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Patterns, Predictors, and Prognostic Validity of Persistent Complex Bereavement Disorder (PCBD) Symptoms in Recently Bereaved Adults: A Latent Class Analysis

Running title: Early indicators of disturbed grief

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Author's contribution

PB and LL undertook the statistical analyses. PB and BMV collected most of the data. PB and LL wrote the completed draft of the manuscript. All authors contributed to and have approved the final manuscript.

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Abstract

Persistent complex bereavement disorder (PCBD) entered DSM-5. No studies have yet examined the nature, prevalence, prognostic validity, and underlying mechanisms of PCBD symptom-patterns in recently bereaved people. Knowledge on these issues could improve the early identification and treatment of disturbed grief. Latent class analysis was used to identify subgroups characterized by different PCBD symptom-patterns among recently (≤6 months) bereaved adults (N = 476). In a subgroup (N = 251) we assessed associations of class-membership with PCBD-severity and functional impairment assessed three years later. Associations between class-membership and sociodemographic and cognitive-behavioral variables were also examined. We identified a Resilient (50.0%), Separation Distress (36.1%), and High PCBD Symptoms (13.9%) Class. Class-membership had prognostic value as evidenced by associations with PCBD-severity and functional impairment assessed three years later. Deaths of partners/children, unexpectedness of the loss, and maladaptive cognitions and avoidance behaviors were also associated with membership of the pervasive symptom classes.

Introduction

In the last two decades, there is growing research evidence that a significant minority of bereaved individuals develops pervasive, distressing, and disabling symptoms of grief. This evidence has culminated in the inclusion of Persistent Complex Bereavement Disorder (PCBD) as one of the "Other Specified Trauma- and Stressor-Related Disorders" in the 5th edition of the Diagnostic and Statistical Manual of mental disorders (American Psychiatric Association, 2013). PCBD is characterized by symptoms of separation distress (e.g., yearning), reactive distress (e.g., difficulty accepting the loss), and social/identity disruption (e.g., feeling alone or detached from others) present to the point of impairment after the first year of bereavement. Although there is limited research on PCBD, because of its recent emergence in the literature, a meta-analysis of studies relying on a slightly different operationalization of disturbed grief—named Prolonged Grief Disorder (PGD) as put forth by Prigerson et al. (2009)—suggests that PCBD occurs in approximately 10% of bereaved people across different samples (Lundorff, Holmgren, Zachariae, Farver-Vestergaard, & O'Connor, 2017). PCBD is associated with considerable distress and disability (Boelen & Smid, 2017; Maciejewski, Maercker, Boelen, & Prigerson, 2016). DSM-5 prescribes that PCBD cannot be diagnosed within the first year of bereavement. PGD as per Prigerson et al. (2009), which was recently, in a modified version, included in ICD-11 (WHO, 2018) has a 6 months post-loss time criterion.

There are obvious reasons to be reserved in suggesting that elevated grief symptoms in the first months following loss could signal a problematic grief course. At the same time, there is evidence that the intensity of grief reactions in the initial months following loss predicts later disturbance. For instance, in a study on cognitive-behavioral variables in grief, early grief severity was the strongest predictor of later disturbed grief

(Boelen, Van den Bout, & Van den Hout, 2006). Studies examining trajectories of different psychological symptoms in bereaved people have also indicated that bereaved people experiencing chronic distress beyond the first months after loss are often also the ones experiencing severe distress later on; that is, chronically high distress starting immediately after the event is much more common than is delayed distress (Galatzer-Levy & Bonanno, 2012; Galatzer-Levy, Huang, & Bonanno, 2018; Lenferink, Nickerson, de Keijser, Smid, & Boelen, in press).

Thus, bereaved people differ in their early responses to loss and these early responses appear strongly associated with how their grief unfolds. However, relatively little is known about the nature, prevalence, predictive value, and underlying mechanisms of different response patterns in the first months after loss (for notable exceptions, see Litz et al., 2014; Raphael, 1977). Knowledge on these issues is important in order to improve options for the early identification and treatment of bereaved people vulnerable for disturbed grief. Accordingly, the first goal of the current study was to enhance knowledge about the heterogeneity in grief reactions in relatively recently bereaved adults. Specifically, in a group of adults bereaved in the past half year, we used latent class analysis (LCA) to identify subgroups characterized by different symptom-profiles of PCBD symptoms. LCA is a person-centered approach that enables the examination of population heterogeneity by grouping individuals into homogenous subgroups (with similar symptom-profiles), or latent classes, on the basis of dichotomously rated indicators of symptoms (Collins & Lanza, 2010). Based on prior LCA research, including research on latent classes of posttraumatic stress symptoms (Hansen, Ross, & Armour, 2017) and depressive symptoms (Ulbricht, Chrysanthopoulou, Levin, & Lapane, 2018) two alternative outcomes were anticipated. The first possible outcome was that subgroups would emerge characterized by increasing probabilities

