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Measuring dysfunctional grief due to a COVID-19 loss: A Turkish validation study of the Pandemic Grief Scale

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ABSTRACT

The global death toll to date of the COVID-19 pandemic has been enormous, and millions of people are grieving these losses. The aim of the current study is to validate a Turkish version of the Pandemic Grief Scale (PGS), which is a brief English-language mental health screener to identify probable cases of dysfunctional grief associated with a COVID-19 death. Participants were assessed using the PGS, Patient Health Questionnaire-4 (PHQ-4) and Work and Social Adjustment Scale (WSAS). We surveyed 758 Turkish native speakers who participated online. Confirmatory factor analysis showed that the factor structure of the PGS was satisfactory. The scale was internally consistent with a Cronbach's alpha of 0.77 and a composite reliability of 0.90. The PGS demonstrated construct validity with strong correlations with suicidal ideation and substance use coping. Positive correlations of the PGS with the PHQ-4 and the WSAS demonstrated adequate convergent validity. The PGS discriminates well between persons with and without dysfunctional grief using an optimized cut score of ≥ 3 (89% sensitivity and 72% specificity). The PGS also demonstrates incremental validity by explaining most of the variance (43%) in functional impairment due to a COVID-19 loss beyond measures of depression and generalized anxiety. These findings closely replicate the original validation study on the PGS in English and suggest that the current Turkish version of the PGS is a valid and reliable measure to assess the severity of dysfunctional grief associated with a COVID-19 death.

The World Health Organization (WHO) announced a new viral pneumonia, which originated in Wuhan, China on December 2019, and declared the new coronavirus a pandemic on March 11, 2020 (World Health Organization [WHO], 2020). After this declaration, the virus spread quickly across the globe, causing an outbreak that escalated rapidly (Evren et al., 2020). While infection rates continued to increase, life has gotten worse for most people, with increasing deaths, job losses, and social isolation associated with COVID-19 (Lee, 2020). Consistent with this, high infection and mortality rates related to COVID-19 caused widespread fear, anxiety (Ahorsu et al., 2020; Lin, 2020), and moderate to high psychological symptoms (Tian et al., 2020; Wang et al., 2020).

Now, nearly a year after the global outbreak, more than 97 million people worldwide have been infected with the virus, more than 2 million of whom have died (Covidvisualizer, 2020). The first case in Turkey was reported on March 11, 2020. The total number of infected people in our country is 2,425,000 and the number of losses is reported as more than 25,000 (Covidvisualizer, 2020). While everyday figures concentrated on the dead, the loved ones they leave behind received less consideration (Carr et al., 2020). Although significant attention has been paid to mitigating the effect of the pandemic by behavioral (e.g., social distancing measures) and medical means (e.g., development of medication), the mental health needs of these people suffering from COVID-19's loss of a loved one have been largely overlooked (Lee & Neimeyer, 2020). As the death of a loved one is rated as one of the most traumatic events in life (Holmes & Rahe, 1967), and it has serious economical, behavioral, psychological and physical health consequences (Lee & Neimeyer, 2020; Stroebe et al., 2007), the lack of scientific attention to those suffering from COVID-19 losses is concerning (Lee & Neimeyer, 2020).

The context of death predicts symptoms of depression, rage, anxiety and the possibility of complicated grief for survivors (Carr et al., 2020). "Bad" or poor-quality deaths are characterized by physical pain, breathing difficulties, social isolation, psychological distress, lack of preparation, treatment without respect or dignity, and receipt of undesirable medical procedures or deprivation of treatments that one needs (Krikorian et al., 2020). "Bad deaths" are especially distressing because they violate cultural expectations for a peaceful death, and involve awareness of a loved one's suffering (Carr et al., 2020). COVID-19 deaths exemplify "bad" deaths as they are characterized by discomfort, difficulty breathing, social isolation, and treatments discordant with one's wishes (Carr et al., 2020). Under normal circumstances, bad deaths are distressing, but the pandemic has created a sense in which concurrent stressors intensify the pain of loss. These stressors include social isolation, financial insecurity, health concerns, worries about other family members, deaths of other friends and family, and anxiety about one's own mortality (World Health Organization, 2020). Thus, in some cases, the grieving process can become complicated or disturbed (Stroebe et al., 2007). Complicated grief has been defined as a deviation from the normal (in cultural and societal terms) grief experience in either time course, intensity, or both, entailing a chronic and more intense emotional experience or an inhibited response, which either lacks the usual symptoms or in which onset of symptoms is delayed (Stroebe et al., 2007). Research has established numerous evidence-based risk factors for clinically impairing prolonged and complicated grief reactions, such as social isolation of the mourner, unexpectedness of the death, challenges to a secure attachment relationship to the deceased, spiritual struggles in bereavement, inability of survivors to make sense of the loss, socioeconomic and educational disadvantage of the and a lack of institutional and informational support for families in the care facilities in which the deaths take place (Neimeyer & Burke, 2017). Consistent with these, a recent study suggests that grief due to a COVID-19 death is indeed more severe than that resulting from other forms of loss, such as death through natural causes (Eisma et al., 2021). Thus, the risk of complicated grief associated with a COVID-19 death is high. In this regard, Lee and Neimeyer (2020) developed and evaluated the properties of the Pandemic Grief Scale (PGS), which is a brief mental health screener to identify probable cases of dysfunctional grief associated with a COVID-19 death, which has strong psychometric properties.

