



## Research Paper

# Understanding laypersons' perceptions of pathological grief and their support recommendations in a German sample

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## ARTICLE INFO

## Keywords:

Prolonged grief disorder  
Mental health literacy  
Treatment recommendation  
Attitudes  
Laypeople

## ABSTRACT

**Background:** Knowledge about mental disorders (mental health literacy, MHL) among laypeople facilitates adequate help-seeking. Prolonged grief disorder (PGD) is a relatively new diagnosis and little is known about MHL regarding PGD. Since grief is a normal phenomenon, it may be difficult for laypeople to recognise the presence of this mental disorder and their decision could be influenced by circumstantial factors determining the expression and intensity of grief.

We examined whether the gender of the bereaved person and the person's relationship to the deceased affected laypeople's recognition of PGD as a mental disorder and what treatment laypeople would recommend for PGD. **Methods:** A German convenience sample ( $n = 369$ ) was randomly presented one of four vignettes. Vignettes varied the gender of the bereaved person (male vs female) and the relationship to the deceased (child vs parent). Participants indicated whether in their view the depicted person suffered from a mental disorder and what treatment they would recommend. Additionally, participants rated their agreement with positive and negative statements about PGD.

**Results:** Neither gender nor the relationship to the deceased influenced laypeople's diagnostic ratings and treatment recommendations. If participants considered a mental disorder to be present, they recommended most strongly grief counselling, followed by psychotherapy and self-help groups. Attitudes towards PGD were overwhelmingly positive.

**Limitations:** Results need to be replicated in representative samples.

**Conclusion:** Laypeople mostly recognised PGD as a mental disorder and recommended seeking help. As only psychotherapy is an evidence-based treatment for PGD, knowledge about different treatment options must be disseminated among the public.

## 1. Introduction

Bereavement is a common, yet stressful, life event that is often followed by grief and associated with a variety of problematic health outcomes (Stroebe et al., 2007; Zisook et al., 2014), making bereavement a relevant public health concern. While most people adapt to bereavement over time, a minority experiences severe and persistent symptoms of grief (Bonanno, 2004; Bonanno et al., 2011; Nielsen et al., 2019). Recently, the World Health Organization accounted for pathological patterns of grief with the inclusion of *prolonged grief disorder* (PGD) in the ICD-11 (World Health Organization, 2019): PGD is characterised by yearning for, or preoccupation with, the deceased

accompanied by intense emotional pain, that persist for more than six months and cause significant impairment. In a German representative study, the prevalence for PGD was 1.5 % in the general population (Rosner et al., 2021).

Psychotherapy is an effective treatment for PGD (Doering and Eisma, 2016; Jordan and Litz, 2014). In a recent meta-analysis, psychological interventions were superior to control conditions in reducing grief symptoms (Johannsen et al., 2019). Less evidence exists for medication (Bui et al., 2012) and a large RCT demonstrated that antidepressant medication does not improve PGD symptoms (Shear et al., 2016). While psychotherapy and medication are usually restricted to people with clinically relevant symptoms, other support services (i.e., primary and

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<https://doi.org/10.1016/j.jadr.2024.100784>

Received 30 December 2023; Received in revised form 4 April 2024; Accepted 8 April 2024

Available online 10 April 2024

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secondary preventive interventions; Stroebe et al., 2007) target a wider circle of bereaved persons. These interventions include for example grief counselling, religious services or self-help groups. This variation in support options reflects a tiered approach to bereavement care (Aoun et al., 2012, 2015; Boelen, 2016). At the same time, there are substantial barriers to accessing support: research indicates that especially highly distressed mourners do not seek help (Lichtenthal et al., 2011) or do not receive adequate support (Aoun et al., 2015). Thus, it is highly relevant to explore the causes of (non-)utilisation of bereavement support and treatment.

