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Turkish Version of the Traumatic Grief Inventory-Self Report (TGI-SR): Validity and reliability

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ABSTRACT

This study aimed to adapt the Traumatic Grief Inventory-Self Report (TGI-SR) to Turkish in a sample of 403 bereaved individuals. The results of the confirmatory factor analysis indicated a correlated two-factor structure for the 18-item version. The Cronbach's alpha coefficient was .94 for the entire scale. Correlation analysis indicated that the TGI-SR was positively correlated with grief-related symptoms. To test discriminant validity, Latent Profile Analysis was performed, and profiles significantly differed from each other in terms of the impact of event, depression, anxiety, and stress levels. Findings showed that the Turkish version of the TGI-SR is a valid and reliable tool.

As a natural consequence of losing a loved one, people may have emotional (e.g., anger, guilt, longing, grief), cognitive (e.g., denial, intrusive thoughts, excessive preoccupation with loss), behavioral (e.g., burnout, social withdrawal) and physiological/bodily (e.g., loss of appetite, sleep problems, physical complaints) symptoms (Stroebe et al., 2007). These symptoms typically diminish over time and most people adapt to the new life after the loss. However, approximately 10–20% of the bereaved people cannot go through the grief process as anticipated, especially in the case of traumatic losses (Kersting et al., 2011; Shear et al., 2011). In such a situation, the symptoms of grief may be permanent, and it becomes difficult to adapt and recover. Researchers claim that this situation requires a different diagnosis and treatment than post-traumatic stress disorder (PTSD), anxiety-related disorders, depression, and other mental problems (Boelen & Smid, 2017a; Prigerson et al., 1996).

This persistent and debilitating grief reaction has been described by several theorists differently, including (but not limited to) pathological grief (Horowitz et al., 1993), complicated grief (Prigerson et al., 1995; Shear et al., 2011), traumatic grief (Prigerson et al., 1997) or prolonged grief (Prigerson et al., 2009). However, diagnosis and classification studies have been focused on two prominent concepts in the relevant literature. First of these is the Prolonged Grief Disorder (PGD) which is characterized by cognitive, emotional, and behavioral symptoms following the death of a loved one that causes significant functional impairment and lasts more than six months after the loss. On the other hand, Complicated Grief (Shear et al., 2011) includes symptoms such as loneliness, rumination difficulties, emotional and physical symptoms in addition to the symptoms of PGD. Recent studies claimed for recognition of the permanent symptoms of grief as a distinct condition. As a result, this phenomenon is included in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) under the title of Conditions for Further Study as Persistent Complex Bereavement Disorder (PCBD; American Psychiatric Association, 2013). It was also included in the 11th edition of the International Classification of Diseases (ICD-11) with the name of Prolonged Grief Disorder (PGD; World Health Organization [WHO], 2018). PCBD can be diagnosed when someone experiences the loss of a close relationship and has at least one of the symptoms of separation distress, and at least six of the symptoms of reactive distress to the death or social/identity disruption for at least 12 months in adults and 6 months in children (American Psychiatric Association [APA], 2013).

The current developments in diagnostic categories and discussions reveal the need for measurement of the problematic grief symptoms. Although they do not cover current PCBD and PGD symptoms, there

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are several mostly used instruments to evaluate the intensity of grief. One of the most frequently used measurement tools in this field is the Inventory of Complicated Grief (Prigerson et al., 1995). The original form of the inventory has 19 items and there is also an extended version of 32 items (Inventory of Complicated Grief-Revised; Prigerson & Jacobs, 2001). Recently, the scale has reached its final form with 13-items (PG-13; Prigerson et al., 2009). A promising tool, the 16-item The Persistent Complex Bereavement Inventory developed by Lee (2015) that covers criteria for PCBD, but it does not include the PGD criteria. In addition, The Two-Track Model of Bereavement Questionnaire (TTBQ; Rubin et al., 2009), and the Texas Revised Inventory of Grief (TRIG; Faschingbauer et al., 1987) are other commonly used measurement tools. Even though they are all well-validated tools, they do not include some of the PCBD or PGD criteria.

