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Does prolonged grief or suicide bereavement cause public stigma? A vignette-based experiment

Maarten C. Eisma[a,*], Bishakha te Riele[a], Marleen Overgaauw[a], Bettina K. Doering[b]

[a] Department of Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, the Netherlands
[b] Department of Clinical and Biological Psychology, Katholische Universität Eichstätt-Ingolstadt, Eichstätt, Germany

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ABSTRACT

Prolonged grief disorder (PGD), characterized by severe, persistent and disabling grief, is newly included in the International Classification of Diseases 11 (ICD-11). Receiving a PGD diagnosis could lead to stigmatizing public reactions (i.e. public stigma), yet research on this topic is limited. Additionally, while there is evidence that experiencing suicide bereavement causes public stigma, no studies to date have investigated the interaction between PGD and cause of death on public stigma. To fill these knowledge gaps, this experimental study tested if a PGD diagnosis (vs. no diagnosis) and experiencing suicide bereavement (vs. homicide and natural loss) cause public stigma. Three hundred and seventeen adults from the general population were randomly assigned to read one of 6 different vignettes of a person with and without PGD who had lost a spouse through a suicide, homicide or a stroke. After reading a vignette, negative attributions, emotional reactions, and desire for social distance were assessed. Notably, only persons with PGD were attributed relatively more negative characteristics, and elicited more anger, anxiety and pro-social emotions, and a larger preferred social distance in participants. This study supports the claim that PGD causes public stigma, but nuances claims that suicide bereavement induces public stigma.

1. Introduction

With the release of the International Classification of Diseases 11 (ICD-11; World Health Organization, 2018), prolonged grief disorder (PGD), characterized by persistent, severe and disabling grief reactions, has become a formal psychiatric diagnosis. In order to meet criteria for PGD one must experience persistent and pervasive longing for the deceased and/or persistent and pervasive cognitive preoccupation with the deceased, combined with additional grief reactions presumed indicative of intense emotional pain until at least six months after bereavement. A related but distinct disorder, persistent complex bereavement disorder (PCBD), is presently included in the Diagnostic and Statistical Manual of Mental Diseases 5 as a proposed diagnosis for further investigation (DSM-5; American Psychiatric Association, 2013; Lenferink and Eisma, 2017; Boelen et al., 2018).

The establishment of grief disorders is likely to provide a great impetus for research and treatment development for people experiencing severe grief reactions (Doering and Eisma, 2016). However, members of the public, researchers and clinicians have all voiced concerns that mental health stigma towards people with PGD could be a negative consequence of this development (Bandini, 2015; Breen et al., 2015; Dietl et al., 2018; Ogden and Simmonds, 2014). Stigma has been defined as the co-occurrence of labeling, stereotyping, separation, status loss, and discrimination in a context in which power is exercised (Link and Phelan, 2001).

Theoretically, there are two interrelated dimensions across which stigma can be assessed: self-stigma and public stigma (Livingston and Boyd, 2010). Self-stigma constitutes a process of stigmatized individuals perceiving social devaluation (perceived stigma), experiencing actual enactments of stigma in the form of discrimination (enacted stigma), or internalizing negative attitudes of others, resulting in a negative self-image (internalized stigma) (Hanschmidt et al., 2016; Livingston and Boyd, 2010). Public stigma refers to "the phenomenon of large social groups endorsing negative stereotypes about and acting against a stigmatized group" (Corrigan et al., 2005). The present study focuses on public stigma.

Stigmatizing public reactions, such as negative emotions and attitudes, and a larger preferred social distance are often used as indicators of public stigma. Such negative reactions have been observed towards individuals suffering from a wide range of mental disorders (Pescosolido et al., 2010; Schomerus et al., 2012). Stigma towards people with a mental illness can have severe negative consequences (Corrigan and Watson, 2002). Public stigma is associated with self-stigma and reduced help-seeking from mental health services (Clement

* Corresponding author.

