The Effectiveness of an Unguided Online CBT Treatment for Complicated Grief in Adults Who Have Lost a Loved One During the COVID-19 Pandemic: A Randomized Controlled Trial

Utrecht University

Sophie B. Westera

Utrecht University

Student number: 6204546

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Supervisor: L. Reitsma, MSc.

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Abstract

Introduction: The impact of the coronavirus disease 2019 (COVID-19) pandemic is enormous. Many people have lost a loved one during the pandemic. Specific COVID-19-related factors may heighten the risk of disturbed grief. The aim of the current study was to evaluate the effectiveness of an unguided online CBT treatment in reducing PCBD symptoms for people who have lost a loved one during the COVID-19 pandemic versus waitlist-controls after waiting. Next to this, the relationship between unexpectedness of the death and the level of PCBD symptoms at baseline was studied.

Method: Sixty-five Dutch individuals were eligible for participation. In a clinical interview before treatment or waiting (T1), the Traumatic Grief Inventory – Clinician Administered, the PTSD Checklist for DSM-5 and the Patient Health Questionnaire were administered. The clinical interview was conducted again after treatment or after 8 weeks of waiting (T2).

Results: The results indicated that the unguided online CBT treatment was effective in reducing PCBD symptoms versus waitlist-controls after waiting. The results also indicated that there is no positive relationship between unexpectedness of the death and the level of PCBD symptoms at baseline.

Discussion: It can be concluded that the current online CBT treatment is effective in the reduction of PCBD symptoms in individuals who have lost a loved one during the COVID-19 pandemic. Since there is currently no evidence-based online CBT treatment for complicated grief, the results of the current study are valuable for clinical practice. Better psychological care is now available for people bereaved during the COVID-19 pandemic.

Key words: Cognitive behavioral therapy, online treatment, persistent complex bereavement disorder, COVID-19 pandemic

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COVID-19 and Grief

The impact of the coronavirus disease 2019 (COVID-19) pandemic is enormous. As of 17 February 2022, there have been over 400 million confirmed cases of COVID-19, including approximately 5.8 million deaths worldwide (World Health Organization [WHO], 2022a). In the Netherlands, there have been almost six million confirmed cases and over 21 thousand deaths (WHO, 2022b). The high number of deaths indicates that many people have lost a loved one during the pandemic.

Losing a loved one is a painful experience that is generally accompanied by grief and emotional distress (Jordan & Litz, 2014). The "normal" grieving process is characterized by feelings of great sadness and anger, insomnia, preoccupation with the death, and concentration difficulties (Cohen et al., 2002). In most people the intensity of the symptoms lessens over time (Jordan & Litz, 2014; Shear et al., 2011). The majority does not develop a mental health condition (Boelen & Smid, 2017a). However, approximately 10 percent of bereaved people stagnate in their grieving process and show disturbed grief symptoms (Lundorff et al., 2017). This applies to natural deaths, such as deaths due to illness or old age. In case of traumatic deaths, approximately 50 percent of bereaved people show disturbed grief symptoms (Djelantik et al., 2020). A traumatic death is a loss that occurs suddenly or under violent circumstances (Green, 2000; Lenferink et al., 2020). Deaths during the COVID-19 pandemic can be seen as potentially traumatic losses (Eisma et al., 2020; Kokou-Kpolou et al., 2020). Therefore, the risk of disturbed grief is heightened during the COVID-19 pandemic.

Complicated Grief

Complicated grief refers to a pattern of adaptation to bereavement that involves the presentation of certain grief-related symptoms at a time beyond that which is considered adaptive (Lobb et al., 2010). Symptoms of complicated grief include intense yearning for the deceased, distressing memories, and difficulties with moving on (Prigerson et al., 1995; Zisook et al., 2010). When grief reactions interfere with daily life functioning for a prolonged period following the death, a grief disorder diagnosis might apply (Lenferink et al., 2021).

Diagnosis of Complicated Grief

Both the *International Classification of Diseases* (ICD-11; WHO, 2019) and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association [APA], 2013) provide classification systems for mental health disorders (Clark et al., 2017). In the ICD-11, complicated grief symptoms are described under prolonged grief disorder (PGD; WHO, 2019). Symptoms include longing for the deceased, difficulty accepting the death, feelings of guilt, anger, denial, and/or an inability to experience positive mood. To be diagnosed with PGD, symptoms should occur more than 6 months after the loss (Eisma et al., 2020; WHO, 2019). In the DSM-5, complicated grief symptoms are described under persistent complex bereavement disorder (PCBD; APA, 2013). Symptoms include intense yearning for the deceased, intense sorrow, preoccupation with the deceased and with circumstances of the death, difficulty accepting the death, numbness, and/or excessive avoidance of reminders of the loss. To be diagnosed with PCBD, symptoms should occur more than 12 months after the loss (APA, 2013; Boelen & Smid, 2017a). In this thesis the focus is on PCBD according to DSM-5-criteria.

