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Risk Factors for Dysfunctional Grief and Functional Impairment for All Causes of Death during the COVID-19 Pandemic: The Mediating Role of Meaning

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Abstract

The COVID-19 pandemic, coupled with significant social changes due to legislative and public health requirements, has changed the way in which people experience grief. We examined whether dysfunctional grief symptoms, disrupted meaning, risk factors, and functional impairment differed between people bereaved from COVID-19 and from other natural or violent causes in this same period. A sample of 409 participants (67.73% male; $M = 37.54$ years) completed an online survey in June 2021. There were no statistically significant differences between the three groups on any of the outcome variables; all three groups manifested clinical levels of functional impairment equal to or greater than bereaved groups diagnosed with complicated or prolonged grief disorder prior to the pandemic. Disrupted meaning partially mediated the relationship between risk factors on the one hand and functional impairment and dysfunctional grief symptoms on the other. Findings indicate that deaths *during* COVID-19, rather than deaths *from* COVID-19, may precipitate symptoms of significant clinical concern.

As of mid-August 2021, there have been over 207 million confirmed cases of COVID-19 and over 4.3 million deaths (World Health Organization, 2021). Each death is estimated to affect an average of 9 people (Verdery, Smith-Greenaway, Margolis, & Daw, 2020). Based on these projections, nearly 40 million people are mourning the loss of a close person from COVID-19. Early in the pandemic, commentators predicted an increased risk of deleterious grief outcomes due to sudden/unexpected death, multiple co-occurring stressors, inability to be by the bedside to comfort the dying and say goodbye, limited opportunities for mourning rituals, and increased social isolation (Breen, 2020; Eisma, Boelen, & Lenferink, 2020; Gesi et al., 2020; Kokou-Kpolou, Fernández-Alcántara, & Cénat, 2020; Menzies, Neimeyer, & Menzies, 2020; Stroebe & Schut, 2020).

The first evidence that a higher prevalence of grief complications is likely among people bereaved by COVID-19 deaths than other natural deaths was provided by Eisma, Tamminga, Smid, and Boelen (2021). They compared acute grief symptoms in three groups they labelled as natural deaths ($n = 1182$), unnatural deaths ($n = 210$), and COVID-19 ($n = 49$). Acute grief was the focus because forms of problematic grief (e.g., Prolonged Grief Disorder [PGD]) cannot be diagnosed before 6 months post-death but are predicted by acute grief (Boelen & Lenferink, 2020). The study participants bereaved by a COVID-19 death reported significantly higher acute grief than those mourning natural deaths and comparable grief to those mourning nonnatural deaths. Further, compared to deaths from natural causes, COVID-19 deaths were more likely to be experienced as unexpected.

Subsequent studies further demonstrate the deleterious outcomes of COVID-19 loss. Lee and Neimeyer (2020) studied 831 Americans bereaved by COVID-19 and found that over 66% met or exceeded the clinical cut point for dysfunctional grief, which correlated strongly with assessments of anxiety, depression, and impaired functioning in work and social roles. A second study based on 307 adults in the United States bereaved by COVID-19

showed that most participants scored in the clinical ranges for generalized anxiety (70%), depression (74%), dysfunctional grief (66%), and functional impairment (63%) due to this loss (Breen, Lee, & Neimeyer, 2021). Reinforcing these concerns, mean scores for functional impairment in both studies substantially exceeded scores on the same instrument for family members bereaved by US military service death (Cozza et al., 2020) and those who had lost loved ones in a major airline disaster (Lenferink, de Keijser, Smid, Djelantik, & Boelen, 2017) in the pre-pandemic era, and were equivalent to carefully diagnosed treatment seeking adults with complicated, prolonged grief disorder (Bui et al., 2015; Shear, Wang, Skritskaya, Duan, Mauro, & Ghesquiere, 2014). A study of 422 adults in mainland China (Tang & Xiang, 2021) bereaved from COVID-19 found that 38% met ICD-11 criteria for PGD, an incidence rate 3 to 4 times higher than pre-pandemic population estimates. In the same sample, 70% scored in the clinical ranges of anxiety, 65% for depression, and 22% for post-traumatic stress disorder (Tang, Chen, Fan, & Eisma, 2021). Thus, evidence to date documents the severity and possible prolongation of grief-related anguish and related impairment in social function associated with COVID-19 loss.

