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Religion as a Protective Factor for Prolonged Grief Disorder According to ICD-11 Criteria: A Comparison Between Non-Religious and Religiously Affiliated or Spiritual Groups

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Abstract

Background and aim. Grief, religion and spirituality are intrinsic aspects of human life. Research has shown that grief has a significant impact on physical and psychological well-being and previous studies suggest that religious beliefs and spirituality are associated with grief. This paper tried to shed light on the potential protective effects of religious affiliation and spirituality on Prolonged Grief Disorder (PGD). **Method**. Two hundred and forty-eight participants who had lost a loved one at least six months ago were interviewed by telephone on their religious affiliation and spirituality. PGD symptoms were assessed using the Traumatic Grief Inventory – Clinician Administered. **Results**. A Mann-Whitney U test and a one-way ANOVA showed no significant differences in PGD symptomatology between Christian, spiritual or non-religious participants. A hierarchical multiple regression showed that religious beliefs and spirituality did not add to the explained variance of PGD symptom level above other demographic and grief related variables. **Conclusion.** The results showed no empirical evidence that religious affiliation or spirituality have a protective effect on PGD. Contradicting results in the field highlight the need for methodologically rigorous research in order to obtain a better understanding of the relation between grief and religious beliefs and spirituality.

Keywords: grief, prolonged grief disorder, religious affiliation, spirituality, ICD-11

Religion as a Protective Factor for Prolonged Grief Disorder According to ICD-11 Criteria: A Comparison between Non-Religious and Religiously Affiliated or Spiritual Groups

Everybody is confronted with the loss of a beloved someone at some point in their life. For most people the grieving process occurs naturally, but for a minority this is not the case. Over the years many studies have accumulated empirical evidence to consider pathological grief (PG) as a distinct clinical issue (Boelen, 2013; Boelen, van de Schoot, van den Hout, de Keijser, & van den Bout, 2010; Bonanno et al., 2007; Prigerson et al., 2009). Despite Prolonged Grief Disorder (PGD) having a strong overlap and high comorbidity rates with depression and PTSD (Bonanno, 2006; Melhem, Moritz, Walker, Shear, & Brent, 2007; Schaal et al., 2012), there is evidence for it as a distinctive disorder that is affected by specific factors and is in need of specialised treatment (Boelen et al., 2010; Boelen, 2013; Bonanno et al., 2007; Jordan, & Litz, 2014; Prigerson et al., 2009).

PGD symptoms include marked and chronic separation distress, such as longing and searching for the deceased, loneliness, and preoccupation with thoughts of the deceased; and symptoms of traumatic distress, such as feelings of disbelief, mistrust, anger, shock and detachment from others (Lobb et al., 2010). The topic of grief in the field of psychopathology is still relatively young and the cause of several disagreements among researchers; specifically in the differentiation between normal and pathological grief and in the diagnostic criteria of PGD. The Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) includes Persistent Complex Bereavement Disorder (PCBD; American Psychological Association [APA], 2013) as a condition for further study. The International Classification of Diseases 11th edition (ICD-11) incorporated Prolonged Grief Disorder (PGD) as a stress related disorder (World Health Organization [WHO], 2018). Both manuals establish different diagnostic criteria for pathological grief disorders, consequently, there is a

high discrepancy in the prevalence rates: 6.4% according to the DSM-5 and 18.0% if we were to follow ICD-11 criteria (Boelen, Lenferink, Nickerson, & Smid, 2018).

The need of effectively diagnosing and treating PGD is highlighted by several studies which have linked grief to increased mortality and physical illness (Stroebe, Schut, & Stroebe, 2007). Latham and Prigerson (2011) concluded that people meeting criteria for PGD are at a heightened risk of suicide, even after controlling for depression and PTSD. Furthermore, several studies have associated PGD with reduced quality of life, social and occupational impairment, substance abuse and sleep disturbances (Bonnano et al., 2007; Jordan, & Litz, 2014; Latham, & Prigerson, 2011). This emphasises the need for further research into PGD, including more insight on risk and protective factors to identify vulnerable people. Lobb et al. (2010) performed a systematic review assessing several risk factors such as relationship with the deceased, type of death, time since loss, unexpectedness of loss, lack of social support and level of dependency on the deceased. However, little research has focused on potential protective factors.

