



Brief Report

DSM-5-TR prolonged grief disorder levels after natural, COVID-19, and unnatural loss during the COVID-19 pandemic

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ABSTRACT

Background and objectives: A rise in prolonged grief disorder (PGD) levels was expected due to COVID-19 deaths. We tested this assumption, by comparing PGD-severity among people who experienced a death of a loved one during the pandemic caused by a natural (e.g., illness), COVID-19, or unnatural (e.g., accidents, suicides, homicides) loss on average 8 months earlier and in a subgroup of people bereaved ≥ 12 months earlier.

Design and methods: Self-rated DSM-5-TR (acute) PGD levels (using the Traumatic Grief Inventory-Self Report plus) were compared among Dutch adults who experienced a natural ($N = 1036$), COVID-19 ($N = 76$), or unnatural loss ($N = 271$) during the pandemic. Analyses of covariance were used.

Results: About two-thirds of the participants scored above the cut-off for (acute) probable PGD. Significantly higher acute PGD-severity was found in people after unnatural loss compared with COVID-19 ($B = -2.44$ ($SE=0.87$), $p = .005$) or natural loss ($B = -1.78$ ($SE=0.45$), $p < .001$). No significant differences in acute PGD-severity was found between people who experienced a natural or COVID-19 loss ($B = 0.66$ ($SE=0.80$), $p = .413$). PGD levels did not differ between the three groups for people who lost their loved one ≥ 12 months earlier ($N = 380$).

Conclusions: We found that acute PGD-severity was significantly higher following unnatural deaths than after COVID-19 deaths or natural causes, but no differences were found for people who experienced a loss ≥ 12 months earlier.

1. Introduction

Since 2020, the COVID-19 pandemic has claimed the lives of more than six and a half million people and left a multiple of that number in mourning. During the first year of the pandemic, several scientists predicted a steep rise in the number of people experiencing unhealthy, disordered grief responses (Eisma et al., 2020; Kokou-Kpolou et al., 2020), defined as Prolonged Grief Disorder (PGD) in recent editions of the ICD-11 (World Health Organization, 2023) and DSM-5-TR (American Psychiatric Association, 2022). Arguments given for this included that large-scale disasters generally cause more mental damage than occasional deaths and that specific circumstances of COVID-19-deaths

(such as admission to the intensive care unit, suddenness of loss, inability to say goodbye properly) may block healthy grief (Eisma et al., 2020). Almost three years after the start of the pandemic, several studies have compared acute PGD (i.e., people bereaved ≤ 12 months earlier) and other manifestations of unhealthy grief following COVID-19 deaths and non-COVID-19-related deaths. Some studies found that COVID-19-deaths precipitated more severe acute PGD compared to natural losses (e.g., to illness) but not compared to unnatural losses (e.g., suicide) (Eisma et al., 2021; Eisma and Tamminga, 2020). Other studies found no differences between these groups (Breen et al., 2022; Downar et al., 2022). Still other studies found small indications for differences in the impact of COVID-19 vs. non-COVID-19-related deaths (with

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COVID-19 deaths being associated with increased PGD scores (> 6 months post-loss) compared to all other deaths (Edwards et al., 2022) and higher PGD after COVID-19 deaths compared to dementia deaths, but not other deaths on average 24 months post-loss (Gang et al., 2022)). Differences may be due to methodological differences between studies, including different samples used and different instruments to measure grief (e.g., the Eisma studies used the Traumatic Grief Inventory-Self-Report (TGI-SR) or Traumatic Grief Inventory-Self-Report-Plus (TGI-SR+ (Lenferink et al., 2022)); Breen et al. used the Pandemic Grief Scale (Lee and Neimeyer, 2022); Gang et al. and Edwards et al. used different versions of the PG-13 (Prigerson et al., 2021)).