Risk-Factors for Developing PCBD

Several risk-factors for developing PCBD after losing a loved one are identified.

Anxiety, insecurity, lower levels of self-esteem, and higher levels of negative cognition are associated with complicated grief (Boelen et al., 2006). The relationship with the deceased plays a role too. The closer the relationship with the deceased, the more likely it is that the bereaved individual will experience complicated grief symptoms (Tofthagen et al., 2017). Also, losing a loved one unexpectedly heightens the risk of developing complicated grief symptoms (Fujisawa et al., 2010; Wijngaards-de Meij et al., 2005).

During the pandemic there are specific COVID-19-related factors that may heighten the risk of the development of PCBD symptoms in people who have lost a loved one: absence of grief rituals (Castle & Phillips, 2003), lack of physical social support (Lobb et al., 2010), secondary COVID-related stressors, multiple losses, and presumed responsibility for the death (Eisma et al., 2020).

PCBD can result in negative health outcomes such as cognitive impairment, feelings of loneliness, and social isolation (Tofthagen et al., 2017). It is also associated with functional impairment and suffering (Boelen & Prigerson, 2007; Silverman et al., 2000). Therefore, it is important to offer effective psychological treatments for people suffering from PCBD.

Treatments for PCBD During COVID-19

Face-to-face cognitive behavioral therapy (CBT) is considered the most effective treatment for PCBD (Boelen & Van den Bout, 2017; Doering & Eisma, 2016; Rosner et al., 2015). Grief-specific CBT consists of exposure, cognitive restructuring, and behavioral activation (Boelen & Van den Bout, 2017). Exposure involves the gradual confrontation with internal and external loss-related stimuli avoided by the bereaved person. Cognitive restructuring involves modifying pervasive maladaptive cognitions that maintain negative emotions and unhelpful behaviors. Behavioral activation involves helping bereaved individuals to gradually increase their engagement with activities that offered joy and fulfillment before the loss occurred (Boelen et al., 2021).

Government policy during the COVID-19 pandemic impedes access to face-to-face therapy. Therefore, psychotherapy needs to be offered remotely, for instance online. Several studies on the effectiveness of online CBT have been conducted and the results are promising (Eisma et al., 2015; Ruwaard et al., 2012). Currently, there is no evidence-based online grief-specific CBT treatment. Several studies on the effectiveness of online grief treatments have been conducted (Eisma et al., 2015; Kersting et al., 2013; Litz et al., 2014; Wagner et al., 2006). The overall outcome of these studies was that online grief interventions were effective in reducing symptoms of complicated grief, post-traumatic stress disorder (PTSD), and depression in bereaved individuals. However, these studies are characterized by several limitations, such as restricted sample sizes (Eisma et al., 2015), the use of self-rating questionnaires (Eisma et al., 2015; Kersting et al., 2013; Litz et al., 2014; Wagner et al., 2006), and biased samples (Kersting et al., 2013; Litz et al., 2014; Wagner et al., 2006). Therefore, further research is necessary.

Aim of the Current Study

The aim of the current study is to evaluate the effectiveness of an unguided online CBT treatment in reducing PCBD symptoms for people who have lost a loved one during the COVID-19 pandemic. Next to this, the relationship between unexpectedness of the death and the level of PCBD symptoms at baseline will be studied. Data will be gathered through clinical interviews. The interviews will be conducted at baseline, that is before treatment or waiting (T1), and after treatment or 8 weeks of waiting (T2).

The first research question is: “What is the effectiveness of an unguided online CBT in reducing PCBD symptoms for people who have lost a loved one during the COVID-19 pandemic, in comparison to the control group?”

The second research question is: “What is the relationship between unexpectedness of the death and the level of PCBD symptoms at T1?”

Earlier research showed that face-to-face CBT interventions are effective in reducing PCBD-symptoms (Boelen & Van den Bout, 2017; Doering & Eisma, 2016; Rosner et al., 2015). Furthermore, research showed promising results on the effectiveness of online CBT (Eisma et al., 2015; Ruwaard et al., 2012). In accordance with this, the first hypothesis states that people assigned to the treatment group will show a greater reduction in PCBD symptoms than people assigned to the waiting list group immediately after treatment, when controlling for baseline symptom-levels of PCBD and co-interventions. Co-interventions are other psychological interventions that people received during the current online CBT treatment. Furthermore, losing a loved one unexpectedly heightens the risk for developing complicated grief symptoms (Fujisawa et al., 2010; Wijngaards-de Meij et al., 2005). In accordance with that, the second hypothesis states that people who experienced the death as very unexpected report higher PCBD symptoms at T1 than people who experienced the death as not unexpected.