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et al., 2015; Evans-Lacko et al., 2012). Self-stigma, in turn, is associated with depression and suicidality (Carpiniello and Pinna, 2017), and premature termination of mental health treatments (Sirey et al., 2001).

Despite the importance of the topic, there is limited research on the association between PGD and stigma. However, one survey demonstrated that people who experience more severe PGD symptoms perceive more negative social reactions from others (Johnson et al., 2009). More recently, a pioneering vignette-based experiment demonstrated the existence of public stigma towards persons with PGD (Eisma, 2018). A general population sample judged a person with PGD (vs. without) to be substantially less competent, warm, and emotionally stable, and more dependent and sensitive. Moreover, a person with PGD elicited relatively more anger, anxiety and pro-social emotions, and a stronger desire for social distance. Since the study vignettes were based on an older PGD definition (Prigerson et al., 2009), and more recent PGD criteria diverge substantially from these original criteria (Eisma and Lenferink, 2018), the first aim of the present study is to clarify if these findings can be cross-validated using vignettes based on more recent PGD criteria (Maercker et al., 2013).

Contrasting the limited attention for stigma and PGD, substantially more research has focused on investigating which characteristics of the bereaved person and circumstances of the death determine social reactions. One prominent question is whether the cause of loss, particularly suicide bereavement, results in more public stigma than other bereavement types. With regard to self-stigma, suicide bereaved persons perceive more stigmatizing social reactions, experience more internalized stigma (e.g. shame, guilt, embarrassment), and report experiencing more enacted stigma in the form of social avoidance and rejection by others (Hanschmidt et al., 2016). With regard to public stigma, a recent review (Logan et al., 2018) demonstrated that public perceptions of and reactions to suicide bereaved persons also differ from people bereaved through other causes. A series of studies conducted in the 80s demonstrated that suicide bereaved persons are perceived as more psychologically disturbed and experiencing a more difficult grieving process, and are attributed more shame, blame and guilt (e.g. Calhoun et al., 1980, 1982; Range and Thompson, 1987). Additionally, people from the general population may experience greater anticipated tension in expressing sympathy to, and interacting with, suicide bereaved people (e.g. Calhoun et al., 1984, 1986). However, these studies often lacked psychometrically sound outcome measures and suffer from other limitations (e.g. frequent focus on perceptions of child-bereaved parents). The second aim of this study was therefore to experimentally compare (comprehensively assessed) public stigma towards people experiencing suicide bereavement, another type of violent bereavement (i.e. homicide), and bereavement through natural causes (i.e. stroke).

This study will thus shed light on the relative importance of PGD and cause of loss in public stigma. We predict that people with PGD (vs. no PGD) and suicide bereavement (vs. homicide and natural loss) will elicit more negative emotions and negative attributions in participants. Additionally, we expect that participants will be relatively less willing to engage socially with people who suffer from PGD or have been suicide bereaved, as indicated by a preference for a larger social distance from these people (Link et al., 1987). Furthermore, we will explore whether there might be potential interactions between both factors on public stigma. For instance, it could be that suicide bereavement (vs. other types of bereavement) elicits public stigma more strongly when the bereaved person has PGD (vs. no PGD).

2. Methods

2.1. Sample and procedure

Formal ethical approval from the local ethical review board was obtained for this study. Participants were recruited from the Dutch adult (age ≥ 18 years) population. Recruitment took place on several locations in Dutch city and advertisements were placed on publicly accessible Facebook webpages. The study was conducted online and programmed in Qualtrics. Participants who were recruited on the street were asked for their email addresses and sent a link to the study. Participants who were recruited via online advertisements could directly access the study via a web-link. Participants read information about general study aims (i.e. to learn more about public reactions to bereavement) and procedure (e.g. data handling, anonymity, voluntariness) and provided informed consent. During the study, participants first filled out a background questionnaire and were then randomly allocated to read one of 1 of 6 unique vignettes. After reading a vignette, participants filled in questions about their reactions to the person described in the vignette (see Materials). Upon study completion, participants were informed online about the true research aims.

