**A Comparison of Risk Factors for Pathological Grief and Depression**

Iris Hilgeman (5976219)

Faculty of Social and Behavioral Sciences, Utrecht University

Master Thesis Clinical Psychology (201500819)

*Supervisor*

Iris van Dijk, MSc

*Second examiner*

Dr. Angelos Krypotos

24 June, 2021

20 EC

Word count: 4842

**Abstract**

*Introduction.* Research has focused on the extent to which pathological grief and depression are distinct disorders. The current study elaborated on this by examining risk factors associated with pathological grief and depression and assessed how these concepts differ.

*Methods.* The current study used existing data from the *TGI-CA Assessment after Loss in Europe* (TALE) study (N = 433). All participants were 18 years and older and had lost a loved one at least six months ago. To assess levels of pathological grief and depression the TGI-CA and PHQ-9 were used respectively. Separate multiple regression analyses were conducted for both outcome variables.

*Results.* The results show thatpathological grief and depression were both predicted by the following risk factors: history of psychological support, shorter time since loss and unexpectedness of the loss. Additional risk factors were found for pathological grief: loss of a grandparent compared to ‘other’ and death due to an unnatural cause. Other predictors used in the analysis (gender, multiple loss and religious affiliation) showed no results.

*Discussion.* This study examined and comparedrisk factors between pathological grief and depression in a general sample. Pathological grief and depression show some overlap in risk factors, however additional risk factors for pathological grief indicate that the two are distinct disorders. The results have clinical implications for early screening and intervening purposes. Furthermore, this study adds to the scientific literature of depression and pathological grief being two distinct disorders. Limitations of the study and recommendations for future research are being discussed.

*Keywords: pathological grief, depression, TGI-CA, PHQ-9, comparing risk factors, multiple regression*

**Introduction**

There is variation in how people respond to the death of a loved one. Most people experience little disruption and return to pre-loss levels of functioning relatively soon after a loss (Boelen & Lenferink, 2019; Bonanno et al., 2007). However, a significant minority of approximately 10% develops persistent and disabling grief symptoms that result in pathological grief (Lundorff et al., 2017). This percentage is as high as 50% in people that have experienced an unnatural loss (e.g., death due to an accident or suicide; Djelantik et al., 2020). Pathological grief is characterized by intense yearning and longing for the deceased, preoccupation with the deceased, and difficulty accepting the loss (Boelen & Smid, 2017a).

Research has focused on the extent to which pathological grief is distinct from depression. Depression is characterized by depressed mood, negative cognitions and loss of interest or pleasure in almost all activities (American Psychiatric Association (APA), 2013). Clinicians have difficulty diagnosing depression in the context of bereavement (Zisook & Shear, 2009). According to some, depression can explain the psychiatric responses following bereavement and additional diagnostic constructs are unnecessary (Bryant, 2013). Grief symptoms have therefore been assimilated into symptoms of depression for some decades (Kossigan Kokou-Kpolou et al., 2021). In the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-3; APA, 1980) it was noted not to diagnose depression within two months after bereavement to prevent premature labelling (Bryant, 2013). However, this ‘bereavement exclusion’ was removed in DSM-5 since several studies showed that pathological grief and depression are distinguishable syndromes (Boelen et al., 2010; Boelen & Lenferink, 2019; Boelen & van den Bout, 2005; Bonanno et al., 2007; Pies, 2014). Since then, several classifications for pathological grief have been proposed and some have been adopted by well-known classification systems: Persistent Complex Bereavement Disorder (PCBD; DSM-5; APA, 2013), Prolonged Grief Disorder (PGD; ICD-11; World Health Organization (WHO), 2019), Prolonged Grief Disorder (PGD; Prigerson et al., 2009) and Complicated Grief (CG; Shear et al., 2011).

Although pathological grief and depression share some similarities, they also have important key differences (Kristensen et al., 2017). A key difference is that in pathological grief thoughts and emotions continue to circle around the deceased, while in depression these tend to be more generalized and less associated with the loss itself (Kristensen et al., 2017; Lenferink et al., 2017; Prigerson et al., 2009). Intense yearning and longing for the deceased, a core symptom of pathological grief, is not associated with depression. The two constructs also differ in avoidance behavior. Individuals with pathological grief tend to avoid specific places or things that remind them of their loss, however they sometimes actively seek sensory experiences that bring them closer to the deceased. Depression is associated with more general avoidance behavior and social withdrawal. Suicidal thoughts are common in both pathological grief and depression. In pathological grief these thoughts are associated with wishing to be reunited with a loved one, in depression they are associated with the idea of not deserving to live or wanting to put an end to an intolerable situation (Kristensen et al., 2017). Furthermore, low self-esteem and self-worth, key symptoms of depression, are not present in pathological grief (Shear, 2012). Parker et al. (2015) conducted a study in which they assessed how clinical features of pathological grief differed from depression. Of the 153 participants, 87% reported that the depressed state they experienced differed from grief.