Method

Participants

Sixty-five Dutch individuals were eligible for participation. The sample consisted of 10 men and 55 women (age: $M = 53.89$, $SD = 12.92$). To be included, individuals needed to be at least 18 years of age. The individuals must have lost a loved one during the COVID-19 pandemic (March 2020 – present), and the death must have occurred at least 3 months ago. Also, the individuals had to report clinically relevant symptom-levels of PCBD, PTSD and/or depression based on interviews. Individuals were excluded when they did not master the Dutch language or if they did not have access to the internet. When they were suffering from a psychotic disorder or reported suicidality, they were also excluded. Participants were recruited in cooperation with GGZ Friesland, ARQ Centrum ’45, and Psychotraumacentrum

Zuid-Nederland. Next to this, participants were recruited via www.rouwencorona.nl and social media, such as LinkedIn and Facebook.

Procedure

Individuals received information and an informed consent form by e-mail. Individuals who signed the informed consent form were called for a clinical interview (T1, see appendix A). The interview was conducted by a trained psychologist who is a member of the research team. The interview lasted approximately 30 minutes. First, demographics were asked. Participants were also asked if they have ever been diagnosed with a psychotic disorder. The interview was stopped if this was the case. Second, loss-related and COVID-19-related questions were asked. Next, PCBD, PTSD, and depression symptoms were asked. Due to the scope of this thesis, only PCBD will be used in the analyses.

Suitable individuals were randomly allocated to the treatment- or waitlist-control group after the interview. Participants allocated to the treatment group started with the online treatment within 1 week after randomization. One week after treatment, they were interviewed again (T2). The same questions as during the baseline interview were asked, with exception from background and loss-related questions. Participants allocated to the waitlist-control group started with the online treatment after 8 weeks of waiting. They were interviewed after the waiting period (T2).

Study Design

A monocenter randomized controlled trial was conducted. The effectiveness of an unguided online CBT treatment in the reduction of PCBD symptoms compared to a waitlist-control condition was examined. Due to the research-design it was impossible to blind the researcher and the participant to allocation. The applied allocation ratio was 1:1. Participants allocated to the treatment group received treatment. Participants allocated to the waitlist-control group received treatment after 8 weeks of waiting. The study design was approved by

the Medical Ethics Committee at the University Medical Center Utrecht (UMCU) in the Netherlands (NL74518.041.20).

Instruments

Traumatic Grief Inventory – Clinician Administered (TGI-CA)

To assess PCBD symptoms, the TGI-CA (Lenferink et al., in prep) was administered. The TGI-CA is the interview-version of the Traumatic Grief Inventory – Self Report (TGI-SR; Boelen & Smid, 2017b). The first 18 items of the TGI-CA were used, which is in accordance with the DSM-5 (APA, 2013). Each item was scored on a 5-point Likert scale (1 = never to 5 = always). An example of an item is: "In the last month, did you feel a strong desire for …?". Individuals were considered to report clinically relevant PCBD symptom-levels in case they scored at least one "sometimes" on at least one criterion B-symptom (item 1, item 2, item 3, and item 14), and at least three criterion C-symptoms (item 4-11, item 15-18). Also, the D-symptom (item 13) needed to be endorsed. Clinically relevant PCBD symptoms were also considered when individuals reported a total score of 54 or higher on the first 18 items (Boelen et al., 2018). Psychometric properties of the TGI-CA are adequate (Boelen & Smid, 2017b). The internal consistency of the TGI-CA was high ($\alpha = .85$).

PTSD Checklist for DSM-5 (PCL-5)

To assess PTSD symptoms, the PCL-5 (Blevins et al., 2015) was administered. This questionnaire consists of 20 items. Originally, the questions were about "the stressful experience". For this research, this was changed to "the death of your loved one(s) during the COVID-19 pandemic". An example of an item is: "In the past month, how much were you bothered by repeated, disturbing dreams of the death of your loved one(s) during the COVID-19 pandemic?". Participants rated how often they experienced each symptom. Each item was scored on a 5-point Likert scale (0 = not at all to 4 = extremely). A symptom is considered endorsed when an item is rated with at least "moderately". When participants endorsed at

least one criterion B-symptom (item 1-5), one criterion C-symptom (item 6 and item 7), two criterion D-symptoms (item 8-14), and two criterion E-symptoms (item 15-20), and/or report a total score of 31 or higher, participants were considered to report clinically relevant PTSD symptom-levels (Weathers et al., 2013). Psychometric properties of the PCL-5 are adequate (Blevins et al., 2015). The internal consistency of the PCL-5 was high (α = .82).

Patient Health Questionnaire (PHQ-9)

To assess depression symptoms, the PHQ-9 (Kroenke et al., 2001) was used. This questionnaire consists of nine items. An example of an item is: "Over the last two weeks, how often have you been bothered by feeling down, depressed, or hopeless?". Participants rated how often they experienced each item. Each item was scored on a 4-point Likert scale (0 = not at all to 3 = nearly every day). Participants with a total score of 10 or higher were considered to report clinically relevant depression symptom-levels. Psychometric properties of the PHQ-9 are adequate (Kroenke et al., 2001). In the current study, the internal consistency of the PHQ-9 was found to be questionable (α = .61).