However, there is no available measuring instrument to evaluate the dysfunctional grief related to COVID-19 in Turkey. Such a measure may help clinicians identify individuals suffering from dysfunctional levels of grief due to a COVID-19 death and treat them with psychological interventions. Thus, the aim of the present study is to adapt the PGS (Lee, 2020) into Turkish (see Appendix section).

Method

Participants and procedure

A cross-sectional online survey was conducted to test the psychometric properties of the PGS in Turkish. The target population was the general Turkish population. An online survey link was distributed across social media, e-mail and WhatsApp groups.

Participation in the study was anonymous and confidential. Participants were given the Plain Language Information Statement and informed consent was recorded online. The data were collected via Qualtrics, from December 22, 2020 to January 18, 2021. There were 1,704 potential participants who initiated the survey online. Among these, 758 participants who reported that they lost someone to COVID-19 were included in the study. Of these, 253 were male (33.4%) and 505 were female (66.6%). The mean age of the sample was 31.30 years (SD = 19.62). Sociodemographic information on the participants is summarized on Table 1.

Measures

Background information
Questions related to the background information asked participants' age, gender, education status, duration of their education, employment status, and if they ever had COVID-19 diagnosis. Participants were also asked to report their relationship to a significant person in their life who had died from COVID-19, how long ago this person died, and if the participant needed and/or received professional help for this loss.

The pandemic grief scale (PGS)
The PGS is a 5-item English language scale with solid reliability ($\alpha = .86$), factorial validity (CFA support), and construct validity with strong correlations with suicidal ideation and substance use coping, based on a study conducted with 831 adults who lost someone to COVID-19 (Lee & Neimeyer, 2020). The PGS measures COVID-19 grief equivalently across demographic groups, and discriminates well between persons with

Table 1. Sociodemographic and clinical variables ($n = 758$).

	n	%
Age years; (Mean ± SD)	31.30	19.62
Gender		
Male	253	33.4
Female	505	66.6
Education		
Elementry	22	2.9
High school	410	54.0
University	292	38.5
Yüksek lisans	34	4.5
Duration of education (Mean ± SD)	14.70	3.76
Employment		
Working	167	22.0
Part-time worker	19	2.5
Unemployed	67	8.8
Student	449	59.2
Other	56	7.4
Positive COVID-19 diagnosis	138	18.2
Relative or acquaintance with COVİD-19 death		
First degree relatives (Mother, Father, Brother, Child)	21	2.8
Second degree relatives (Grandmother, Grandfather, Uncle, Aunt, Cousin, Niece etc.)	261	34.4
Spouse / Partner	3	0.4
Close friend	36	4.7
Friend, acquaintance, dorm friend, colleague, schoolmate, neighbor, teacher etc.	394	52.0
Other	43	5.7
Duration since loss due to COVID-19 diagnosis		
Less than a month ago	153	20.2
Between 1 and 2 months	242	31.9
Between 2 and 3 months	163	21.5
Between 3 and 4 months	113	14.9
Between 4 and 5 months	57	7.5
More than 6 months ago	30	4.0
Alcohol and/or drug use to get through this loss	84	11.1
Wishing to be already dead not to deal with this loss.	115	15.2
Needed medical and/or therapy help related with this loss?	97	12.7
Applied for medical and/or therapy help?	40	5.3

and without dysfunctional grief using an optimized cut score of ≥ 7 (87% sensitivity and 71% specificity). An alarming 66% of the sample scored in the clinical range. The PGS also demonstrates incremental validity by explaining 18% additional variance in functional impairment due to a COVID-19 loss beyond measures of depression and generalized anxiety. Thus, the PGS was suggested as an efficient and valid screening tool for clinical research and practice during a pandemic.