Studies have highlighted factors that might further explain the risk of deleterious outcomes following a COVID-19 death. For example, Breen et al. (2021) aimed to determine how psychological symptoms explain functional impairment in crucial life roles in the family, workplace, or broader social world. Disruption of social functioning was higher among grieving persons who were diagnosed with COVID-19, received professional help with their loss, and lost domestic partners or immediate family members. After controlling for covariates, the odds of functional impairment significantly increased by 27% for higher scores in separation distress, 25% for higher scores in dysfunctional grief, and 13% for higher scores in posttraumatic stress.

Although Breen et al. (2021) reported that functional impairment scores were not associated with the age, gender, and race of the grieving persons or time since loss, Tang and Xiang (2021) reported that a shorter time since loss, loss of a partner/child/parent, higher levels of perceived trauma, and subjective closeness and/or conflicts with deceased were associated with worse mental health outcomes. Neimeyer and Lee (2021) surveyed 831 adults in the United States bereaved from a COVID-19 death and reported that circumstantial risk factors (e.g., distress over inability to “be there” for the loved one at the end of life, feelings of social isolation, dissatisfaction with communication with physicians) explained 59% of the variance in functional impairment and 71% of dysfunctional grief. Although this research focused specifically on the adjustment of those bereaved by COVID-19, it is probable that people who have lost loved ones to other causes of death in the pandemic era could encounter similar complications, insofar as the social context of dying is marked by essentially the same circumstantial risk factors arising from legislative and institutional policies to mitigate contagion.

The potential for a substantial increase in problematic grief outcomes from COVID-19 deaths has raised questions about appropriate psychological interventions (Breen et al., 2021). Multiple scholars posit meaning reconstruction as a central component to grief (Neimeyer, 2019; Park, 2010), and one that carries clear implications for grief therapy (Neimeyer, 2021). With a sample of 357 adults in the United States and Europe, Milman, Lee, Neimeyer, Mathis, and Jobe (2019) tested whether meaning making regarding the loss mediated the relationship between early risk factors for PGD (e.g., low social support, spousal loss) and development of PGD symptoms 7-10 months later. The findings demonstrated that meaning making mediated the adverse impact of multiple risk factors on the development of problematic grief outcomes, accounting for much of the variance in several of the variables, and all the variance in others. Similarly, meaning made of the

pandemic has been found to fully mediate the impact of multiple circumstantial stressors (e.g., job loss, loss of childcare) on coronavirus anxiety (Milman, Neimeyer, Fitzpatrick, MacKinnon, & Cohen, 2020), underscoring the link between meaning making and adaptation to pandemic losses observed in other studies (Lee, Neimeyer, & Breen, 2021).

The Current Study

The overarching aim of this study is to explore dysfunctional grief symptoms and related constructs (risk factors, functional impairment, and meaning making following a death) during the COVID-19 pandemic. We examined the rate of clinically significant grief and functional impairment in the current sample compared to previous populations sampled earlier in the COVID-19 pandemic. Extending recent findings (Eisma et al., 2021), we first hypothesized that people bereaved by COVID-19 would report more dysfunctional grief, risk factors, functional impairment, and disrupted meaning compared to those bereaved by natural causes, and similar levels to those bereaved from violent causes. Also inspired by recent findings (Breen et al., 2021; Milman et al., 2019), we hypothesized that disrupted meaning would mediate the relationship between risk factors and functional impairment, and between risk factors and dysfunctional grief.

Method

Participants

The study sample comprised 409 participants (132 women, 277 men). The mean age was 37.54 years ($SD = 10.04$ years), ranging from 20 years to 65 years. Most participants were White ($n = 328$; 80.2%), and a minority of participants split between Black ($n = 42$; 10.3%), Asian ($n = 28$; 6.8%), and Hispanic ($n = 10$; 2.4%), with one participant reporting 'other'. Demographic information for the current sample is presented in Table 1.

*** Table 1 Here***

In terms of cause of death occurring during the COVID-19 pandemic, half of the total sample ($n = 206$; 50.4%) had experienced a loss due to COVID-19. Just over one-quarter ($n = 111$; 27.1%) had experienced a death due to natural causes (e.g., stroke, heart attack, cancer, organ failure, degenerative disease). The remaining participants ($n = 92$; 22.5%) had experienced a death due to violent causes, comprising deaths due to accident (e.g., fall, car accident, drowning; $n = 49$), natural disaster (e.g., fire, flood; $n = 26$), suicide ($n = 6$), homicide ($n = 5$), drug overdose ($n = 2$), or other unspecified causes ($n = 4$).