Treatment

The studied treatment is an unguided online grief-specific CBT for individuals bereaved during the COVID-19 pandemic who reported clinically relevant symptom levels of PCBD, PTSD and/or depression. The symptoms needed to be present at least 3 months after the loss. Again, due to the scope of this thesis, the focus is on PCBD only.

The online CBT is designed by the Dutch company Therapieland and is provided via "www.therapieland.nl". The online CBT consists of eight weekly 2-hour sessions. During treatment, pre-recorded videos wherein a therapist offers information about treatment elements can be watched. There is no interaction with the video-therapist.

The treatment is based on the Dutch mental-health guidelines for the treatment of PCBD (Boelen & Van den Bout, 2017). Key components of the treatment are exposure,

cognitive restructuring, and behavioral activation. First, psychoeducation about stress-factors that are particularly relevant for this population is offered. Then, several sessions are spent on exposure. Exposure assignments are aimed at writing a comprehensive story of the loss and its circumstances. The sessions thereafter are focused on the identification and adaptation of negative cognitions that hinder adjustment. Cognitive restructuring assignments are aimed at developing a new perspective on negative thoughts by writing a letter to an imaginary friend who went through the same loss. In the last sessions, participants are encouraged to reengage in earlier valued social, recreational, and occupational activities to promote the adaptation process. Behavioral activation assignments are aimed at writing about valuable activities and planning to realize valued goals.

Participants were allowed to use co-interventions during treatment participation. To take the potential effect of the co-interventions into account, the following question was asked during the interview at T2: “During the past 8 weeks, did you receive additional psychological professional support from a psychologist, therapist or psychiatrist for dealing with your emotional problems?”.

Data-Analysis

Statistical analyses were carried out using IBM Statistical Package for the Social Sciences (SPSS) version 25. A power analysis was conducted to calculate the minimum sample size. To find a difference between the waitlist-control group and the treatment group of at least a large effect size with a power of 80%, a sample size of 52 participants is adequate. Possible differences between the treatment- and waitlist-control group on demographic variables age, gender, education, and relationship with the deceased, and baseline symptoms of PCBD were tested using an independent samples T-test, Mann-Whitney *U* Test, a Fisher’s exact test and Chi-squared tests.

A Mann-Whitney *U* Test was conducted to explore differences in symptom levels of PCBD at T1 and an independent samples T-test was conducted to explore the demographic variable age between the treatment- and waitlist-control group. Symptom levels of PCBD at T1 and age were the dependent variables and condition (waitlist-control- or treatment group) was the independent variable. The assumptions of scale of measurement, independence, normality, and homogeneity of variance were checked.

To explore differences between the treatment- and waitlist-control group in the demographic variables education and relationship with the deceased, Chi-squared tests were used, and for the demographic variable gender, a Fisher's exact test was conducted. The variable education was dichotomized, with primary school, secondary school, and vocational education as "lower education" and college and university as "higher education". The variable relationship with the deceased was also dichotomized, with partner and child as "partner or child" and parent, sibling, grandparent, grandchild, friend, and other as "other". The demographic variables gender, education, and relationship with the deceased were the dependent variables and condition was the independent variable. The assumptions of independence and expected frequencies were checked.

An Analysis of Covariance (ANCOVA) was used to test the first research question: "What is the effectiveness of an unguided online CBT in reducing PCBD symptoms for people who have lost a loved one during the COVID-19 pandemic, in comparison to the control group?" The dependent variable was symptom-levels of PCBD at T2. The independent variable was condition. Baseline symptom-levels of PCBD and the use of co-interventions were included in the analysis as covariates. The assumptions of independence, normality, homogeneity of regressions lopes, linearity, and homogeneity of variance were checked. A correlation analysis was used to test the second research question: "What is the

relationship between unexpectedness of the death and the level of PCBD symptoms at T1?" The assumptions of normality, linearity, and homoscedasticity were checked.

Results

Preliminary Analyses

The sample consisted of 65 people. Participants were on average 53.89 (*SD* = 12.92) years old. The sample consisted largely of women (84.6%). Approximately 15% of the participants were not included in the interviews at T2. See Table 1 for the demographic characteristics gender, education, and relationship with the deceased, and baseline PCBD symptoms of participants in the treatment group and the waitlist-control group.

Table 1

Characteristics and Symptom-Levels of PCBD at T1 of Participants in the Waitlist-Control Group and the Treatment Group

	Waitlist-control group (*N* = 33)		Treatment group (*N* = 32)	
	N	%	*N*	%
Gender				
Female	26	78.8	29	90.6
Male	7	21.2	3	9.4
Highest educational level				
Primary school	1	3.0	0	0.0
Secondary school	3	9.1	6	18.8
Vocational education	11	33.3	10	31.3
College and university	18	54.5	16	50.0
Relationship with the deceased				
Partner	13	39.4	11	34.4
Child	1	3.0	2	6.3
Parent	14	42.4	14	43.8
Sibling	3	9.1	1	3.1
Grandparent	1	3.0	1	3.1
Friend	1	3.0	1	3.1
Other	0	0.0	2	6.3

	Waitlist-control group (N = 33)		Treatment group (N = 32)	
	N	%	*N*	%
Symptom-levels of PCBD at T1	48.27	10.13	52.34	7.76

Note. T1 = baseline before treatment or waiting.