After receiving the consent of one of the original scale's authors, the PGS was translated from English to Turkish by two independent translators, and this translated version was agreed upon by these specialists (Sousa & Rojjanasrirat, 2011). In order to establish their comparability, a Turkish version of the PGS was then translated from Turkish to English by a separate translator.

Patient health questionnaire-4 (PHQ-4

Clinical symptoms of depression and generalized anxiety were measured using the *Patient Health Questionnaire-4* (PHQ-4; Kroenke et al., 2009). Participants indicated how frequently they experienced symptoms of depression (e.g., 'feeling down, depressed, or hopeless.') and generalized anxiety (e.g.,

'feeling nervous, anxious, or on edge.') over the past two weeks, using a 4-point scale ($0 = not\ at\ all$ to $3 = nearly\ every\ day$). We used the Turkish version of the PHQ-4 (Demirci & Ekşi, 2018), found satisfactory internal consistency ($\alpha = .82$ [depressive symptoms $\alpha = .69$; generalized anxiety symptoms, $\alpha = .75$]).

Negative effects of the COVID-19 loss

Participants were asked to rate, using a 4-point time anchored scale that spans a two-week period ($0 = not\ at\ all$ to $3 = nearly\ every\ day$), how often they experienced negative thoughts and behaviors because of their COVID-19 loss using single-item scales. Passive suicidal ideation ($M = 1.21$; $SD = 0.57$) was measured by the item, "I wished I was already dead so I did not have to deal with this loss." Substance use coping ($M = 1.15$; $SD = 0.49$) was measured by the item, "I used alcohol or other drugs to help me get through this loss."

Work and social adjustment scale (WSAS)

An adapted version of Mundt et al.'s (2002) Work and Social Adjustment Scale (WSAS) was used to measure functional impairment due to a COVID-19 loss. Participants were asked to rate, using a 9-point

severity scale (0 = *not at all* to 8 = *very severely*), how much impairment they experienced because of their COVID-19 loss (e.g., "Because of this loss, my ability to work is impaired. 0 means not at all impaired and 8 means very severely impaired to the point I can't work."). Based on a WSAS cut-score of $\geq$ 21.00 (Mundt et al., 2002), 64.5% of the sample were classified as functionally impaired due to a COVID-19 death in previous study (Lee & Neimeyer, 2020).

A Turkish version of this scale was not available, thus a similar process was conducted for translation of WSAS to Turkish as was done for the PGS (Sousa & Rojjanasrirat, 2011). In the present study, the unidimensional 5-item WSAS indicated a good fit to the data (χ^2/df = 0.316, RMSEA = .000 [CI 90% (.000, .040)], CFI = 1.000, GFI = .999) and had good internal consistency (α = .94). The correlations between the WSAS and the PGS ($r = .70$, $p < .001$), and the PHQ-4 ($r = .27$, $p < .001$) were statistically significant, providing evidence of the convergent validity of the scale.

Statistical analysis

AMOS was used for Confirmatory Factor Analysis (CFA), whereas IBM SPSS Statistics Version 20 was used for the remaining statistical analyses. Data were cleaned through the inspection of cases with severe missing values across the measures beforehand. The distribution of all items across all psychometric tests utilized in the present study was examined to assess univariate normality. As a result, no item of the PGS and the other psychometric tests had absolute values of skewness > 3.0 and kurtosis > 8.0 (Kline, 2011). Frequencies and percentages were given for sociodemographic variables, whereas means and standard deviations were given for age, duration of education and PGS score. We used independent samples Students t-tests for mean differences analyses.

The psychometric properties of the Turkish PGS were consecutively investigated. CFA was used to examine the scale's factorial structure. Secondly, convergent validity was determined by estimating Pearson product-moment correlation coefficients between the total scores of the PGS, PHQ-4, and the WSAS. Cronbach's alpha was used to assess internal consistency. Incremental validity of the PGS was evaluated using a hierarchical multiple regression analysis, while a receiver operating characteristic (ROC) analysis was used to evaluate the diagnostic properties and cut-score for the instrument.