Recently, a growing number of studies have explored the relationship of religiousness and spirituality to health, considering them aspects that can improve our well-being (Austen, Macdonald, & MacLeod, 2018; Cotton et al., 2006; Koenig, 2012). In general, religious or spiritual beliefs have been linked to improved coping with stress, lower levels of depression, anxiety, suicidal ideation and substance abuse, and a higher quality of life (Koenig, 2009; Lucchetti, Lucchetti, & Vallada, 2013). Religious beliefs appear to be especially relevant in situations of bereavement and indeed have been shown to be particularly helpful during grief (Mattlin, Wethington, & Kessler, 1990).

A review by Becker et al. (2007) examined the relationship between religious or spiritual beliefs and grief and coping. The authors concluded that there is not enough empirical evidence to answer the question of whether religious or spiritual beliefs positively

influence bereavement due to contradicting results. These could be due to cultural differences in grief and mourning practices or due to methodological flaws in prior research. The use of homogeneous samples consisting mainly of white, American, protestant women complicates generalization of results to other demographics and religious or spiritual groups.

Another notable issue pointed out by Becker et al. (2007) was the majority of the studies failing to differentiate between religious beliefs and spirituality. Therefore, despite difficulties discerning between the two, a distinction for the purpose of this study was made. Religion can be defined as "the outward expression of a particular spiritual understanding and/or framework for a system of beliefs, values, codes and rituals" (Becker et al., 2007, pp. 214). Spirituality is generally understood as a broader and more abstract term. Oxford English Dictionary defines spirituality as a "vital life principle which integrates other aspects of the person and is an essential ingredient in inter-personal relationships and bonding".

Religion has been identified as an important element when giving meaning to the death of a loved one (Wortmann, & Park, 2008). Kotarba (1983) considered religion as a central element of our belief system, which influences our understanding of the world and provides ways of understanding loss and suffering. Recent studies have suggested that religion may indeed serve as a meaning system in which bereaved people can reinterpret their loss and find more benevolent interpretations and coping resources (Park, 2005). In the case of grief, religion can have a greater effect by restoring beliefs that the world is safe, fair, predictable and controllable (Park, 2005). In line with this framework, findings suggest that high levels of meaning making are related to lower levels of PGD, whereas struggles with sense of peace and meaning making are associated with higher PGD symptomatology (Milman et al., 2018; Pan, Cheung, & Jieyi Hu, 2018).

Considering the impact of grief and the potential magnitude of its consequences, it is necessary to further the emerging research in order to understand all factors affecting PGD

symptomatology. Although there has been an increase in grief research, investigations targeting religion and spirituality still present methodological limitations and a lack of rigour (Wortmann, & Park, 2008). According to the Pew Research Center (2012), 84% of the Worlds' population is religiously affiliated. Christianity and Islam are the largest groups, containing 32% and 23% of the worlds' population respectively. Considering these high percentages, it seems crucial to investigate whether religion and spirituality play a role in the development of PGD, and if so, explore possible differences in PGD level between groups.

The current study re-examined the association of religious affiliation and PGD while addressing methodological shortcoming of previous studies. In order to achieve this, bereavement specific instruments that allow to differentiate between pathological and normal grief were used. Additionally, variables known to be important in adjustment such as age, gender and relationship to the deceased were statistically controlled for.

The first aim of the present study was to investigate the effect of religious affiliation and spirituality on PGD symptomatology. Based on previous research religious affiliation and spirituality were expected to be related to lower PGD symptomatology, demonstrated by lower PGD symptoms in religiously affiliated and spiritual people compared to a group of non-religious people (hypothesis 1). The second aim was to compare PGD symptomatology amongst different religious and spiritual groups, therefore mean differences in PGD symptomatology between Christian, spiritual and non-religious groups were expected (hypothesis 2). The third aim was to examine the relation between PGD symptoms and religious affiliation and spirituality while controlling for other risk factors. Religious affiliation and spirituality were expected to be associated to PGD symptomatology over and above other demographic and loss-related variables such as gender, age, time since loss, and relationship with the deceased (hypothesis 3) (Nielsen et al., 2017; Stammel et al., 2013; Stroebe, Schut, & Stroebe, 2007).

Method

Participants

A convenience sample of Dutch and German-speaking non-suicidal adults who have never received a diagnosis for a psychotic disorder was used for this study (*N*=248). Recruitment occurred through word-of-mouth, social media posts on Facebook and LinkedIn, the university credit point website and grief and bereavement associations. Student participants from Utrecht University or University of Groningen were given the possibility of receiving two course credit point for their participation (n=21). No other compensation was offered. Recruitment and interviews took place between October 2019 and February 2020. Once recruited, participants were sent the informed consent and contacted by email or phone in order to set a date for the interview. The interviews were performed by six Clinical Psychology Master students who were trained in the use of the instruments.