Differences between the waitlist-control group and the treatment group on symptom-levels of PCBD at T1 and the demographic variables age, gender, education, and relationship with the deceased, were tested with an independent samples T-test, a Mann-Whitney *U* Test, Chi-squared tests, and a Fisher's exact test.

The assumptions of the independent samples T-test were checked (see Appendix B). For age, the assumption of homogeneity of variance was violated. Therefore, the T-test for equal variances not assumed was used. For symptom-levels of PCBD at T1, the assumption of normality was violated. Therefore, a Mann-Whitney *U* Test was conducted. The assumption of expected frequencies for the Chi-squared test was violated for gender. Therefore, a Fisher's exact test was conducted. See Appendix B for the assumption checks.

No statistically significant difference on age was found between the waitlist-control group and the treatment group, $t(57.80) = .29$, $p = .775$. Next to this, no statistically significant difference on symptom-levels of PCBD at T1 was found between the waitlist-control group and the treatment group, $U = 411.50$, $z = 1.53$, $p = .126$. Also, no statistically significant differences on gender (Fisher's exact test, $p = .303$), education (χ^2 (1) = .14, p = .714), and relationship with the deceased (χ^2 (1) = .02, p = .883) were found between the waitlist-control group and the treatment group.

Treatment Effectiveness for PCBD Symptoms Between the Treatment Group and the Waitlist-Control Group

The first research question was: "What is the effectiveness of an unguided online CBT in reducing PCBD symptoms for people who have lost a loved one during the COVID-19 pandemic, in comparison to the control group?"

Treatment effectiveness on symptom-levels of PCBD at T2 between the waitlist-control group and the treatment group, when taking symptom-levels of PCBD at T1 and the use of co-interventions into account, was tested with an ANCOVA. Before conducting the ANCOVA to test this hypothesis, the assumptions were checked (see Appendix B).

After controlling for symptom-levels of PCBD at T1 and co-interventions, a significant effect of treatment on symptom-levels of PCBD at T2 was found, $F(1, 51) = 25.38$, $p < .001$, partial $\eta^2 = .33$. The effect size can be interpreted as large. Symptom-levels of PCBD at T1 were significantly related to symptom-levels of PCBD at T2, $F(1, 51) = 58.60$, $p < .001$, partial $\eta^2 = .54$. The use of co-interventions was also significantly related to symptom-levels of PCBD at T2, $F(1, 51) = 329.42$, $p = .014$, partial $\eta^2 = .11$. So, in accordance with the first hypothesis, the treatment is effective in reducing symptom-levels of PCBD in comparison with the waitlist-control group. Thirty-three percent of variability of symptom-levels of PCBD at T2 could be accounted for by the effect of the treatment. See Table 2 for symptom-levels of PCBD at T1 and T2 for the waitlist-control group and the treatment group.

Table 2

Symptom-Levels of PCBD at T1 and T2 for the Waitlist-Control Group and the Treatment Group

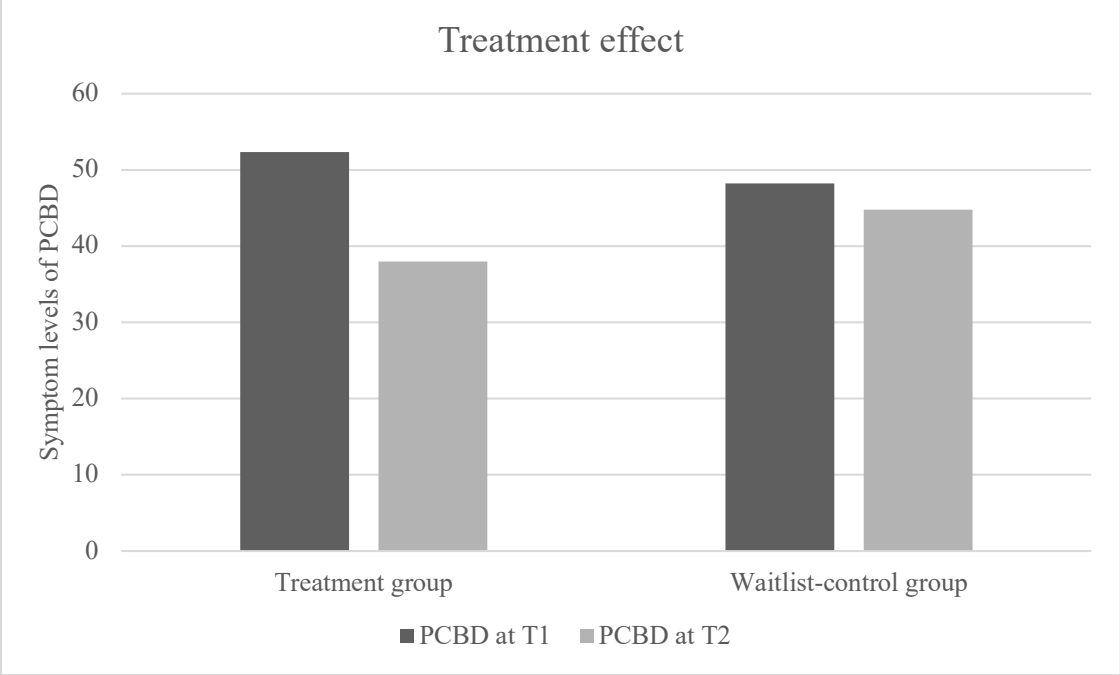
	Treatment group ($N = 23$)	Waitlist-control group ($N = 32$)
Symptom-levels of PCBD at T1		
Mean	52.34	48.27
SD	7.76	10.13

