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PSYCHOMETRIC PROPERTIES OF THE TURKISH VERSION OF THE PERCEIVED INVALIDATION OF EMOTION SCALE

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Abstract

Zielinski and Veilleux (2018) developed the Perceived Invalidation of Emotions Scale (PIES) to measure people's perceptions of ignored or invalidated emotion sharing. Since there is no instrument assessing emotion invalidation for the Turkish sample, this study aimed to examine the psychometric properties of the scale and adapt it into Turkish.
Method: The original scale was first translated into Turkish and then back into the original language. 390 adults aged 18-65 years participated in the study. Participants were given Childhood Trauma Questionnaire (CTQ), the Difficulties in Emotion Regulation Scale-Short Form (DERS-16), the Multidimensional Scale of Perceived Social Support (MSPSS), the Psychological Vulnerability Scale (PVS), the Beck Anxiety Inventory (BAI), and the Beck Depression Inventory (BDI) to check for criterion-related validity.
Results: The confirmatory factor analysis revealed that the obtained values were acceptable. As a result of the correlation analyses conducted to determine the criterion-related validity of the PIES, it was revealed that there were positive, low-medium significant relationships with the PIES. According to the results of the study, Cronbach's alpha coefficients of PIES were found to be 0.86, respectively.
Conclusion: The findings of the present study show that the Turkish version of PIES is a reliable and valid measurement tool.

Keywords: *Invalidation, emotion, reliability, validity.*

1. Introduction

Invalidate means making something wrong or unacceptable, while emotional invalidation occurs when emotions are judged inappropriate by others (Zielinski & Veilleux, 2018). According to Biosocial Theory, childhood invalidation impairs emotion regulation and weakens trust in one's feelings (Linehan, 1993).

In chronic pain patients, invalidation manifests as lack of support and dismissiveness, particularly due to the invisibility of their illness (Kool, van Middendorp, Boeije & Geenen, 2009). Emotional invalidation research focuses on emotions rather than thoughts or identity (Zielinski, 2016). The brain's negativity bias may reinforce emotional invalidation (Savaşır, Boyacıoğlu & Kabakçı, 1996). Emotions, as adaptive resources, shape self-awareness and social interaction (Greenberg, 2008).

Emotional vulnerability also contributes to psychopathology (Sauer & Baer, 2010). More fragile individuals are prone to stress, psychological disorders, and negative emotions (Ingram & Price, 2010; Levine, 2004). Negative reactions while expressing emotions can heighten feelings of invalidation (Zielinski & Veilleux, 2018). Invalidation is both external and internal, leading to self-suppression (Linehan, 1993), while emotion regulation involves modifying emotional responses to achieve goals (Thompson, 1994).

Despite its significance, emotional invalidation remains under-researched in Turkey. Most studies focus on childhood experiences (Alpay, Bellur & Aydın, 2018), with no standardized tool for adulthood. Adapting the Perceived Emotion Invalidation Scale (PIES) into Turkish will address this gap, enriching research on emotion regulation, psychological distress, and social support.

In Turkish society, emotional suppression is reinforced within family and social structures, making emotional invalidation both prevalent and underexplored (Ersay, 2014; Yağmurlu & Altan, 2010). A Turkish adaptation of PIES will facilitate research on its relationships with emotion regulation difficulties, psychological distress, and perceived social support. Additionally, it will enable cross-cultural comparisons, shedding light on differences between collectivist and individualist societies.

2. Method

2.1. Participants

The study included 390 participants to assess the construct validity, criterion-related validity, discriminant validity, and reliability of the scale. Of the participants, 269 (69.0%) were female, 119 (30.5%) were male. The age range was 18–65 years (mean = 26,95, sd = 10,913). Regarding marital status, 85 (21.8%) were married, 302 (77.4%) were single, and 3 (0.8%) were divorced. For educational attainment, 7 (1.8%) had primary school education, 1 (0.3%) secondary school, 62 (15.9%) high school, 298 (76.4%) undergraduate, and 21 (5.4%) graduate education. In terms of parental education, most mothers (47.4%) and fathers (26.7%) had primary school education, while 14.6% of mothers and 25.1% of fathers had a university degree. Regarding income status, 7.9% rated their income as poor, 68.7% as moderate, and 23.3% as good. In terms of physical health, 2.8% described themselves as poor, 34.4% as fair, and 62.8% as good, while for psychological health, 9.7% rated themselves as poor, 51.8% as fair, and 38.5% as good. Lastly, 37.7% reported experiencing or witnessing a traumatic event.