Results

Factor structure

Bartlett's Test of Sphericity and the Keiser-Meyer-Olkin measurement of sampling adequacy (KMO) were checked to be sure about the sample size sufficiency beforehand so CFA analyses were run in order to examine the factor structure and its dimensionality of the PGS. The Bartlett's Test of Sphericity was significant (χ^2 = 997.401, df = 10, $p < .001$) for the PGS, and the KMO was acceptable at .795.

The unidimensionality of the Turkish PGS was then assessed via CFA with maximum likelihood. In order to evaluate the quality of the model estimated in the CFA, several fit indices were used and the following thresholds adopted: χ^2/df $\leq$ 5, Goodness of Fit Index (GFI), Tucker-Lewis Fit Index (TLI) and Comparative Fit Index (CFI) > .90, and Root Mean Square Error of Approximation (RMSEA) < .06 (Ferguson & Cox, 1993; Hu & Bentler, 1999; Kaiser, 1960; Lin et al., 2013; Wu et al., 2015). The estimation of a unidimensional model produced a satisfactory fit (χ^2/df = 14.694/4 = 3.674; GFI = .995, TLI = .973, CFI = .989, and RMSEA = .059). As seen in Table 2, all item-component loadings were statistically significant (ranged from .52 to .74) and within the conventional acceptable threshold of > .50. Thus, results from the CFA suggest that the PGS assesses a unidimensional construct.

Convergent validity

The literature defines convergent validity as the extent to which items of a psychometric test appear to be indicators of a single underlying construct (Lee et al., 2015). Convergent validity is deemed adequate when the Average Variance Extracted (AVE) of the latent variable is $\geq$ .50 and composite reliability (CR) is $\geq$ .70 (Fornell & Larcker, 1981; Wu et al., 2015). As shown in Table 2, the AVE value for the PGS was adequate (.58), and the CR coefficient was beyond the desired threshold (.90).

Convergent validity was also assessed by correlating the PGS scores with the scores of two related scales (i.e., the WSAS and PHQ-4). The correlations between the PGS and the WSAS ($r = .70$, $p < .001$), and the PHQ-4 ($r = .30$, $p < .001$) were statistically significant. Overall, these results demonstrate positive correlations among the variables of interest in the expected direction according to the underlying theory, thus supporting the validity of the PGS.

Table 2. Summary of the results from the CFA on the Pandemic Grief Scale (PGS), Cronbach's alpha and item-total correlations obtained from the five items of the PGS.

Item	Factor loadings	Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I wished to die in order to be with the deceased	0.677	0.692	0.725
2. I experienced confusion over my role in life or felt like my identity was diminished because of the loss.	0.743	0.815	0.673
3. Nothing seemed to matter much to me because of this loss.	0.590	0.759	0.732
4. I found it difficult to have positive memories about the deceased.	0.520	0.549	0.764
5. I believed that without the deceased, life was either meaningless, empty, or could not go on.	0.740	0.782	0.693
Mean ± SD = 2.46 ± 2.62		AVE = 0.58	
Cronbach's alpha = 0.77		CR = 0.90	

All factor loadings and item-item Pearson correlations were statistically significant ($p < .001$). CFA: Confirmatory factor analysis; SD: Standard deviation; AVE: Average Variance Extracted; CR: Composite reliability.

Internal consistency reliability

The Cronbach's alpha coefficient of the current Turkish PGS was satisfactory ($\alpha = .77$), which showed the reliability of the scale (Table 2). Moreover, item-total correlations for the PGS were equally robust, ranging between .55 (item 4) and .82 (item 2) (Table 2).

Mean differences analyses

Male ($M = 2.37$; $SD = 2.69$) and female 19 ($M = 2.50$; $SD = 2.59$) participants did not differ according to PGS scores ($t[756] = 0.651$, $p = .515$). Participants who were diagnosed with COVID-19 ($M = 3.41$; $SD = 3.16$) had higher PGS scores than participants who did not have COVID-19 ($M = 2.25$; $SD = 2.43$), ($t[174.878] = -4.073$, $p < .001$). Participants who received professional help for their COVID-19 loss ($M = 5.53$; $SD = 2.95$) had higher PGS scores than participants who did not receive such services ($M = 2.01$; $SD = 2.24$), ($t[112.843] = -11.281$, $p < .001$). Zero-order correlations revealed that PGS scores was not associated with age ($r = 0.008$, $p = .82$, ns) nor time since loss ($r = 0.015$, $p = .68$, ns).

