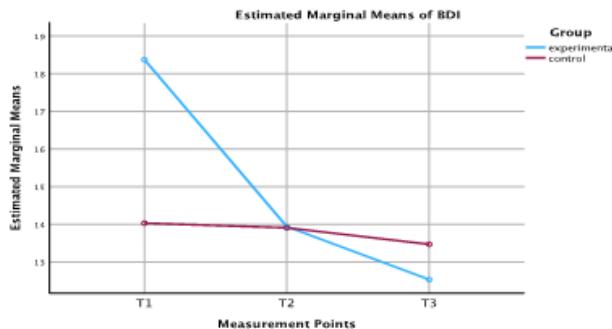
## Results

### Depression (Hypothesis 1)

The test of the intervention effect was statistically significant

( $F[1] = 6.586$ ,  $p = .013$ ). With a mean depression score of  $M = 18.38$  ( $SD = 11.37$ ) before the intervention in the experimental group and a mean depression score of  $M = 13.94$  ( $SD = 11.52$ ) in the experimental group after the intervention, the intervention contributed to a reduction in clinical depression symptoms as a result of the intervention.

The interaction effect between the measurement time points and the experimental and control groups was statistically significant ( $F[2] = 4.761$ ,  $p = .013$ ). This effect was moderately strong at  $\eta^2 = .071$  [13]. The effect was therefore persistent. A graphical representation is provided in Figure 1.



**Figure 1:** Interaction effect between groups and across measurement time points.

### General Health (Hypothesis 2)

The effectiveness of the intervention was not statistically significant ( $F[2] = 2.682$ ,  $p = .107$ ). The intervention contributed not to a reduction in symptoms of general health issues as a result of the intervention.

The interaction effect between the measurement time points and the experimental and control groups was not statistically significant ( $F[2] = 0.957$ ,  $p = .387$ ).

### Symptoms of Trauma (Hypothesis 3)

The test of the intervention effect was not statistically significant ( $F[2] = 2.682$ ,  $p = .107$ ). The intervention contributed not to a reduction in symptoms of trauma as a result of the intervention.

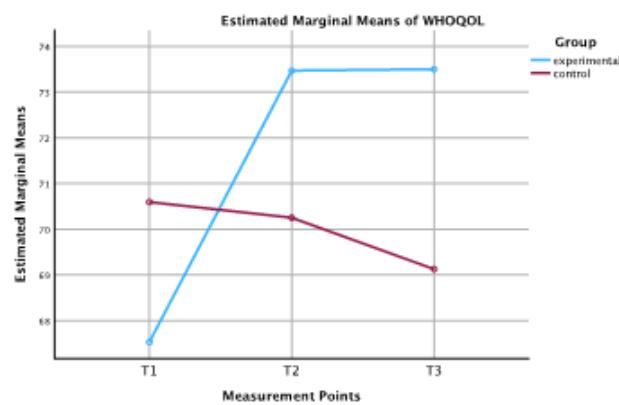
The interaction effect between the measurement time points and the experimental and control groups was not statistically significant ( $F[2] = 0.957$ ,  $p = .387$ ).

### Life Quality (Hypothesis 4)

The interaction effect test was statistically significant ( $F[1] = 7.254$ ,  $p = .009$ ). At  $\eta^2 = 0.105$ , it was an effect of large effect size (Ellis, 2010). With a mean quality of life of  $M = 15.94$  ( $SD = 2.82$ ) before the intervention in the experimental group and a

mean quality of life of  $M = 16.21$  ( $SD = 2.87$ ) in the experimental group after the intervention, the intervention helped to improve subjective quality of life.

The interaction effect between the measurement time points and the experimental and control groups was statistically significant ( $F[2] = 5.148$ ,  $p = .007$ ). This effect was moderately strong at  $\eta^2 = .086$  (Ellis, 2010). The effect was therefore persistent. A graphical representation is provided in Figure 2.



**Figure 2:** Interaction effect between groups and across measurement time points.

### Conclusions

The improvement in depressive symptoms in terms of severity and in the before-after comparison by cognitive-behavioral psychoeducation was statistically significant in the intervention group. Cognitive-behavioral psychoeducation also improved quality of life in the experimental group. It remains unclear why therapy did not also improve overall health and trauma-specific symptoms. Further studies need to be conducted on this. However, since cognitive has been conducted in a therapeutic group setting and is thus a highly economical form of psychotherapy, consideration should be given to offering this form of therapy because it leads to improvements in possible depression and a better quality of life.

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