

# The Study of The Reliability and Validity of The Turkish Version of Post Traumatic Embitterment Disorder Self-Rating Scale (PTED Self-Rating Scale)

Süheyla Ünal<sup>1</sup>,  
Sevgi Güney<sup>2</sup>,  
Şükrü Kartalçı<sup>3</sup>,  
İsmail Reyhani<sup>4</sup>

<sup>1</sup>Prof. Dr., <sup>3</sup>Asist. Prof. Dr. <sup>4</sup>Psychologist,  
Inönü University Medical School,  
Department of Psychiatry, Malatya - Turkey  
<sup>2</sup>Clinical Psychologist, Ankara University  
Ankara - Turkey

## ABSTRACT

The study of the reliability and validity of the Turkish version of post traumatic embitterment disorder self-rating scale (PTED self-rating scale)

The present study was performed to test the reliability and validity of the Turkish version of Post Traumatic Embitterment Disorder Self - Rating Scale (PTED Self-Rating Scale) which evaluates prolonged and disabling embitterment reactions in the aftermath of negative life events and to introduce the scale to clinical and nonclinical settings in Turkey. The PTED scale was administered to four independent groups of inpatients and normal people, a total of 1333 participants: 1. Inpatients with the PTSD diagnosis; 2. Inpatients with general psychiatric disorder diagnosis; 3. Normal people having no psychiatric diagnosis but experiencing a traumatic life events during the study applications; and 4. Normal people who experienced a traumatic life event in the past. Applications were performed in both face to face and group settings. Results showed that the internal consistency, test-retest reliability and split half reliability were high. Factor analysis indicated a two-factor solution, accounting for 54.47% of the total variance. The item loadings were 0.37 and higher. The analysis indicated that the PTED Scale has very good convergent and criterion validity. The PTED Scale is a reliable and valid measure for embitterment as an emotional reaction to a negative life event. It can be used for clinical and nonclinical populations in Turkey.

**Key words:** Post Traumatic Embitterment Disorder Self-Rating Scale, PTSD, adjustment disorder, anxiety disorder

## ÖZET

Travma sonrası hayata küsme bozukluğu ölçeğinin (PTED self-rating scale) Türkçe uyarlamasının geçerlilik ve güvenilirlik çalışması

Bu çalışma, Travma Sonrası Hayata Küsme Bozukluğu Ölçeğinin (PTED Self-Rating Scale) Türkçe uyarlamasının geçerlilik ve güvenilirlik çalışmasını yaparak, ölçeğin ülkemizde, klinikte ve alan çalışmalarında kullanılabilirliğini sağlamak amacıyla gerçekleştirilmiştir. Çalışmanın örneklem grubunu, dört farklı gruptan 1333 kişi oluşturmuştur; 1. Travma Sonrası Stres Bozukluğu tanısı almış, yatan ve ayaktan tedavi gören hastalar; 2. Genel psikiyatrik hastalık tanılarında en az birini almış, yatarak tedavi görmekte olan hastalar; 3. Normal popülasyonda travmaya maruz kalmış, herhangi bir psikiyatrik tanısı olmayan kişiler; 4. Normal popülasyonda psikiyatrik tanısı olmayan kişiler. Uygulamalar, birebir yüz yüze görüşme ve toplu uygulamalar şeklinde gerçekleştirilmiştir. Sonuçlar ölçeğin Türk örneklemini için iç tutarlık ve test-yeniden test güvenilirliğinin oldukça yüksek olduğunu göstermiştir. Faktör analizi iki faktörlü bir yapıya işaret etmiştir. Bu iki faktör toplam varyansın % 54.47'lik bir bölümünü açıklamıştır. Maddelerin faktör yükleri 0.37 ve üzerinde bulunmuştur. Analizler, Travma Sonrası Hayata Küsme Bozukluğu ölçeğinin oldukça iyi bir geçerlilik düzeyine sahip olduğunu göstermiştir. Bu sonuçlar, Travma Sonrası Hayata Küsme Bozukluğu Ölçeğinin (TSHKB Ölçeği) Türkiye'de klinik ve klinik dışında geçerli ve güvenilir bir ölçek olarak uygulanabileceğini göstermektedir.