COVID-19 deaths

In terms of COVID-19 deaths, the highest PGS scores was among those who lost immediate family members ($M = 5.91$; $SD = 3.11$). These losses were higher than close friends ($M = 3.97$; $SD = 2.59$), extended family $M = 2.92$; $SD = 2.88$), acquaintances ($M = 1.92$; $SD = 2.16$), and the "other" category ($M = 1.28$; $SD = 1.39$) ($F[4, 750] = 23.403$, $p < .001$). There was no difference between close friends and extended family on PGS scores, whereas these categories had higher scores than acquaintances and other category. Participants who lost acquaintances to COVID-19 and

figures in the "other" category had the lowest PGS scores compared to the remaining groups. It is important to note that the category of participants who lost romantic partners ($M = 7.67$; $SD = 4.51$) was omitted from this analysis because it only had three participants (0.40%).

Receiver operating characteristic analyses

A receiver operating characteristic (ROC) analysis was used to examine the diagnostic accuracy of the PGS to identify bereaved adults who were functionally impaired by a COVID-19 loss. Drawing on the properties of well-established psychiatric screening tests (Spitzer et al., 2006; Weinstein et al., 1989), screening indicators of complicated grief (Djelantik et al., 2017; Guldin et al., 2011), and diagnostic testing considerations (Schisterman et al., 2005; Simundic, 2009), the following criteria were used to evaluate the fitness of the PGS for mental health screening: (1) area under the curve (AUC) value $\geq .70$, (2) a convex shaped ROC curve, and (3) an optimal cut-score with a sensitivity value $\geq 80\%$, specificity value $\geq 70\%$, and a Youden index ≥ 50.

Receiver operating characteristic (ROC) analyses were used to evaluate the diagnostic viability of the PGS as a screening tool, as well as to determine a cut score that best distinguishes individuals who experience clinically significant impairment because of a significant COVID-19 death (individuals who scored ≥ 21 on the WSAS) from those who were not impaired by this loss. The ROC graph displayed the convex pattern that is indicative of good discrimination ability (see Figure 1), while the area under the curve (AUC) demonstrated solid diagnostic accuracy for the PGS (AUC $= .87$, $p < .001$). The results of the ROC analysis also revealed that a PGS score ≥ 3 optimally classified adults as having (89% sensitivity) or not having (72% specificity) dysfunctional levels of grief
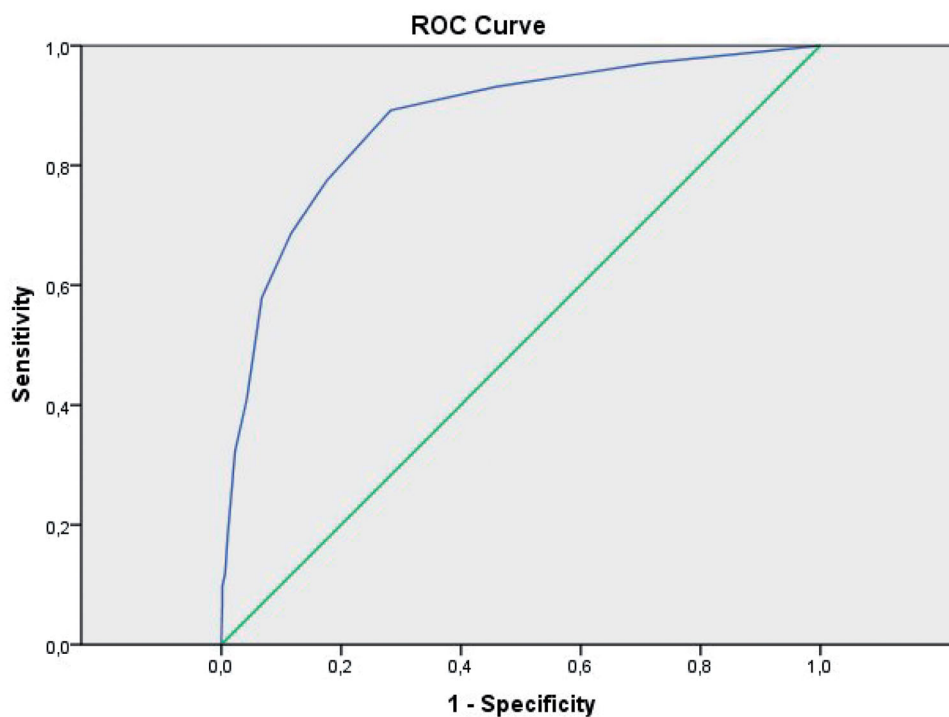
Figure 1. ROC curve for Pandemic Grief Scale. *Note.* AUC $= .87$, $p < .001$

Table 3. Data showing the sensitivity, specificity and Youden's index at various cutoff points of PGS to detect dysfunctional grief associated with a COVID-19 death.