Instruments

Traumatic Grief Inventory – Clinician Administered (TGI-CA)

A clinician administered version of the TGI (TGI-CA) was used. The TGI-CA consists of 22 items, which correspond with Persistent Complex Bereavement Disorder (PCBD) included in the DSM-5 (APA, 2013), PGD symptoms as established in the ICD-11 (WHO, 2018), and symptoms for Prolonged Grief as proposed by Prigerson et al. (2009). Every item was scored on a scale 1 to 5, 1 standing for “Never” and 5 for “Very often”. The TGI-CA was developed in the context of the current study. Its content is based on the Traumatic Grief Inventory Self Report (TGI-SR). Items of the TGI-SR were reformulated from statements to questions. Additionally, the reference to “the past 4 weeks” was included in every item instead of only being stated in the instructions. In the case of multiple losses,

participants were asked to answer the questions while keeping in mind the loss that was most often on their minds. In order to facilitate normal conversation flow with participants, interviewers referred to the deceased person by their name or kinship. An example of an item would be "In the past 4 weeks, have you felt stunned or dazed over the death of your husband?" For more information on the items see Appendix A. Lastly, as this paper focuses on grief reactions according to PGD in the ICD-11, only the items referring to PGD were included in the analysis (items 1-5, 8-10, 13, 16 and 19-22). Two sets of criteria have been proposed to score PGD based on the TGI – CA, both of which require the presence of item 13 and items 1, 3, or both. The liberal criteria suggested by Killikelly and Maercker (2018) consider that one more item (2, 5, 8-10, 16 or 19-22) needs to be present; whereas the conservative criteria developed by Boelen et al (2019) require the presence of at least five of these items.

The TGI-SR measures symptoms of PCBD and PGD, and previous studies have shown its validity in assessing disturbed grief (Boelen, & Smid, 2017; Boelen, Djelantik, de Keijser, Lenferink, & Smid, 2019). The Dutch version of the TGI-SR has proven to have the necessary psychometric properties to measure maladaptive symptoms of grief (Boelen, den Bout, De Keijser, & Hoijtink 2003). To assess reliability of the TGI-CA in the current sample a Cronbach's Alpha test was administered. The test yielded an internal consistency of α=.90 across the 13 PGD items that were used, which is a good alpha value (Tavakol, & Dennick, 2011).

Religious Affiliation and Spirituality

Based on previous research (e.g. Austin, Macdonals, & Macleod, 2018; Chiang, Lee, Chu, Han, & Hsiao, 2017), one background questions was included in order to assess religious and spiritual affiliation. As the relevant aspect for this paper was whether the participants considered themselves religiously affiliated or spiritual, the following question

was asked: “Do you identify with a religious or spiritual belief?” In order to give the participant maximum agency over their answer, no possibilities were suggested. The participant’s response was categorized by the researcher into “Not religious”, “Christian”, “Jewish”, “Muslim”, “Buddhist”, “Spiritual” or “Other”. In order to perform the first analysis (Mann-Whitney U test) and third analysis (multiple regression), two groups were made and coded as 1=non-religious, 2=religious, the latter including all religious affiliations and spirituality. Three groups were made for the second analysis (ANOVA) and coded as 1=non-religious, 2=Christian, 3=spiritual. Five participants reported religious affiliation to other groups (Muslim, Jewish and Buddhism) and were included into the “religious” group for the first and third analysis. These participants were excluded from the second analysis as the size of this group did not allow for an accurate estimation of variance.

Background variables

Based on previous research (e.g. Lobb et al.), several background variables were assessed. Gender was coded as 1=man, 2=woman, age was recorded in years and time since loss in months, as the minimum time since loss was 6 months. Relationship with deceased was assessed in 8 levels (partner, child, parent, sibling, grandparent, grandchild, friend and other). Based on Lenferink and colleagues (2020), relationship with the deceased was dichotomized and coded as 1=partner/child, 2=other.