One factor determining the utilisation of support is mental health literacy (MHL). MHL refers to knowledge about, and helpful attitudes towards, mental illnesses among laypeople that can facilitate adequate help-seeking (Jorm, 2000). For example, better knowledge and correct labelling of mental disorders is associated with more appropriate help-seeking (Rüsch et al., 2011, 2012; Wright et al., 2007). Importantly, the context in which the symptoms occur affects the recognition of mental disorders and laypeople's treatment recommendation. If the symptoms are preceded by negative life events such as the loss of a spouse, laypeople are less likely to recognise them as a mental disorder (Holzinger et al., 2011b). If symptoms are viewed as part of a life crisis, medical treatments and psychotherapy are recommended less frequently (Holzinger et al., 2011b; Lauber et al., 2001). This is highly relevant for PGD, as the disorder is – per definition – preceded by the death of a loved one and bereavement can be understood as a life crisis. Accordingly, bereaved people with PGD symptoms may not seek help because they and their support system do not recognise the symptoms as a mental disorder (Lichtenthal et al., 2011). Additionally, PGD may differ from other mental disorders in two ways. First, PGD is a rather unknown diagnosis (Gonschor et al., 2020), limiting MHL. Second, grief *per se* is a common and normal phenomenon, thus, it may be more difficult to recognise PGD symptoms as a mental disorder. For example, only 51 % of the participants in a population-representative English sample agreed that grief could be a mental disorder, compared to 83 % agreement for depression (Rüsch et al., 2012). In an international English-speaking sample, 75 % of the participants agreed that grief could be a mental disorder (Breen et al., 2015) while in a study in mainland China, 57 % of the participants endorsed the same statement (Tang et al., 2019).

A defining criterion of PGD as a mental disorder stipulates that the grief response must clearly exceed what is expected in “normal” bereavement. Previous research has demonstrated that this evaluation proves difficult even for health care professionals (Eisma, 2023; Keeley et al., 2016). Thus, the recognition of grief reactions as PGD in the context of MHL among laypersons may also depend on social norms concerning the manifestation and duration of grief. Generally, the public expects grief symptoms to decrease over time (Penman et al., 2014). However, expectations of “correct” grief expressions vary with the gender of the bereaved person (Costa et al., 2007): male grievers are expected to behave more “stoically” and express their grief less emotionally (Huisman, 2019; Kubitz et al., 1989) whereas women demonstrating symptoms of intense and persistent grief may be perceived as grieving “normally”. This could lead to PGD being less frequently recognised as a mental health disorder in women. Additionally, circumstances of the loss may play a decisive role. The loss of a child is widely associated with more intense and persistent grief in contrast to other losses (Lichtenthal et al., 2015). Accordingly, losing a child is associated with an expectation of more intense grieving than the loss of a spouse (Miller, 2015). This could lead to a reduced recognition of PGD among bereaved parents. To the best of our knowledge, no studies have investigated the impact of loss-related variables on MHL decisions in PGD so far.

In order to foster adequate help-seeking for PGD, three factors matter: Firstly, the correct identification of a mental disorder (Lauber et al., 2001; Rüsch et al., 2012). Thus, the labelling of PGD symptoms as a mental disorder may lead to more appropriate help-seeking and therefore, recommendation of professional support. Secondly, the

selection of appropriate treatment options is important. In the study by Lauber et al. (2001), laypeople favoured treatments like psychotherapy and medication when they considered a person in a vignette to suffer from a mental disorder. In contrast, when they considered the person to be in a life crisis, they opted for other support services like the support through social workers, telephone counselling or homeopathy. Little is known about the public's perception of PGD treatment options. Thirdly, the general attitude towards a disorder matters. Attitudes towards PGD among laypersons vary: in a qualitative analysis, bereaved participants feared a pathologisation and stigmatisation through PGD, but also expressed hope for a better recognition and support through the diagnosis (Holmgren, 2022). From a public perspective, several vignette studies found that people report more stigmatising responses towards a person with PGD symptoms vs ‘normal’ grievers (Dennis et al., 2022; Eisma, 2018), irrespective of the diagnostic label (Gonschor et al., 2020). What laypersons think about PGD will possibly influence their treatment recommendations.

We used a vignette experiment to explore the influence of the gender of the bereaved person and the relationship to the deceased on the correct labelling of PGD symptoms. We analysed what support options participants would recommend to a person with PGD symptoms. We hypothesised that:

1. Participants will rate a female vignette less frequently as portraying a mental disorder than a male vignette.
2. Participants will rate a vignette describing the loss of a child less frequently as portraying a mental disorder than a vignette describing the loss of a parent.
3. Participants' rating of the diagnostic status of the vignette will affect their treatment recommendation.

Additionally, we explored the following questions:

1. What professional support options do people recommend to a person with PGD symptoms?
2. What attitudes do laypeople hold towards PGD?