Cutoff score	Sensitivity	Specificity	Youden's index
2	.931	.541	47
3	.892	.717	61
4	.775	.824	60
5	.686	.884	57
6	.578	.936	51
7	.412	.957	37

(Youden's index of 61) with a false positive rate of 28.3% (Table 3). Although a lower PGS score of ≥ 2 will yield a high sensitivity rate of 93%, the specificity value of 54% and Youden's Index of 47 are much lower than values produced by the optimal cut-score of ≥ 3. Thus, these results support the PGS as a diagnostically accurate mental health screening tool with strong classification features.

Correlation and hierarchical multiple regression analyses

Zero-order correlations between PGS scores and negative outcomes associated with COVID-19 loss were used to examine the construct validity of this measure of COVID-19 grief. As expected and in support of the PGS's construct validity, PGS scores were positively correlated with passive suicidal ideation ($r = .47$, $p <$ .001) and the use of alcohol or drugs to cope with the COVID-19 loss ($r = .30$, $p < .001$).

A hierarchical multiple regression analysis was then used to evaluate the incremental validity of the PGS. In the first step of the regression analysis, depression ($\beta = 0.14$, $p = 0.004$) and generalized anxiety ($\beta = 0.16$, $p < .001$), emerged as significant predictors of functional impairment due to the COVID-19 loss (Adjusted $R^2 = 0.07$, $F[2, 753] = 30.13$, $p < .001$). In the second step, depression ($\beta = 0.01$, $p = 0.81$) was no longer a significant predictor and generalized anxiety ($\beta = 0.07$, $p = 0.04$) continued to be a significant predictor, while the PGS ($\beta = 0.68$, $p < .001$) emerged as a predictor of functional impairment due to COVID-19 loss (Adjusted $R^2 = 0.50$, $F[3, 752] = 250.42$, $p < .001$). These regression results support the incremental validity of the PGS as it accounted for 43% additional variance in functional impairment over common measures of psychological distress. Thus, these results support the PGS as a clinically useful measure of dysfunctional grief due to a COVID-19 death.

Discussion

The current study mainly aimed to adapt the PGS into Turkish and assess its psychometric properties in a sample of participants, who reported that they lost

someone to COVID-19, recruited from the general population in Turkey. Results revealed statistical support for the validity of the translated PGS across several analyses. A single-factor solution for the PGS was found in the CFA, further supporting the unidimensional factor structure of the PGS found for the original measure (Lee & Neimeyer, 2020). The results of the CFA yielded statistically significant factor loadings, further demonstrating that all items were adequate indicators of the construct (dysfunctional grief related to the losing someone to COVID-19) and that the scale has adequate psychometric properties, alongside a solid factor structure. In the previous study, the PGS showed adequate reliability (Cronbach's alphas of .86 [Lee & Neimeyer, 2020]) among USA participants. Consistent with these results, the Cronbach's alpha obtained for the present Turkish version was satisfactory ($\alpha = .77$) and the CR coefficient was beyond the desired threshold (.90).

In addition to this result, convergent validity was supported by the expected positive pattern of correlations that have emerged between the PGS and the related measures. The convergent validity of the scale was indicated by the significant correlations of the PGS with the PHQ-4 and the WSAS. PGS scores were positively correlated with passive suicidal ideation and the use of alcohol or drugs to cope with the COVID-19 loss showing the construct validity of PGS. The current Turkish version of the PGS mainly showed similar psychometric characteristics as the original PGS. There were only two differences. First, although women tend to be at a greater risk of developing grief and affective disorder than men (APA, 2013), in Lee and Neimeyer's (2020) study men were found to have higher PGS scores than women, whereas there was no difference between genders in the present study. Secondly, Lee and Neimeyer (2020) found ≥ 7 as an optimized cutoff score for PGS, whereas it was ≥ 3 in the present study. According to this cutoff score, the PGS performed well as a mental health screener with a sensitivity rate of 89%, a specificity rate of 72%, and an AUC value of 0.87, which is the same as the original PGS. The results of the regression analysis support the incremental validity of the PGS as it accounted for 43% additional variance in functional impairment over common measures of psychological distress, a rate which was even higher than found in the original PGS (18%). These findings provide solid evidence of external validity for the original PGS.