Most deaths had occurred within the last 3 months ($n = 190$), followed by 4 to 6 months ($n = 135$), 7 to 9 months ($n = 48$), 10 to 12 months ($n = 26$) or more than 12 months ($n = 10$). In terms of relationship to the deceased, most were extended family members (grandparent, aunt/uncle, cousin; $n = 133$) or immediate family (e.g., parent, sibling, or child; $n = 112$), followed by close friends ($n = 70$), domestic partners ($n = 53$), or members of an extended social group (e.g., acquaintances, co-workers; $n = 41$).

Measures

Dysfunctional grief symptoms. Dysfunctional grief symptoms were measured using the Pandemic Grief Scale (PGS) developed by Lee and Neimeyer (2020). This 5-item scale assesses participants' responses to specific grief symptoms following a death that had occurred during the COVID-19 pandemic. Responses are recorded using a 4-point scale (0 = *not at all* to 3 = *nearly every day*). Example items include "*I wished to die in order to be with the deceased*" and "*I found it difficult to have positive memories about the deceased.*" Higher scores demonstrate a higher level of dysfunctional grief symptoms. A total score ≥ 7 indicates clinically significant levels of grief. The scale has strong psychometric and diagnostic features (Lee & Neimeyer, 2020) and has demonstrated incremental validity in terms of identifying mourners at risk of harmful outcomes (Lee et al., 2021). The PGS displayed good internal reliability in the present study ($\alpha = .81$).

Risk factors. The Pandemic Grief Risk Factors (PGRF) is a 10-item inventory developed by Neimeyer and Lee (2021) to measure circumstantial risk factors for severity and impairment of COVID-19 grief. Each item has been found to account for unique variance in measures of dysfunctional pandemic grief, functional impairment, or both. Responses are recorded using a 4-point scale (0 = *not at all* to 3 = *nearly every day*). Sample items include “*I felt upset that the deceased was not given a proper funeral or memorial service*” and “*I felt too alone in my grief because of social isolation policies to control the pandemic.*” Higher scores demonstrate a higher level of perceived risk factors. This scale displayed strong internal reliability in the present study ($\alpha = .89$).

Functional impairment. A 5-item scale adapted from the Work and Social Adjustment Scale (WSAS; Mundt, Marks, Shear, & Griest, 2002) that has been recently administered in pandemic grief research (Breen et al., 2021; Neimeyer & Lee, 2021) was used in the current study. This scale assesses levels of perceived functional impairment due to a loss during the COVID-19 pandemic. Responses are recorded using a 9-point scale (0 = *not at all* to 8 = *very severely*). An example item is “*Because of this loss, my home management (cleaning, tidying, shopping, cooking, looking after home or children, paying bills) is impaired.*” This scale displayed good internal reliability in the present study ($\alpha = .83$). Higher scores demonstrate poorer functioning in family, workplace, and social contexts. A score ≥ 21 indicates clinically significant levels of functional impairment.

Disrupted meaning. The Integration of Stressful Life Experiences Scale-Short Form ([ISLES-SF] Holland, Currier, & Neimeyer, 2014) was used to assess difficulties participants had in making meaning of the loss they had experienced. Responses to the six items (e.g., “*This loss is incomprehensible to me*”, “*I have difficulty integrating this event into my understanding of the world*”) are recorded using a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Higher scores indicate greater disruption in the meaning making process

following a death. The ISLES-SF demonstrated strong internal reliability in the present study ($\alpha = .91$).

Procedure

Approval to conduct the study was provided by the institutional review board of Christopher Newport University. The survey was completed online between June 2 and June 4, 2021 and hosted via the *MTurk* platform. The survey took approximately 10 minutes to complete. Responses from consenting participants were exported from the platform for data analysis after the completion window had closed. Participants received US\$0.50 for their time.

Statistical Analysis

Multiple analysis of covariance (MANCOVA) was used to test the first hypothesis. The independent variable was cause of death (COVID-19, natural causes, or violent causes). The dependent variables for this analysis were dysfunctional grief, risk factors, functional impairment, and disrupted meaning. Age, gender, and time since death were included as covariates.