	Treatment group (N = 23)	Waitlist-control group (N = 32)
Symptom-levels of PCBD at T2		
Mean	37.96	44.78
SD	9.23	11.34

Note. SD = standard deviation. T1 = baseline before treatment or waiting; T2 = after treatment or 8 weeks of waiting.

Figure 1

Symptom-Levels of PCBD at T1 and T2 for the Waitlist-Control Group and the Treatment Group



Note. T1 = baseline before treatment or waiting; T2 = after treatment or 8 weeks of waiting.

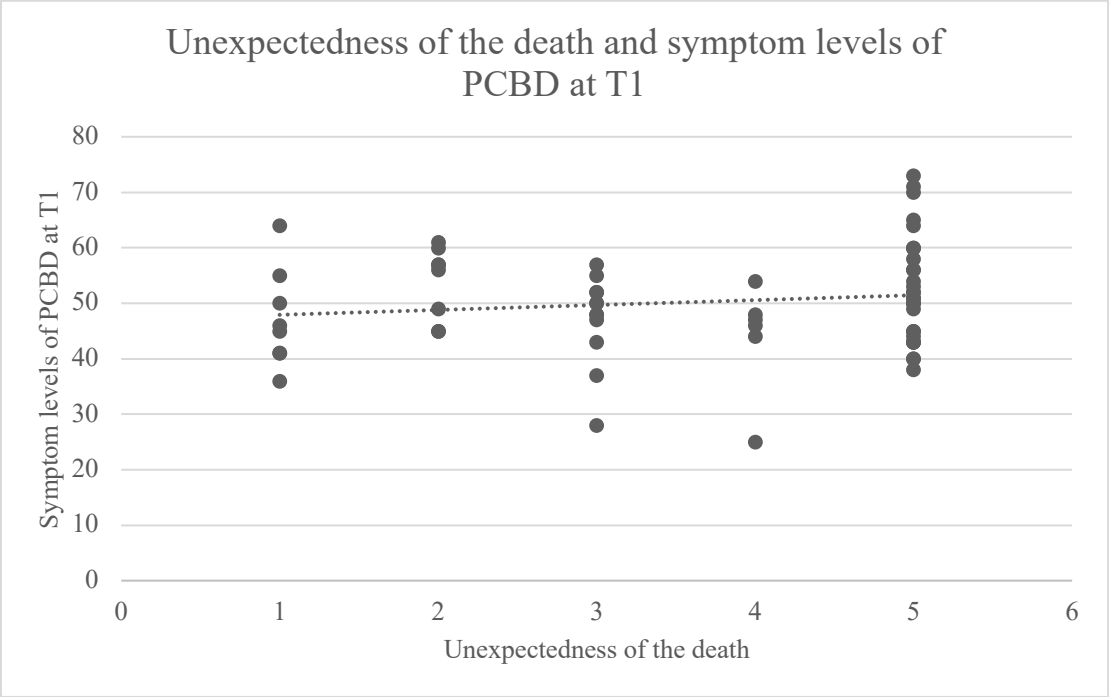
Relationship Between Unexpectedness of the Death and PCBD Symptoms at T1

The second research question was: "What is the relationship between unexpectedness of the death and the level of PCBD symptoms at T1?" To answer this question, a correlation analysis was conducted. The assumptions of normality and linearity were violated (see Appendix B). Therefore, Kendall's tau-b was used instead of Pearson's correlation

coefficient. Kendall's tau-b indicated that there is a non-significant positive correlation between unexpectedness of the death and the level of PCBD symptoms at T1, $\tau = .092$, $p = .336$, two-tailed, $N = 65$. See Figure 2 for a graphical representation of the correlation between unexpectedness of the death and the level of PCBD symptoms at T1.