In total, 317 people participated (78.5% women). The age of participants ranged from 18 to 85 years (M = 37.7, SD = 16.5). Education levels were divided in lower (primary school, high school, vocational school) and higher education (college or university). Compared to the general Dutch population, mean age was similar (M = 37.7 vs. M = 41.5), but more females (78.5% vs. 50.5%) and more people with higher education (54.6% vs. 30%; CBS, 2017) participated. Table 1 depicts sample characteristics.

Table 1
Sample characteristics.

	PGD Natural (N = 51)	PGD Suicide (N = 48)	PGD Homicide (N = 53)	No PGD Natural (N = 49)	No PGD Suicide (N = 55)	No PGD Homicide (N = 61)	Total (N = 317)
Female (%)	84.3%	77.1%	81.1%	77.6%	69.1%	82.0%	78.5%
Age in years (M(SD))	36.6 (16.1)[a]	37.9 (18.1)	38.2 (18.2)	36.3 (15.7)	38.0 (15.6)	38.9 (15.8)[a]	37.7 (16.5)[a]
Education (%)							
Lower education	58.8%	54.2%	37.7%	34.7%	41.8%	45.9%	45.4%
Higher education	41.2%	45.8%	62.3%	65.3%	58.2%	54.1%	54.6%
Work Status (%)							
Student	31.4%	35.4%	32.1%	38.8%	30.9%	29.5%	32.8%
Part-time employed	31.4%	33.3%	30.2%	30.6%	36.4%	41.0%	34.1%
Full-time employed	23.5%	16.7%	30.2%	34.7%	29.1%	27.9%	27.1%
Religious (%)	25.5%	16.7%	22.6%	22.4%	16.4%	29.5%	22.4%
Loss past 3 years (%)	54.9%	58.3%	67.9%	51.0%	58.2%	60.7%	58.7%

Note: Lower education = primary school, high school or vocational school. Higher education = college or university. Bereaved past 3 years = percentage of people who was bereaved of a close other in the past three years. Work status does not add up to 100% because categories are not mutually exclusive.

[a] Missing data: For age, 2 cases were missing in the PGD-natural death group, and 1 case was missing in the No PGD-homicide group. There were no significant differences detected on the demographic variables between groups.

2.2. Materials

2.2.1. Vignettes

This study assessed public stigma towards mental disorders with vignettes, a commonly used method to investigate stigma (Link et al., 2004). We developed six different vignettes, each describing a fictional person, Carl, who experienced bereavement. The vignettes varied on the independent variables 'presence of a grief disorder' (PGD symptoms and diagnosis vs. no PGD symptoms and no diagnosis) and 'cause of death' (suicide vs. homicide vs. stroke). The vignettes with a person suffering from PGD were based on recent PGD criteria of Maercker et al. (2013). Specifically, two conditional criteria for PGD (disturbances following death should last at least 6 months and impairments in daily functioning) and four symptoms (yearning for the deceased, trouble accepting the loss, guilt, and difficulties engaging in activities) were selected for the PGD vignette. The vignette designs were based on previous research of Eisma (2018). Time since loss in each vignette was set at 'more than two years', well beyond the time limit of 6 months for PGD (Maercker et al., 2013). While gender of the bereaved person and the relation with the deceased may influence reactions to bereaved persons (Logan et al., 2018; Penman et al., 2014), these variables were kept constant in the vignettes to retain maximum statistical power. Conjugal bereavement was chosen as it is a common type of loss that yields relatively strong grief responses. Severe grief reactions may meet with differential public recognition dependent upon the relationship with the deceased (Corr, 2002). For example, severe grief after loss of a distant relative could be judged as "inappropriate" . In order to reduce the potentially confounding influence of this evaluation on stigma assessment, conjugal bereavement was chosen as the type of loss for all vignettes. Table 2 shows the vignettes.

2.2.2. Questionnaires

A background questionnaire was administered prior to presentation of a vignette and all other questionnaires were administered after vignette presentation.