Since pathological grief and depression are distinct disorders, they may have different risk factors. Knowledge about risk factors for poor bereavement outcomes is growing, however, there is a need to enhance this knowledge (Boelen & Lenferink, 2019). Several risk factors for pathological grief have already been identified: close relationship to the deceased, unexpectedness of the loss (Boelen et al., 2019b; Burke & Neimeyer, 2013; Lobb et al., 2010; Shear et al., 2013), cause of death, multiple losses (Burke & Neimeyer, 2013; Lobb et al., 2010; Shear et al., 2013), female gender (Boelen & Lenferink, 2019; Burke & Neimeyer, 2013; Shear et al., 2013), previous psychiatric history (Lobb et al., 2010), and time since loss (Boelen & Lenferink, 2019). Burke and Neimeyer (2013) conducted a review of empirical literature on risk factors for pathological grief. They found 37 statistically significant risk factors which were divided into different categories. The death- and bereavement-related (e.g., cause of death), relation to the deceased (e.g., kinship), and intrapersonal categories (e.g., attachment style) included the most statistically significant risk factors, followed by survivor’s background. Several researchers have performed latent class analysis (LCA) to define subgroups of bereaved people. Kossigan Kokou-Kpolou et al. (2021) found three groups: a resilient class, a predominantly pathological grief class and a combined pathological grief and depression class. The following factors were differential predictors of class membership: time since loss, age, religious beliefs and relationship with the deceased. In another LCA from Lenferink et al. (2017) a sense of unrealness was the biggest differential feature of the subgroups. The LCA from Boelen et al. (2019b) showed that close relationship to the deceased (i.e., partner or child) and unexpectedness of the loss were associated with high symptom-level classes. Previous research into risk factors for depression in the context of bereavement showed that younger age and poor prior physical and mental health were important predictors (McHorney & Mor, 1998; Onrust et al., 2007). Also, shorter time since loss predicted higher symptom levels of depression (Onrust et al., 2007).

To the best of my knowledge few studies have compared risk factors in pathological grief and depression. Studies that have done this specifically focus on pathological grief and depression after loss of a child (Harper et al., 2014; McCarthy et al., 2010; Wijngaards-de Meij et al., 2005). Wijngaards-de Meij et al. (2005) found that pathological grief after loss of a child was mostly predicted by factors that parents share (e.g., cause of death, unexpectedness, number of remaining children, and age of the child) and depression was predicted by individual factors (e.g., gender, professional help seeking, and religious affiliation).

The current study will more broadly examine which risk factors are associated with higher symptom levels of pathological grief or depression. Since pathological grief and depression are distinct disorders, this research will investigate whether they have unique risk factors. Based on the literature the following risk factors will be analyzed: gender, multiple loss, history of psychological support, kinship, cause of death, expectedness, religious affiliation and time since loss. Intrapersonal categories were found to be important in predicting pathological grief symptoms (Burke & Neimeyer, 2013). However, the TALE-study does not include measures of intrapersonal categories and therefore these will not be examined in the current study.

Based on previous research it is expected that being female, having experienced multiple losses, having a history of psychological support, having a close relationship to the deceased, an unnatural death, high unexpectedness, not being religious and shorter time since loss are associated with higher symptomology in pathological grief and depression. More specifically, it is expected that risk factors associated with the loss (i.e.., cause, kinship and expectedness) are more related to grief and that risk factors associated with the individual (i.e., gender, religious affiliation, multiple loss, time since loss and history of support) are more related to depression.

As we now have increased knowledge of diagnosing pathological grief, having better scales to measure it with and improved therapies to treat it, isolating risk factors is crucial for clinical practice (Burke & Neimeyer, 2013). When healthcare professionals are able to recognize individuals at risk for pathological grief or depression, they can screen, monitor and intervene early (Mason et al., 2020). Also, having knowledge of risk factors may help develop psychotherapies that aim to modify those risk factors. If pathological grief and depression have unique risk factors, this study will also add to the scientific literature of pathological grief and depression being two distinct disorders.

**Methods**

**Participants and procedure**

For this thesis, existing data from the study “*The TGI-CA Assessment after Loss in Europe* (TALE)” was used. This study was conducted by researchers from Utrecht University, University of Groningen and University of Berlin. In total, 433 Dutch and German people participated in the study. All participants were 18 years and older and had lost a loved one at least six months ago. Time since loss had to be at least six months since according to the PGD criteria in ICD-11 (WHO, 2019) pathological grief can be diagnosed six months after the loss (Boelen et al., 2018). Participants scoring high on suicidality and participants who ever received a diagnosis of a psychotic disorder were excluded from the study. When participants indicated having thoughts about being better off dead or hurting themselves, the suicide protocol of the study was followed. The suicide protocol consisted of two questions about considering ending one’s life and actively planning to end one’s life. The interview was stopped when participants indicated recognizing either of these.

Participants were contacted through the network of the researchers. They received a brochure with information about the study via WhatsApp, LinkedIn, email or support groups. Based on the brochure, participants decided whether to engage in the study. After filling out the contact form, participants were contacted to schedule the interview. Informed consent procedures were used. The interviews were conducted by telephone between November 2019 and May 2020. After the interview participants were asked whether they wanted to engage in follow-up measurements. The TALE-study has been approved by the ethical committee. The current study only used data that was collected at the first measurement-point of the TALE-study and only used data relevant to answering the research question.