There is a need to further our knowledge on the impact of COVID-19 deaths vs. non-COVID-19 deaths, given that, worldwide, many people have faced COVID-19 deaths and that the circumstances of these losses, arguably, inflate the risk of PGD/unhealthy grief, whereas studies examining the impact of COVID-19 vs. other deaths yielded inconclusive results. With the recent appearance of DSM-5-TR, there is a particular need to study PGD as defined in the DSM-5-TR (APA, 2022) given that many policy and treatment decisions are based on this formulation of PGD. Moreover, prior studies on PGD severity in people bereaved during the pandemic mainly included people bereaved ≤ 12 months earlier, while the DSM-5-TR states that the loss should have occurred more than 12 months ago in order to meet PGD criteria. Accordingly, the present study used data from an ongoing study, monitoring PGD symptoms and correlates thereof in the Netherlands. Our aim was to study severity scores of DSM-5-TR based PGD symptoms and to compare these scores between people confronted with COVID-19-deaths, natural deaths, and unnatural deaths less and more than 12 months earlier, while considering sociodemographic and loss-related variables.

2. Methods

Data for this study were collected via a Dutch website with information about grief and bereavement care for the general public (www.rouwbehandeling.nl) where bereaved people can complete the TGI-SR+ as self-monitoring tool (named ‘‘Grief Monitor’’ on the website). After completing items measuring background information and the TGI-SR+, people were offered one of four possible texts with brief standardized information about their grief intensity and global advice on options for bereavement care, depending on their total score. People were then asked if their scores on the ‘‘Grief Monitor’’ and items registering background information could be used for scientific purposes. Ethical approval for this study was obtained from an ethics committee at University Twente (ID:210674).

Background- and loss-related information gathered included gender (male, female, other), age (in years), relationship to the deceased (partner, child, parent, sibling, other), date of death, cause of death (physical illness, COVID-19, accident, suicide, murder/manslaughter, other). The TGI-SR+ (‘‘Grief Monitor’’) is a 22-item self-report measure of PGD-symptoms representing different (including ICD-11, DSM-5, and DSM-5-TR based) criteria-sets for PGD (Lenferink et al., 2022). People score the frequency of symptoms during the preceding month, on a 1 (never) through 5 (always) scale. Given our aim to examine DSM-5-TR based PGD, we used the summed score of the 10 DSM-5-TR PGD as index of PGD, with a score of ≥ 33 being indicative of probable (acute) PGD caseness (see for details (Lenferink et al., 2022)). The TGI-SR+ has sound psychometric properties (Lenferink et al., 2022). Cronbach's alpha in this study was 0.84.

We analyzed data completed between March through November 2022. During this period 2059 people completed the online survey and provided consent for research participation; 1513 reported that the date of death was within the time frame of the COVID-19 pandemic (from March 2020 till November 2022), which was an inclusion criterion for the current study. Some people completed the survey more than once. In total, 1383 unique responses were included in this study. We compared

DSM-5-TR acute PGD levels between people who experienced a loss during the pandemic due to COVID-19, unnatural cause (i.e., accident/suicide/murder/manslaughter/other), or natural cause (i.e., physical illness), using analyses of covariance (ANCOVAs). Relevant covariates were included in case the three groups differed ($p < .05$) in background- and loss-related characteristics based on ANOVAs and Chi-square tests. We ran analyses twice, first for the entire sample and then for those who met the DSM-5-TR-based time criterion, that the loss occurred ≥ 12 months earlier. Analyses were conducted using SPSS version 28.

3. Results

Table 1 summarizes characteristics of the total sample and the three subgroups. Most participants were women, the mean age over 51 years, and most people lost a partner or parent to illness, eight months earlier, on average. Gender, age, and time since loss differed between subgroups. In total, 868 people (63%) scored above the cut-off for probable acute PGD. Of all 380 participants meeting the time criterion for PGD (≥ 12 months post-loss), 237 (62%) scored above the cut-off for PGD. Symptom-levels of acute PGD differed between the three groups divided by cause of loss, when including gender, age, and time since loss as covariates ($F(2, 1363) = 8.65, p < .001$). Participants confronted with unnatural deaths reported significantly higher acute PGD-levels than those confronted with natural deaths ($B = -1.78, SE = 0.45, p < .001, d = 0.47$) or COVID-19-deaths ($B = -2.44, SE = 0.87, p = .005, d = 0.43$). Acute PGD-severity did not differ between these latter two subgroups (B

Table 1
Characteristics of sample and group-comparisons ($N = 1383$).