2.2. Measures

Participants completed validated Turkish versions of psychological scales measuring perceived invalidationof emotion, emotion regulation, psychological health, trauma, and social support.

Perceived Invalidation of Emotion Scale (PIES) (Zielinski & Veilleux, 2018) - It is a 10-item, 5-point Likert-type scale.

Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock & Erbaugh, 1961; Turkish adaptation: Hisli, 1988, 1989) - 21-item, 4-point Likert-type scale that measures depression symptoms (α = .86).

Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown & Steer, 1988; Turkish adaptation: Ulusoy, Şahin & Erkmen, 1998) - 21 items, 4-point Likert-type scale measuring anxiety symptoms (α = .93).

Childhood Trauma Questionnaire (CTQ-28) (Bernstein et al., 1994; Turkish adaptation: Şar, Öztürk & İkikardeş, 2012) - 28 items, 5-point Likert-type scale that assesses childhood traumas (α = .79 - .94).

Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet & Farley, 1988; Turkish adaptation: Eker, Arkar & Yaldız, 2001) - 12 items, 7-point Likert-type scale that measures sources of social support (α = .88).

Difficulty in Emotion Regulation Scale-Short Form (DERS-16) (Bjureberg et al., 2016; Gratz & Roemer, 2004; Turkish adaptation: Yiğit & Guzey Yiğit, 2017) - 16-item, 5-point Likert-type scale that assesses difficulty in emotion regulation (α = .92).

Psychological Vulnerability Scale (PVS) (Sinclair & Wallston, 1999; Turkish adaptation: Akın & Eker, 2011) - 6-item, 5-point Likert-type scale that measures psychological sensitivity (α = .75).

2.3. Data analyses

Construct validity was assessed using confirmatory factor analysis (CFA) in AMOS 23.0, following a normality check and employing the maximum likelihood estimation method. Model fit was evaluated using indices from section 3.1, while reliability and criterion-related validity analyses were conducted in SPSS 20.0, including Cronbach's alpha, two-half reliability, and item-total correlations. Additionally, Hotelling's T^2 test assessed response bias, and Pearson correlation coefficients were used to examine the relationships between PIES scores and relevant psychological constructs.

3. Results

3.1. Construct validity

In this adaptation study, CFA was conducted to assess construct validity. In the evaluation of CFA, path diagram, fit indices (χ^2/df, GFI, AGFI, CFI, NFI, TLI, RMR, RMSEA) were taken into consideration. Three different models were compared based on the one-factor structure specified by Zielinski and Veilleux (2018) (Table 1).

The differences between the models were evaluated in terms of chi-square difference tests, CFI difference values and AIC. It can be said that Model 1 has acceptable fit values; χ^2 (35) = 202.268, χ^2/df = 5.779, GFI = 0.894, AGFI = 0.834, CFI = 0.882, NFI = 0.862, TLI = 0.849, RMR = 0.082, RMSEA = 0.111, AIC = 242.268. Model 2 was examined by selecting the three highest items with modification indicators above 10 (PIES2 and PIES6, PIES6 and PIES7, PIES4 and PIES5) and was found to have good fit values; χ^2 (31) = 107. 717, χ^2/df = 3.475, GFI = 0.948, AGFI = 0.907, CFI = 0.946, NFI = 0.927, TLI = 0.922, RMR = 0.059, RMSEA = 0.080, AIC = 155.717. For Model 3, in addition to the covariances in Model 2, covariances between PIES2 and PIES5, PIES4 and PIES9, PIES7 and PIES9 were

drawn, and the model was run again. The final model was found to have very good fit values; χ^2 (28) = 76.356, χ^2/df = 2.727, GFI = 0.963, AGFI = 0.928, CFI = 0.966, NFI = 0.948, TLI = 0.945, RMR = 0.049, RMSEA = 0.067, AIC = 130.356 (Table 1).