2.2.2.1. Background questions. A self-constructed questionnaire was used to assess the following background variables: gender (male/ female), age (in years), highest education level (primary school/ high school/ vocational school/ college/ university), religiosity (yes/no), employment status (student/ working full-time/ working part-time/ unemployed/ incapacitated/ retired/ homemaker – multiple answers possible), and the experience of bereavement in the past three years (yes/no).

2.2.2.2. Stigma. Three aspects of public stigma were assessed (cf. Link and Phelan, 2001): (1) characteristics ascribed to the person (attributions), (2) emotional reactions to the person, and (3) desire for social distance from the person.

Attributions. Attributions were measured by asking participants to indicate to what extent they agreed with statements that Carl is competent, warm, emotionally stable, dependent and sensitive, on a four-point Likert scale ranging from "completely disagree" (1) to "completely agree" (4). The attribution items were previously used by Eisma (2018) and were selected based on research of public stigma in depression (Angermeyer and Matschinger, 2003), a German pilot study on stigma following bereavement, and research findings on personality characteristics that are commonly associated with grief severity.

Emotional reactions. Angermeyer and Matschinger (2003) distinguished three types of stigma-related emotional reactions: fear, anger and pro-social emotions. von dem Knesebeck et al. (2017) developed 3 subscales (3 items per emotional reaction) to assess these reactions. Two of these subscales (fear, pro-social) yielded low reliabilities in previous studies (von dem Knesebeck et al., 2017; Eisma, 2018). The following measures were taken to improve the existing scale: one pro-social item that correlated low with its respective subscale was dropped ('I feel sympathy') and 5 items based on validated scales to assess state anxiety, anger and pro-social emotions (e.g. Chlan et al., 2003; Marteau and Bekker, 1992; Spielberger, 1999) were added to the subscales. These included 2 fear-items ('I feel tense', 'I feel nervous'), 1 anger-item ('I feel irritated'), and 2 pro-social emotion items ('I am concerned about Carl', 'I take pity'). This yielded a 13 item scale (5-item fear subscale, a 4-item anger subscale, and a 4-item pro-social emotion subscale). All internal consistencies of revised subscales were acceptable to good with, $\alpha = 0.85$, $\alpha = 0.82$, and, $\alpha = 0.75$, for the fear, anger, and pro-social emotion subscales, respectively.

Preferred social distance from the described person was measured with the Social Distance Scale (SDS; Link et al., 1987; 6-item Dutch version: de Ruddere et al., 2016) that consists of statements about the willingness to interact with a person in various roles, such as co-worker, or neighbor. Participants were asked to rate to what extent they agree with these statements on a 4-point Likert scale, ranging from completely disagree (1) to completely agree (4). Higher scores indicate a smaller preferred social distance. The reliability of the SDS was good,

Table 2
Vignettes.

Vignettes	Descriptions
PGD after homicide	Fifty year-old Carl has lost his wife to a homicide more than two years ago. He finds this extremely difficult and does not function well at work nor at home. Since the loss he yearns strongly for his deceased wife. Carl has difficulties accepting the loss and experiences strong feelings of guilt. He withdraws socially and engages in few activities. On the basis of this behavior a mental health professional diagnoses him with a prolonged grief disorder.
PGD after suicide	Fifty year-old Carl has lost his wife to suicide more than two years ago. He finds this extremely difficult and does not function well at work nor at home. Since the loss he yearns strongly for his deceased wife. Carl has difficulties accepting the loss and experiences strong feelings of guilt. He withdraws socially and engages in few activities. On the basis of this behavior a mental health professional diagnoses him with a prolonged grief disorder.
PGD after natural loss	Fifty year-old Carl has lost his wife to a stroke more than two years ago. He finds this extremely difficult and does not function well at work nor at home. Since the loss he yearns strongly for his deceased wife. Carl has difficulties accepting the loss and experiences strong feelings of guilt. He withdraws socially and engages in few activities. On the basis of this behavior a mental health professional diagnoses him with a prolonged grief disorder.
No PGD after homicide	Fifty year-old Carl has lost his wife to a homicide more than two years ago. While he was very sad after the loss and strongly yearned for his deceased wife, he is now able to live with the loss. He functions well both at work and at home. Carl has accepted the loss of his wife more, experiences less feelings of guilt and participates in activities that he finds meaningful.
No PGD after suicide	Fifty year-old Carl has lost his wife to suicide more than two years ago. While he was very sad after the loss and strongly yearned for his deceased wife, he is now able to live with the loss. He functions well both at work and at home. Carl has accepted the loss of his wife more, experiences less feelings of guilt and participates in activities that he finds meaningful.
No PGD after natural loss	Fifty year-old Carl has lost his wife to a stroke more than two years ago. While he was very sad after the loss and strongly yearned for his deceased wife, he is now able to live with the loss. He functions well both at work and at home. Carl has accepted the loss of his wife more, experiences less feelings of guilt and participates in activities that he finds meaningful.