(e.g., low, moderate, high probability) of endorsing all PCBD symptoms. The second possible outcome was that LCA would reveal different subgroups distinguished by the nature of symptoms—e.g., some with high separation distress and low reactive distress and/or social/identity confusion, and others with other combinations of symptoms.

The second goal of this study was to examine the predictive value of PCBD subgroup membership in terms of the association with PCBD severity and functional impairment assessed several years after the first half year of bereavement. In keeping with prior research (e.g., Boelen, Van den Bout, et al., 2006; Galatzer-Levy & Bonanno, 2012), we predicted that people with elevated initial distress would report higher levels of later distress compared to their bereaved counterparts with limited initial distress.

The third goal of this study was to examine whether emerging subgroups differed in terms of several sociodemographic, loss-related, and psychological variables. Examining factors associated with different symptom-patterns is clinically and theoretically relevant as it may aid in identifying bereaved individuals at risk of psychopathology and inform theorizing about underlying mechanisms of disturbed and non-disturbed early response patterns. In the current study, two sets of correlates were explored. First, sociodemographic variables (age, gender, education) and characteristics of the loss (kinship to the deceased, cause of loss, time since loss) were considered. Although no prior studies have explored correlates of early PCBD symptom-patterns, research findings on risk factors for disturbed grief led us to predict that those in classes with higher symptom severity would more likely be women, with lower education, more closely related to the deceased, and confronted with unnatural loss (cf. Lobb et al., 2010). A second set of variables considered as correlates of PCBD response patterns were cognitive-behavioral variables distinguished in Boelen, Van den Hout, and Van den Bout's (2006) model. That model postulates that acute grief becomes chronic under the

influence of, e.g., difficulties integrating the irreversibility of the separation with autobiographical memory (yielding a sense of unrealness about the permanence of the separation), negative cognitions (specifically about oneself, the future, and catastrophic misinterpretations about one's grief reactions), anxious avoidance of stimuli reminding of the loss, and depressive avoidance of activities that could foster recovery. We hypothesized that emerging classes would differ in terms of these variables, with participants in the higher symptom severity classes evidencing more unrealness, negative cognitions, and avoidance (Boelen, Van den Hout, et al., 2006).

Method

Participants and Procedure

Data were collected in collaboration with a funeral service company in the Netherlands. During a one-year period, all bereaved individuals using services from this organization were asked permission to be approached with an invitation to participate in a study on initial responses to loss. This was asked in the routinely administered customer satisfaction survey. In total, 1307 people gave permission and they were guided to a secured website providing further information about the study, the informed consent form, and the questionnaires. Of these 1307 people, 552 (42.2%) completed the consent form and questionnaires. Data from 476 people who reported having lost a loved one in the prior 6 months were used in the LCA. All participants were approached to complete several questionnaires, including measures of PCBD and functional impairment, approximately three years after the first assessment; of the 522 participants completing the initial questionnaires, 316 (60.5%) completed these second questionnaires—including 251 individuals who had reported having lost a loved one in the prior 6 months at the first assessment. This last group was included in our longitudinal analyses to achieve our second research aim. Questionnaires and study

procedures were approved by the ethical review board of the faculty of social sciences of Utrecht University (FETC-17/067).

Measures

Questionnaires administered at T1. The questionnaire for the study on initial responses to loss included 80 questions concerning sociodemographic variables, features of the loss, emotional reactions, funeral rituals, social support, coping, and cognitive-behavioral variables.

Sociodemographic variables included (i) age of participant in years, (ii) sex (0 = man, 1 = woman), and (iii) education (0 = lower/intermediate, 1 = college/university). Features of the loss included kinship to the deceased (0 = other than partner/child, 1 = partner/child) and cause of loss (0 = not unexpected, 1 = unexpected [e.g., accident, suicide, heart attack or other unexpected medical cause]).