Several instruments have also been developed or adapted for the assessment of grief reactions in Turkish population. One of these tools is the 35-item The Mourning Scale developed by Balcı Çelik (2006) in a university student sample. The scale evaluates the physical, emotional, cognitive, and behavioral symptoms experienced by bereaved people. Another widely used scales adapted into Turkish are the 70-item TTBQ (Ayaz et al., 2014), 21-item TRIG (Yildiz & Cimete, 2011), and the 17-item Core Bereavement Items (Selvi et al., 2011). However, none of these tools has been included in the recent diagnostic criteria of PCBD. More recently, Gökler Danisman et al. (2017) tested the use of the 12-item Turkish Version of Prolonged Grief Disorder-Patient Form in a sample of patients diagnosed with cancer. Even though the item content of this scale involves the PGD criteria, it was not tested on the bereaved sample but the cancer patients. Consequently, there is a need for a tool assessing the persistent and complex bereavement symptoms that is compatible with the most up-to-date diagnostic criteria in Turkey.

Recently, Boelen et al. (2019) developed the Traumatic Grief Inventory Self-Report Version (TGI-SR) that covers both PCBD and most of the ICD-11 PGD criteria. Along with the 16 PCBD symptom criteria, one PGD symptom (being stunned/shocked) and one item for impairment in functionality comprised the content of 18 items TGI-SR. Unlike the others, the researchers preferred the term "traumatic grief" as they consider the experience of loss as a separation trauma. In this regard, it was thought that the adaptation of TGI-SR to Turkish will meet the need for a comprehensive instrument to assess the level of grief in Turkish population. Therefore, the first aim of this study was to test validity and reliability of Turkish version of TGI-SR as one of the most up-to-date measurement tools to assess the intensity of symptoms of both PCBD (included in DSM-5) and PGD.

Further, it was aimed to determine whether there are different subgroups in terms of grief symptoms among Turkish participants. Recent studies have focused on whether there are different patterns in terms of grief symptoms since PCBD is a separate condition from disorders such as PTSD and MDD but is often seen together. Therefore, some researchers adapted person-centred approach by conducting latent class analysis (LCA) to gain a better insight on loss-related experiences and expression of the grief symptoms in bereaved individuals (e.g. Boelen et al., 2019; Eisma et al., 2019; Heeke et al., 2017; Lenferink et al., 2017). In a study by Lenferink et al. (2017), the results of the latent class analysis showed three different subgroups in terms of prolonged grief, depression, and PTSD symptoms: resilient class, moderate PGD class and a class with combined symptoms. Also, Djelantik et al. (2017) obtained similar three subgroups on a bereaved sample from Netherland. Some other studies found more than three groups with differential characteristics of grief symptoms. For example, in a study conducted with earthquake victims, five different groups in terms of complex bereavement and PTSD symptom profiles (Eisma et al., 2019); in another study conducted with Colombian participants, four different subgroups were identified in terms of PGD and PTSD (Heeke et al., 2017). Given the importance of the personally unique nature of bereavement, the second aim of this study was to test the latent symptom profiles in terms of TGI-SR scores and examine whether the grief-related symptoms are associated with different symptom patterns in a Turkish bereaved sample.

Methods

Participants

The sample of this study were individuals over the age of 18 who lost a significant person in their life (e.g., mother, father, spouse, brother, child, partner, close relative, or friend, and so on). In total, 311 (77%) of the sample of 403 participants were women. Death of relatives (41%) and parents (34%) were reported as the most upsetting experience of loss by participants. Death due to disease which included

Table 1. Socio-demographic and loss-related characteristics of the participants.