Mediation analyses using PROCESS Version 3 (Hayes, 2020) were performed to test the second hypothesis. The 95% bias-corrected and accelerated confidence intervals (BcA CIs) for the direct and indirect effect were estimated using 10,000 bootstrapped iterations. This method is robust to data that are not perfectly normally distributed. Confidence intervals that do not contain zero were considered significant. Risk factors were included as the independent variable, functional impairment was included as the dependent variable for the first model, and dysfunctional grief symptoms were included as the dependent variable for the second model. Disrupted meaning was included as a mediating variable.

Results

Sample Characteristics

Means and standards deviations for risk factors, disrupted meaning, grief symptoms, and functional impairment across the total sample and for loss type are presented in Table 1. Independent samples t tests demonstrated that males and females did not differ significantly on levels of risk factors, functional impairment, and disrupted meaning. However, males did report slightly higher levels of dysfunctional grief symptoms ($M = 8.48$, $SD = 3.49$) compared to females ($M = 7.53$, $SD = 3.48$), $t(407) = 2.57$, $p = .010$ (two-tailed), $d = 0.27$. These findings indicate that gender should be considered as a potential covariate in the analyses including dysfunctional grief symptoms.

Spearman's ρ coefficient was used to examine whether time since death was correlated with the four dependent variables (risk factors, disrupted meaning, functional impairment, and dysfunctional grief symptoms). There was a very weak, but statistically significant positive correlation between time since death with each of the four outcome variables, with coefficients ranging from .11 ($p = .024$) to .13 ($p = .009$). Consequently, time since loss was also included as a potential covariate. There was no significant linear correlation between age and any of the four outcome variables. However, age was retained as a control variable.

Clinically Significant Outcomes

Dysfunctional grief. Nearly three-quarters of the sample ($n = 295$, 72%) reported clinically significant dysfunctional grief symptoms, as indicated by a PGS score equal to or greater than 7. A chi-square test of contingencies demonstrated that the proportion of clinically significant dysfunctional grief symptoms did not differ significantly between the COVID-19 group (68.90% of the group), the natural causes group (71.12% of the group), and the violent causes group (78.26% of the group), $\chi^2(2, N = 409) = 2.28$, $p = .320$.

Functional impairment. Likewise, three-quarters of the sample ($n = 315$; 77%) reported clinically significant symptoms of functional impairment, as indicated by a WSAS

score equal to or greater than 21. A chi-square test of contingencies demonstrated that the proportion of clinically significant functional impairment did not differ significantly between the COVID-19 group (74.80% of the group), the natural causes group (78.40% of the group), and the violent causes group (80.40% of the group), $\chi^2(2, N = 409) = 1.32, p = .517$.

Hypothesis One: Cause of Death and Symptomatology

MANCOVA was used to test whether there were significant differences in levels of grief, risk factors, functional impairment, and disrupted meaning making between those who experienced a death due to COVID-19 compared to death by natural causes or death by violent causes after controlling for age, gender, and time since death.

Relevant assumptions underpinning MANCOVA were checked prior to the analysis and found to be met. Findings demonstrated that there was no statistically significant difference between type of death on the combination of the dependent variables, and that the overall size of this effect was small, $F(8, 802) = 1.47, p = .166$, partial eta-squared = .01.

Hypothesis Two: Mediation Analyses

Statistical assumptions underpinning multiple regression were checked prior to the mediation analyses using PROCESS and found to be appropriately met (Hayes, 2020). Bivariate correlations and descriptive statistics for variables included in the two mediation analyses are presented in Table 2.

*** Table 2 here ***

Meaning mediating the relationship between risk factors and functional impairment. Mediation analyses using PROCESS (Hayes, 2020) tested the hypothesis that the relationship between risk factors and functional impairment would be accounted for by disrupted meaning making. To control for the potential confounding effects of participant age and gender and time since death, these variables were included as covariates. In combination, the predictors explained 68.62% of the variance in functional impairment, Model $R^2 = .69$,

$F(5, 403) = 176.24, p < .001$, and was a large effect $f^2 = 2.19$. The potential indirect effects of disrupted meaning making were evaluated using a percentile bootstrap estimation approach with 10,000 samples (Shrout & Bolger, 2002). A significant indirect effect is denoted if the 95% BcA CIs do not contain the null value of 0 between the upper and lower bound estimates.