Symptoms of PCBD were assessed using a modified version of the Traumatic Grief Inventory Self Report version (TGI-SR; Boelen & Smid, 2017). This 18-item self-report questionnaire measures the presence of PCBD symptoms (e.g. "I had trouble to accept the loss") on 5-point scales ranging from 1 = *never* to 5 = *always*. Because we wanted to assess current PCBD symptoms (rather than symptoms during the preceding month) and some participants experienced loss in the preceding few week, items were reformulated into the present tense (e.g., "I have trouble to accept the loss") and the response scale was changed into 1 = *not at all*, 2 = *a little*, 3 = *somewhat*, 4 = *quite much*, and 5 = *very much*. For ethical reasons, the TGI-SR's suicidality item was not included in the scale. To reduce the length, one of two items tapping preoccupation was removed (namely "I had intrusive thoughts or images related to the person who died"), leaving 16 items. Two items ("Feeling shocked" and "Impaired functioning because of the loss"), tapping symptoms of disturbed grief that are not among the PCBD symptom criteria

were not included in the analyses, leaving 14 items included in the analyses. In Table 1 the abbreviated item content is shown. The alpha of this 14-item scale was .92.

Additional data were used from items tapping cognitive-behavioral variables. Specifically, unrealness was measured with one item ("I can hardly imagine that s/he will never be here again"), based upon the Experienced Unrealness Scale (Boelen, 2017). Several items were adapted from the Grief Cognitions Questionnaire (Boelen & Lensvelt-Mulders, 2005). These included two items representing negative cognitions about the self ("Since s/he is gone, I feel less worthwhile", "I am generally satisfied about myself" (reverse scored)), two representing negative views of the future ("When I look ahead, I see more misery than happiness", "I have confidence in the future" (reverse scored)), and one item representing catastrophic misinterpretations ("If I would fully realize what the death of [–] means, I would go crazy"). One item measuring depressive avoidance ("Since [–] is dead, I do much less of the things that I used to enjoy") and another measuring anxious avoidance ("I deliberately retrieve positive memories related to [–] as a means to avoid thinking about the fact that [–] is dead and will never return") were taken from the Depressive and Anxious Avoidance in Prolonged Grief Questionnaire (Boelen & Van den Bout, 2010). To ease the understandability of the total questionnaire, participants were instructed to rate all these items in terms of the degree to which they applied to them on the same 5-point scale that was also used for the PCBD items (1 = *not at all*, to 5 = *very much*).

Questionnaires administered at T2. At T2, the complete 18-item TGI-SR was administered assessing the severity of PCBD symptoms during the preceding month on 5-point scales (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *frequently*, 5 = *always*). Recent research supported the reliability and validity of the TGI-SR (Boelen & Smid, 2017). Alpha in the current sample at T2 was .94. We also counted the number of people

meeting criteria for a provisional diagnosis of PCBD based on TGI-SR scores. To this end, we treated each item rated with a 3, 4, or 5 response as a symptom endorsed and then followed the DSM-5 based algorithm requiring the endorsement of (i) >1 Criterion B item (items 1, 2, 3, 14), (ii) >6 Criterion C items (items 4-11 and 15-18), and (iii) the Criterion D item (item 13).

Additionally, the 5-item Work and Social Adjustment Scale (WSAS; De Graaf et al., 2009; Mundt, Marks, Shear, & Greist, 2002) was administered to assess impairments associated with the loss. Participants rated to what extent they experienced impairments in functioning (e.g., social activities) on 9-point scales (0 = *not at all*, to 8 = *very severe*) with higher summed scores indicating stronger functional impairment. Psychometric properties of this instrument are adequate (Mundt et al., 2002). The alpha in the current study was .88.

Statistical analysis

The 14 PCBD symptoms were subjected to LCA implemented in Latent Gold 5.0. (Vermunt & Magidson, 2013). Less than 2% of the data for each indicator in the LCA (i.e., PCBD symptoms) were missing and handled with full maximum likelihood estimation (Vermunt & Magidson, 2016). We dichotomized TGI-SR item scores representing PCBD symptoms, by considering a symptom as absent when rated 1 = *not at all* or 2 = *a little*, and present when rated as 3 = *somewhat*, 4 = *quite much* or 5 = *very much*. Models with one class up to six classes were estimated. Model selection was based on fit indices, class sizes, and interpretation of the class solutions (Nylund, Asparouhov, & Muthen, 2007). We compared the following fit indices for each model: (i) the (sample-size adjusted) Bayesian information criterion ((SA-)BIC) and Akaike's information criterion (AIC) with lower values indicating better fit (Nylund et al., 2007), (ii) the entropy, with values >.80 considered acceptable (Muthén & Muthén, 2007), (iii) the bootstrap likelihood ratio test