**Dependent variables**

The Dutch version of the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) was used to assess levels of depression. This questionnaire consists of 9 items which are formulated as statements, for example, “little interest or pleasure in doing things”. Answers were given on a 5-point scale in which 1 = *not at all*, 2 = *several days*, 3 = *more than half the days*, and 4 = *nearly every day*. Items are based on symptomatology in the past two weeks. Higher scores indicate higher levels of depressive symptoms. Its psychometric properties have been studied and proved to be adequate (Beard et al., 2016; Titov et al., 2011). The current study reports a Cronbach’s alpha of .80, which indicates good internal consistency (Field, 2013).

To assess levels of pathological grief, a Dutch version of the Traumatic Grief Inventory - Clinician Administered (TGI-CA) was used. This questionnaire was developed by Boelen, Smid & Lenferink and is based on the Traumatic Grief Inventory - Self Report (TGI-SR), a self-report questionnaire (Boelen & Smid, 2017b). The TGI-CA consists of 22 items and measures both PCBD (APA, 2013) and PGD (WHO, 2019). An example of an item is: “Have you experienced a strong longing or yearning for the deceased in the past month?”. The answers range from 1 = *never*, 2 = *seldom*, 3 = *sometimes*, 4 = *often*, to 5 = *always*. Questions are based on symptomatology from the past month. Higher scores indicate higher levels of pathological grief symptoms. Psychometric properties of this questionnaire have been studied and proved to be adequate (Boelen & Smid, 2017b; Boelen et al., 2019a). The current study reports a Cronbach’s alpha of .93, which indicates excellent internal consistency (Field, 2013).

**Predictors**

Biographical data about the participants and their loss were gathered at the beginning of the interview. Gender (i.e., male or female), multiple losses (i.e., yes or no), history of psychological support (i.e., yes or no), kinship, cause of death, expectedness (5-point scale; 1 = *totally not expected*, 2 = *a bit unexpected*, 3 = *quite unexpected*, 4 = *very unexpected*, 5 = *completely unexpected*), religious affiliation (i.e., yes or no), and time since loss in months were selected as independent variables for the current study. Kinship was categorized into partner, child, parent, sibling, grandparent, grandchild, friend, or ‘other’. This variable was dummy coded for multiple regression analysis, with ‘other’ as the reference category. A close relationship with the deceased was defined by loss of a partner, child, parent or sibling. Cause of death was categorized into physical illness, accident, suicide, murder and ‘other’. For the current study this variable was dichotomized into natural death (i.e., physical illness) and unnatural death (i.e., accident, suicide, murder and ‘other’). Religious affiliation and multiple loss were dichotomized as well.

**Statistical analysis**

All statistical analyses were performed using SPSS(version 26.0; IBM Corp., 2019). The current study used data collected at the first measurement-point of the TALE-study. First, the dataset was cleaned and checked for missing values. A total of 11 missing values occurred in the dataset, which were divided over several items. Since the number of missing values was considerably small compared to the size of the dataset, the missing values were not removed. A multiple regression analysis was conducted for both dependent variables separately. All risk factors were entered into the regression analysis simultaneously. Assumption testing prior to the analysis indicated that the assumption of normality for both dependent variables was violated. However, since the sample size of the current study is sufficiently large, this violation has no significant impact on the data (Williams et al., 2013). Further assumption testing did not indicate any violations.

**Results**

**Participant characteristics**

Participant characteristics are shown in Table 1. Data from 81 (19%) men and 352 (81%) women was used. The mean age of participants was 43.05 years (*SD* = 16.90). Most participants lost a loved one due to natural causes (77%). Among participants that experienced an unnatural death, suicide was the most common cause (13%). Loss of a parent was most frequent (30%). Mean time since loss was 80.38 months (*SD* = 98.03). Religious affiliation and multiple loss were roughly equally distributed. Mean scores for symptom levels of depression and pathological grief were calculated. Depression had a mean score of 15.53 (*SD* = 4.57), scores on the PHQ-9 ranged from 9 to 32. Pathological grief had a mean score of 40.62 (*SD* = 14.67), scores on the TGI-CA ranged from 22 to 90.

**Risk Factors for Depression**

To estimate the relative importance of the independent variables in predicting symptom levels of depression, a standard multiple regression analysis was performed. All independent variables were entered into the model simultaneously. The category grandchild of the predictor variable ‘kinship’ was removed from the analysis since this category did not occur in the dataset. Unstandardized (*B*) and standardized (*ß*) regression coefficients for each predictor in the regression model are reported in Table 2.

The model was found to be significant and explained 9,8% of variance in levels of depression, *F* (13, 417) = 3.49, *p* < .001. History of psychological support, unexpectedness of the loss and shorter time since loss were significant predictors of levels of depression, with history of psychological support being the strongest predictor. Specifically, individuals who had a history of psychological support, who experienced an unexpected death and/or who lost a loved one more recently, were more likely to have higher levels of depressive symptoms.

