

**Polish adaptation
of the PTSD Checklist for DSM-5—PCL-5.
A preliminary communication**

Nina Ogińska-Bulik*

University of Lodz, Institute of Psychology

Zygfryd Juczyński

Social Academy of Sciences in Lodz, Institute of Applied Psychology

Maja Lis-Turlejska

SWPS University of Social Sciences and Humanities, Warsaw

Dorota Merecz-Kot

The Nofer Institute of Occupational Medicine in Lodz

The aim of this article is to present preliminary results of research on the psychometric properties of the Polish adaptation of the PTSD Checklist for DSM-5 (PCL-5), a new tool designed to assess the symptoms of post-traumatic stress disorder (PTSD) in adults. The analyses were carried out using results obtained from 1220 people (55% were men) aged 17–83 years ($M = 39.7$, $SD = 16.8$) who had experienced various types of traumatic events. Factor analysis confirmed the 4-factor structure of the scale. Four factors, i.e. intrusion, avoidance, negative changes in cognition and mood as well as arousal and reactivity, explained a total of 56% of variance. The reliability of the Polish version of PCL-5 is very good. Cronbach's *alpha* coefficient for the whole scale is .96 and absolute stability (test-retest) is .89. The scores of the Polish version of PCL-5 correlate significantly with the scores of the Impact of Event Scale, which confirms the accuracy of the adapted tool. PCL-5 allows provisional recognition of PTSD. The scale can be used in scientific research as well as in clinical practice.

Key words: trauma; PTSD Checklist for DSM-5—PCL-5; Polish adaptation.

* Address for correspondence: NINA OGIŃSKA-BULIK—University of Lodz, Institute of Psychology, ul. Smugowa 10/12, 91–433 Łódź, Poland; e-mail: noginska@uni.lodz.pl

INTRODUCTION

Posttraumatic stress disorder (PTSD) was introduced into the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) in 1980. The description of the clinical picture of PTSD had been changing throughout the years, as reflected in each revision of the DSM. The main changes were related to the causes and symptoms of the disorder. In the newest edition of the DSM-5 published in 2013 (APA, 2013; Gałecki & Świącicki, 2015), further considerable alterations were made. The subjective assessment of emotional reaction to the event (criterion A2) was eliminated. It was replaced with a list of potentially traumatic events together with the information whether a person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury or was informed about such an event (excluding media news). The structure of symptoms was changed by adding negative changes in the cognitive sphere and relocating PTSD from the category of Anxiety Disorders to the new category of Trauma and Stressor-related Disorders. The introduction of these major changes made the already existing diagnostic tools redundant.

The PTSD Checklist for DSM-5 (PCL-5) (Weathers et. al., 2013) is a new version of the internationally recognized PTSD Checklist, which was adjusted to the DSM-5 criteria for PTSD. The PTSD Checklist was developed in the National Center for Posttraumatic Stress Disorder in the United States of America. PCL-5 replaced three earlier versions of PCL (the military PCL-M, the civilian PCL-C, and the specific PCL-S). Although there is now only one version of PCL, it can be used in three different formats (one without a Criterion A component, one with a Criterion A component, and one with the Life Event Checklist (LEC-5) and an extended Criterion A component). The aim of our work was to translate and adapt the PCL-5 measure without Criterion A into Polish.

METHODS

The study group was selected using nonprobability purposive sampling. We aimed to reach people with a high probability of traumatic experiences, such as victims of violence, cancer patients, close relatives of cancer patients, people injured in accidents, participants of motor vehicle accidents, victims of occupational traumas. The sample consisted of 1,330 subjects. Questionnaires obtained from 1,220 subjects were included in the analyses after verification of the initial data. Over half of the sample were men (55%). Mean age was 39.7 ± 16.8 years, minimum = 17 years, maximum = 83 years.

All subjects filled in PCL-5 forms and one or several other questionnaires, which were used to assess the validity of PCL-5. The PTSD Checklist (PCL-5) is a 20-item self-report measure that assesses the 20 DSM-5 symptoms of PTSD. The respondent rate on a 5-point scale (from 0—"Not at all" to 4—"Extremely") to what extent the problems described have affected him/her during the last month. The time of examination by PCL-5 does not exceed

10 minutes. The authors obtained the written agreement from the National Center for PTSD to adapt PCL-5 to Polish conditions. The English version was translated into Polish by five independently working translators. The authors agreed on a common version of the Polish translation and sent it to a native speaker of English familiar with psychological terminology for back-translation. The slight differences between the original version and the back translation were discussed, and appropriate changes were introduced into the final version of the Polish translation of PCL-5, which was positively evaluated by all persons involved in the process.

RESULTS

Factor structure

A subsample of 600 subjects was randomly selected from the database. The subsample was divided in two parts. The scores of a first part were used to perform exploratory factor analysis, and those of a second one to perform confirmatory factor analysis. The four-factor solution appeared to be clear and unambiguously interpretable. It was also equivalent to the structure of the original PCL-5 version based on the DSM-5 diagnostic criteria.

Generally, all four factors explained over 56% of total variance. Factor 1—criterion E (alterations in arousal and reactivity related to an event/s that began or worsened after the trauma, E1–E6) explained 35% of the variance; Factor 2—criterion B (re-experiencing B1–B2)—almost 10%, and each of the last two factors, Factors 3—criterion D (Negative alteration in cognitions and mood, D1–D7) and Factor 4—criterion C (Avoidance of trauma-related stimuli C1–C2), explained slightly over 5% of the variance.