## 2. Methods

The study was approved by the Institutional Review Board of the Catholic University Eichstaett-Ingolstadt (073–2021) and preregistered at the Open Science Foundation ([osf.io/3bkgf](https://osf.io/3bkgf)) in December 2021. We conducted an online survey using the software Qualtrics (2020) from January 2022 to April 2022.

### 2.1. Procedure

We recruited a convenience sample via mailing lists, social media groups or advertisements in public places. Participants were eligible if they were at least 18 years old and provided informed consent. Participants were excluded if they anticipated that they would feel too distressed by loss-related questions. After receiving full information about the study and providing written informed consent, participants supplied demographic data. Subsequently, they were randomly assigned to read one of four vignettes describing a person with PGD. After reading the vignette, participants indicated whether they believed that the person in the vignette suffered from a mental disorder and what they would recommend him or her to do. Afterwards, participants received information about the diagnosis of PGD and indicated their attitude towards PGD. Finally, all participants could take part in a lottery and win one of 15 gift vouchers (20 EUR each).

### 2.2. Vignettes

All vignettes described a person with PGD symptoms. They varied with regard to the gender of the bereaved person (male vs female) and

the relationship to the deceased (child vs parent), but were identical on all other accounts (see supplementary material for the wording of the four vignettes). Seven experts in the field of PGD research and therapy had reviewed the vignettes prior to the study to ascertain their ecological and construct validity according to the ICD-11 diagnostic criteria of PGD.

### 2.3. Measures

Demographic and bereavement-related variables: Participants provided information on gender (male, female, diverse), age (in years) and marital status (single, married, widowed, divorced). To assess their status as laypeople, they indicated whether they were healthcare professionals (e.g., doctor, nurse, psychotherapist; yes/no) and whether they worked with bereaved persons (yes/no). They indicated whether they personally had experienced the death of a significant other (yes/no) and if so, provided information regarding the time since death (years) and their current bereavement-related distress on a five-point Likert scale (1=not distressed at all; 5=very distressed).

Diagnostic rating and treatment recommendation: Two items were selected based on previous research (Holzinger et al., 2011a, 2011b). The first item read “Would you say that [the person in the vignette] suffers from a mental disorder?” (yes / no / not sure). The second item read “What should [the person in the vignette] do? What would you recommend?” (do nothing and wait / seek help from friends or family / seek professional help). If participants indicated that they would recommend professional help, they were asked to specify the strength of their recommendation (−2=not recommend at all; 2=strongly recommend) for potential services. Services were based on descriptions of the German system of bereavement care (see e.g., Müller et al., 2021; Wagner, 2019; Wittkowski, 2013) and included psychotherapy, medication, couple/ family counselling, grief counselling, religious services, self-help groups, and complementary and alternative medicine. Of note, psychotherapy is distinguishable from all forms of counselling in Germany as psychotherapists need a special licensure.

Attitudes towards PGD: Participants stated whether they were familiar with the diagnosis PGD (yes / no). Additionally, we presented participants with eight statements about PGD. These statements were based on a survey of professionals (Dietl et al., 2018), but adapted for laypersons. Four statements each addressed advantages and disadvantages of PGD as a diagnostic entity. A positive statement read for example “The diagnosis will help people to get more effective treatment”, a negative statement was “The diagnosis will lead to stigmatisation and marginalisation”. Statements were presented in random sequence and rated on a five-point Likert scale (1=certainly not; 5=for sure).

### 2.4. Data analysis

We conducted the analysis of data with IBM SPSS statistics (Version 29). Hypotheses one and two concerned the main and interaction effects of vignette characteristics (gender of the bereaved person; relationship to the deceased) on the diagnostic rating. As our focus was on the correct identification of PGD caseness, diagnostic ratings of “no mental disorder” and “not sure” were combined. We used a loglinear analysis and significant interaction effects were followed by chi-square tests. A logistic regression was planned to examine hypothesis three, using the diagnostic ratings, the relationship to the deceased and the gender of the bereaved person as predictors for the treatment recommendation. We report odds ratios (OR) as effect sizes for the hypotheses. As a sensitivity analysis, we recalculated all analyses with genuine laypersons only (i.e., excluding participants who were healthcare professionals or worked with bereaved persons). We explored service recommendations and attitudes towards PGD using descriptive statistics.