**Table 1**

*Participant Characteristics*

|  |  |  |
| --- | --- | --- |
| Variable | n | % |
| Gender |  |  |
| Male | 81 | 19 |
| Female | 352 | 81 |
| Religious affiliation |  |  |
| Yes | 207 | 48 |
| No | 226 | 52 |
| Multiple loss |  |  |
| Yes | 234 | 54 |
| No | 198 | 45 |
| History of support |  |  |
| Yes | 167 | 39 |
| No | 266 | 61 |
| Kinship |  |  |
| Partner | 119 | 27 |
| Child | 51 | 12 |
| Parent | 130 | 30 |
| Sibling | 16 | 4 |
| Grandparent | 73 | 17 |
| Grandchild | 0 | 0 |
| Friend | 19 | 4 |
| Other | 25 | 6 |
| Cause of death |  |  |
| Natural | 334 | 77 |
| Unnatural  *Accident*  *Suicide*  *Murder*  *Other* | 99  27  57  3  12 | 23  6  13  1  3 |

*Note*. Participants were on average 43.05 years old (*SD* = 16.90), and time since loss was on average 80.38 months (*SD* = 98.03).

**Table 2**

*Predictors of Depression in Multiple Regression Analysis*

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *b* | *SE B* | *ß* |
| Constant | 11.91 | 1.53 |  |
| Gender a | 0.61 | 0.55 | .05 |
| Multiple loss b | 0.18 | 0.44 | .02 |
| History of support c | 1.86 | 0.44 | .20\*\*\* |
| Religious affiliation d | -0.65 | 0.44 | -.07 |
| Cause of death e | 0.22 | 0.56 | .02 |
| Expectedness | 0.36 | 0.14 | .13\* |
| Time since loss (months) | -0.01 | 0.00 | -.10\* |
| Partner kinship | 0.02 | 0.97 | .00 |
| Child kinship | -1.16 | 1.08 | -.08 |
| Parent kinship | -1.17 | 0.96 | -.12 |
| Sibling kinship | -0.03 | 1.42 | -.00 |
| Grandparent kinship | -0.85 | 1.03 | -.07 |
| Friend kinship | -2.15 | 1.33 | -.10 |

*Note*. *R*2 = .10

\* = *p* < .05, \*\*\* = *p* < .001.

a 1 = male, 2 = female. b 0 = no, 1 = yes. c 1 = no, 2 = yes. d 0 = no, 1 = yes. e 0 = natural, 1 = unnatural.

**Risk Factors for Pathological Grief**

A standard multiple regression analysis was performed for predicting levels of pathological grief as well. All independent variables were entered into the model simultaneously. The category grandchild of the predictor variable ‘kinship’ was removed from the analysis since this category did not occur in the dataset. Regression coefficients for each predictor in the regression model are reported in Table 3.

The model was found to be significant and explained 2,4% of variance in levels of pathological grief, *F* (13, 417) = 9.97, *p* < .001. History of psychological support, unnatural cause of death, unexpectedness of the loss, shorter time since loss and loss of a grandparent compared to the loss of ‘other’, were significant predictors of levels of pathological grief, with shorter time since loss being the strongest predictor.

**Table 3**

*Predictors of Pathological Grief in Multiple Regression Analysis*

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *b* | *SE B* | *ß* |
| Constant | 31.35 | 4.57 |  |
| Gender a | 2.71 | 1.64 | .07 |
| Multiple loss b | -0.16 | 1.30 | -.01 |
| History of support c | 3.06 | 1.31 | .10\* |
| Religious affiliation d | -1.22 | 1.30 | -.04 |
| Cause of death e | 3.69 | 1.67 | .11\* |
| Expectedness | 1.13 | 0.42 | .13\*\* |
| Time since loss (months) | -0.04 | 0.01 | -.27\*\*\* |
| Partner kinship | 3.84 | 2.89 | .12 |
| Child kinship | 3.20 | 3.22 | .07 |
| Parent kinship | -1.03 | 2.87 | -.03 |
| Sibling kinship | 1.36 | 4.23 | .02 |
| Grandparent kinship | -8.06 | 3.06 | -.21\*\* |
| Friend kinship | -3.43 | 3.98 | -.05 |

*Note*. *R*2 = .24

\* = *p* < .05, \*\* = *p* < .01, \*\*\* = *p* < .001.

a 1 = male, 2 = female. b 0 = no, 1 = yes. c 1 = no, 2 = yes. d 0 = no, 1 = yes. e 0 = natural, 1 = unnatural.

**Comparison of Predictors for Pathological Grief and Depression**

The results of multiple regression analysis for depression and pathological grief are shown in Table 2 and Table 3. Depression and pathological grief share the following significant predictors: history of psychological support, shorter time since loss and unexpectedness of the loss. For depression, history of psychological support was the strongest predictor (*ß* = .20), for pathological grief the strongest predictor was shorter time since loss (*ß* = -.27). Results show two additional predictors for pathological grief: unnatural cause of death (*ß* = .11) and loss of a grandparent compared to ‘other’ (*ß* = -.21).