Table 3
Means and standard deviations of attributes, emotions and preferred social distance per vignette group.

	PGD Natural death (N = 51)	PGD Suicide (N = 48)	PGD Homicide (N = 53)	PGD Aggregated (N = 152)	No PGD Natural death (N = 49)	No PGD Suicide (N = 55)	No PGD Homicide (N = 61)	No PGD Aggregated (N = 165)
Attributions								
Competent	2.55 (0.83)	2.63 (0.79)	2.60 (0.72)	2.59 (0.77)	3.37 (0.60)	3.51 (0.50)	3.25 (0.54)	3.37 (0.56)
Warm	3.02 (0.68)	2.92 (0.82)	2.92 (0.68)	2.95 (0.72)	3.29 (0.50)	3.25 (0.51)	3.28 (0.55)	3.27 (0.52)
Emotionally stable	1.65 (0.59)	1.69 (0.85)	1.72 (0.63)	1.68 (0.70)	3.22 (0.55)	3.27 (0.56)	3.23 (0.46)	3.24 (0.52)
Dependent	2.86 (0.72)	2.73 (0.64)	2.79 (0.53)	2.80 (0.63)	1.90 (0.62)	1.85 (0.68)	2.03 (0.71)	1.93 (0.67)
Sensitive	3.37 (0.63)	3.15 (0.62)	3.38 (0.56)	3.30 (0.61)	3.02 (0.48)	3.05 (0.59)	3.08 (0.53)	3.05 (0.53)
Emotions								
Anger	5.78 (2.50)	5.88 (2.69)	5.38 (1.99)	5.67 (2.40)	4.53 (1.23)	4.78 (1.52)	5.00 (1.94)	4.78 (1.62)
Anxiety	7.86 (2.75)	8.60 (3.39)	7.92 (2.62)	8.11 (2.92)	6.78 (2.12)	6.60 (2.09)	6.97 (2.77)	6.79 (2.37)
Prosocial	12.25 (2.35)	12.10 (2.24)	12.75 (2.17)	12.38 (2.25)	9.98 (1.83)	10.15 (2.02)	10.43 (2.36)	10.20 (2.10)
Social distance	14.88 (3.85)	13.35 (3.98)	14.23 (2.95)	14.17 (3.63)	18.06 (3.52)	17.35 (3.55)	16.49 (3.75)	17.24 (3.64)

Note. PGD = prolonged grief disorder. Lower scores on social distance indicate a higher preferred social distance. There were significant differences on all stigma variables for vignettes with PGD and without PGD ($p < 0.05$).

$\alpha = 0.85$.

2.2.2.3. Manipulation check. To investigate whether participants read the vignette carefully and filled in the questionnaires with the right information in mind, two open questions were posed at the end of the study about the vignette manipulations: 'What was the cause of death of Carl's wife?' and 'Did Carl have a mental disorder?'.