## 3. Results

### 3.1. Participant characteristics

The sample size was determined via an a-priori power analysis with G\*Power (Version 3.1.9.7; Faul et al., 2007). A minimum sample size of 263 participants would detect small to medium effect sizes (expected  $\omega = 0.2$ ; power = 0.90). To enable the detection of small differences, we aimed to recruit 300 people for the study. A total of 596 persons visited the survey page, 482 persons provided informed consent. If participants had completed less than half of the survey items, their data were excluded from the analyses ( $n = 113$ ). Included and excluded participants did not differ in age ( $p > .20$ ). However, persons who were healthcare professionals ( $p = .03$ ) or worked with bereaved persons ( $p = .08$ ) were more likely to complete the survey.

The final sample consisted of 369 participants. The sample was predominantly female (76.10 %) with a mean age of 44.49 years ( $\pm 17.08$ ). Nearly all participants had experienced the death of a significant other. A total of 116 participants worked as healthcare professionals or with bereaved persons. Table 1 summarises the sample characteristics for the total sample and the four experimental conditions (vignettes 1 - 4).

### 3.2. Randomisation check

The randomisation was successful ( $\chi^2(1) = 0.003, p = 1.000$ ). Participants in the four conditions did not differ in age ( $F(3365) = 0.20, p = .893$ ), gender ( $\chi^2(6) = 5.34, p = .501$ ), marital status ( $\chi^2(9) = 9.95, p = .355$ ), professional status (healthcare professional,  $\chi^2(3) = 6.01, p = .111$ , working with bereaved persons,  $\chi^2(3) = 1.21, p = .751$ ), experience of the death of a significant other ( $\chi^2(3) = 4.87, p = .182$ ), and length of bereavement ( $F(3323) = 0.66, p = .577$ ). However, participants differed in their current bereavement-related distress,  $F(3327) = 5.22, p = .002$ . Post-hoc tests revealed that participants in condition 1 reported significantly lower distress than participants in condition 4 ( $p < .001$ ).

### 3.3. Diagnostic rating of the vignette

After reading the vignette, 77.8 % ( $n = 287$ ) participants correctly indicated that the vignette described a person with a mental disorder, 22.2 % ( $n = 82$ ) did not think so or did not know. Fig. 1 displays the ratings for the four different vignettes.

The three-way loglinear analysis resulted in a good fit of the model ( $\chi^2(0) = 0.00, p = 1.00$ ). However, only one-way effects were significant,  $\chi^2(3) = 120.65, p < .001$ . The only significant main effect was the rating of mental illness,  $\chi^2(1) = 120.62, p < .001$ . The gender of the bereaved person in the vignette and the relationship with the deceased did not show main or interaction effects (all  $p > .05$ ). The odds of rating the vignette as portraying a mental illness were 3.89 for a male vignette and 3.16 for a female vignette. The OR for a male person vs a female person was 1.23, 95 %CI [0.75;2.02]. For the loss of a parent, the odds of rating the vignette as portraying a mental illness were 3.63 and 3.38 for the loss of a child. The OR for the loss of a parent vs the loss of a child was 1.07, 95 %CI [0.66;1.75]. In the sensitivity analysis excluding participants who were healthcare professionals or worked with bereaved persons, results remained unchanged.

### 3.4. Treatment recommendation

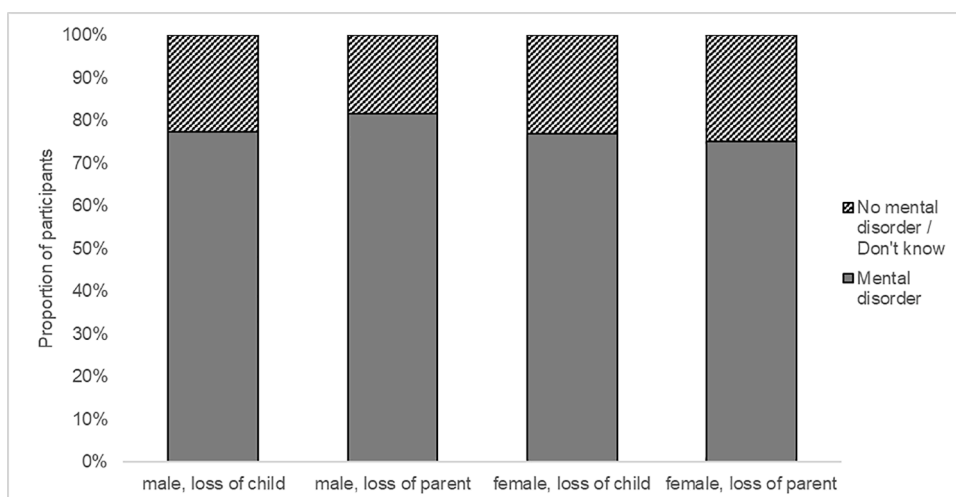
The majority of the participants (92.40 %,  $n = 341$ ) indicated that they would advise the person to seek professional help, whereas 6.80 % of the participants ( $n = 25$ ) recommended seeking help from friends or family and only 0.80 % ( $n = 3$ ) suggested that the person should do nothing and wait. Fig. 2 displays the recommendations for the four vignettes.