Figure 2

Unexpectedness of the Death and the Level of PCBD Symptoms at T1



Note. T1 = baseline before treatment or waiting.

Discussion

The aim of the current study was to evaluate the effectiveness of an unguided online CBT treatment in reducing PCBD symptoms for people who have lost a loved one during the COVID-19 pandemic. Next to this, the relationship between unexpectedness of the death and the level of PCBD symptoms at baseline was studied. The results indicated that the unguided online CBT treatment was effective in reducing PCBD symptoms versus waitlist-controls

after waiting. The results also indicated that there is no positive relationship between unexpectedness of the death and the level of PCBD symptoms at baseline.

Treatment Effectiveness for PCBD

The first hypothesis stated that people assigned to the treatment group will show a greater reduction of grief symptoms than people assigned to the waitlist-control group immediately after treatment, when controlled for baseline symptom-levels and co-interventions. Support for this was found in the results. People in the treatment group showed a greater reduction of grief symptoms than people in the waitlist-control group. This is in accordance with earlier research findings (Boelen & Van den Bout, 2017; Doering & Eisma, 2016; Rosner et al., 2015). This means that the unguided online CBT treatment was effective for the reduction of PCBD symptoms.

Unexpectedness of the Death and the Level of PCBD Symptoms at Baseline

The second hypothesis stated that people who experienced the death as very unexpected report higher PCBD symptoms at baseline than people who experienced the death as not unexpected. No support for this was found in the results. A high rate of unexpectedness of the death was found not to be related to a high symptom-level of PCBD at baseline. Therefore, the second hypothesis is rejected. Although losing a loved one unexpectedly brings people at higher risk for developing complicated grief (Fujisawa et al., 2010; Wijngaards-de Meij et al., 2005), this study did not find evidence that a high rate of unexpectedness of the death leads to a higher level of symptoms of PCBD at baseline. A possible explanation hereof is that a high rate of unexpectedness of the death leads to the development of PCBD symptoms, but not necessarily to a higher level of PCBD symptoms. Another possible explanation is that the current research sample was not representative for the population of individuals who have lost a loved one and experience PCBD symptoms. For example, almost 85% of the participants were female. This may have influenced the research findings. Lastly,

a possible explanation is that unexpectedness of the death was operationalized differently in the current study than in previous studies that did find the relationship. In the current study, unexpectedness of the death was measured on a 4-point Likert scale ranging from not unexpected at all to completely unexpected. In other studies, unexpectedness of death was measured on a 5-point Likert scale (Wijngaards-de Meij et al., 2005), or as either unexpected or expected (Fujisawa et al., 2010). This difference in operationalization may have led to a different outcome in the current study than was expected based on earlier studies.

Strengths of the Current Study

The current study has several strengths. A first strength of the current study is that it is one of the first randomized controlled trials on the effectiveness of online treatment for PCBD. This means that the current study is groundbreaking. In addition, all participants received the treatment, independently of the condition they were allocated to. This means that people allocated to the waitlist-control group also received the treatment, after a period of waiting. Third, the data were not obtained via self-report measures, but with clinical interviews conducted by a trained psychologist. This prevented self-report bias.

Limitations of the Current Study

The current study also has a few limitations. First, the recruitment of bereaved individuals was mainly done via the internet. Announcements were made on websites. This often happened in collaboration with mental health organizations. A consequence hereof is that the research sample possibly existed of individuals who were already looking for help. This may have led to expectancy bias (Wu et al., 2020). This means that individuals allocated to the treatment group had positive expectancies about the decrease of symptoms, and that this, next to the positive effect of the treatment, led to a decrease of their PCBD symptoms (Greenberg et al., 2006). Second, due to the research-design, it was not possible to blind the researcher and the participant to allocation. This may also have led to expectancy bias. Lastly,

treatment effects were only studied immediately after treatment. Therefore, only short-term effects were examined, and it is not possible to draw conclusions about the long-term effectiveness of the treatment. Finally, the current study is characterized by a high dropout rate. Approximately 15% of the participants were not included in the interviews at T2. A high dropout rate is often seen in studies on online interventions (Eisma et al., 2015; Litz et al., 2014). A reason for the high dropout rate may be the lack of contact with the therapist (Melville et al., 2010).

Suggestions for Future Research

A suggestion for future research is to study the long-term effectiveness of online treatment for PCBD, since in the current study treatment effect was only studied immediately after treatment. It is suggested to perform multiple follow-up measurements, for example at 6 and 12 months after treatment, to assess the long-term effectiveness. Another suggestion for future research is to study the effectiveness of a guided version of the treatment. The lack of guidance and support during the current online treatment may have led to a high dropout rate (Melville et al., 2010). In a guided version of the treatment, participants can interact with the therapist via for example e-mail or video conferencing. Possibly, a guided version of the treatment leads to a lower dropout rate.