Results indicated that the indirect effect of risk factors on functional impairment via disrupted meaning making was significant ($B = .39, 95\% \text{ BcA CI } [.30, .49]$), partially standardized $\beta = .04$. This indirect effect represented approximately 36.45% of the total effect of risk factors on functional impairment, representing a moderate-to-large effect. The direct effect of risk factors on functional impairment was reduced but remained statistically significant after the inclusion of meaning and the covariates into the model, indicating a partially mediated effect. Thus, the relationship between risk factors and functional impairment was partially mediated by disrupted meaning making. This is visually presented in Figure 1.

*** Figure 1 Here***

Disrupted meaning mediating the relationship between risk factors and dysfunctional grief. A second analysis using PROCESS (Hayes, 2020) tested whether the relationship between risk factors and dysfunctional grief symptoms would be mediated by disrupted meaning making. To account for the potential confounding effects of age, gender, and time since death, these variables were included as covariates. In combination, the predictors explained 74.70% of the variance in dysfunctional grief symptoms, Model $R^2 = .75, F(5, 403) = 238.03, p < .001$, and was a large effect $f^2 = 2.95$.

Results indicated that the indirect effect of risk factors on dysfunctional grief symptoms via meaning was statistically significant ($B = .05, 95\% \text{ BcA CI } [.02, .08]$), partially standardized $\beta = .01$. This indirect effect represented approximately 10.64% of the

total effect of risk factors on dysfunctional grief symptoms, representing a small-to-moderate effect. The direct effect of risk factors on dysfunctional grief symptoms was reduced but remained statistically significant after the inclusion of disrupted meaning making and the covariates into the model, indicating a partially mediated effect. Thus, the relationship between risk factors and dysfunctional grief symptoms was partially mediated by disrupted meaning making. This is visually presented in Figure 2.

*** Figure 2 Here***

Discussion

The broad aim of this study was to investigate the impact of loss for participants who had experienced a death during the COVID-19 pandemic. The first aim was to examine whether those people who had experienced a death from COVID-19 reported different levels of grief, functional impairment, risk factors, and meaning when compared to those people who had experienced a death from natural causes or violent causes in this same period. After controlling for participant age and gender and time since death, there were no statistically significant differences in levels of disrupted meaning, dysfunctional grief, functional impairment, and risk factors, according to death type. This pattern of findings stands in contrast to that reported early in the pandemic by Eisma et al. (2021), who found that participants bereaved by a COVID-19 death reported significantly higher acute grief than those mourning natural deaths and comparable grief to those mourning nonnatural deaths.

Heuristic, if not statistical, comparisons to previous publications reveal that the present sample is our most psychologically disturbed sample yet reported. The proportions of the total sample reporting dysfunctional grief (72%) and for each of the three sub-groups were higher than rates examined from samples assessed earlier in the pandemic. Specifically, clinically significant dysfunctional grief assessed on the same validated measure was identified in 66.4% of a sample of 831 participants recruited from March to May 2020 (Lee

& Neimeyer, 2020), 56.6% of a sample of 1065 participants recruited from July to August 2020 (Lee et al., 2021), and 66.1% of a sample of 307 participants recruited from November to December 2020 (Breen et al., 2021). Similarly, the mean dysfunctional grief score in our sample (i.e., $M = 8.17$) is also higher than the 6.45 reported by Lee et al. (2021) and 7.74 reported by Breen et al. (2021) [note that a mean score was not reported by Lee and Neimeyer (2020)].

Similarly, the proportions of the total sample reporting functional impairment (77%) and for each of the three sub-groups were higher than rates observed in samples assessed earlier in the pandemic. Specifically, we identified clinically significant functional impairment in 64.5% of a sample of 831 participants recruited from March to May 2020 (Lee & Neimeyer, 2020) and 63.2% of a sample of 307 participants recruited from November to December 2020 (Breen et al., 2021). The mean functional impairment score in our current sample (i.e., $M = 25.64$) was substantially higher than those reported in pre-pandemic community samples of family members bereaved by US military service death ($M = 10.5$, Cozza et al., 2020) and people whose loved ones perished in an airline disaster ($M = 16.03$, Lenferink et al., 2017). Further, the mean functional impairment score in our sample exceeded that reported in clinical samples of bereaved adults diagnosed with complicated grief ($M = 22.0$, Shear et al., 2014; $M = 22.3$, Szuhany et al., 2020; $M = 21.7$, Bui et al., 2015) and clinical samples of people diagnosed with a psychiatric disorder ($M = 21.14$, Vázquez Morejón, Vázquez-Morejón, & Conde Álvarez, 2021).