**Table 1**  
Demographic characteristics.

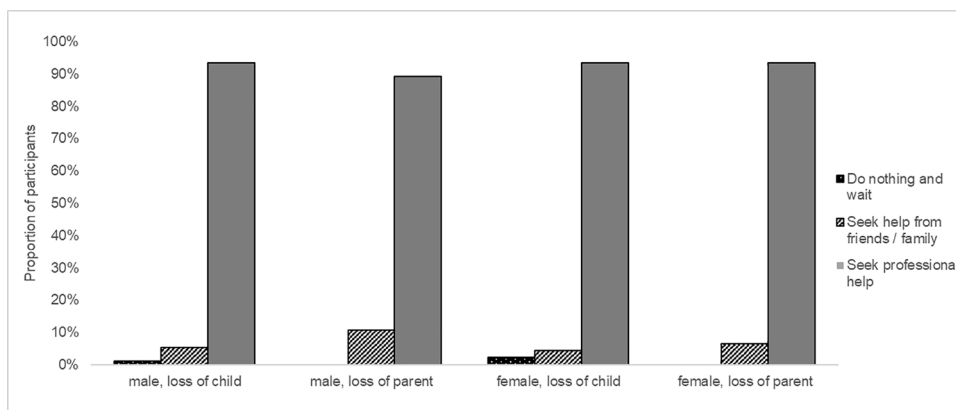
Sample characteristics	Total sample	Vignette 1: Male bereaved, loss of child	Vignette 2: Male bereaved, loss of parent	Vignette 3: Female bereaved, loss of child	Vignette 4: Female bereaved, loss of parent
N	369	93	93	91	92
Gender (%)					
Female	76.10	79.60	76.30	71.10	77.20
Male	23.10	20.40	21.50	27.80	22.80
Diverse	0.80	0.00	2.20	1.10	0.00
Age ( <i>M</i> ± <i>SD</i> )	44.49 (±17.08)	44.83 (±17.77)	45.29 (±16.65)	43.40 (±16.57)	44.40 (±17.50)
Marital status (%)					
single	46.30	49.50	45.20	39.60	51.10
married	45.00	41.90	41.90	54.90	41.30
widowed	4.90	5.40	8.60	1.10	4.30
divorced	3.80	3.20	4.30	4.40	3.30
Healthcare professional (% yes)	16.60	17.40	14.00	11.10	23.90
Working with bereaved persons (% yes)	22.20	21.50	23.70	18.70	25.00
Experienced the death of a significant other (% yes)	91.90	95.70	92.50	92.30	87.00
Time since death (years) <sup>a</sup> ( <i>M</i> ± <i>SD</i> )	6.78 (±8.64)	7.43 (±8.43)	6.52 (±8.56)	5.77 (±6.95)	7.35 (±10.37)
Current bereavement-related distress <sup>b</sup> ( <i>M</i> ± <i>SD</i> )	2.62 (±1.09)	2.31 (±0.95)	2.59 (±1.11)	2.65 (±1.10)	2.96 (±1.14)

<sup>a</sup> 327 participants provided data (vignette 1, *n* = 87; vignette 2, *n* = 82; vignette 3, *n* = 79; vignette 4, *n* = 79)

<sup>b</sup> 331 participants provided data (vignette 1, *n* = 88; vignette 2, *n* = 85; vignette 3, *n* = 79; vignette 4, *n* = 79).