Procedure

The interviews were performed by phone and lasted an average of 45 minutes. The researchers recorded the answers in Qualtrics. Firstly, participants were asked basic demographic questions (gender, age, nationality, religious affiliation). Secondly, they were asked if they had ever received a formal diagnosis for a psychotic disorder, as this was an

exclusion criteria. Thirdly, participants were asked loss-related questions (relationship with the deceased, time since loss, cause of death and unexpectedness of death). Participants who had lost more than one person answered these questions about each loss. The PHQ-9 was then administered and if participants answered the suicidality question with anything different than "not at all", the interview was stopped. Lastly, participants completed the TGI-CA and stated whether they would like to participate in future grief-related studies. Participants also filled in two other stress-related questionnaires which fall out of the scope of the current research and were not used in the analysis.

Statistical Analysis

The independent categorical variables of the present study were gender, religious affiliation and relationship to the deceased. Age and time since loss in years were assessed as continuous independent variables. The dependent variable was the level of PGD symptomatology, measured on an interval scale.

All data was analysed using the Statistical Package for Social Sciences (version 26). In order to test the hypotheses several statistical tests were used. First, as data on the outcome measure was not normally distributed, a Mann-Whitney U test was performed to compare mean PGD symptom levels between two groups (religious and non-religious) (Field, 2013). In order to assess the second aim, a one way analysis of variance (ANOVA) was executed comparing PGD symptom levels amongst three groups (Christian, spiritual and non-religious). As homogeneity of variances was violated, a one-way Welch ANOVA was used (Field, 2013). The groups were chosen because Christian, spiritual and non-religious were the only categories large enough to compare statistically after data collection. Lastly, a hierarchical multiple regression was used to assess whether religious affiliation (religious and non-

religious) explained additional variance in PGD levels over and above gender, age, time since loss and relationship to the deceased.

Results

Sample Characteristics

The current study used a sample of 251 adult participants. Three participants were excluded as they did not meet the inclusion criteria (N=248). Around three quarters of the participants were women (194) and the participant's age ranged from 19 to 87, with a mean age of 46.70 (*SD*=16.31). Almost 65% of participants were interviewed in Dutch (161) and the rest were interviewed in German. The average time since loss was 6.87 years (*SD*=8.91), ranging from 0.50 years to 71.41 years. The mean PGD score was 24.95 (*SD*=9.69), ranging from 13 to 55. Fifteen participants (6.04%) fulfilled the liberal criteria for PGD diagnosis (Killikelly, & Mearcker, 2018), whereas only 6 participants (2.41%) fulfilled the conservative criteria for PGD diagnosis (Boelen et al, 2019). Table B1 in Appendix B displays sample characteristics.

Hypothesis 1: Differences in PGD symptoms between religious and non-religious groups

There were 128 religious participants and 120 non-religious participants. A Mann-Whitney U test was run to determine if there were differences in PGD symptomatology between religious and non-religious participants. One outlier in the data was assessed by inspection of a boxplot and excluded from the test. Distribution of the engagement scores for religious and non-religious were similar, as assessed by visual inspection. Median engagement score was not statistically significantly different between religious (*Mdn*=23) and non-religious participants (*Mdn*=21.50), *U*=8120, *z*=0.892, *p*=.373.

Hypothesis 2: Differences in PGD symptoms between groups (Christian, spiritual and non-religious).

A one-way Welch ANOVA was conducted to determine if PGD symptomatology level differed between groups with various religious beliefs (see Figure B1 in Appendix B). Participants were classified into three groups: Christian (n=73), spiritual (n=50) and non-religious (n=120). No outliers were detected. The data as assessed by a Shapiro-Wilk test was not normally distributed in all three groups Christian (p=.004), spiritual (p=.001) and non-religious (p<.001). However, simulation studies showed that a one-way ANOVA is relatively robust against violation of this assumption (Mena et al., 2017). The assumption of homogeneity of variances was violated, as assessed by Levene's Test (p<.001). PGD symptomatology was not significantly different between the groups, Welch's $F(2,118.99)=2.558$, p=.082.

Hypothesis 3: Explained variance of PGD symptomatology by religious affiliation and spirituality.

A hierarchical multiple regression was run to determine if the addition of religious affiliation (religious vs. non-religious) significantly increased the proportion of explained variance of PGD symptomatology over and above previously identified variables gender, age, time since loss and relationship to the deceased (Kersting, Brähler, Glaesmer, & Wagner, 2011; Lobb et al., 2010).

Linearity was present as appraised by partial regression plots and a plot of studentized residuals against the predicted values. Heteroscedasticity was confirmed by visual inspection of a plot of studentized residuals versus unstandardized predicted values. No multicollinearity was detected and three outliers were identified and removed from the analysis. There were no leverage values greater than 0.2 or values for Cook´s distance above 1. The assumption of normality was met, as evaluated by Q-Q Plot.