Thus, the finding that our sample reports clinical levels of dysfunctional grief and functional impairment at a rate much higher than reported by other community samples and higher even than clinical samples of bereaved people is concerning. The focus of previous research, including our own, on people bereaved by COVID-19 may be too narrow, because broadly equivalent and equally worrisome outcomes characterize those losing a loved one to

any cause under conditions posed by the pandemic. In essence, the present results underscore the neglected side of the pandemic; that is, grief from deaths *during* COVID-19 may warrant similar clinical concern as deaths *from* COVID-19.

These findings qualify conclusions about the unique impact of COVID-19 loss reported by Eisma et al. (2021) in comparison to other losses and suggested by studies of people mourning COVID-19 losses without comparison groups (Breen et al., 2021; Lee & Neimeyer, 2020; Lee et al., 2021; Tang et al., 2021). Instead, early predictions that COVID-19 deaths in particular would precipitate grief complications over and above other natural deaths might be unfounded. However, rather than assuaging concerns about bereavement following loss due to COVID-19, these results suggest that far greater attention is needed to all bereavement in the context of the pandemic, because the level of functional impairment in our sample—irrespective of loss-type—exceeds that of previous seriously impaired clinical samples diagnosed with PGD. The findings that there were no differences between the loss groups and that the great majority of the participants were highly distressed likely reflects nearly universal pandemic-related complications such as inability to accompany the loved one at the end of life, horrific images of the deceased dying alone on a machine, limited face-to-face social support, and restricted or cancelled funerals, which apply broadly to all losses during these times in the U.S. as well as in many other nations. This conclusion is strongly supported by the large direct effect that such circumstantial risk factors displayed in the mediation analyses reported above.

Our second aim was to test whether disrupted meaning following death mediated the relationships between risk factors with functional impairment, and with dysfunctional grief symptoms, as suggested by a growing body of previous research (Neimeyer, 2019). As hypothesized, disrupted meaning partially mediated these relationships, highlighting the potential indirect effect of risk factors on both sets of symptoms via disruptions to meaning.

These findings suggest that disrupted meaning making may act as an intermediary pathway by which risk factors can lead to both dysfunctional grief and functional impairment, though further replication is required. Importantly, the finding that these variables explain a significant and substantial proportion of variance in dysfunctional grief symptoms (74.70%) and functional impairment following bereavement (68.62%) highlights meaning making as a worthwhile intervention target to mitigate deleterious outcomes of essentially all bereavement experienced during the pandemic, irrespective of its cause.

Taken together, these results carry clear implications for clinical assessment and intervention. First, they underscore the practical relevance of assessing dysfunctional grief (Lee & Neimeyer, 2020), functional impairment (Mundt et al., 2002) and unique risk factors associated with poorer outcomes in the context of the pandemic (Neimeyer & Lee, 2021) using the brief screening instruments available for each of these variables. In particular, mourners meeting clinical levels of dysfunctional grief or functional impairment can then be offered relevant support and professional intervention, guided by the thematic focus of the client's distress as reflected in the PGRF (Neimeyer & Lee, 2021). For example, several of the risk factors assessed on this measure that are empirically linked to poor outcomes reflect "unfinished business" with the deceased (Holland, Klingspon, Lichtenthal, & Neimeyer, 2020) in the form of guilt and regret over the mourner's inability to prevent the death or care for the loved one at the end of life, whereas others reflect anger about poor communication with medical staff, spiritual struggle in bereavement, or traumatic images of the loved one dying alone, with life maintained only by machines. Using these measures as "conversation starters" in grief therapy or counseling could establish a relevant focus for intervention, regardless of the practitioner's theoretical orientation.