Table 1. PIES CFA.

	Model 1	Model 2	Model 3
χ^2	202.268	107.717	76.356
df	35	31	28
p	.000	.000	.000
χ^2 /df	5.779	3.475	2.727
GFI	.894	.948	.963
AGFI	.834	.907	.928
CFI	.882	.946	.966
NFI	.862	.927	.948
TLI	.849	.922	.945
RMR	.082	.059	.049
RMSEA	.111	.080	.067
(AIC)	242.268	155.717	130.356
Differences Between Models	Model 1 - Model 2	Model 2 - Model 3	Model 1 - Model 3
χ^2 differences	94.551	31.361	125.912
CFI differences	.064	.02	.084

χ^2: Chi-square, χ^2 /df: Chi-square/degree of freedom ratio, GFI:Goodness of Fit Index, AGFI:, Adjusted Goodness of Fit Index, CFI: Comparative Fit Index, NFI: Normed Fit Index, TLI: Tucker-Lewis Index, RMR: Root Mean Square Residual and RMSEA: Root Mean Square Error of Approximation

3.2. Criterion related validity

Table 2 shows the correlations between perceived emotional invalidity measured by PIES and measures of emotional dysregulation, psychological health (depression, anxiety, psychological vulnerability), childhood experiences (childhood traumas) and social support, which are considered to be related to the concept. Perceived emotion invalidity was found to be associated with such measures. The total PIES score correlated significantly with all six measures at the .001 level (DERS-16, r = .352; BDI, r = .338; BAI, r = .298; PVS, r = -.318; CTQ, r = .266; MSPSS, r = -.307).

Table 2. Correlation coefficients of PIES with other scales used in the study.

	DERS-16	BDI	BAI	PVS	CTQ-28	MSPSS
PIES	.352**	.338**	.298**	-.318**	.266**	-.307**

*DERS-16: Difficulties of Emotion Regulation Scale-Short Form, BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory, PVS: Psychological Vulnerability Scale, CTQ-28: Childhood Trauma Questionnaire, MSPSS: Multidimensional Scale of Perceived Social Support, *** p<.001*

3.3. Internal consistency

A reliability analysis was conducted to assess the internal consistency and split-half reliability of the scale. Cronbach's alpha (α) was calculated to determine internal consistency, while inter-item correlations were examined to assess the strength and direction of relationships among scale items. Additionally, a split-half reliability analysis was performed using the Spearman-Brown coefficient and Guttman split-half coefficient. The Cronbach's Alpha for the proposed scale was α = .859, which demonstrates high internal consistency (α = .93 as reported by Zielinski & Veilleux, 2018). Cronbach's alpha values ranged from .838 to .865 when any single item was removed, indicating that the scale maintains strong reliability across all items.

A split-half reliability analysis showed a r = .736 correlation between the two halves of the scale The Spearman-Brown coefficient was .848 for equal length conditions, while the Guttman split-half coefficient was .847. These findings confirm the high reliability of the scale, as split-half coefficients above .80 indicate strong reliability (DeVellis, 2017).

To test for statistically significant differences across items, ANOVA tests were conducted, including Friedman's test and Hotelling's T^2 test. The results demonstrated significant differences in multivariate means ($\chi^2(9) = 635.575$, $p < .001$; $T^2 = 448.198$, $F(9, 381) = 48.776$, $p < .001$), suggesting that individual items varied significantly in their responses.