The overall model of explained variance by means of gender, age, time since loss, relationship with deceased and religious affiliation (Model 2) was statistically significant, R^2=.337, F(1,239)=.310, p<0.001; adjusted R^2=.323. However, the addition of religious affiliation to the explained variance of PGD symptomatology (Model 2) did not lead to a statistically significant increase in R^2 (p=0.578) when compared to Model 1. Therefore, Model 1 (gender, age, time since loss and relationship with deceased) would be the better fit, R^2=.336, F(4,240)=30.417, p<0.001; adjusted R^2=.325. Regression coefficients and standard errors can be found in Table B2 in Appendix B.

Discussion

Extensive research has shown the important detrimental effects of bereavement on physical and mental health (Stroebe, Schut, & Stroebe, 2007) and numerous scholars support the introduction of PGD as an independent disorder (Boelen et al., 2010; Boelen, 2013; Jordan, & Litz, 2014). Additionally, substantial research has pointed out the relevance of religious beliefs and spirituality when investigating physical and mental well-being (Hill, & Pargament, 2003). The goal of this paper was to further examine the relation of religious affiliation and spirituality to PGD. Results showed no significant effect of religious affiliation and spirituality on PGD symptom level when compared to non-religious participants (hypothesis 1). Additionally, no significant effect was found between the Christian, spiritual and non-religious groups (hypothesis 2). While these results contradicted expectations, they can be partially substantiated through conclusions drawn by Wortmann and Park's review (2008), in which they analysed various dimensions of religion such as general religiousness (intensity and relevance of faith), affiliation, attendance, religious coping or religious social support. Religious affiliation was the only dimension for which they did not find a significant relationship with adjustment, understood as mental and physical well-being, after

bereavement. The authors suggest this could be because affiliation in itself does not reflect intensity or relevance of the religious beliefs, nor the quality of the religious experience. Wortmann and Park point out that meaning-making appears to be the pathway through which religious beliefs are related to adjustment, which is in line with the meaning-making coping model (Park, 2005). Following this model, the concept of religious affiliation would be too simple to play a significant role as it does not encompass the complexity of the issue, which potentially explains the current results. Therefore, other aspects of religiousness would be more relevant to look into. Other studies have also pointed at these alternative aspects such as strength of beliefs, religious coping and religious rituals related to mourning (Koenig, 2009; 2012; Koenig, George, & Peterson, 1998; Lucchetti, Lucchetti, & Vallada, 2013; Mattlin, Wethington, & Kessler, 1990; Sherman et al., 2001). These have been linked to positive psychological adjustment, possibly working as a resource during stressful circumstances, especially during bereavement.

In terms of spirituality, Wortmann & Park (2008) reported positive associations with adjustment after bereavement, a finding that was not replicated in the current study. However, spirituality was not considered as a multidimensional construct and therefore affiliation in itself was not assessed. Considering the complexity of spirituality, this simplified view does not allow for strong conclusions to be drawn.

The addition of the variable religious affiliation and spirituality to the model including gender, age, time since loss and relationship to the deceased did not add significantly to the explained variance of PGD symptomatology rejecting the last proposed hypothesis. This result is contrary to previous studies, as spirituality, especially strongly held spirituality, seems to explain a significant amount of variation of bereavement outcome when compared to no spiritual beliefs (Walsh, King, Jones, Tookman, & Blizard, 2002). However, this result could again be explained by the fact that the current study only considered affiliation *per se*,

without covering other aspects of religious beliefs and spirituality. Gender and age did not add significantly to the explained variance of PGD symptomatology which conflicts with previous findings where female gender has been consistently found as a predictor of PGD level (Lobb et al, 2010). The added value of age remains unclear as some studies have pointed at age as a higher risk factor for pathological grief (Kersting, Brähler, Glaesmer, & Wagner, 2011), while others found that age was unimportant in the prediction of pathological grief (Nielsen et al., 2017). Furthermore, it is relevant to note that the assumption of homoscedasticity was violated, pointing at a more difficult prediction of exact PGD level of those participants with higher PGD symptomatology. The larger variance amongst participants with higher PGD level could be explained by the fact that this study did not look into other protective resources for psychological well-being, such as coping strategies (Maschi, Viola, Morgen, & Koskinen, 2015). The lack of focus on these additional resources might account for the lower precision in the higher PGD symptomatology cases.