In addition, the evidence that meaning making significantly mediates the impact of such risk factors on both dysfunctional grief and impaired social functioning suggests the

specific relevance of meaning-oriented interventions, which have shown promise in open trails of meaning reconstruction for heterogeneous losses (Neimeyer & Young-Eisendrath, 2015), meaning-centered grief therapy for losses to cancer (Lichtenthal et al., 2019) and restorative retelling for violent death bereavement (Saindon, Rheingold, Baddeley, Wallace, & Brown, 2014). Although grief therapists obviously cannot reverse the reality of the death or change the complicating circumstances under which it occurred, they can collaborate with clients in integrating the event story of the death in a meaningful fashion, in accessing the back story of their client's relation to the loved one to address unfinished business and realign the continuing bond, and ultimately revise the identity story of who they are in the aftermath of loss (Neimeyer, 2019). Clinicians addressing any of these treatment goals can draw on any of hundreds of specific procedures for grief therapy that are tailored to the challenges faced by a specific client, whatever the cause of death (Neimeyer, 2012, 2016, 2021).

Limitations

The strengths of the study (e.g., sizable samples of all three cause of loss groups, use of carefully validated measures of all constructs) notwithstanding, this research does have some limitations that should be noted. These include online convenience sampling of the bereaved and overrepresentation of men, counterbalancing, in some sense, the overrepresentation of women in most bereavement research. Moreover, reliance on cross-sectional data means that prospective prediction cannot be proved, and potential bidirectional relationships between variables included in the regression cannot be disentangled.

Longitudinal research is called for, as is the study of treatment seeking populations struggling with losses incurred during the pandemic, irrespective of their cause.

Conclusion

Mental health consequences of bereavement due to COVID-19 have garnered increasing attention in the wake of recovery efforts (Simon, Saxe, & Marmar, 2020). In

particular, concern is growing that a “shadow pandemic” of anguishing grief is gaining momentum the wake of the enormous death toll resulting from the spread of coronavirus around the world (Neimeyer, Milman, & Lee, 2022). The current research strongly supports this concern. However, current calls for action to mitigate grief from COVID-19 might be too narrow in their focus, potentially overlooking evidence that other forms of bereavement in the COVID-19 era might be equally heavy in their functional impact on the bereaved, as all such losses appear to be more complicated than natural death bereavement in the pre-pandemic era. We therefore hope that other investigators will join in studying the broad impact of the pandemic on adjustment to bereavement of all kinds, and that therapists of all disciplines will seek relevant training to address the complicated and potentially protracted grief that will often result.

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Table 1

Descriptive statistics for total sample, participants experiencing a loss from COVID-19, natural causes, and violent causes ($N = 409$).

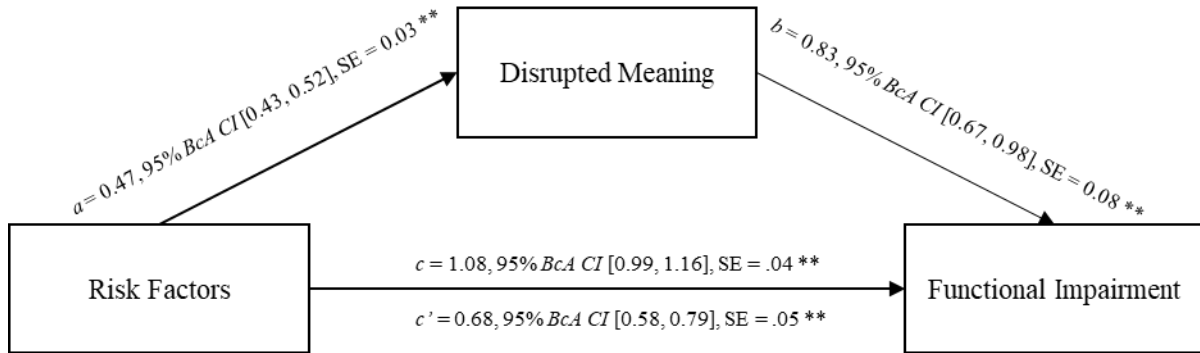
Variable	Total Sample	COVID-19	Natural Causes	Violent Causes
<i>N</i>	409	206	111	92
Mean Age (SD)	37.54 (10.04)	36.25 (9.54)	39.57 (10.60)	37.96 (10.10)
Median Time since loss (months)	4	3	5	4
Gender				
<i>N</i> Male (%)	277 (67.7)	132 (64.1%)	80 (72.1%)	65 (70.7%)
<i>N</i> Female (%)	132 (32.3)	74 (35.9%)	31 (27.9%)	27 (29.3%)
Relationship to deceased				
<i>N</i> Immediate family (%)	112 (27.4%)	54 (26.2%)	41 (36.9%)	17 (18.5%)
<i>N</i> Extended family (%)	133 (32.5%)	69 (33.5%)	33 (29.7%)	31 (33.7%)
<i>N</i> Close friend (%)	70 (17.1 %)	35 (17.0%)	13 (11.7%)	22 (23.9%)
<i>N</i> Romantic partner (%)	53 (13.0%)	21 (10.2%)	15 (13.5%)	17 (18.5%)
<i>N</i> Extended group (%)	41 (10.0%)	27 (13.1%)	9 (8.1%)	5 (5.4%)
Descriptive Statistics <i>M</i> (SD)				
Risk Factors	17.55 (6.45)	16.70 (5.91)	18.14 (6.99)	19.74 (6.72)
Disrupted Meaning	22.54 (4.48)	21.95 (4.28)	22.95 (4.92)	23.38 (4.19)
Grief Symptoms	8.17 (3.51)	7.72 (3.10)	8.32 (3.96)	9.00 (3.69)
Functional Impairment	25.64 (9.11)	24.65 (8.65)	26.11 (9.71)	27.29 (9.18)