Confirmatory analysis performed on the scores from the second subsample confirmed the four-factor model. Results of the four most frequently used goodness of fit indexes showed that the model fit the data relatively well: $\chi^2(164) = 1010.59$; $p < .001$; Standardized Root Mean Square Residual (SRMR) = .03; Confirmatory Fit Index (CFI) = .94; Root Mean Square Error of Approximation (RMSEA) = .06, and Adjusted Goodness of Fit Index (AGFI) = .89 or Goodness of Fit Index (GFI = .91).

Reliability of PCL-5

Internal consistency for the total PCL-5 score for the entire sample of 1220 subjects was high (Cronbach's $\alpha = .96$). Cronbach's α calculated for each criterion were as follows: Criterion B, .91; criterion C, .80; Criterion D, .91; and Criterion E, .89. Test-retest reliability was assessed in a group of 70 students. They filled in the PCL-5 on two occasions three-weeks apart. The general coefficient $r_{tt} = .89$, as well as its components (from .61 to .89), indicated the stability of the PCL-5 measurement was high. In another study of 54 adults aged 22–57 years ($M = 34.65 \pm 8.66$) examined twice at a four-week interval, the stability coefficient was .74 (B–E Criteria respectively: .61; .50; .68 and .74).

Validity of PCL-5

To assess convergent validity, we compared the PCL-5 scores of 30 students with their scores on the Impact of Event Scale- Revised (IES-R), which measures PTSD symptoms according to the DSM-IV criteria. The correlation between total PCL-5 and IES-R scores was .85; the correlation for intrusions was .78, avoidance .70, and arousal .84 ($p < .001$). Criterion validity was assessed by comparing PCL-5 scores with an external criterion, namely clinicians' diagnoses. A group of 60 participants of motor vehicle accidents (MVA) went through an independent psychological and psychiatric examination. 53% of the subjects were diagnosed with PTSD and 17% were diagnosed with aggravation. The correlation coefficient between PCL-5 scores and clinical diagnosis was .77 at a high significance level ($p < .001$).

Comparison of mean PCL-5 scores in different groups of respondents

PCL-5 is used to measure symptoms related to exposure to traumatic events. As a screening tool, it also allows to make a provisional diagnosis. A diagnosis based on test scores requires reference to some standards, at least in the form of means for different groups of respondents, which serve as reference points. Before statistical significance of mean differences was evaluated, we determined the shape of the data distribution curve (kurtosis and skewness). The obtained indices showed that the distribution of scores was close to normal, which justified the employment of parametric tests.

PCL-5 scores were differentiated by gender more than by age. Women scored significantly higher than men on the total PCL-5 scale and on each criterion ($p < .001$). Age affected mostly criteria B and C. Older people showed increased intrusive and avoidance symptoms. The highest scores were obtained by persons who had experienced trauma directly due to their own illness or their child's illness, and victims of domestic violence or MVA. Subjects occupationally exposed to traumatic events (firemen, policemen) had the lowest PTSD scores.

Differential diagnosis of PTSD

In scientific research, comparison of means is a commonly used tool for tracking differences in the severity and prevalence of symptoms. However, in differential diagnosis, we need to refer to criterion validity and find an adequate cut-off point to be able to take optimal diagnostic decisions. To determine the optimal cut-off point, we used two measures of diagnostic accuracy: sensitivity and specificity. An adequate cut-off point is one which maximises both values. An alternative procedure for estimating a cut-off point is to evaluate the severity of symptoms in each of the four PTSD criteria. A provisional PTSD diagnosis can be made by treating each item rated as 2 ("Moderately") or higher as a symptom endorsed. The rating ≥ 2 should be given to at least one symptom from criteria B and C, and at least two symptoms from criteria D and E.

We checked both of the aforementioned procedures in our own study of 60 survivors of MVA. After verification of various cut-off points, we obtained maximised values of sensitivity and specificity for a cut-off of 33 points. At this cut-off point, 36% of the respondents were preliminarily diagnosed with PTSD. The same diagnosis was made for 34% of the respondents with criteria B–E item ratings of ≥ 2 . Victims of domestic violence had the highest rate of PTSD diagnosis (70%). The lowest prevalence of PTSD was found among people after transplantation.

DISCUSSION

The psychometric properties of the Polish adaptation of PCL-5 are satisfactory. The parameters obtained in the Polish study correspond to those obtained for the original version and other national versions of PCL-5. Generally, the severity of PTSD symptoms depends on the type of trauma, which is in line with current knowledge of this topic. People who had directly experienced trauma in their personal lives had the highest PCL-5 scores, while those occupationally exposed to trauma had the lowest scores. The estimated cut-off point of ≥ 33 accurately differentiated the respondents. Various cut-off values have been adopted in other national versions of PCL-5, however, they are still close to the value of 31–33 points.

Fit indexes were determined for five different models using a matrix of all results from our own studies. The four-factor model (re-experiencing: B1–B5; avoidance: C1–C2; negative alterations in cognition and mood: D1–D7, and alterations in arousal and reactivity: E1–E6), characterised for the original version of the instrument, satisfied almost all the required criteria. However, as in many other studies, the seven-factor hybrid model (combining anhedonia and externalizing behavioral models) was found to best fit the empirical correlation matrix.

The Polish version of PCL-5 can be used as a screening tool and to make provisional diagnoses of PTSD. Our results indicate that PCL-5 is a sensitive, specific, and reliable measure of PTSD with a high clinical utility. Of course, a psychometric diagnosis must necessarily be confirmed by clinical examination.

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