The results of this study being inconsistent with previous research is not surprising, as inconsistencies in research on the field of religious beliefs and spirituality are common. This can be explained mainly due to conceptual and methodological issues. Firstly, scholars do not fully agree on the definition and conceptualization of religious beliefs and spirituality (Baumsteiger, & Chenneville, 2015; Becker et al., 2007; Koenig, 2008). The complex and multidimensional nature of these phenomena can cause a single definition to be too one-sided, narrow and limited (Hill et al., 2000). This can lead to operational conceptualizations with limited empirical value by, for example, not distinguishing between spirituality and religion. For more information on the conceptualization of these phenomena, see Hill et al (2000). Secondly, not all researchers in the field find these concepts relevant enough to be measured independently, as some consider them to overlap with other psychological areas, while the way they relate to overall well-being is still unclear (Hill, & Pargament, 2003;

O'Connell, & Skevington, 2007). In spite of this, the general trend in social and behavioural sciences today is that it is indeed possible and relevant to assess and include religious beliefs and spirituality in quality of life measurements (O'Connell, & Skevington, 2007). Thirdly, the question of how to measure these constructs arises, as they cover a wide array of cognitive, emotional, behavioural and interpersonal aspects (Hill, & Pargament, 2003; Idler et al., 2003). Religious behavioural practices such as church, temple or mosque attendance have been widely researched, but some argue that the defining factor is experience *per se*, which cannot be measured based on behavioural practices (O'Connell, & Skevington, 2007). Fourth and lastly, further methodological issues complicate the assessment and comparison of religious beliefs and spirituality. This is especially relevant when assessing non-western and non-Christian communities, as most of the instruments developed so far are based on these perspectives (Chiang, Lee, Chu, Han, & Hsiao, 2017). Cultural aspects should be considered when measuring these complex constructs in communities with different values than Western societies (Lo et al., 2001).

Despite controversy, this study chose to assess religious or spiritual affiliation in a denominational way as the prime interest resided in whether the participants considered themselves religiously affiliated or spiritual. For practical reasons, the present research did not consider detailed descriptions of the content and strength of religious beliefs or spiritual experiences. However, the use of broad labels such as Christian, Protestant, Muslim or Hindu has been questioned, as it appears that the use of such brief measures could decrease the association between religious beliefs and spirituality and the health variable analysed (Hunter & Schmidt, 1990). Notwithstanding, evidence also suggests that simple denominational affiliation measures can be significant predictors of mental health outcome variables (Koenig, 2001). In general, broad denominational affiliation labels can be used, but researchers should be cautious and aware of their limitations, as there are many subgroup differences that could

influence results (Alwin, Felson, Walker, & Tufiş, 2006). A more detailed or concise categorisation to distribute participants into groups, or the use of a scale to measure the strength of beliefs could have led to different results when looking at PGD symptom levels between groups.

Strengths and limitations

In general, religion and spirituality have been widely underestimated in the field of psychopathology (Hill, & Pargament 2003) and even fewer studies address the role of religious beliefs and spirituality in relation with grief. To the best of our knowledge, this was the first study to look at the relationship of religious affiliation/spirituality and PGD according to ICD-11 criteria as this is still a relatively new disorder. Another strength of the present study was the use of a clinician-administered version of the TGI, a bereavement specific instrument whose content is based and very similar to the self-report version of the TGI. Studies that address religious beliefs and spirituality often make use of self-report questionnaires, making them vulnerable to participant interpretation errors (Demetriou et al., 2015). However, despite holding a good internal consistency, the TGI-CA has yet to be tested for its reliability and validity, calling for caution when interpreting results. Moreover, even though there are several ways to measure religious beliefs and spirituality, the simplicity of assessing affiliation permits anwering the research questions without imposing difficult or confusing questions to the participants, allowing for people of all ages and cognitive abilities to take part.

This current study is also subject to various limitations. Independency of observations was assumed, despite some of the participants being family members, whose bereavement resulted from the same loss, potentially leading to interactions in their grief reactions. Data of two different samples obtained in different languages was merged to increase total sample

size. It was assumed that there were no differences in TGI-CA interpretation, but this was not tested for. Another potential limitation is the cross-sectional design which does not allow for causal relationships to be established. Additionally, the assumption of homoscedasticity was violated in the hierarchical multiple regression, which results in imprecise coefficient estimates and calls for caution when interpreting results (Kalina, 2011). Furthermore, generalisability of results is limited considering the restricted variety in the religious and spiritual groups assessed, and the majority of female participants in the total sample. Lastly, assessment of spirituality could be subject to social desirability bias (Batson, Schoenrade, & Ventis, 1993), as a recent general perception of spirituality as being independent from social influence could increase its desirability (Baumsteiger, & Chenneville, 2015). As Marty stated: “spirituality is now cool” (1996, p. 439).