Table 2

Bivariate Correlations and Descriptive Statistics for Variables Included in Mediation Analysis

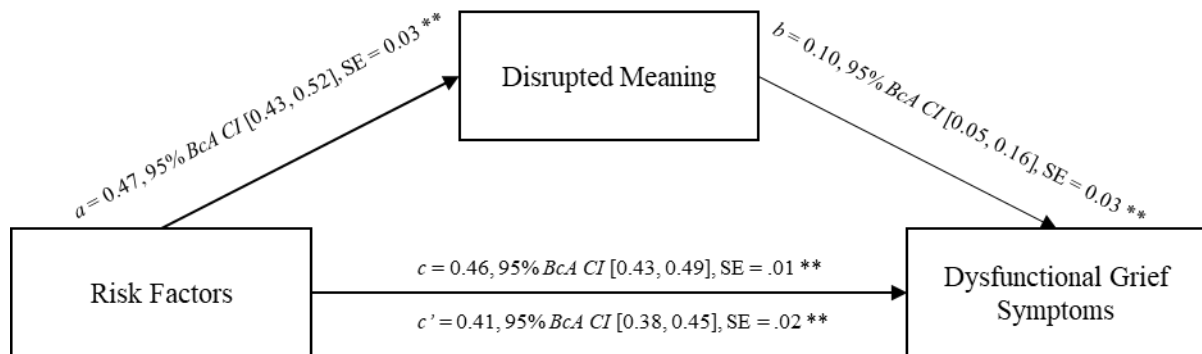
Variable	Correlations							Descriptive Statistics	
	1	2	3	4	5	6	7	M (SD)	α
1. Risk Factors	-							17.54 (6.45)	.89
2. Disrupted Meaning	.68**	-						22.54 (4.48)	.83
3. Grief Symptoms	.86**	.65**	-					8.17 (3.51)	.81
4. Functional Impairment	.77**	.74**	.79**	-				25.64 (9.11)	.91
5. Age	-.03	.03	-.08	-.09	-			37.54 (10.04)	-
6. Gender	-.08	-.05	-.13*	-.10*	-.05	-		-	-
7. Time since death	.01	.09	.03	.07	-.01	.01	-	-	-

Note. * $p < .05$. ** $p < .001$. Gender coded as 1 = Female, 0 = Male. Time since death binarized by median split, 1 = within the last 8 months, 0 = longer than 8 months.



Note. Pathways depicted in this model were after controlling for the potential confounding effects of participant age and gender and time since death.

Figure 1. Mediation model demonstrating that the relationship between risk factors and functional impairment was mediated by meaning ($N = 409$).



Note. Pathways depicted in this model were after controlling for the potential confounding effects of age, gender, and time since death.

Figure 2. Mediation model demonstrating that the relationship between risk factors and dysfunctional grief symptoms was mediated by meaning ($N = 409$).