**Anahtar kelimeler:** Travma Sonrası Hayata Küsme Bozukluğu Ölçeği (PTED Self-Rating Scale), TSSB, uyum bozukluğu, anksiyete bozuklukları

Address reprint requests to:  
Prof. Dr. Süheyla Ünal, İnönü University Medical School, Department of Psychiatry, Malatya - Turkey

Phone: +90-422-3410787

E-mail address:  
sunal@inonu.edu.tr

Date of acceptance:  
January 15, 2011

This case was presented in 45<sup>th</sup> National Congress of Psychiatry (20-24 October 2009 Ankara) as a poster report.

## INTRODUCTION

Negative life events take their parts in the original cycle of daily life whether they contain a traumatic event or not. Damaging effects of negative events which may take part in everyone's lives may cause gradual and continuous impairment of mental health of the person who experienced it. In studies of Linden et al.(1) done in Germany, people who experienced negative life event may carry diagnostic criteria for both post-traumatic stress disorder and adjustment disorder but also may apply for treatment with different symptoms which do not fully correspond to both of these disorders. Linden et al. who gathered these symptoms under diagnostic criteria for Post Traumatic Embitterment Disorder (2) advanced their studies and developed a scale called Post Traumatic Embitterment Disorder Scale (PTED Self-rating Scale) which supports to diagnose this disorder. This disorder consists of symptoms and signs of an adjustment disorder different from the ones of DSM-IV. In this disorder, individual reacts to the negative life event experienced excessively. It is possible that traumatic event may have different emotional impact at each individual. Likewise, a life event which is not important for a person may impair other person's mental well-being. In this disorder, negative life event experienced creates an evident change in personal life.

Post Traumatic Embitterment Disorder is characterized by development of clinically important emotional and/or behavioral symptoms. These clinical symptoms develop after a single negative life event experienced in daily life. Individual exposed to this disorder perceives the event he/she experienced as the cause of illness. He/she perceives this event as an event which he/she was acted unjustly, humiliated and insulted. Reaction of the individual to this event was being weary of life, emotional pain, sadness and anger which cannot be coped with. He/she reacts with extreme anger every time he/she remembers it. Original symptoms occurring consequent to the event are repetitive compelling memories and permanent negative change in mental health. Emotional regulation is evidently impaired. This disorder is generally obscured and unidentified because normal emotional state can be observed when

person's attention is directed towards another thing. Individual who was exposed to this disorder may not have a history of any premorbid psychiatric disorder which explains the symptoms and signs (3-5).

Among diagnostic criteria of Post Traumatic Embitterment Disorder, perception of a single negative life event as traumatic due to impairment of that person's basic beliefs. Experiencing the traumatic event initiates negative consequences at several domains of patient's life such as work, social life and interpersonal relations. Post Traumatic Embitterment Disorder differs at two important points from Post Traumatic Stress Disorder: content of the life event and feeling of deep emotional pain (embitterment). Experienced event is not life-threatening or fear and tension provoking like in Post Traumatic Stress Disorder (PTSD). Emotional reaction is feeling of sadness rather than anxiety. These emotions should continue more than 3 months (6).

Linden et al. who gathered these symptoms as Post Traumatic Embitterment Disorder (PTED) (2) also developed a scale (PTED Self-rating Scale) which helps to diagnose this disorder. There are studies being done to place this disorder in adjustment disorders group, under sub-category of stress-related disorders in DSM-V and ICD-11 systems (7).

This study was done in order to increase awareness of this disorder in our country which its importance will increase among psychopathological definitions and classifications and to provide the use of Post Traumatic Embitterment Disorder scale in clinical and normal population by doing validity and reliability study.