2.3. Analyses

Before the main analyses, a randomization check was carried out, by testing for group differences for all background variables (age, education, religiosity, work-status and experience of bereavement), using ANOVAs and χ^2-tests. Also, assumptions of MANOVA were checked. The two main effects of PGD diagnosis (yes vs. no) and cause of death (suicide vs. homicide vs. stroke) on indices of stigma and their interaction were tested with a 2 * 3 between-group MANOVA. In total, there were 9 dependent variables, consisting of the five attributions (competent, warm, emotionally stable, dependent and sensitive), three types of emotional reactions (fear, anger, pro-social) and preferred social distance. In case assumptions were violated, non-parametric tests were run to check the outcomes of parametric tests. Main analyses were run with and without people who got one or two manipulation check questions wrong, to ascertain if this influenced results. A two-sided significance level of 0.05 was used. Partial η^2's were calculated, with 0.01 viewed as small, 0.06 as medium and 0.14 as a large effect size (Cohen, 1988).

3. Results

3.1. Assumption check

In some comparison groups, normality assumptions were violated for a number of dependent variables. The assumption of equality of variance across groups also appeared violated (maximal standard deviation > 2 * minimal standard deviation). Therefore, after the planned MANOVA, we ran non-parametric tests (Kruskal–Wallis tests) in addition to normal post-hoc tests to follow up on any significant main effects. Since results of the parametric tests were highly similar to results of the non-parametric tests, only the parametric test results are reported here.

3.2. Randomization check

Prior to the analyses, it was checked whether randomization was successful. There were no significant differences between the six vignette groups on age, $F(5,308) = 0.19$, $p = 0.97$, gender, $\chi^2(5) = 10.25$, $p = 0.42$, education levels $\chi^2(5) = 7.18$, $p = 0.07$, religiosity, $\chi^2(5) = 4.12$, $p = 0.53$, percentage of students $\chi^2(5) = 1.39$, $p = 0.93$, percentage of full-time workers $\chi^2(5) = 4.80$, $p = 0.44$ and percentage part-time workers $\chi^2(5) = 2.22$, $p = 0.82$, and experience of bereavement in the past three years $\chi^2(5) = 3.46$, $p = 0.63$.

3.2.1. Manipulation check

The question 'What was the cause of death of Carl's wife?' was answered correctly by 84.5% of participants and the question 'Did Carl have a mental disorder?' was answered correctly by 78.9%, indicating that the majority of participants had read the vignettes well. We ran the analyses with and without people who had one or two of these questions wrong. Since this did not alter the main analysis outcomes (significant effects remained significant, non-significant effects remained non-significant, all effects remained of similar size), only the main analyses of the full sample are reported.

3.3. Main analyses

Means and standard deviations are presented for each vignette group in Table 3. MANOVA demonstrated that there were no significant interaction effects between PGD diagnosis * cause of death on indicators of stigma, Roy's Largest Root = 0.03, $F(9, 304) = 1.01$, $p = 0.43$, $\eta_p^2 = 0.03$. However, there was a significant main effect of PGD diagnosis (yes vs. no) on indicators of stigma, Roy's Largest Root = 2.34, $F(9,303) = 78.73$, $p < 0.001$, $\eta_p^2 = 0.70$. There were no significant main effects of cause of death on indicators of stigma, Roy's Largest Root = 0.05, $F(9,304) = 1.58$, $p = 0.12$, $\eta_p^2 = 0.05$.