(BLRt), with a *p*-value below .05 indicating a significant improvement of the fit of a model relative to the model with one less class (Nylund et al., 2007). Furthermore, class solutions with small class sizes were rejected, because when cells contain too few observations this could cause computational difficulties (e.g., inaccurate estimates of class sizes) and elevated Type 2 error rates when correlates of class-membership are examined (Nylund et al., 20017; van de Schoot, Sijbrandij, Winter, Depaoli, & Vermunt, 2017). Lastly, solutions with fewer classes that were relatively easy to interpret were preferred over solutions with more classes that were more difficult to interpret.

Based on the highest classification probability, people were assigned to the classes. We examined the association between each correlate of class-membership separately, by using the three-step approach implemented in Latent Gold (Vermunt, 2010). Within this three-step approach the classification error resulting from assigning people to classes is taken into account. In the longitudinal analyses, we examined associations of class-membership at T1 with PCBD severity (TGI-SR total score) and impairments in functioning (WSAS total score) at T2. We used the approach from Bolck, Croon, and Hagenaars (2004), which is a weighted analysis of variance (ANOVA), as recommended by Bakk and Vermunt (2016). As recommended by Vermunt (2010), we used a maximum likelihood-based correction method for the cross-sectional analyses in which we included the correlates as independent variables and the classes as dependent variables. For each comparison, 95% confidence intervals (CIs) were calculated. When zero was not included in these CIs, the differences between the classes were considered significant ($p < .05$). People with missing data on correlates were excluded from the analyses.

Results

Descriptive Statistics

The sample included 200 men (42%) and 276 (58%) women. The mean age was 58.7 (*SD* = 11.2) years); 220 (46.2%) had college/university level education, 256 (53.8%) had followed lower education. Concerning relationship, 158 (33.2%) lost a partner or child, and 318 (66.8%) some other relative. The losses took place a mean of 94.5 (*SD* = 28.5) days before the assessment. Deaths were not unexpected in 363 (76.3%) and unexpected in 113 (23.7%) cases.

Latent Class Analysis

Table 2 shows the fit indices for the one to six class solutions. All models yielded acceptable (>.80) entropy values. The significant BLRt and other indices indicated that the two-class solution fit the data better than the one-class solution. The three-class solution had the lowest BIC value and a marginally significant BLRt value. BICs were higher for the four-, five-, and six-class solutions, and their BLRt values were not statistically significant. The five-class solution yielded the lowest AIC and SA-BIC. However, two of its five classes had small sample sizes (i.e., 21 and 26 people) and the interpretability of this solution was difficult. Considering the lowest BIC of the three-class solution, its marginally significant BLRt, and the interpretability of the solution, the three-class solution was retained. Table 1 shows symptom frequencies in the total sample and probabilities of PCBD symptom endorsement for each class. We considered values of ≥0.60 as representing high symptom probability, values ≤0.59 and ≥0.16 as representing moderate probability, and values of ≤0.15 as representing low probability (Minihan, Liddell, Byrow, Bryant, & Nickerson, 2018). The largest class included 238 people (50.0%) and was characterized by low probability of thirteen PCBD symptoms and moderate probability of one symptom. This class was therefore labelled as "Resilient Class". The second class included 172 people (36.1%) and was characterized by high probability of two PCBD symptoms ("Yearning", "Sorrow/emotional pain"),

moderate probability of three symptoms ("Preoccupation", "Difficulties accepting", "Life feels empty/meaningless"), and low probabilities of nine items. Because of the relatively high probability of three items from the separation distress cluster of PCBD ("Yearning", "Sorrow/emotional pain", "Preoccupation"), this class was labelled as "Separation Distress Class". The smallest class included 66 people (13.9%) and was characterized by high probability estimates for nine PCBD symptoms and moderate probabilities for five symptoms. This class was labelled as "High PCBD Symptoms Class". See Figure 1 for a plot of the probability estimates for the 3-class solution.