Demographic characteristics	
Gender	[*N* (%)]
Women	311 (77)
Men	92 (23)
Age [*M* (*SD*)]	30.54 (11.78)
Demographic variables related with loss	
Mean number of losses [*M* (*SD*)]	1.75 (.91)
Deceased was	[*N* (%)]
Family members	175 (43)
Relatives	164 (41)
Others	64 (16)
Time since loss (months) [*M* (*SD*)]	34.85 (36.68)
Age of deceased [*M* (*SD*)]	58.86 (22)
Cause of death	[*N* (%)]
Illness (heart attack, cancer, renal impairment, etc.)	326 (81)
Traffic accident	29 (7)
Other accidents (work/home accidents etc.)	13 (3)
Suicide	18 (5)
Homicide (murder, terrorist attack, robbery etc.)	13 (3)
Other	4 (1)

serious conditions such as heart attack, cancer, and kidney failure, was the most common cause of loss (81%) in the present study. Following the loss, 21 (5%) of participants reported receiving psychotherapy, 15 (4%) of them taking medication, 11 (3%) of them receiving both medication and psychotherapy. Seventy percent of the participants reported that their loss experiences sudden and unexpected. The average time after the loss was 35 months in this study. See Table 1 for detailed information related to other socio-demographic variables and characteristics of the loss.

Materials

Sociodemographic information form

This form created by the researchers includes personal information on participants' age, gender as well as the number of losses, time since loss, closeness to deceased and age of the deceased person, and the cause of death.

Traumatic Grief Inventory Self-Report Version (TGI-SR)

The scale was developed by Boelen and Smid (2017b) to assess the severity of traumatic grief reactions. It was created according to the potential diagnostic criteria of DSM-5 Persistent Complex Bereavement Disorder (PCBD). It has 18 items on a 5-point Likert scale (1 = "Never"; 5 = "Always"). The original form of the inventory has a one-dimensional structure and total score range from 18 to 90. Cronbach's alpha coefficients change between .91 and .95 (Boelen & Smid, 2017b; Boelen et al., 2019) The scores of the inventory were found to be positively related to psychopathological symptoms and negatively related to satisfaction with life (Boelen & Smid, 2017b). A cutoff point for this inventory to indicate a high probability of meeting DSM-5 PCBD criteria has been suggested, equaling 61 and above for possible PCBD diagnosis (Boelen et al., 2019).

Impact of Event Scale-Revised (IES-R)

The IES-R was developed by Weiss and Marmar (1997) to measure the level of stress emerging as a reaction to traumatic life events during the past week. It consists of 22 items on a 5-point Likert scale (1 = "Not at all," 5 = "Extremely"). The scale has three sub-dimensions assessing traumatic stress symptoms, which are intrusion (8 items), avoidance (8 items), and hyperarousal (6 items). In the Turkish version of IES-R internal consistency coefficients were found .94 for total IES-R which pointed to high reliability (Çorapçıoğlu et al., 2006).

Depression, Anxiety, and Stress Scale-21 (DASS-21)

The DASS-21 was developed by Lovibond and Lovibond (1995) to assess the level of depression, anxiety, and stress symptoms experienced within a week and originally had 42 items. Then, DASS-21 was created to shorten the scale by selecting representative items from DASS-42 (Antony et al., 1998). As in its original form, it had three subscales, which are depression, anxiety, and stress and each subscale contains 7 items. Each item was evaluated on a 4-points Likert scale (0 = "Never," 3 = "Almost always"). The first version of the scale with 42 items was adapted into Turkish by Uncu et al. (2007). Yıldırım et al. (2018) examined the psychometric properties of the short version of the scale and found that this form also showed a three-factor structure like the original version. Also, the internal consistency coefficient values were found to be .89 for depression, .87 for anxiety, and .90 for stress.

Procedure

We received permission from the authors (Boelen & Smid, 2017b) to adapt the Traumatic Grief Inventory Self Report Version to Turkish. We collected data with the approval of the Ethics Review Board of Dokuz Eylul University. All 18 items of TGI-SR were translated from English to Turkish separately by two translators who had a high command of both English and Turkish. Three clinical psychologists compared these two translated versions of TGI-SR and made further recommendations if necessary. After this

process, the researchers reviewed these suggested modifications and decided on the final items of the Turkish version of TGI-SR by considering its relevance and comprehensibility.

Participants were recruited using a convenience sampling method. Some of the data were collected via Google Forms on online platforms. Participation in the research link was announced through popular social media applications and online communication. The printed questionnaire was also disseminated to potential participants by hand. All participants initially were asked to approve an informed consent form which includes information about the general aim of the study, confidentiality issues, voluntary participation, and their right to quit the study at any time. Then, a socio-demographic information form, TGI-SR, IES-R, DASS-21 were presented. No incentive was offered for participation in the research. It took about 15 minutes for each participant to complete the study.