Directions for future research

Grief and religiosity or spirituality are relatively unexplored fields in psychology (Becker et al., 2007). Given the scope of these topics and their role in mental health and general well-being, it is important to keep exploring and connecting them. Future research should focus on different aspects that are still lacking in the present. In the case of grief, research needs to focus on identifying those at risk of developing bereavement-related issues and developing efficient treatment programmes. Religious beliefs and spirituality are relevant factors to be considered in this process, as many people turn to them in times of hardship (Park, & Halifax, 2011). In order to accurately assess these complex experiences, they should be properly operationalized and culturally sensitive instruments need to be developed. Furthermore, researchers should aim at more methodologically sound studies, including more heterogeneous samples.

Conclusion

The results of this study suggest that there is no meaningful relationship between religious affiliation and spirituality and PGD symptomatology. This is in line with previous research, which has highlighted other aspects or religious beliefs and spirituality as significant, as opposed to the more simple concept of affiliation. However, three major reviews conclude that research in the field is inconsistent as most studies are methodologically flawed (Becker et al., 2007; Wortmann, & Park, 2008; Hays, & Hendrix, 2008). Future research lines should focus on a more adequate operationalization of these terms and include a wide variety of participants from different cultural backgrounds, religions and ages, while looking into different aspects of the complex phenomena of religion and spirituality.

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Appendix A: Traumatic Grief Inventory – Clinician Administered

1. Hebt u, in de afgelopen maand, plots opkomende gedachten en beelden gehad die te maken hadden met het overlijden van [____]?
2. Hebt u, in de afgelopen maand, intense gevoelens van emotionele pijn, verdriet, of golven van rouw gehad?
3. Hebt u, in de afgelopen maand, een zeer sterk verlangen naar [____] gevoeld?
4. Hebt u, in de afgelopen maand, verwarring over uw rol in het leven of een verminderd gevoel van eigenwaarde gevoeld?
5. Hebt u, in de afgelopen maand, moeite gehad om het overlijden van [____] te aanvaarden?
6. Hebt u, in de afgelopen maand, plaatsen, voorwerpen, of gedachten vermeden die u eraan herinneren dat [____] dood is?
7. Hebt u, in de afgelopen maand, moeite gehad om mensen te vertrouwen?
8. Hebt u zich, in de afgelopen maand, bitter gestemd of boos gevoeld over het overlijden van [____]?
9. Hebt u, in de afgelopen maand, moeite gehad om door te gaan met uw leven (bijvoorbeeld door nieuwe vrienden te maken, nieuwe interesses te ontwikkelen)?
10. Hebt u zich, in de afgelopen maand, verdoofd gevoeld?
11. Hebt u, in de afgelopen maand, ervaren dat het leven leeg en zonder betekenis is zonder [____]?
12. Hebt u zich, in de afgelopen maand, geschokt of verbijsterd gevoeld over het overlijden van [____]?
13. Hebt u, in de afgelopen maand, gemerkt dat uw functioneren (in uw werk, privéleven en/of sociale leven) ernstig is verslechterd ten gevolge van het overlijden van [____]?

14. Hebt u, in de afgelopen maand, plots opkomende gedachten en beelden gehad die te maken hebben met de omstandigheden waaronder [____] is overleden?
15. Hebt u, in de afgelopen maand, moeite gehad om stil te staan bij positieve herinneringen aan [____]?
16. Hebt u, in de afgelopen maand, negatieve gedachten gehad over uzelf die verband houden met het overlijden van [____] (bijvoorbeeld gedachten over zelfverwijt)?
17. Hebt u, in de afgelopen maand, de wens gehad om zelf te sterven, om bij [____] te kunnen zijn?
18. Hebt u zich, in de afgelopen maand, alleen gevoeld of voelde u afstand tot andere mensen?
19. Hebt u, in de afgelopen maand, ervaren dat het onwerkelijk is dat [____] dood is?
20. Hebt u, in de afgelopen maand, intens verwijt gevoeld naar anderen vanwege het overlijden van [____]?
21. Hebt u, in de afgelopen maand, het gevoel gehad alsof een deel van uzelf samen met [____] is gestorven?
22. Hebt u, in de afgelopen maand, moeite gehad om positieve gevoelens te ervaren?