Associations of class-membership with PCBD severity, functional impairment, and provisional PCBD caseness at T2

Table 3 and Appendix A summarize outcomes of the analyses testing the associations of class-membership at T1 with PCBD severity (TGI-SR total score) and functional impairments (WSAS total score) at T2. Average levels of PCBD and impairments were significantly higher in the High PCBD Symptoms Class compared to the Separation Distress Class and higher in the Separation Distress Class compared to the Resilient Class. Within the sample at T2 (n = 251), 13 people (5.2%) met criteria for a provisional diagnosis of PCBD. Of all 113 participants in the Resilient Class, none met PCBD-criteria at T2; of all 101 participants in the Separation Distress Class, 7 (6.9%) met PCBD-criteria at T2; of all 37 participants in the High PCBD Symptoms Class, 6 (16.2%) met PCBD-criteria at T2. Because none were included in the Resilient Class, the weighted ANOVA testing differences in prevalence rates of provisional PCBD diagnosis as T2 between the PCBD classes at T1 did not converge. Chi square analyses showed that differences between classes in terms of percentages of PCBD caseness at T2 were statistically significant (Chi Square = 15.98, DF = 2, N = 251, p < .001).

Sociodemographic and loss-related correlates of PCBD class-membership at T1

Table 4 shows sociodemographic variables and loss-related characteristics of participants included in the three classes. Appendix A summarizes weighted ANOVAs testing differences between classes. Classes did not differ in terms of age. More women were assigned to the Separation Distress Class compared to the Resilient Class. People in the High PCBD Symptoms Class were more likely to have lower education compared to people in the Resilient Class. People assigned to the Separation Distress Class and High PCBD Symptoms Class were more likely to have lost a partner or child (vs. other relative) and also more likely to have experienced an unexpected loss, compared to people in the Resilient Class.

Cognitive-behavioral correlates of PCBD class-membership at T1

Table 4 also shows mean scores on the cognitive-behavioral variables in each class; Appendix A summarizes weighted ANOVAs testing differences between classes. All cognitive-behavioral variables (i.e., unrealness, negative self, negative future, anxious avoidance, and depressive avoidance) differed straightforwardly between the classes, with scores ordered Resilient Class < Separation Distress Class < High PCBD Symptoms Class.

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Discussion

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We employed LCA to explore symptom-profiles of PCBD symptoms in relatively recently (≤6 months) bereaved adults. We also examined whether early PCBD symptoms were associated with elevated PCBD and functional impairment three years later. Furthermore, we explored whether a number of sociodemographic, loss-related, and psychological variables were associated with different symptom-patterns of PCBD. LCA indicated that, based on their endorsement of PCBD symptoms, participants could be grouped into three meaningful subgroups. The largest class, including 50% of participants, was characterized by low probability of endorsement of all but one

(yearning) PCBD symptoms and coined the Resilient Class. The second class included

36.1% of participants evidencing high probabilities of two separation distress symptoms

("Yearning", "Sorrow/pain"), moderate probabilities of endorsing three symptoms

("Preoccupation", "Difficulties accepting", "Life empty/meaningless"), and low

probabilities of the remaining nine items. Because three items from the separation

distress cluster had moderate to high probabilities, this class was coined the Separation

Distress Class. The smallest class included 13.9% of participants with high probability

estimates for nine PCBD symptoms, moderate probabilities for five symptoms. This class

was therefore labelled High PCBD Symptoms Class. Our finding that the largest class was

comprised of people with no PCBD symptoms is consistent with prior evidence that the

vast majority of bereaved people do not experience notable symptoms of grief and that

psychological adaptation is the normative response to loss (Galatzer-Levy et al., 2018).

Interestingly, LCA did not reveal classes with increasing probabilities of endorsing *all*

PCBD symptoms. Instead, the emergence of the second class indicates that among

recently bereaved people, a subgroup exists including individuals afflicted by some, but

not all PCBD symptom, including two symptoms of separation distress. This is somewhat

different from other recent LCA studies examining grief. For instance, Djelantik et al.

(2017) explored latent classes of symptoms of PGD (as put forth by Prigerson et al.

(2009)), posttraumatic stress disorder (PTSD), and depression. These authors did not

find distinct classes of people characterized by different PGD symptoms. Instead, their

study identified a resilient class, a PGD class, and a combined PGD/PTSD class.

Differences may be due to the fact that the current study focused on PCBD symptoms

rather than PGD symptoms, among very recently (rather than remotely) bereaved

individuals. It would be interesting for future studies to further explore differences in

subgroups of bereaved individuals based on PCBD vs. PGD criteria and at different

points in the process of grief.