A descriptive analysis was performed to assess the distribution characteristics of the scale (Table 3.). The analysis of skewness indicates that most items exhibit rightward asymmetry, suggesting a positive skew. Regarding kurtosis, the distribution is mostly mesokurtic, with some items displaying mild

leptokurtic tendencies. The skewness and kurtosis values fall within the acceptable ranges (|3| for Skewness and |10| for Kurtosis, see Kline, 2011), indicating that the distribution of responses does not exhibit extreme deviations. These findings suggest a moderate concentration of the measured values around the mean, with no severe departures from normality.

Table 3. Means, Standard Deviations, Skewness and Kurtosis Values of Items.

	Mean	Std. Deviation	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
PIES1	2,08	1,084	,858	,124	-,004	,247
PIES2	3,00	1,207	,014	,124	-1,073	,247
PIES3	2,03	1,059	,885	,124	,027	,247
PIES4	1,58	,885	1,615	,124	2,224	,247
PIES5	1,78	1,020	1,343	,124	1,166	,247
PIES6	2,35	1,121	,570	,124	-,493	,247
PIES7	1,92	1,020	,993	,124	,350	,247
PIES8	1,88	,973	1,024	,124	,522	,247
PIES9	2,20	1,152	,718	,124	-,435	,247
PIES10	1,82	1,102	1,375	,124	1,076	,247

4. Discussion

The aim of this study was to evaluate the factor structure and psychometric properties of the PIES in a Turkish sample. The CFA supported a one-factor structure, consistent with the original version of the scale (Zielinski & Veilleux, 2018). Model comparisons and fit indices suggested that Model 3 demonstrated the best fit. These values fall within the acceptable or excellent fit range suggested in the literature (Bentler & Bonett, 1980; Hu & Bentler, 1999; Tabachnick & Fidell, 2007). AIC values were used to compare models, and Model 3, with the lowest AIC value, was identified as the most valid structure for the Turkish version of PIES (Gomez & Rohner, 2011).

For criterion-related validity, PIES scores were strongly linked to DERS-16, BDI, BAI, PVS, CTQ-28, and MSPSS, all going in the right direction. There are strong links between the DERS-16, BDI, BAI, and CTQ-28 tests that support the idea that people who feel more emotionally invalidated are more likely to be psychologically distressed. Similarly, the negative correlation with PVS suggests that individuals with higher perceived emotional invalidation report lower psychological vulnerability, possibly because those who frequently experience emotional invalidation may develop adaptive coping mechanisms or emotional resilience over time.

The adaptation of the scale into Turkish culture significantly contributes to understanding the psychological impact of perceived emotional invalidation. In Turkish society, where emotional suppression is prevalent, this adaptation enables further research on its relationship with psychological well-being (Ersay, 2014; Yağmurlu & Altan, 2010). However, as the sample primarily consisted of young adults, future studies should examine the scale across different age groups and clinical populations.

References

Akın, A., & Eker, H. (2011, July). *Turkish version of the Psychological Vulnerability Scale: A study of validity and reliability.* Paper presented at the meeting of 32nd International Conference of the Stress and Anxiety Research Society (STAR), Münster, Germany.

Alpay, E. H., Bellur, Z., & Aydin, A. (2018). The reliability and validity of the Invalidating Childhood Environment Scale (ICES)–Turkish Version. *Dusunen Adam Journal of Psychiatry and Neurological Sciences*, *31*(1), 40-49.

Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: psychometric properties. *Journal of Consulting and Clinical Psychology*, *56*(6), 893-897.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961) An inventory for measuring depression. *Archives Of General Psychiatry*, *4*, 561-571.

Bentler, P., & Bonett, D. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, *88*(3), 588-606.

Bernstein, D. P., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzel, K., ... & Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *The American Journal of Psychiatry*, *151*(8), 1132.

Bjureberg, J., Ljótsson, B., Tull, M. T., Hedman, E., Sahlin, H., Lundh, L. G., ... & Gratz, K. L. (2016). Development and validation of a brief version of the difficulties in emotion regulation scale: the DERS-16. *Journal of Psychopathology and Behavioral Assessment, 38*, 284-296.