Results

Confirmatory factor analysis

The confirmatory factor (CFA) analysis was carried out to test whether TGI-SR is explained by a single or multi-factor structure. In this regard, besides the single-factor model, the orthogonal factor model and two-factor related model were tested using Amos 23 (Arbuckle, 2014). The findings were evaluated according to chi-square value and other accepted model fit indices (i.e., RMSEA = root mean square error of approximation, CFI = comparative fit index, NFI = normed-fit index and IFI = incremental fit index). For good model fit, the ratio of chi-square value which is sensitive to sample size to degrees of freedom (χ^2/df) needs to be between 2 and 3, which indicates a good model fit (Schermelleh-Engel et al., 2003). Furthermore, fit indices such as CFI, NFI, and IFI, .90 and above are indicators of acceptable fit (Hair et al., 2010) and .95 and above are interpreted as good fit (Hu & Bentler, 1999). Considering these values, the findings of CFA indicated that two-factor related model (model 3) of TGI-SR have good fit values (See Table 2).

Table 2. Results of the confirmatory factor analysis.

Models	χ^2/df	RMSEA	CFI	NFI	IFI
Model 1: Single factor	4.251	0.09	0.90	0.87	0.90
Model 2: Orthogonal two factor	5.375	0.10	0.87	0.84	0.87
Model 3: Correlated two factor	2.587	0.06	0.95	0.92	0.95

RMSEA: root mean square error of approximation; CFI: comparative fit index; NFI: normed-fit index; IFI: incremental fit index.

Reliability of TGI-SR

Internal consistency coefficient value (Cronbach's Alpha) of the inventory was measured as .94 for the total scale. In parallel with findings of factor analysis, reliability coefficient values for two subdimensions also yielded good results; it was measured as .92 for separation distress and .90 for adaptation difficulties.

Relationships with other variables

To evaluate the concurrent validity, the correlations of TGI-SR and its sub-dimensions with subscales of DASS-21 (i.e., depression, anxiety, and stress) and level of traumatic stress (IES-R) were examined with Pearson's correlation analysis. According to Pearson's correlation coefficients, the total score of TGI-SR and its sub-dimensions were found to be strongly and positively associated with the level of traumatic stress; moderately and positively correlated with the levels of depression, anxiety, and stress (see Table 3).

Latent profiles of traumatic grief

To explore whether the participants were divided into distinct subgroups in terms of traumatic grief symptoms, latent profile analysis (LPA) was conducted by using Latent GOLD version 5.1 (Vermunt & Magidson, 2016). We decided to use LPA because we assumed TGI-SR scores as continuous variables. Different information criteria are used for model selection in latent profile models. The most used of which are the Akaike Information Criterion (AIC; Akaike, 1987) and the Bayesian Information Criterion (BIC; Schwartz, 1978). In addition, other information criteria are widely considered, such as Consistent Akaike Information Criterion (CAIC; Bozdogan, 1987) and Corrected AIC with a penalty factor of 3 (AIC3). Independent from the information criteria used, a lower value indicates a better model fit. In the model selection process, parsimony (simplicity) and interpretability should also be considered besides statistical criteria (Collins & Lanza, 2010).

The analysis was carried out based on the TGI-SR scores only. According to the lowest AIC and log-likelihood values, 10-cluster solution fit the data better than others. Moreover, five-cluster solution with the lowest BIC score and eight-cluster solution with the lowest AIC3 score fit the data better. However, the interpretability of these solutions was difficult. Considering the lowest CAIC value as well as parsimony and interpretability of the model, four-cluster solution was chosen (see Table 4). Table 5 indicates

Table 3. TGI-SR and relationship with the other variables.