Appendix B: Results tables and figure

Table B1

Sample characteristics (N=248)

Background variables	Frequency	%
Gender		
Female	194	78.2
Male	54	21.8
Country of birth		
Netherlands	144	58.1
Germany	84	33.9
Other	20	8.06
Relationship of deceased to participant		
Partner	83	33.5
Child	22	8.9
Parent	80	32.3
Sibling	7	2.8
Grandparent	42	16.9
Friend	7	2.8
Other	7	2.8
Religious affiliation		
Christian	73	29.4
Spiritual	50	20.2
Other	5	2
Non-religious	120	48.4
Extent to which religious beliefs are incorporated into daily life [a]		
Never	81	32.7
Seldom	50	20.2
Sometimes	48	19.4
Often	38	15.3
Very often	23	9.3

[a] Missing data (n=8)

Figure B1

Mean PGD symptomatology between non-religious, Christian and spiritual groups

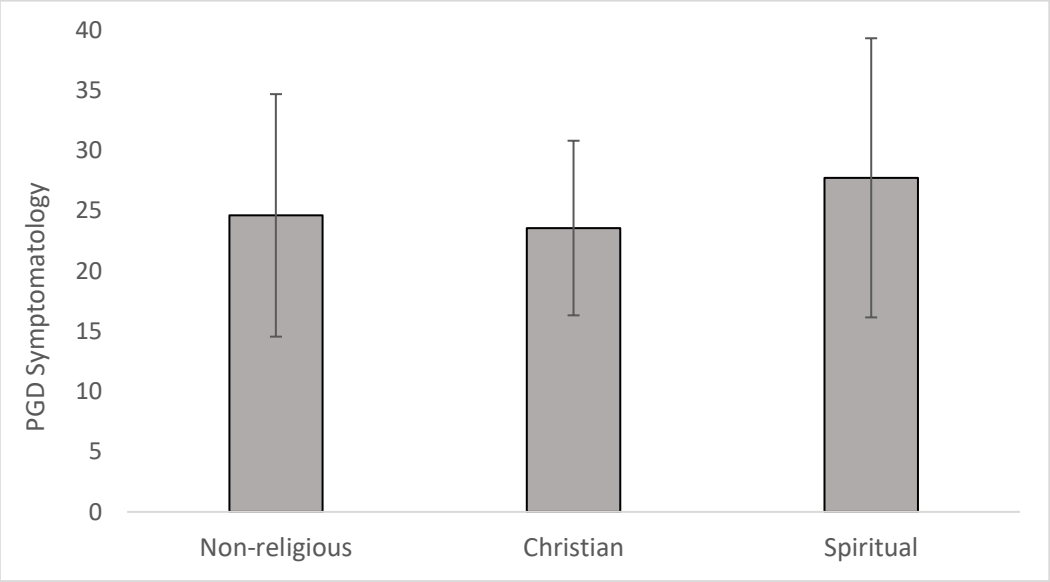

Table B2

Hierarchical Multiple Regression of Explained Variance of PGD Symptomatology Level From Gender, Age, Time Since Loss, Relationship To Deceased, and Religious Affiliation (N=245)

Variables	B	95% CI		SE B	β	R^2	ΔR^2
		LL	UL				
Model 1						.336*	.336*
Constant	37.991	30.29	45.69	3.907			
Gender	1.861	-0.54	4.26	1.219	.081		
Age (years)	-0.013	-0.09	0.06	0.037	-.022		
Time since loss (years)	-0.360	-0.05	-0.02	0.006	-.331*		
Relationship of deceased to participant	-8.301	-10.66	-5.94	1.198	-.429*		
Model 2						.337*	.001
Constant	38.419	30.56	46.27	3.987			
Gender	1.974	-0.46	4.41	1.230	.086		
Age (years)	-0.008	-0.08	0.07	0.038	-.013		
Time since loss (months)	-0.036	-0.05	-0.02	0.006	-.333*		
Relationship of deceased to participant	-8.275	-10.64	-5.92	1.200	-.428*		
Religious affiliation	-0.590	-2.68	1.50	1.059	-.031		

Note. B=unstandardized regression coefficient; *CI*=confidence interval; *LL*=lower limit; *UL*=upper limit; *SE B*=standard error of the coefficient; *ß*=standardized coefficient; R^2=explained variance; ΔR^2=change in explained variance. *p<.05.