## METHODS

### Sample

This study was realized in four different samples by the participation of 1333 people. Scale aims to assess Post Traumatic Embitterment Disorder in people exposed to trauma so the sample formed from following groups:

1. Ninety-eight Tekel workers rallying in Sakarya Street, Ankara who do not have a psychiatric diagnosis but currently under traumatic living due to threat of

losing their jobs and social benefits;

2. Patients diagnosed with PTSD but not any other psychiatric diagnosis: 25 PTSD inpatients being treated in a psychiatric hospital in Ankara;

3. Patients exposed to trauma but had a psychiatric diagnosis other than acute stress disorder and PTSD (anxiety and affective disorders): 127 inpatients hospitalized at Department of Psychiatry, Turgut Özal Medical Center, Malatya and have a history of trauma and a diagnosis of general psychiatric disorders such as major depressive disorder, adjustment disorder or affective disorders;

4. Subjects from general population whom experienced trauma but not diagnosed any psychiatric disorder: 1083 people who were professionals, housewives, police college students and university students from Malatya and Ankara randomly selected and did not have any psychiatric diagnosis.

## Tools

**Socio-demographic Data Collection Form:** This form consists of 6 questions developed by the investigators and intended to collect the demographic information of the participants.

**Post Traumatic Embitterment Disorder Scale (PTED Scale):** This scale is a 5-point Likert-type, self-reported scale having 19 items. Scores of the scale is between 0 and 76. Severity of the pathology increases by the increasing scores. This scale was developed by Michael Linden et al. (2) to assess the magnitude of weariness to life developed in reaction to negative events based on symptoms of patients admitted to the clinic.

**Impact of Events Scale-Revised form (IES-R):** It is a 22 item self-reported scale developed to assess subjective tension and strain caused by traumatic events. First version developed by Horowitz et al. (8) was reorganized by Weiss and Marmar (9). It was adapted to Turkish by Çorapçioğlu et al. (10).

**Post Traumatic Stress Disorder Control List (Civil Version) (PTSD-CL):** This is a 17 item 4-point Likert-type scale which 14 of 15 PTSD diagnostic criteria of DSM-IV is directly asked. The scale was developed by Dobbie et al. (11) and adapted to Turkish by Kocabaşoğlu et al. (12).

## Procedure

Post Traumatic Embitterment Disorder Scale (PTED-Self-Rating Scale) was translated to Turkish by two psychiatrists, a clinical psychologist and a linguist. After reverse translation from Turkish to English, original and Turkish versions of the form were applied to 15 academicians from medical school who know English well with one week interval to test the item equivalency. Correlation between these two applications was found at level of  $r = 0.95$ .

Scale was applied after the verbal consents of all participants were obtained by one-to-one, face-to-face application technique and collective applications. Applications to students were done in İnönü University Medical School and Malatya Police Vocational School by 5 investigators at classrooms in parallel sessions at hours permitted by academicians. Sample except students was provided by application to individuals not having any psychiatric diagnosis by a group of students participated in the study and trained for the application of the scale. Tekel workers were asked to fulfill the scale in the strike tents and patient sample were interviewed face-to-face in the wards. Diagnoses of the patient sample were done by clinical examination according to DSM-IV.

Internal consistency coefficient (Cronbach alpha coefficient) was calculated for the validity and reliability analyses of the scale and test-retest method, two half-reliability (split-half) method, basic components factor analysis Warimax rotation (principal component analysis with Warimax rotation) and criteria-related validity analyses were also performed.

## RESULTS

Sample of the study showed normal distribution ( $KMO = 0.97$ ,  $p < 0.01$ ). Mean age of the sample was 25 ( $X = 25.9$ ;  $SD = 8.7$ ). Twenty-seven people did not tick the gender box so 36.9% ( $n = 492$ ) of the sample were women and 61.1% ( $n = 814$ ) were men. Educational levels cumulated around high school and university. Majority of the participants were state employees ( $n = 406$ ; 43.6%) followed by university students ( $n = 408$ ; 30.6%), workers ( $n = 97$ ; 7.3%) and academicians ( $n = 17$ ; 1.3%).

## Validity

### Explorative Principal Components Method and Factor Analysis Performed by Warimax

**Rotation:** Factor analysis performed indicated a two factor structure: Factor 1 explained 48.40% of total variance and factor 2 explained 6.08% of it. While factor 1 contained psychological condition, emotional reactions and personal part of social functionality, factor 2 contained social emotional reactions of social functionality. Both factors explained 54.47% of total variance. These factor analysis findings showed that total score of Post Traumatic Embitterment Disorder Scale is appropriate to assess the severity of reactionary weariness to life and embitterment of both healthy people and patients. Item contents of both factor 1 and factor 2 are given in table 1 (Table 1).