		1	2	3	4	5	6	7
1	TGI-SR		0.92**	0.96**	0.82**	0.56**	0.52**	0.51**
2	TGI-SR _separation distress			0.77**	0.73**	0.41**	0.40**	0.42**
3	TGI-SR _adaptation difficulties				0.80**	0.60**	0.56**	0.53**
4	IES-R					0.63**	0.65**	0.59**
5	Depression						0.75**	0.77**
6	Anxiety							0.80**
7	Stress							
	M.	48.28	22.90	25.37	50.83	14.44	12.69	14.99
	SD	17.15	7.66	10.55	18.41	5.89	5.24	5.40
	a	.94	.92	.90	.93	.90	.87	.86

**$p < .01$; TGI-SR: Traumatic Grief Inventory; IES-R: Impact of Event Scale Revised.

Table 4. Fit indices for the models of latent profiles.

Models	LL	BIC	AIC	AIC3	CAIC
1-Cluster	−10,854.3	22,194.48	21,870.57	21,951.57	22,275.48
2-Cluster	−9,573.05	19,745.99	19,346.1	19,446.1	19,845.99
3-Cluster	−9,169.92	19,053.71	18,577.84	18,696.84	19,172.71
4-Cluster	−8,980.37	18,788.59	18,236.74	18,374.74	**18,926.59**
5-Cluster	−8,918.67	**18,779.16**	18,151.33	18,308.33	18,936.16
6-Cluster	−8,861.95	18,779.72	18,075.9	18,251.9	18,955.72
7-Cluster	−8,809.03	18,787.85	18,008.05	18,203.05	18,982.85
8-Cluster	−8,772.42	18,828.6	17,972.83	**18,186.83**	19,042.6
9-Cluster	−8,746.32	18,890.4	17,958.65	18,191.65	19,123.4
10-Cluster	**−8,711.8**	18,935.34	**17,927.61**	18,179.61	19,187.34

LL: Log-likelihood; AIC: Akaike Information Criterion; BIC: Bayesian Information Criterion; AIC3: Corrected AIC with a penalty factor of 3; CAIC: Consistent AIC.
Bold values indicate the best fit value of each criterion.

mean symptom scores and size percentage of each profile. While average item scores of four (frequently) and above (always) indicate the presence of symptoms, an average of one point (never) indicates no symptom presence. Cluster 1, with the mildest symptom averages, included 19% of the participants and was called the "resilient group." In Cluster 2 and 3, individuals had average scores of three (sometimes) or less for all symptoms. Therefore, these two clusters exhibited milder traumatic grief symptom profiles. Cluster 2 included 39% of the participants and specifically the answer to the item 17 ("I experienced a desire to die to be with the deceased") separated the group from Cluster 3. For this reason, it was named as the "mild traumatic grief group without desire to die." Cluster 3, included 24% of the participants, referred to as "mild traumatic grief group." Finally, Cluster 4 with 18% of the participants was the heaviest group in terms of TGI-SR symptom scores and therefore it was referred to as the "traumatic grief group."

Differences in grief profiles

Latent grief profiles were used to test the differential validity of the scale. Several analyses of variance (ANOVA) were conducted to explore how four profiles of traumatic grief differed from each other on subscales of DASS-21(depression, anxiety, and stress) and on the total scores of IES-R and TGI-SR. ANOVA results demonstrated that the difference between profiles was significant for all variables (see Table 6). The differences between profiles were analyzed in detail by Bonferroni post-hoc tests. The findings showed that all three profiles significantly differed from each other on the level of traumatic grief, impact of event, depression, anxiety, and stress. However, only the difference between profile 2 (mild traumatic grief group without desire to die) and 3 (mild traumatic grief group) was not significant in terms of anxiety and stress levels.

Table 5. Mean symptom scores within each of the four latent profiles.

Profile	1	2	3	4
Size (%)	19	39	24	18
TGI-SR1	2.33	3.22	3.65	4.46
TGI-SR2	1.91	3.19	3.70	4.84
TGI-SR3	2.27	3.41	3.90	5.00
TGI-SR4	1.69	2.88	3.50	4.59
TGI-SR5	1.60	2.94	3.51	4.78
TGI-SR6	1.37	2.80	3.63	4.72
TGI-SR7	1.93	2.96	3.83	4.53
TGI-SR8	1.37	2.50	2.98	3.97
TGI-SR9	1.59	2.26	2.94	3.59
TGI-SR10	1.08	1.98	2.89	3.69
TGI-SR11	1.00	1.77	2.81	3.92
TGI-SR12	1.22	2.20	3.14	3.75
TGI-SR13	1.00	1.82	3.09	4.08
TGI-SR14	1.05	1.97	2.94	3.81
TGI-SR15	1.44	2.08	2.83	3.31
TGI-SR16	1.08	1.85	2.65	3.12
TGI-SR17	1.00	1.00	2.16	3.02
TGI-SR18	1.03	1.75	2.74	3.88