**Discussion**

Research has focused on the extent to which pathological grief is distinct from depression. Several studies have shown that they are distinguishable syndromes (Boelen et al., 2010; Boelen & Lenferink, 2019; Boelen & van den Bout, 2005; Bonanno et al., 2017; Pies, 2014). The current study focused on risk factors and specifically on whether pathological grief and depression have different risk factors. The predictors that were analyzed in the current study were based on the results of previous research (Boelen et al., 2019b; Boelen & Lenferink, 2019; Burke & Neimeyer, 2013; Lobb et al., 2010; Shear et al., 2013). It was hypothesized that higher symptom levels of pathological grief are more associated with loss-related predictors (i.e., cause, kinship, and expectedness) and that higher symptom levels of depression are more associated with predictors related to the individual (i.e., gender, religious affiliation, multiple loss, time since loss and history of support).

The results indicate that pathological grief and depression share some important predictors: a history of psychological support, shorter time since loss, and unexpectedness of the loss. For pathological grief additional predictors were found: an unnatural cause of death and loss of a grandparent compared to ‘other’. The current study analyzed eight predictors, of which five seem to play a role in predicting symptom levels of pathological grief and/or depression. Religious affiliation, gender, multiple loss, and other categories of the predictor variable ‘kinship’ showed no effects in the current study. The findings partly support the hypothesis. It was not expected that unexpectedness of the loss would play a role in predicting symptom levels of depression. The review of Kristensen et al. (2012) provides a possible explanation for this result. The authors found that an unexpected loss can adversely affect mental health and that mental health disorders (e.g., post-traumatic stress disorder, depressive disorder, and pathological grief) are more elevated after sudden loss compared to natural deaths. Thus, it seems that unexpectedness of the loss can also play a role in predicting symptom levels of depression. Furthermore, it was not expected that a history of psychological support and shorter time since loss would play a role in predicting symptom levels of pathological grief. However, these results are not surprising because research into risk factors for pathological grief found them as well (Boelen & Lenferink, 2019; Lobb et al., 2010). It was only expected that a history of psychological support and shorter time since loss would be more strongly associated with symptom levels of depression than with symptom levels of pathological grief. Loss of a grandparent compared to ‘other’ was not defined as being a close relationship to the deceased, this finding is therefore not in line with the hypothesis. However, this should be stated carefully since it is not clear what the category ‘other’ entails. Gender showed no effect in the current study, perhaps due to methodological reasons. The variable gender was not equally distributed in the sample: 81 men (19%) and 352 women (81%) participated in the study. To conclude, the additional findings for pathological grief support the hypothesis that predictors are different for pathological grief and depression.

These findings have implications for clinical practice. It seems that having a history of psychological support, a shorter time since loss and unexpectedness of the loss are important in predicting symptom levels of both pathological grief and depression. Therefore, healthcare professionals should recognize and screen for these circumstances in order to intervene early. Having lost a loved in due to unnatural causes (e.g., an accident or suicide) increases the chance of developing pathological grief symptoms. Again, it is important for healthcare professionals to recognize and screen for this. Furthermore, research showed that patients with pathological grief improve more from a treatment that focuses on grief, than a treatment for depression (Shear et al., 2005). This indicates that pathological grief should be treated differently than other mental disorders.

As with all research, there are limitations to this study. The PHQ-9 is used in clinical practice as a screening instrument. It is not recommended to use this questionnaire for diagnostic purposes (Manea et al., 2012; Manea et al., 2015). Therefore, in the current study, a depressive disorder could not be classified amongst participants. Instead, symptom levels of depression were used as an outcome measure. It would be interesting for future research to use depressive disorder as an outcome measure, instead of symptom levels of depression. By using a dichotomous outcome variable (i.e., depressive disorder yes or no) risk factors can be measured more explicitly. It is recommended for future research to use an instrument that is more suitable for classifying a depressive disorder, so that the outcome measure can be dichotomous.

Second, the current study used the term ‘pathological grief’ in order to describe and summarize the symptoms associated with all different grief classifications (PCBD; DSM-5; APA, 2013; PGD; ICD-11; WHO, 2019; PGD; Prigerson et al., 2009; CG; Shear et al., 2011). The instrument used in the current study, the TGI-CA, measures symptoms of PCBD (APA, 2013), PGD (WHO, 2019) and PGD (Prigerson et al., 2009). These different grief classifications have different symptoms and criteria sets (Lenferink et al., 2019). This indicates a lack of consistency. Future research should define the concept of pathological grief more clearly and use an instrument based on that specific classification. It is recommended to focus on PCBD, as this classification will be adopted by the DSM (APA, 2013). The current study used the complete set of items in the TGI-CA, since the focus was on symptom levels for pathological grief not classifying pathological grief.

The period in which the interviews have taken place forms another possible limitation of this study. The interviews for the first measurement-point of the study were conducted from November 2019 to May 2020. During this period the Netherlands and Germany were in lockdown due to the COVID-19 virus. This period of distress and isolation may have influenced participants’ mental health. The WHO explicitly stressed the importance of taking care of our mental health during this period (WHO, 2020), since people were confronted with disease and loss on a daily basis. Perhaps this caused participants to have more attention for the loss of their own loved one(s). This could mean that answers on the PHQ-9 and TGI-CA exceeded normal levels. This may have led to an overestimation of the results, which forms a limitation of this study.