	Natural death ($n = 1036$)	COVID-19 death ($n = 76$)	Unnatural death ($n = 271$)	Total	Group comparisons
Gender ¹ , Women, N (%)	837 (81)	70 (92)	232 (86)	1139 (82)	$\chi^2(2) = 8.79,$ $p = .012$
Age in years ² , M (SD)	52.50 (14.36)	50.95 (14.27)	47.71 (12.90)	51.48 (14.20)	$F(2, 1370) =$ $12.43, p <$ $.001$
Kinship, the deceased is my ³ ..., N (%)					$\chi^2(2) = 3.11,$ $p = .212$
Partner	528 (51)	33 (43)	85 (31)	646 (47)	
Child Parent	43 (4) 379 (37)	1 (1) 34 (45)	64 (24) 40 (15)	108 (8) 453 (33)	
Sibling Other	36 (4) 50 (5)	3 (4) 5 (7)	39 (14) 43 (16)	78 (6) 98 (7)	
Time since death in months, M (SD)	7.54 (7.07)	14.09 (8.09)	8.56 (8.02)	8.10 (7.47)	$F(2, 1382) =$ $29.03, p <$ $.001$
Cause of death, N (%)					
Illness				1036 (75)	
COVID-19				76 (6)	
Accident				87 (6)	
Suicide				131 (10)	
Homicide Other				20 (1) 33 (2)	
Acute PGD levels, M (SD)	33.96 (6.48)	33.38 (7.24)	35.76 (6.61)	34.28 (6.59)	

Note.

¹ 3 people reported ‘other’ and were not included in group comparisons;

² 1371 had valid responses;

³ For the group-comparisons, we compared loss of partner/child versus other.

= 0.66, SE = 0.80, $p = .413$ $d = 0.01$).

When repeating the analyses with participants who experienced the loss ≥ 12 months earlier ($N_{\text{total}} = 380$; $N_{\text{naturalloss}} = 248$; $N_{\text{covid19loss}} = 45$; $N_{\text{unnaturalloss}} = 87$) but without covariates (i.e., because the three groups did not differ in terms of the covariates at $p > .05$), PGD levels did not differ between groups ($F(2, 377) = 1.04, p = .356$). See Table 2 for overview of sample characteristics of people who were bereaved ≥ 12 months earlier.