Profile 1: Resilient group; Profile 2: Mild traumatic grief without desire to die; Profile 3: Mild traumatic grief group; Profile 4: Traumatic grief group; TGI-SR: Traumatic Grief Inventory.

Discussion

The main aim of the study was to assess the validity, reliability, and psychometric properties of the Turkish form of TGI-SR. Accordingly, the scale was translated into Turkish, and then confirmatory factor analysis, reliability and validity analysis were applied. Also, the characteristics of traumatic grief symptoms in

Table 6. Traumatic grief profiles and relationship with other variables.

	M (SD)						
	Profile 1	Profile 2	Profile 3	Profile 4	*p*	*F*	*Post-Hoc*
TGI-SR	26.0 (5.1)	42.7 (7.6)	56.9 (8.9)	73.3 (6.9)	<.001	587.3	4 > 3>2 > 1
IES-R	31.4 (7.4)	46.7 (13.8)	57.3 (14.3)	72.4 (13.5)	<.001	140.6	4 > 3>2 > 1
Depression	10.2 (3.8)	13.6 (5.3)	15.4 (5.5)	19.7 (5.2)	<.001	47.3	4 > 3>2 > 1
Anxiety	9.1 (2.8)	12.0 (4.5)	13.3 (5.2)	17.3 (5.3)	<.001	42.2	4 > 3 = 2 > 1
Stress	11.5 (4.0)	14.2 (5.0)	15.6 (4.9)	19.8 (4.7)	<.001	41.1	4 > 3 = 2 > 1

Profile 1: Resilient group; Profile 2: Mild traumatic grief without desire to die; Profile 3: Mild traumatic grief group; Profile 4: Traumatic grief group; TGI-SR: Traumatic Grief Inventory; IES-R: Impact of Event Scale-Revised.

different symptom profiles were evaluated with Latent Profile Analysis, and their relationship with other grief related symptoms such as traumatic stress, depression, anxiety, and stress was examined.

Confirmatory factor analysis results indicated a correlated two-factor structure for the 18-item TGI-SR. Although the two-factor structure of the inventory showed better fit values in the original studies, the item distribution was not suitable for meaningful interpretation so the researchers decided to use a single-factor structure of inventory (Boelen & Smid, 2017b; Boelen et al., 2019). In our study, it was observed that the distribution of items showed a more meaningful structure in parallel with the distinction between the possible criteria both in PGD (separation distress plus cognitive, emotional, and behavioral symptoms; Prigerson et al., 2009), and the PCBD criteria in DSM-5 distinction (separation distress plus reactive distress and social/identity confusion). While items representing the separation distress criterion predominantly were collected under the factor called "separation distress," items representing the social-identity disruption were collected under the second factor called "adaptation difficulties."

It is also noteworthy that this distribution is compatible with the dual process (loss-oriented and restoration-oriented stressors) model of coping with bereavement theory expressed by Stroebe and Schut (1999). The items in the separation distress factor have similar contents with the loss-oriented stressors (ruminations about the deceased, the time spent together and circumstances of the death as well as yearning for the deceased) expressed in the dual process model. Similarly, the items of the adaptation difficulties factor have similar contents to the situation expressed as restoration-oriented stressors (e.g., new responsibilities, roles, identities, or relationships). These findings show us that two-dimensional structure exists explicitly both in the original studies as well as in theoretical background like diagnosis and classification working properly in Turkish sample. The fact that the related two-factor structure which was confirmed in the Turkish form shows us that the inventory can be used validly both by taking the total score and with its sub-dimensions.