To conclude, the research design forms another limitation of this study. The current study only used data available at the first measurement-point of the TALE-study. This way, the predictive value of the risk factors could not be measured. By conducting longitudinal research risk factors can be measured more precisely and the influence of risk factors over time can be measured.

Strengths of the current study include a large (international) sample that represents the general population, which increases the external validity of this research. The psychometric properties of both instruments proved to be good. The study examined multiple risk factors based on the results of previous research. No assumptions were violated in order to use statistical analysis. Furthermore, this research differs from previous research comparing risk factors for pathological grief and depression. It also provides useful insight for clinical practice and scientific literature.

Future research should elaborate on risk factors on and differences between pathological grief and depression. It is recommended to use a depressive disorder and a grief classification as outcome measures, instead of symptom levels. It would be interesting to conduct longitudinal research to examine the predictive value of the risk factors. Although this study already examined multiple risk factors, future research could elaborate on this. For example, intrapersonal categories (e.g., rumination, worry, neuroticism) were found to be important in predicting pathological grief symptoms and depression in several studies (Boelen et al., 2016; Burke & Neimeyer, 2013; Eisma et al., 2013). Future research should include these intrapersonal categories into the analysis.

To conclude this study examined and compared risk factors for pathological grief and depression in a general sample. The results show that depression and pathological grief are strongly associated, but still appear to be different. Additional predictors seem to be involved in higher symptom levels of pathological grief. These results are important for clinical practice, because this way individuals at risk can be recognized early and healthcare professionals can intervene early. Furthermore, research showed that treatment should be different between pathological grief and depression (Shear et al., 2005). The results add to the scientific literature of pathological grief and depression being similar, but two distinct disorders (Boelen et al., 2010; Boelen & Lenferink, 2019; Boelen & van den Bout, 2005; Bonanno et al., 2017; Pies, 2014). This research provided results for risk factors of pathological grief and depression on which future research should elaborate.

**Reference list**

American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental*

*Disorders* (3rd ed.).

American Psychiatric Association. (2013). ​*Diagnostic and Statistical Manual of Mental*

*Disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Beard, C., Hsu, K. J., Rifkin, L. S., Busch, A. B., & Björgvinsson, T. (2016). Validation of

the PHQ-9 in a psychiatric sample. *Journal of Affective Disorders*, 193, 267-273.

https://doi.org/10.1016/j.jad.2015.12.075

Boelen, P. A., Djelantik, A. M. J., de Keijser, J., Lenferink, L. I. M., & Smid, G. E. (2019a).

Further validation of the Traumatic Grief Inventory-Self Report (TGI-SR): A measure of persistent complex bereavement disorder and prolonged grief disorder. Death studies, 43(6), 351-364. https://doi.org/10.1080/07481187.2018.1480546

Boelen, P. A., & Lenferink, L. I. (2019). Symptoms of prolonged grief, posttraumatic stress,

and depression in recently bereaved people: symptom profiles, predictive value, and cognitive behavioural correlates. *Social Psychiatry and Psychiatric Epidemiology*, *55*, 765-777. https://doi.org/10.1007/s00127-019-01776-w

Boelen, P. A., Lenferink, L. I. M., Nickerson, A., & Smid, G. E. (2018). Evaluation of the

factor structure, prevalence, and validity of disturbed grief in DSM-5 and ICD-11. *Journal of Affective Disorders*, 240, 79-87. https://doi.org/10.1016/j.jad.2018.07.041

Boelen, P. A., Reijntjes, A., & Smid, G. E. (2016). Concurrent and prospective associations

of intolerance of uncertainty with symptoms of prolonged grief, posttraumatic stress, and depression after bereavement. *Journal of anxiety disorders*, *41*, 65-72. http://dx.doi.org/10.1016/j.janxdis.2016.03.004

Boelen, P. A., & Smid, G. E. (2017a). Disturbed grief: prolonged grief disorder and persistent

complex bereavement disorder. *BMJ*. https://doi.org/10.1136/bmj.j2016

Boelen, P. A., & Smid, G. E. (2017b). The traumatic grief inventory self-report version (TGI-

SR): Introduction and preliminary psychometric evaluation. *Journal of Loss and Trauma*, *22*(3), 196-212. https://doi.org/10.1080/15325024.2017.1284488

Boelen, P. A., Smid, G. E., Mitima-Verloop, H. B., de Keijser, J., & Lenferink, L. I. (2019b).

Patterns, Predictors, and Prognostic Validity of Persistent Complex Bereavement Disorder Symptoms in Recently Bereaved Adults: A Latent Class Analysis. *The Journal of Nervous and Mental Disease, 207*(11), 913-920.

https://doi.org/10.1097/NMD.0000000000001053

Boelen, P. A., & van den Bout, J. (2005). Complicated Grief, Depression, and Anxiety as

Distinct Postloss Syndromes: A Confirmatory Factor Analysis Study. *American Journal of Psychiatry, 162*(11), 2175-2177. [https://doi.org/10.1176/appi.ajp.162.11.2175](about:blank)

Boelen, P. A., van de Schoot, R., van den Hout, M. A., de Keijser, J., & van den Bout, J.