**Fig. 1.** Diagnostic judgement of the presence of a mental disorder per vignette.



**Fig. 2.** Treatment recommendations per vignette.

Next, we investigated the association between the diagnostic rating of the vignette and treatment recommendations. Due to the low number of recommendations of “do nothing and wait” ( $n = 3$ ), we excluded this option from the subsequent analysis. The expected frequencies for several cells were too low ( $< 5$ ) to conduct a logistic regression. Therefore, Fisher’s exact test was used. The results ( $p = .004$ ) indicated a significant association between the diagnostic rating (mental disorder: yes vs no/not sure) and the treatment recommendation (seek help from family and friends vs professional help). The odds of recommending professional help were 21.00, when participants had rated the vignette as displaying a mental disorder. In contrast, if they did not think that the vignette displayed a mental disorder, the odds were 5.67. Thus, the OR for recommending professional help was 3.70, 95 %CI [2.61;5.26] for the rating of the vignette as a mental disorder vs no mental disorder. These results remained unchanged in the sensitivity analysis excluding participants who were healthcare professionals or worked with bereaved persons.

Participants who recommended professional help ( $n = 341$ ) were asked to rate several support options. Grief counselling was the most strongly endorsed recommendation, followed by psychotherapy and self-help groups. Participants discouraged complementary and alternative treatments and medication (see Fig. 3).

### 3.5. Attitudes towards PGD as diagnostic category

The majority of the participants (69.8 %,  $n = 252$ ) reported that they had not heard of PGD prior to the study. Fig. 4 shows the attitudes towards PGD as diagnostic category. Participants were mostly in favour of the four positive statements (58.8 % to 68.8 %), only 6.3 % to 12.0 % considered them unlikely or wrong. On the other hand, 7.4 % to 20.8 % of the participants considered the negative statements at least quite likely. Their greatest concern was that normal grief might be pathologised (20.8 %).

## 4. Discussion

In contrast to our hypotheses, neither the gender of the depicted person with PGD symptoms nor their relationship to the deceased affected the laypersons’ judgements whether a mental disorder was present. In accordance with our hypothesis, laypeople recommended seeking professional help, if they recognised a mental disorder. The most strongly endorsed treatment recommendations for PGD were grief counselling, psychotherapy and self-help groups.

### 4.1. Diagnostic rating

The analysis demonstrated no significant main or interaction effects for gender and relationship to the deceased. The absence of a statistically significant difference does not imply equality. However, our study was powered to detect small effect sizes so that any effects our analyses failed to detect are of questionable relevance. The absence of a difference could be due to a ceiling effect given that the recognition rates in our sample were relatively high: more than 75 % of the participants correctly indicated that the person in the vignette suffered from a mental disorder. This is particularly relevant considering that almost 70 % of the participants had not heard of PGD before, but were still able to identify the clinical relevance of the symptoms. In previous vignette research, preceding negative life events (i.e., death of a spouse) affected the recognition of mental disorders negatively: only 42 % of the participants correctly identified a written description of depression as a mental disorder, if the information that the symptoms occurred after a negative life event preceded the description. If negative life events were not mentioned, the recognition rate was 67 % (Holzinger et al., 2011b). Our findings may reflect an increasing MHL in society. Perhaps laypeople have become more aware that while negative life events can precipitate psychological distress, this psychological distress can take the form of a mental disorder regardless of whether the distress is an “understandable” reaction. Noteworthy, the aforementioned study used a population-based sample while our sample was comparatively knowledgeable. Nevertheless, our sensitivity analyses revealed unchanged results when more knowledgeable participants were excluded. However, this hypothesis warrants further research. Additionally, our study examined diagnostic ratings based on what people may expect from grieving men and women. However, other people’s expectations may also affect grief expressions in bereaved men and women. For example, bereaved men suffering from PGD could adapt to role expectations and hide specific symptoms from the public or downplay their expressions of grief. Further research is needed to examine these interrelationships.