Following the MANOVA, post-hoc ANOVA's were used to follow-up the main effects on PGD diagnosis (yes vs. no) on attributions, emotional reactions and social distance. Aggregated means for the groups with and without PGD are shown in Table 3. A person with PGD was judged to be relatively less competent, $F(1, 311) = 107.61$, $p < 0.001$, $\eta_p^2 = 0.26$, warm, $F(1, 311) = 20.30$, $p < 0.001$, $\eta_p^2 = 0.06$, and emotionally stable, $F(1, 311) = 508.60$, $p < 0.001$, $\eta_p^2 = 0.62$, and more dependent, $F(1, 311) = 137.69$, $p < 0.001$, $\eta_p^2 = 0.31$, and sensitive, $F(1, 311) = 14.74$, $p < 0.001$, $\eta_p^2 = 0.05$, than a person without PGD. A person with PGD elicited relatively more anger, $F(1, 311) = 15.73$, $p < 0.001$, $\eta_p^2 = 0.05$, anxiety, $F(1, 311) = 20.40$, $p < 0.001$, $\eta_p^2 = 0.06$, and pro-social emotions, $F(1, 311) = 79.47$, $p < 0.001$, $\eta_p^2 = 0.20$, and a larger preferred social distance, $F(1, 311) = 59.64$, $p < 0.001$, $\eta_p^2 = 0.16$.

4. Discussion

The present study experimentally investigated public stigma towards people with and without PGD and people bereaved through suicide or other causes. Moreover, we explored the interaction between diagnostic status and cause of death on public stigma. Confirming expectations, results showed that people with PGD elicited more public stigma than people without PGD. People with PGD were judged to be relatively less competent, warm, and emotionally stable, and more dependent and sensitive, and elicited more feelings of anger and anxiety and pro-social emotions, and a preference for a larger social distance. However, in contrast to our expectations, we found no indication of public stigma for suicide bereavement as compared to bereavement through homicide and natural causes. We also did not find a significant interaction between PGD diagnosis and cause of death on public stigma.

Turning to the findings on PGD first, the present experiment provides a crucial cross-validation of results from the experimental study by Eisma (2018), which also demonstrated the existence of negative attitudes and different emotional reactions and a larger preferred social distance towards people with PGD (vs. non-clinically bereaved people). Whereas Eisma (2018) demonstrated that this effect did not vary for people who had different relationships with the deceased (spouse vs. friend), this study shows that this effect is not different across various causes of death (suicide vs. homicide vs. natural). While further sensitivity analyses are indicated (e.g. does PGD also elicit public stigma when the bereaved person is female?), the present experiment lends further support to the validity of concerns that establishment of grief disorders in diagnostic handbooks will lead to stigmatization of people who receive such diagnoses (Bandini, 2015; Breen et al., 2015; Dietl et al., 2018; Ogden and Simmonds, 2014).

Despite a body of older studies supporting the existence of public stigma towards suicide bereaved persons (for reviews: Hanschmidt et al., 2016; Logan et al., 2018), we could not corroborate previous findings. Multiple explanations for these results are possible. First, it could be that differences between our methods and methods used in previous experimental studies on public stigma for suicide bereavement (in part) account for diverging results. For example, a past, repeatedly-used experimental method to investigate public stigma to suicide bereavement was to provide randomized participant groups different newspaper clippings about child suicide and other types of child bereavement, which included information about the child's age and details on the cause of death (e.g. gun shot, overdose). In such studies, attributed blame and guilt were typical dependent variables. In contrast, our vignettes contained limited information that may lead to more public stigma for the suicide bereaved (e.g. parent-child relation with the deceased, limited parental control over child's access to guns), nor did we assess guilt or blame attributions. It is possible that the mere mentioning suicide loss (as in our study) does not have a strong effect on public stigma or that our comprehensive assessment of public stigma may still have excluded important dimensions of public stigma for suicide loss (e.g. blame attributions).

Second, it could be that Dutch people perceive suicide bereavement differently than U.S. citizens (most prior studies on this topic were conducted in the U.S.), or that in the past three decades public stigma of suicide bereavement has reduced (most prior studies were conducted in the 80s). A third possible explanation for diverging findings could be that people show stigmatizing reactions toward all distressed bereaved persons (e.g. experiencing PGD), and that reigning stereotypes hold that people who experience suicide loss are by definition severely distressed (Logan et al., 2018), despite the fact that only a minority develops a mental disorder following suicide loss (Pitman et al., 2014). As such, information about actual experienced distress (i.e. having or not having a PGD diagnosis) could have cancelled out any effects of cause of loss on public stigma.