As can be seen at Table 1, factor 1 and 2 had both quite high burden values. Just factor burden of item 8 was 0.37 and factor burden of item 6 was 0.46. Other items had quite high burden values between 0.51 and 0.80. Likewise, these values were 0.46 - 0.80 for factor 1 and 0.37 - 0.80 for factor 2.

**Criteria Related Validity:** The scale has a quite high correlation with both impact of events scale (IES-R) for both patients and normal sample and post traumatic stress disorder control list civil version (PTSD-PCL). For patient sample, IES-R was found  $r=0.73$ ,  $p<0.01$  and

PTSD-PCL was found  $r=0.70$ ,  $p<0.01$ ; for normal sample, IES-R was found  $r=0.82$ ,  $p<0.01$  and PTSD-PCL was found  $r=0.84$ ,  $p<0.01$ .

## Reliability

**Inner Consistency Coefficient:** Inner consistency coefficient (Cronbach alpha) for all groups was found 0.93. This coefficient value indicates a quite good inner consistency.

**Test-Retest Reliability:** Test-retest reliability of the scale was calculated by a one-week interval. Test-retest reliability of the scale was found quite high for both patients and normal sample. Test-retest reliability at patient sample was found  $r=0.93$ ,  $p<0.01$  and at normal population was found  $r=0.97$ ,  $p<0.01$ .

**Reliability Analysis:** In the analysis done for two half reliability (Split-half) of the scale split-half coefficient was found 0.89 ( $p<0.01$ ) which is a quite high reliability level.

## DISCUSSION

In conclusion, after applications and statistical analyses, total score of the Turkish version of Post Traumatic Embitterment Disorder Scale (PTED Self-Rating Scale) is appropriate to detect the severity of symptoms of emotional pain and weariness to life developed thereafter experienced by individuals who

**Table 1: Factor burden of scale items**

Scale Items	Factor 1	Factor 2
1. That hurt my feelings and caused considerable embitterment.		0.68
2. That led to a noticeable and persistent negative change in my mental well-being.		0.51
3. That I see as very unjust and unfair.	0.70	
4. About which I have to think over and over again.		0.80
5. That causes me to be extremely upset when I am reminded of it.		0.79
6. That triggers me to harbour thoughts of revenge.	0.46	
7. For which I blame and am angry with myself.		0.55
8. That led to the feeling that there is no sense to strive or to make an effort.		0.37
9. That makes me to frequently feel sullen and unhappy.	0.60	
10. That impaired my overall physical well-being.	0.64	
11. That causes me to avoid certain places or persons so as to not be reminded of them.	0.60	
12. That makes me feel helpless and disempowered.	0.70	
13. That triggers feelings of satisfaction when I think that the responsible party having to experience a similar situation.	0.54	
14. That led to a considerable decrease in my strength and drive.	0.75	
15. That made that I am more easily irritated than before.	0.63	
16. That makes that I must distract myself in order to experience a normal mood.	0.63	
17. That made me unable to pursue occupational and/or family activities as before.	0.78	
18. That caused me to draw back from friends and social activities.	0.80	
19. Which frequently evokes painful memories.	0.67	

were exposed to any negative life event in Turkish society. In this context, PTED Self-Rating Scale can be considered a scale which is adequate and helpful to clinician and investigators planning to study on this subject to diagnose and evaluate the severity of this disorder both in normal and clinical population.

Linden et al. (2) pointed out that subjects who had crude score 47.5 or over from total score were exposed to reactive embitterment disorder and by increasing scores, severity of the disorder also increases. He also pointed out the high structural validity (90.7%) and convergent validity of the original scale as well. Likewise, PTED Self-Rating Scale showed statistically significant correlations with Impact of Events scale, SCL-90R and Bern Embitterment Scale. Findings from this study showed highly parallel results with the original scale. In the Turkish version, factor analysis corresponded to a two factor structure as well. After evaluating factor analysis results, while number of items was found 5 under factor 2 of the original scale, in Turkish version this number was 6. In our sample, revenge ideas and deep emotional responses to negative event experienced were gathered under factor 1 and social aspect of the functionality was gathered under factor. This may be explained by increased expression of our emotions as an emotional society. Except for the structural validity of the scale, indication of quite high findings of criteria-related validity and reliability analysis -although there are cultural differences- scientifically proved that this scale is a valid and reliable

scale for our country.