4. Discussion

We compared symptom-levels of acute and non-acute PGD reported by people confronted with deaths during the pandemic due to COVID-19, deaths due to natural causes, and deaths due to unnatural causes, focusing on PGD symptomatology as defined in DSM-5-TR (APA, 2022). Our main finding was that, when controlling for differences in groups in terms of gender, age, and time since loss, acute PGD-severity was significantly higher following unnatural deaths (e.g., accidents, suicides, homicides) than after deaths due to COVID-19 or natural causes, but note that these differences were small in terms of effect sizes. Among more remotely bereaved participants, passing the ≥ 12 months timing criterion, no differences in PGD-severity were found between subgroups divided by cause of loss. These findings seem to contradict earlier expectations from grief researchers that PGD prevalence rates would rise due to the COVID-19 pandemic (Eisma et al., 2020; Kokou-Kpolou et al., 2020). Our findings mirror those of other recent studies finding no (Breen et al., 2022; Downar et al., 2022) or very limited (Edwards et al., 2022; Gang et al., 2022) evidence that confrontation with COVID-19-deaths increase the risk of unhealthy grief. Our findings are different from those obtained by Eisma et al. (2021) and Eisma and Tamminga (2020) showing that COVID-19-deaths yielded acute PGD-levels similar to unnatural deaths, but higher than natural deaths. Given similarities in methodology between our study and the Eisma studies (using similar samples, a similar mode of data collection, and similar PGD measure) it is hard to explain differences in findings. Possibly, difference are due to the fact that we recruited people somewhat later after the start of the COVID-19-pandemic and the conditions that would make COVID-19 deaths more difficult to cope with are less of an issue now than before. However, we also found relatively high rates of probable PGD in the total sample as well as the subsample of people bereaved ≥ 12 months earlier. More specifically, almost two-thirds of the participants scored above the cut-off for (acute) DSM-5-TR PGD. These high numbers of probable (acute) PGD cases are likely explained by the fact that this is a self-selected sample that was recruited via a website that offered information about grief and bereavement care. These high rates may also (partly) be explained by pandemic-related factors which were faced by many people who lost loved ones during the pandemic irrespective of cause of deaths, such as limitations in traditional farewell rituals (due to restrictions in number of people who were allowed to attend a funeral) and limited physical social support due to social distancing measures implemented by the Dutch government. It would be relevant for future research to perform a more fine-grained analyses of different elements of the causes and circumstances of deaths and how they relate to bereavement outcomes.

The findings of this study must be considered in light of several potential limitations, including that data were based on self-report (making it impossible to draw conclusions about percentages of true cases of PGD), gathered in a self-selected sample of people who were searching for information about grief and bereavement care online (likely resulting in overestimation of (acute) PGD severity), with an overrepresentation of women (putting restrictions on the generalization of findings), were cross-sectional (precluding any conclusions about the course of PGD-symptoms over time), and only encompassed background variables and PGD-symptoms (making a more fine-grained analysis of factors increasing or decreasing PGD symptoms in the context of different causes of death impossible). Notwithstanding these considerations, the present study adds to our knowledge about the consequences

Table 2

Characteristics of sample and group-comparisons for people bereaved ≥ 12 months earlier ($N = 380$).

	Natural death ($n = 248$)	COVID-19 death ($n = 45$)	Unnatural death ($n = 87$)	Total (86)	Group comparisons
Gender, Women, N (%)	211 (85)	40 (89)	76 (87)	327 (86)	$\chi^2(2) = 0.62, p = .733$
Age in years, M (SD)	52.65 (13.84)	53.85 (12.19)	49.57 (13.09)	52.07 (13.54)	$F(2, 374) = 2.08, p < .126$
Kinship, the deceased is my..., N (%)					$\chi^2(2) = 5.94, p = .051$
Partner	145 (59)	19 (42)	28 (32)	192 (51)	
Child	13 (5)	1 (2)	24 (28)	38 (10)	
Parent	66 (27)	21 (47)	10 (12)	97 (26)	
Sibling	9 (4)	1 (2)	13 (15)	23 (6)	
Other	15 (6)	3 (7)	12 (14)	30 (8)	
Time since death in months, M (SD)	18.36 (4.82)	19.76 (4.89)	18.80 (5.05)	18.63 (4.89)	$F(2, 377) = 1.63, p < .197$
Cause of death, N (%)					
Illness				248 (65)	
COVID-19				45 (12)	
Accident				27 (7)	
Suicide				47 (12)	
Homicide				8 (2)	
Other				5 (1)	
PGD levels, M (SD)	34.12 (6.99)	33.89 (7.57)	35.30 (6.69)	34.28 (6.59)	

Note. For the group-comparisons, we compared loss of partner/child versus other.

of COVID-19-deaths that may not be so alarming as initially predicted by researchers, including we ourselves (e.g., Eisma et al., 2020; Kokou-Kpolou et al., 2020). However, COVID-19 remains a serious public health concern worldwide and there remains a need to further scrutinize the impact of COVID-19 deaths on people left behind, compared to other deaths.

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Data availability statement

Data are available upon request.

Declaration of Competing of Interest

The authors report there are no competing interests to declare.

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