Our longitudinal analyses, based on data from a subgroup of 251 participants who completed additional questionnaires approximately three years after baseline, indicated that class-membership had prognostic value. Specifically, we found that indices for overall disturbed grief and impairments in functioning were lowest in the Resilient Class, significantly higher in the Separation Distress Class, and highest in the High PCBD Symptoms Class. These findings are important in showing that in the first half year following bereavement, elevations in just a few symptoms of PCBD already render bereaved individuals prone to more severe distress and disfunction a few years later; even worse long-term outcomes can be expected when all PCBD symptoms are endorsed in the early months of bereavement. The associations of classes with probable caseness of PCBD paralleled these findings, with none of the participants in the Resilient Class, 6.9% from the Separation Distress Class, and 16.2% from the High PCBD Symptoms Class meeting criteria for caseness three years after baseline.

Our findings indicate that among recently bereaved individuals, there are subgroups with partial or preclinical PCBD that are vulnerable to persistent distress. These findings accord with findings from our own recent study among people who lost loved ones in a plane crash (Lenferink et al., in press) that people with persistent high levels of PCBD over a three and a half year period following the loss already displayed elevated PCBD before the first anniversary of the loss. Moreover, the results are reminiscent of literature showing that subclinical posttraumatic stress disorder is associated with different negative outcomes (Zlotnick, Franklin, & Zimmerman, 2002), including delayed expression of full PTSD (Smid, Mooren, Van der Mast, Gersons, & Kleber, 2009). These findings underscore that it could be useful to develop means to identify vulnerable subgroups in the first months of bereavement and to offer them

preventive interventions. Notably, attempts have been made to devise screening tools to identify such subgroups (Djelantik, Smid, Kleber, & Boelen, 2018). In addition, there is evidence that treatment of people with elevated PCBD in the early months of bereavement can be successful in preventing exacerbations of grief symptoms (Litz et al., 2014).

We also examined variables associated with latent class assignment, including sociodemographic and loss-related variables. Fairly straightforwardly, participants confronted with the death of a partner and child (rather than another relative) and those whose losses were experienced as unexpected (rather than foreseen) were more often in the Separation Distress and High PCBD Symptoms (rather than the Resilient) Class. This is largely consistent with prior evidence that more pervasive grief is experienced following deaths of partners/children, specifically following unnatural causes (e.g., Lobb et al., 2010). Less clear differences emerged in terms of age, gender, and education.

Finally, we evaluated differences between classes in terms of a sense of unrealness about the loss, negative cognitions, and depressive and anxious avoidance. Outcomes indicated that endorsement of items tapping these maladaptive cognitive-behavioral variables was lowest in the Resilient Class, intermediate in the Separation Distress Class and highest in the High PCBD Symptoms Class. The finding that cognitive-behavioral vulnerabilities were elevated among those people with just a few PCBD symptoms (who had elevated distress and dysfunction three years later) accords with prior longitudinal evidence that these variables are involved in the maintenance and exacerbation of disturbed grief (as well as comorbid depression and anxiety; cf. Boelen, Van den Bout et al., 2006). Taken together, these findings indicate that targeting difficulties to confront and integrate the irreversibility of the loss and tendencies towards negative thinking and avoidance in the first months following loss may have

fruitful preventive effects among those with elevated PCBD symptoms.

Several limitations should be taken into account. First, with only one third of participants having lost a partner or child, people confronted with potentially untimely, and more emotional and distressing losses may have been underrepresented in this study. Thus, caution should be applied in generalizing the findings. Secondly, to reduce response burden, cognitive-behavioral variables were evaluated with one or two item questionnaires. Although these were mostly obtained from longer, validated questionnaires, results may have been affected by limitations of the psychometric properties of these questions. Third, the second assessment was three years after the first. Future research is needed to determine to what extent membership of different classes in the first half year is associated with elevated distress and disfunction earlier on, before those three years, as well as later in time.

Conclusion

Notwithstanding these considerations, the current findings are important in showing that elevations in separation distress in the first half year of bereavement may signal elevated grief problems and that early endorsement of all PCBD symptoms in this period is associated with a significantly elevated risk of full blown PCBD some years later. More work is needed to further explore different symptom presentations in the early stages of grief as well as factors involved in the maintenance and exacerbation of these symptoms. Besides cognitive-behavioral factors, these factors may include negative life events and losses of resources, highlighting the need to develop interventions that are accessible to socially or culturally vulnerable groups.

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