### 4.2. Treatment recommendations

If participants rated the vignette as portraying a mental disorder, they were more likely to recommend professional help. This finding is consistent with previous research on MHL (Jorm, 2012). Participants who advocated seeking professional help, strongly recommended psychotherapy. This is an encouraging result as laypeople’s recommendations align with current research on effective treatments for PGD

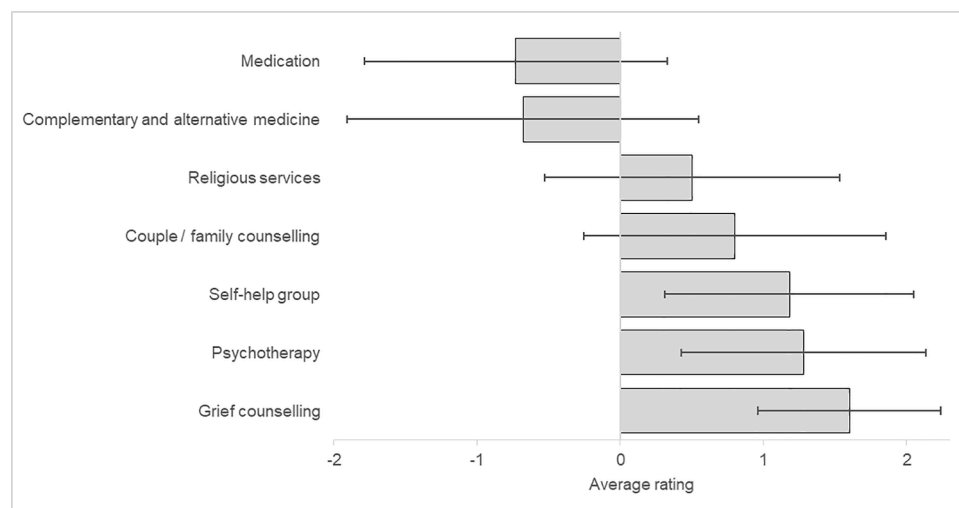


Fig. 3. Strength of recommendation (means and standard deviations) for the treatment options. Note: five-point Likert scale, -2= not recommend at all; 2= strongly recommend.

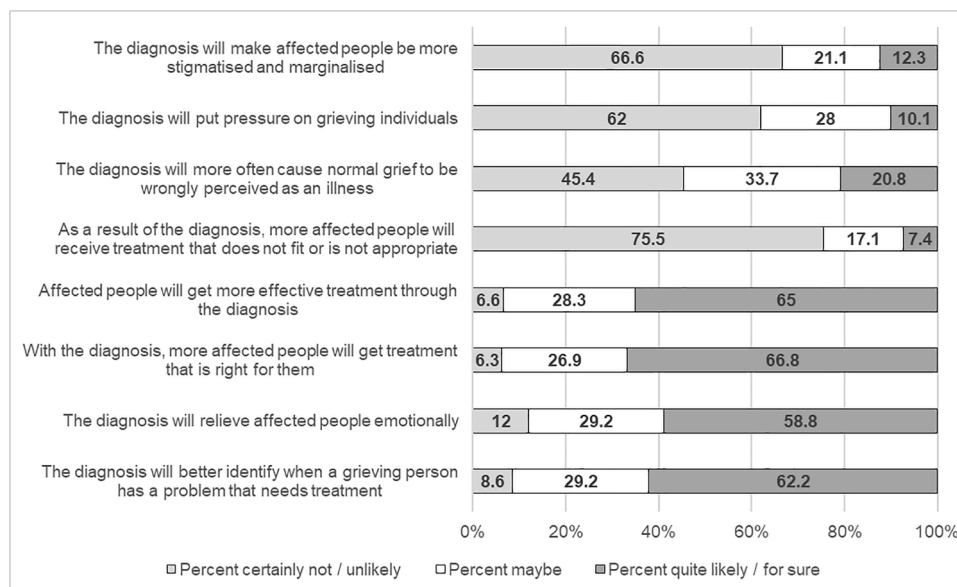


Fig. 4. Attitudes towards PGD as diagnostic category.

(Doering and Eisma, 2016; Johannsen et al., 2019; Jordan and Litz, 2014). Also encouragingly, participants discouraged the use of medication for PGD. This aligns with research that demonstrates no beneficial effects of medication for PGD symptoms (Bui et al., 2012; Shear et al., 2016).

However, among the most strongly recommended professional support for a person with PGD was grief counselling, a service that can be categorized as a preventive intervention (Stroebe et al., 2007). In the German health care system, the treatment of mental disorders is restricted to licensed health care professionals. Grief counselling, provided by volunteers and persons from all walks of life with varying training, therefore explicitly does not offer treatment for mental disorders. At the same time, based on our results, grief counselling is the strongest treatment recommendation for PGD. This assigns a great responsibility to grief counsellors: they will often have to judge whether a particular client has a mental disorder and requires professional treatment. As part of a tiered approach to bereavement care (Müller et al., 2021), grief counselling has a pivotal role, i.e., to refer clients who show signs of a mental disorder to a licensed specialist. Our results highlight the need for a thorough formal training of grief counsellors, high quality standards in bereavement care and a close cooperation among the different support services. Additionally, the development of validated screening questionnaires for PGD that are easily administrable and time efficient seems of utmost importance (Sealey et al., 2022) to support grief counsellors in their decisions.