(2010). Prolonged Grief Disorder, depression, and posttraumatic stress disorder are distinguishable syndromes. *Journal of Affective Disorders, 125*(1-3), 374-378.

[https://doi.org/10.1016/j.jad.2010.01.076](about:blank)

Bonanno, G. A., Neria, Y., Mancini, A., Coifman, K. G., Litz, B., & Insel, B. (2007). Is

There More to Complicated Grief Than Depression and Posttraumatic Stress Disorder? A Test of Incremental Validity. *Journal of Abnormal Psychology, 116*(2), 342–351. https://doi.org/10.1037/0021-843X.116.2.342

Bryant, R. A. (2013). Is pathological grief lasting more than 12 months grief or depression?

*Current Opinion in Psychiatry, 26*(1), 41-46. https://doi.org/10.1097/YCO.0b013e32835b2ca2

Burke, L. A., & Neimeyer, R. A. (2013). Prospective Risk Factors for Complicated Grief. In

Stroebe, Schut & van den Bout (Red.), *Complicated Grief: Scientific Foundations for Health Care Professionals* (pp. 145-161). Routledge.

Djelantik, A. M. J., Smid, G. E., Mroz, A., Kleber, R. J., & Boelen, P. A. (2020). The

prevalence of prolonged grief disorder in bereaved individuals following unnatural losses: Systematic review and meta regression analysis. *Journal of Affective Disorders*, *265*, 146-156. https://doi.org/10.1016/j.jad.2020.01.034

Eisma, M. C., Stroebe, M. S., Schut, H. A., Stroebe, W., Boelen, P. A., & van den Bout, J.

(2013). Avoidance processes mediate the relationship between rumination and symptoms of complicated grief and depression following loss. *Journal of Abnormal Psychology*, *122*(4), 961. https://doi.org./10.1037/a0034051

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4th ed.). SAGE

Publications Ltd.

Harper, M., O’Connor, R. C., & O’Carroll, R. E. (2014). Factors associated with grief and

depression following the loss of a child: A multivariate analysis. *Psychology, Health & Medicine, 19*(3), 247-252. [https://doi.org/10.1080/13548506.2013.811274](about:blank)

IBM Corp. (2019). IBM SPSS Statistics for Apple, Version 26.0. Armonk, NY:

IBM Corp

Kossigan Kokou-Kpolou, C., Park, S., Lenferink, L.I., Iorfa, S.K., Fernandez-Alcantara, M.,

Derivois, D., & Cénat, J.M. (2021). Prolonged grief and depression: A latent class analysis. *Psychiatry Research, 299*. https://doi.org/10.1016/j.psychres.2021.113864

Kristensen, P., Dyregrov, K., & Dyregrov, A. (2017). What distinguishes prolonged grief

disorder from depression? *Tidsskrift for den Norske legeforening*, (7*),* 538-540.

doi: 10.4045/tidsskr.16.0629

Kristensen, P., Weisæth, L., & Heir, T. (2012). Bereavement and mental health after sudden

and violent losses: A review. *Psychiatry: Interpersonal & Biological Processes*, *75*(1), 76-97.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ‐9: Validity of a Brief

Depression Severity Measure. *Journal of General Internal Medicine*, 16(9), 606-613.

Lenferink, L. I., Boelen, P. A., Smid, G. E., & Paap, M. C. (2019). The importance of

harmonising diagnostic criteria sets for pathological grief. *The British Journal of Psychiatry*, 1-4. doi: 10.1192/bjp.2019.240

Lenferink, L.I., de Keijser, J., Smid, G.E., Djelantik, A.A., & Boelen, P.A. (2017). Prolonged

grief, depression, and posttraumatic stress in disaster-bereaved individuals: latent class analysis. *European Journal of Psychotraumatology, 8*(1). https://doi.org/10.1080/20008198.2017.1298311

Lobb, E. A., Kristjanson, L. J., Aoun, S. M., Monterosso, L., Halkett, G. K., & Davies, A.

(2010). Predictors of Complicated Grief: A Systematic Review of Empirical Studies. *Death studies, 34*(8), 673-698. https://doi.org/[10.1080/07481187.2010.496686](about:blank)

Lundorff, M., Holmgren, H., Zachariae, R., Farver-Vestergaard, I., & O’Connor, M. (2017).

Prevalence of prolonged grief disorder in adult bereavement: A systematic review and meta-analysis. *Journal of Affective Disorders*, *212*, 138-149.

https://doi.org/10.1016/j.jad.2017.01.030

Manea, L., Gilbody, S., & McMillan, D. (2012). Optimal cut-off score for diagnosing

depression with the Patient Health Questionnaire (PHQ-9): a meta-analysis. Cmaj, 184(3), E191-E196. https://doi.org/10.1503/cmaj.110829

Manea, L., Gilbody, S., & McMillan, D. (2015). A diagnostic meta-analysis of the Patient

Health Questionnaire-9 (PHQ-9) algorithm scoring method as a screen for depression. General hospital psychiatry, 37(1), 67-75. https://doi.org/10.1016/j.genhosppsych.2014.09.009

Mason, T.M., Tofthagen, C.S., & Buck, H.G. (2020). Complicated Grief: Risk Factors,

Protective Factors, and Interventions. *Journal of Social Work in End-of-Life & Palliative Care, 16*(2), 151-174. https://doi-org.proxy.library.uu.nl/10.1080/15524256.2020.1745726

McCarthy, M. C., Clarke, N. E., Ting, C. L., Conroy, R., Anderson, V. A., & Heath, J. A.