As for every psychiatric disorder, perception and evaluation of Post Traumatic Embitterment Disorder Scale differs in each society. For this reason, for the development, course and treatment of Post Traumatic Embitterment Disorder, studies focusing on the impact of cultural characteristics will give valuable information about not only this disorder but about pathogenesis and course of all mental disorders.

Results of this study pointed out that embitterment symptoms are consequences of a universal reaction to traumatic condition experienced. In other words, negative life events and traumatic experiences - together with cultural differences- show themselves as one of the common universal reactions. One of these common reactions was embitterment disorder. Although this disorder is originated from traumatic life events, its occurrence and prognosis is significantly different from post traumatic stress disorder and other anxiety disorders and causes a different type of adjustment disorder at the individual exposed. If diagnosed at early stages, adjustment to social processes will be provided shortly after. Capturing the psychological problem or disorder at an earlier stage is very important for public mental health in preventive mental health studies (13). Introducing this disorder, developing awareness and educating the diagnostic criteria will not only help the clinician who sees these kinds of patients but will highly contribute to public mental health studies as well.

## REFERENCES

- Linden M. Posttraumatic Embitterment Disorder. *Psychother Psychosom* 2003; 72:195-202.
- Linden M, Baumann K, Lieberei B, Rotter M. The Post-Traumatic Embitterment Disorder Self-Rating Scale (PTED Scale). *Clin Psychol Psychother* 2009; 16:139-147.
- Linden M, Baumann K, Rotter M, Schippan B. The psychopathology of posttraumatic embitterment disorder (PTED). *Psychopathology* 2007; 40:159-165.
- Linden M, Bauman K, Rotter M, Schippan B. Posttraumatic Embitterment Disorder (PTED). *Psychopathology* 2007; 77:50-56.
- Hasanoğlu A. Suggestion of a new diagnostic category: Posttraumatic embitterment disorder. *Turkish Journal of Psychiatry* 2008; 19:94-100.
- Linden M, Baumann K, Rotter M, Schippan B. Diagnostic criteria and the standardized diagnostic interview for posttraumatic embitterment disorder (PTED). *Int J Psychiatr Clin Pract* 2008; 12:93-96.
- Dobricki M, Maercker A. (Post-traumatic) embitterment disorder: Critical evaluation of its stressor criterion and a proposed revised classification. *Nord J Psychiatry* 2010; 64:147-152.
- Horowitz MJ, Wilner N, Alvarez W. Impact of Event Scale: A measure of subjective stress. *Psychosom Med* 1979; 41:209-218.

9. Weiss DS, Marmar CR. The Impact of Event Scale – Revised: In Wilson J, Keane T (editors). Assessing psychological trauma and PTSD. New York: Guildford, 1997, 399-411.
10. Çorapçıoğlu A, Yargıç İ, Geyran P, Kocabaşoğlu N. “Olayların Etkisi Ölçeği” (IES-R) Türkçe versiyonunun geçerlilik ve güvenilirliği. Yeni Symposium 2006; 44:14-22 (Article in Turkish).
11. Dobbie DR, Kivlahan DR, Maynard C, Bush KR, McFall M, Epler AJ, Bradley KA. Screening for post-traumatic stress disorder in female veteran’s affairs patients: Validation of the PTSD checklist. Gen Hosp Psychiatry 2002; 24:367–374.
12. Kocabaşoğlu N, Çorapçıoğlu Özdemir A, Yargıç İ, Geyran P. Türkçe “PTSD Checklist - Civilian Version” (PCL-C) Ölçeğinin geçerlilik ve güvenilirliği. Yeni Symposium 2005;43: 126-134 (Article in Turkish).
13. Sayıl I. Crisis and crisis intervention (Kriz ve krize müdahale). Ankara University Crisis Intervention Center publications, Ankara, 1996 (Article in Turkish).