#### 4.3. Attitudes towards PGD

Participants in our sample overwhelmingly held positive attitudes towards the diagnostic category of PGD. More than two thirds found it at least quite likely that the PGD diagnosis would lead to an appropriate treatment for more affected people and almost 60 percent were positive that receiving the diagnosis of PGD would provide emotional relief for those affected. Only few participants considered an inappropriate treatment through the diagnosis at least quite likely and about one fifth judged it at least quite likely that “normal” grief might be pathologised through the diagnosis. These results are of interest in two ways. First, they indicate that German laypersons are more positive towards the diagnosis compared to professionals. In a German study using almost identical questions (Dietl et al., 2018), only 46 % of professionals (e.g., psychotherapists, psychiatrists, grief counsellors) stated that a more effective treatment through the diagnosis was at least quite likely. By

contrast, more than half of the professionals considered pathologising normal grief through the diagnosis at least quite likely. Second, our results indicate that even the fear of pathologising “normal” grief is rather low among German laypeople. We know from previous studies in an English-speaking international sample (Breen et al., 2015) and a sample in mainland China (Tang et al., 2019) that laypeople may have fears about the medicalisation of grief. Here, our results add findings from Germany, showing that such fears exist, but are a significant concern for only a minority. Both findings need replication in larger and representative samples.

#### 4.4. Strengths and limitations

The interpretation of our results must consider several limitations. First, our sample was not representative of the German population and female participants were overrepresented (a fact that is common in grief research; Stroebe et al., 2003). Thus, the generalisability of the results remains to be tested. Second, our study used an online survey; people with limited access to digital devices may be underrepresented. Third, a substantial proportion of participants (31.4 %) were healthcare professionals (e.g., doctors, psychotherapists or nurses) or worked with bereaved persons; however, a sensitivity analysis demonstrated the robustness of our results when excluding persons with these professional backgrounds. Fourth, the randomisation check demonstrated a small bias in randomisation: participants in one experimental group reported higher grief-related distress. Fifth, the proportion of participants who had experienced the death of a significant other was high in our sample. Thus, participants may have drawn on their own experiences when rating the vignettes.

At the same time, the study has several strengths. First, we conducted a carefully designed and preregistered experiment in a large sample to maximise the internal validity of our study. Second, no study before has examined the diagnostic ratings of PGD symptoms among laypersons as a function of gender and relationship to the deceased in the vignette. Third, to the best of our knowledge, our study is the first to examine treatment recommendations for PGD based on an experimental mental health literacy paradigm. Thus, it establishes a link between research on grief and PGD and research on mental health literacy. Ultimately, this type of research may improve professional care for the bereaved from a public health perspective.

## 5. Conclusion

Knowledge about, and attitudes towards, pathological grief among laypeople may be important to understand help-seeking behaviour among the bereaved. Laypeople in our study were not influenced by the gender of the bereaved person or the person's relationship to the deceased in their decision whether a mental disorder was present. If they considered a person to suffer from a mental disorder, they were more likely to recommend professional help, especially grief counselling, psychotherapy and self-help groups. As only psychotherapy is an evidence-based treatment for PGD, this suggests that we must increase knowledge about these different treatment options among the public. Although a majority of our participants had not heard of PGD prior to our study, they expressed predominantly positive attitudes towards the PGD diagnosis.

## CRedit authorship contribution statement

**C. Hanauer:** Writing – original draft, Methodology, Investigation, Formal analysis, Conceptualization. **B. Telaar:** Writing – review & editing. **A. Barke:** Writing – review & editing, Methodology, Conceptualization. **R. Rosner:** Writing – review & editing. **B.K. Doering:** Writing – review & editing, Supervision, Methodology, Conceptualization.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Data availability

Data are available from the corresponding author upon reasonable request.

## Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.jadr.2024.100784](https://doi.org/10.1016/j.jadr.2024.100784).

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