In summary, with minor exceptions, the present Turkish version of the PGS provided strikingly consistent replication of the original English language study, and demonstrated that the Turkish version reported here represents a valid and reliable measure of dysfunctional grief that can be used for research and diagnostic purposes among Turkish people of both genders in the general population.

The current study has some limitations that must be mentioned. Firstly, this study was conducted online. Therefore, those without Internet access could not be involved in the study. Secondly, the results of this study heavily rely on participants' self-reports. Self-reports may by characterized by biases such as social desirability and short-term recall. Thirdly, there was no common attention check item (instructed response item) embedded within the online survey. Thus, careless responses may have affected the validity of the PGS. Similar to Lee and Neimeyer (2020), a cutoff score on the PGS was evaluated taking the cutoff score of ≥ 21 for the WSAS as a State Variable in the present study. Unfortunately a cutoff point was not evaluated for Turkish version of WSAS previously. While 64.5% of the sample was classified as functionally impaired due to a COVID-19 death according to cutoff score of ≥ 21 in the previous study (Lee & Neimeyer, 2020), this rate was found to be 13.5% in the present study. This may be attributable to cultural differences, but it may also be attributable to sampling differences as well. The previous study included the participants if they had a significant person in their life die from COVID-19, whereas in the present study we evaluated all those who were eligible regardless of the nature of their loss, and then included those who lost a significant person from COVID-19. Thus, the present sample of may have attracted participants with less severely dysfunctional grief.

In addition, we believe that cultural differences may have played a role in the Turkish translation of the PGS, particularly in the case of item 4, which evaluated "difficulties having positive memories about the deceased." The contribution of this item to the scale in the present study seems to be small. In Turkish culture this may be because the item implies having negative memories, which may be perceived as disrespect for the deceased. Therefore, some of the content of the scale may need to be interpreted within a cultural context.

Despite the above-mentioned possible limitations, results of the current study revealed that the present Turkish version of the PGS is a measure of a unidimensional construct. It is a valid and reliable screening tool in examining dysfunctional grief due to a COVID-19 loss among Turkish speaking populations. Findings of this study demonstrated that the PGS could be used as an efficient and valid screening tool for clinical research and practice during a pandemic.

The PGS can also be administered quickly because it includes only five items, possibly assisting clinicians in crowded clinical environments.

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Appendix

Pandemik Yas Ölçeği

PGS

Son 2 hafta boyunca kaybınızla ilişkili aşağıdaki düşünce, duygu veya davranışları ne sıklıkta yaşadınız?	Hiç	Birkaç gün	Günlerin yarısı ndan fazlası	Neredeyse her gün
1. Ölenle birlikte olmak için ölmeyi diledim.	0	1	2	3
2. Kaybım nedeniyle hayattaki rolümle ilgili kafa karışıklığı yaşadım veya benliğimi kaybettiğimi hissettim.	0	1	2	3
3. Bu kayıp yüzünden hiçbir şey bana çok önemli görünmedi.	0	1	2	3
4. Ölen hakkında olumlu anılar bulmakta zorlandım.	0	1	2	3
5. Ölen olmadan hayatın ya anlamsız, boş olduğuna ya da devam edemeyeceğine inandım.	0	1	2	3
Sütun Toplamları	_____ +	_____ +	_____ +	_____ +

Toplam Puan

Puanlama ve yorumlama

Türkçe PGS'nin her bir maddesi, son iki haftadaki deneyimlere göre 0'dan (hiç değil) 3'e (neredeyse her gün) 4 puanlık bir ölçekte derecelendirilir. PGS toplam puanı ≥ 3, COVID-19 kaybı nedeniyle olası işlevsiz kederi (yası) gösterir. Belirli bir madde üzerindeki yüksek puanlar veya yüksek toplam ölçek puanı (≥ 3), bireyin daha ileri değerlendirme ve/veya tedavi gerektirebilecek sorunlu belirtilerini gösterebilir. Klinik karar PGS sonuçları ının yorumlanmasına rehberlik etmelidir.