(2010). Prevalence and Predictors of Parental Grief and Depression After the Death of a Child from Cancer. *Journal of Palliative Medicine*, *13*(11), 1321-1326.

https://doi.org/10.1089/jpm.2010.0037

McHorney, C. A., & Mor, V. (1988). Predictors of Bereavement Depression and Its

Health Services Consequences. *Medical Care*, *26*(9). 882-893.

Onrust, S., Cuijpers, P., Smit, F., & Bohlmeijer, E. (2007). Predictors of psychological

adjustment after bereavement. *International psychogeriatrics*, *19*(5), 921. https://doi.org/10.1017/S1041610206004248

Parker, G., McCraw, S., & Paterson, A. (2015). Clinical features distinguishing grief from

depressive episodes: A qualitative analysis. *Journal of Affective Disorders,* 176, 43-47. [https://doi.org/10.1016/j.jad.2015.01.063](about:blank)

Pies, R. (2014). The Bereavement Exclusion and DSM-5: An Update and Commentary.

*Innovations in Clinical Neuroscience, 11*(7-8), 19.

Prigerson, H. G., Horowitz, M. J., Jacobs, S. C., Parkes, C. M., Aslan, M., Goodkin, K.,

Raphael, B., Marwit, S.J., Wortman, C., Neimeyer, R., Bonanno, G., Block, S.D., Kissane, D., Boelen, P., Maercker, A., Litz, B.T., Johnson, J.G., First, M.B., & Maciejewski, P. K. (2009). Prolonged Grief Disorder: Psychometric Validation of Criteria Proposed for DSM-V and ICD-11. *PLOS Medicine 6*(8). https://doi.org/10.1371/journal.pmed.1000121

Shear, M. K. (2012). Grief and mourning gone awry: pathway and course of complicated

grief. *Dialogues in Clinical Neuroscience, 14*(2), 119-128. 10.31887/DCNS.2012.14.2/mshear

Shear, K., Frank, E., Houck, P. R., & Reynolds, C. F. (2005). Treatment of complicated grief:

a randomized controlled trial. *Jama*, *293*(21).

https://doi.org/10.1001/jama.293.21.2601

Shear, M. K., Ghesquiere, A., & Glickman, K. (2013). Bereavement and Complicated Grief.

*Current Psychiatry Reports, 15*(11), 406. https://doi.org/10.1007/s11920-013-0406-z.

Shear, M. K., Simon, N., Wall, M., Zisook, S., Neimeyer, R., Duan, N., Reynolds, C.,

Lebowitz, B., Sung, S., Ghesquiere, M.S., Gorscak, B., Clayton, P., Ito, M., Nakajima, S., Konishi, T., Melhem, N., Meert, K., Schiff, M., O’Connor . . . & Keshaviah, A. (2011). Complicated Grief and Related Bereavement Issues for DSM‐5. *Depression and Anxiety, 28*(2), 103-117. https://doi.org/10.1002/da.20780

Titov, N., Dear, B. F., McMillan, D., Anderson, T., Zou, J., & Sunderland, M. (2011).

Psychometric Comparison of the PHQ-9 and BDI-II for Measuring Response During Treatment of Depression. *Cognitive Behaviour Therapy*, *40*(2), 126-136.

https://doi.org/10.1080/16506073.2010.550059

Wijngaards-de Meij, L., Stroebe, M., Schut, H., Stroebe, W., van den Bout, J., van der

Heijden, P., & Dijkstra, I. (2005). Couples at Risk Following the Death of Their Child: Predictors of Grief Versus Depression. *Journal of Consulting and Clinical Psychology, 73*(4), 617. https://doi.org/10.1037/0022-006X.73.4.617

Williams, M. N., Grajales, C. A. G., & Kurkiewicz, D. (2013). Assumptions of Multiple

Regression: Correcting Two Misconceptions. *Practical Assessment, Research, and Evaluation*, *18*(1). https://doi.org/10.7275/55hn-wk47

World Health Organization. (2019). *International Statistical Classification of Diseases and*

*Related Health Problems* (11th ed.).

World Health Organization. (2020, 18 March). *Mental health and psychosocial*

*considerations during the COVID-19 outbreak*. https://apps.who.int/iris/bitstream/handle/10665/331490/WHO-2019-nCoV-MentalHealth-2020.1-eng.pdf

Zisook, S., & Shear, K. (2009). Grief and bereavement: what psychiatrists need to know.

*World psychiatry, 8*(2), 67-74. https://doi.org/10.1002/j.2051-5545.2009.tb00217.x