In addition to the results of factor analysis, it was noted that the Turkish form of the inventory had good internal consistency coefficient values for both the whole scale and the sub-dimensions, and accordingly, it was determined that it could be used as a reliable measurement tool in Turkish culture. Moreover, the inventory has a positive and significant relationship with symptoms related to traumatic grief such as traumatic stress, depression, anxiety, and stress, both as a total score and with its sub-dimensions. These findings support both the concurrent validity of the inventory and the relationship of traumatic grief with negative psychological symptoms (Simon et al., 2007).

Recent studies on traumatic grief increasingly focus on symptom profiles and show that people who experience significant loss have different symptom profiles in terms of grief and related diagnosis (e.g., Eisma et al., 2019; Lenferink et al., 2017). The results indicate that individuals with significant loss experience display different symptom profiles in terms of grief and related symptoms. These findings provide important support for the view that the grief process is experienced in the form of personal and personal experiences as much as the person himself (Kübler-Ross & Kessler, 2014). In our study, the participants were divided into profiles using LPA depending on their TGI-SR scores. Results indicated the existence of four different profiles, referred to as "resilient group," "mild traumatic grief group without desire to die," "mild traumatic grief group," and "traumatic grief group." The profiles were also used to test the discriminant validity of the inventory. The findings showed that all these profiles differed significantly from each other in terms of traumatic grief, impact of event, depression, anxiety, and stress levels, except for profile 2 and 3 for anxiety and stress. Because the main difference between profile 2 and 3 was the response of item 17 ("I experienced a desire to die to be with the deceased") which specifically put emphasis

on a depressive symptom rather than anxious or stressful symptoms. As a result, the inventory demonstrated good discriminant validity.

Our adaptation study has some limitations. First, although a general grief population was included in our study, our sample diversity remains limited in terms of generalizability of validity and reliability findings to various subcategories such as gender, age, and relationship with the deceased. In our study, mainly female participants (77%) were reached. This has been observed in earlier studies (Prigerson et al., 1995). Although there is no consensus on the differences between men and women in terms of the intensity of grief and negative symptoms, it was stated that women cope with less avoidant and expressing their negative emotions compared to men (Stroebe et al., 2001). This may be one of the biggest reasons why more female participants agreed to participate in our study.

Second, a cutoff score assessment of the inventory was not made for the diagnosis of possible PCBD. In future studies, a cutoff point evaluation can be made for the Turkish version of the TGI-SR by determining the possible status of the participants to be diagnosed with PCBD by means of diagnostic interviews. In addition, the test-retest reliability of the inventory was not evaluated since the measurements were taken at one-time point.

Finally, our study did not include a grieving group that was exposed to a specific traumatic experience. In order to be more representative, no limit for the specific reason of loss or closeness to loss was applied, and subjective evaluations of the participants were taken into account. Seventy percent of the participants defined the loss experiences as sudden and unexpected. Although there is a common sense that the grief will be experienced at more severe levels in case of traumatic situations, the death of a close person always has the potential to generate a traumatic effect (Rubin et al., 2003). For this reason, it is not easy to say that a long-waited death or a death without a traumatic content will not be traumatic loss or vice versa (Stroebe et al., 2001). Similarly, while developing the inventory, the term "traumatic grief" was used not because grief occurred under traumatic conditions, but because it represented "separation trauma" (Boelen & Smid, 2017b). Additionally, both in DSM-5 PCBD criteria and in ICD-11 PGD criteria, the emphasis is placed on the loss of a person with a close relationship and the symptoms experienced afterward rather than how the loss occurs (APA, 2013; WHO, 2018).

As a result, the Turkish version of TGI-SR was tested on a bereaved sample and results showed that the inventory is a valid and reliable tool to use both clinical and scientific purposes. The Turkish adaptation of the inventory is considered to meet the need for up-to-date measurement in the literature and it is hoped that it will enable the testing of new research questions that will contribute to the understanding of grief. Since this is the very first study assessing the psychometric properties of the scale in a non-western country, it may lead up to the cross-cultural designs within the grief framework. Especially, worldwide increasing numbers of unexpected deaths due to COVID-19 considered, screening grief symptoms gained importance more than ever. Owing to its brief format, it is a useful instrument for several settings, and it is hoped to provoke grief research in both Turkish and international literature.

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