This study has a number of clinical implications. First, the manifold negative effects of public and self-stigma, such as reduced help-seeking behavior, depression, and suicidality have been demonstrated across a wide range of mental health conditions (Carpiniello and Pinna, 2017; Clement et al., 2015). While future research is needed to substantiate the associations between public stigma, self-stigma and these negative outcomes for people with PGD, there are presently no reasons to assume that these associations will not hold in this group. Given the severe consequences of stigmatization, there is a need to investigate which proven-effective approaches to reduce of stigma are most beneficial for people with PGD (Rüsch et al., 2005; Thornicroft et al., 2016). Generally, two approaches could be taken: public stigma could be reduced, for instance through media campaigns and personal contact with people suffering from PGD or self-stigma may be reduced through training programs. Our findings suggest that in order to reduce stigma toward bereaved persons it could be beneficial to refute negative stereotypes about the mental health problems experienced by people who lose a loved one.

This study had some notable strengths. Similar to the first experimental study on PGD and public stigma it had a large sample, robust experimental design and considered multiple public stigma indicators (Eisma, 2018). Additionally, various methodological improvements were made relative to the previous experiment. This study used vignettes based on more recent PGD criteria (Maercker et al., 2013), more reliable measures of emotions, and included a rare manipulation check (cf. Logan et al., 2018).

There were also some limitations. First, we used a sample that contained more females and higher educated individuals than the average Dutch population. It remains to be investigated whether our conclusions would hold in a more representative sample (or in samples from other countries). Second, it is unclear to what extent responses to vignettes generalize to real-world situations. While findings from our experiment on PGD were in line with a previous study showing an association between PGD symptom levels and perceived negative social reactions from others (Johnson et al., 2009), findings on suicide bereavement were discrepant from results of some prior studies on stigma after suicide bereavement (Hanschmidt et al., 2016; Logan et al., 2018).

Third, unlike established mental disorders such as depression and psychosis, PGD is likely less known among the general public. It therefore remains to be established to what extent the diagnosis in the vignette is a credible manipulation for participants, and to what extent results can be attributed to the mere description of a person experiencing prolonged, severe, and disabling grief symptoms. To overcome this limitation, we are presently conducting a new study that aims to disentangle the effects of PGD symptoms from the PGD diagnosis on public stigma. Fourth, as mentioned above, it could be that using vignettes with different characteristics of the bereaved person (e.g. female gender) or loss (e.g. child bereavement) and providing more details on the cause of death (e.g. method used to take one's life) could impact on the levels of stigma, yet we could not consider such issues in the present investigation due to power considerations. Fifth, it needs to be noted that the person without PGD in the present study experienced no PGD symptoms at all. As such, the contrast between the PGD and no PGD vignettes was as large as possible. It remains to be established whether public stigma for people with subclinical PGD also differs from people with clinical PGD. Relatedly, we chose a certain set of symptoms to describe a person with PGD, but it could be that a different symptom set would yield different results. For instance, it could be that the symptom of difficulty in engaging with activities could be perceived as a signal of reduced competence, inflating the effect on this negative attribute. Sixth, while we comprehensively assessed public stigma, it is possible that the inclusion of other measures (e.g. attributions of guilt, blame) would have led to different outcomes. Future studies should aim to further explore effects of such methological variations on public stigma.

5. Conclusion

Notwithstanding these limitations, this is the second experimental

study to show that PGD elicits public stigma. Thereby, results emphasize the importance of stigmatization of persons receiving a PGD diagnosis. This suggests that it could be worthwhile to devote research attention to further examination of stigmatizing reactions toward people with PGD, and to develop and test interventions for PGD-related stigma. Additionally, our pattern of findings suggests that the stigma of suicide bereavement may in part be due to reigning stereotypes about the mental health problems experienced by suicide bereaved people. Future studies should aim to reconcile present findings with prior research on stigma after suicide bereavement.

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