DeVellis, R. F. (2017). *Scale development: Theory and applications* (4th ed.). Thousand Oaks, CA: Sage.

Eker, D., Arkar, H., & Yaldız, H. (2001). Factorial structure, validity, and reliability of revised form of the multidimensional scale of perceived social support. *Turkish Journal of Psychiatry, 12*(1), 17-25.

Ersay, E. (2014). Parental socialization of emotion: How mothers respond to their children's emotions in Turkey. *International Journal of Emotional Education*, *6*(1), 33-46.

Gomez, R., & Rohner, R. P. (2011). Tests of factor structure and measurement invariance in the United States and Australia using the adult version of the parental acceptance-rejection questionnaire. *Cross-Cultural Research, 45*(3), 267-285.

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment, 26*(1), 41-54.

Greenberg, L. (2008). Emotion and cognition in psychotherapy: The transforming power of affect. *Canadian Psychology*, *49*, 49-59.

Hisli, N. (1988). Beck Depresyon Envanteri'nin geçerliği üzerine bir çalışma. *Psikoloji Dergisi, 6*(22), 118-122.

Hisli, N. (1989). Beck Depresyon Envanteri'nin üniversite öğrencileri için geçerliği, güvenirliği. *Psikoloji Dergisi, 7*(23), 3-13.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, *6*(1), 1-55.

Ingram, R. E., & Price, J. M. (Eds.). (2010). *Vulnerability to psychopathology: Risk across the lifespan*. New York, US: Guilford Press.

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (5th ed.). New York: The Guilford Press.

Kool, M. B., van Middendorp, H., Boeije, H. R., & Geenen, R. (2009). Understanding the lack of understanding: invalidation from the perspective of the patient with fibromyalgia. *Arthritis & Rheumatism*, *61*, 1650-1656.

Levine, C. (2004). The concept of vulnerability in disaster research. *Journal of Traumatic Stress*, 17(5), 395-402.

Linehan, M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford Press.

Sauer, S. E., & Baer, R. A. (2010). Validation of measures of biosocial precursors to borderline personality disorder: Childhood emotional vulnerability and environmental invalidation. *Assessment, 17*(4), 454-466.

Savaşır, I., Boyacıoglu, G., & Kabakçı, E. (1996). *Bilişsel-davranışçı terapiler*. Ankara: Türk Psikologlar Derneği.

Sinclair, V. G. & Wallston, K. A. (1999). The development and validation of the Psychological Vulnerability Scale. *Cognitive Therapy and Research, 23*(2), 119-129.

Şar, V., Öztürk, E. & İkikardeş, E. (2012). Çocukluk Çağı Ruhsal Travma Ölçeğinin Türkçe uyarlamasının geçerlilik ve güvenilirliği. *Türkiye Klinikleri Journal of Medical Sciences, 32*(4), 1054-1063.

Tabachnick, B. G., & Fidell, L. S., (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Pearson.

Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development, 59*(2/3), 25-52.

Ulusoy, M., Sahin, N. H., & Erkmen, H. (1998). The Beck Anxiety Inventory: Psychometric properties. *Journal of Cognitive Psychotherapy, 12*(2), 163-172.

Yağmurlu, B., & Altan, O. (2010). Maternal socialization and child temperament as predictors of emotion regulation in Turkish preschoolers. *Infant and Child Development: An International Journal of Research and Practice*, *19*(3), 275-296.

Yiğit, İ., & Guzey Yiğit, M. (2017). Psychometric Properties of Turkish Version of Difficulties in Emotion Regulation Scale-Brief Form (DERS-16). *Current Psychology*, 1-9.

Zielinski, M. J. (2016). *The Perceived Invalidation of Emotion Scale (PIES): Development and psychometric properties* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 10139788).

Zielinski, M. J., & Veilleux, J. C. (2018). The Perceived Invalidation of Emotion Scale (PIES): Development and psychometric properties of a novel measure of current emotion invalidation. *Psychological assessment*, *30*(11), 1454-1467.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*(1), 30-41.