Implications of Research Findings

The results of the current study add up to previous studies showing that online interventions are effective for grief symptom reduction (Eisma et al., 2015; Ruwaard et al., 2012). During the current COVID-19 pandemic, where government policy may impede access to face-to-face psychological therapy, online psychological treatment is more relevant than ever before. However, online treatment does not lose its relevance when the pandemic is over. A first reason for this is that the barriers for engaging in treatment may be lower for online therapy than for face-to-face therapy (Hennemann et al., 2016). Next to this, offering

treatment online could increase availability to CBT (Hedman et al., 2012). Lastly, travel cost and time is reduced (Simpson, 2009).

Conclusion

Since there is currently no evidence-based online CBT treatment for complicated grief, the results of the current study are valuable for clinical practice. With this treatment, better psychological care is available for bereaved people who get stuck in their grieving process during the COVID-19 pandemic.

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Appendix A

Intro [Deelnemer neemt telefoon op]
Interviewer: Hallo [naam deelnemer], u spreekt met [naam interviewer] van de Universiteit Utrecht. Wij hebben een belafspraak in verband met uw mogelijke deelname aan het wetenschappelijk onderzoek “Online behandeling voor nabestaanden van wie een dierbare is overleden tijdens de coronacrisis”. Zoals afgesproken wordt op basis van uw antwoorden bepaald of u in aanmerking komt voor deelname aan het onderzoek. Dat interview zal nu plaatsvinden en duurt ongeveer 30 minuten. Is dit een geschikt moment voor u? [Indien nee, plan een andere dag en/of tijdstip]

Bent op u op dit moment op een rustige plek waar u vrijuit vragen kunt beantwoorden zonder dat u afgeleid wordt door uw omgeving? [Indien nee, adviseer de deelnemer om een rustige plek op te zoeken]

Voordat ik begin met het stellen van de vragen, leg ik eerst kort uit hoe het interview is opgebouwd. Het interview is opgebouwd in twee delen. Deel 1 bestaat uit vragen over uw achtergrond (zoals bijvoorbeeld uw leeftijd). Vervolgens zal ik een aantal vragen stellen over de achtergrond van uw dierbare die is overleden en over hulp die u mogelijk heeft ontvangen.

Deel 2 bestaat uit vragen over emotionele reacties die u mogelijk heeft ervaren. Wij stellen iedereen die deelneemt aan dit onderzoek dezelfde vragen zodat wij straks de antwoorden met elkaar kunnen vergelijken. Wij vragen u straks om antwoord te geven en daaraan een getal te verbinden. Wij vragen u bijvoorbeeld te antwoorden op een schaal van 1 t/m 5, waarbij 1 nooit is en 5 altijd is. Dit voelt misschien wat onwennig, maar in het kader van het onderzoek is het belangrijk dat ieder antwoord een cijfer krijgt, zodat wij straks met deze gegevens uitspraken kunnen doen over hoe mensen omgaan met een verlies.

Kies telkens alstublieft het antwoord dat het meest op u van toepassing is. Er zijn geen goede of foute antwoorden. Zoals aangegeven in de informatiebrief willen wij uw onderzoeksgegevens en die van andere deelnemers gebruiken om de emotionele gevolgen van een overlijden van een dierbare in kaart te brengen. Wij zullen uitspraken doen op groepsniveau en nooit over individuen. Uw antwoorden op de vragen die straks worden gesteld worden gescheiden opgeslagen van uw naam en contactgegevens. Hierdoor beschermen wij uw privacy. Heeft u op dit moment vragen voor mij? Dan zou ik nu graag willen starten met het eerste deel van het interview

Datum van vandaag is (dd-mm-jjjj)

_____

ID nummer van deelnemer

_____

Dit interview begint met een aantal vragen over u en uw dierbare die is overleden.

De vragenlijst begint met een aantal algemene vragen.

[Instructie interviewer: Stel a.u.b. alleen de vraag. De antwoorden alleen oplezen indien noodzakelijk]

Wat is uw geslacht?

- ○ Man
- ○ Vrouw
- ○ Anders

Wat is uw geboortedatum? (dd-mm-jjjj)

_____

Wat is uw geboorteland?

_____

Wat is uw hoogst genoten opleiding die u met een diploma hebt afgerond?

- ○ Lagere school
- ○ Middelbare school
- ○ Beroepsonderwijs
- ○ Hogeschool of universiteit

Hoe bent u op de hoogte gesteld van dit onderzoek?

- ○ Via Psychotraumacentrum Zuid-Nederland
- ○ Via Centrum ‘45
- ○ Via GGZ Friesland
- ○ Een familielid, vriend(in) of andere bekende
- ○ Berichtgeving in de media, zoals internet, t.v. en krant
- ○ Weet ik niet
- ○ Anders, namelijk: _____

Heeft u ooit een diagnose ontvangen voor een psychotische stoornis van een psycholoog, therapeut of een psychiater?

- ○ Nee
- ○ Ja

[indien antwoord op vorige vraag “ja” is]
U geeft aan dat u een diagnose voor een psychotische stoornis heeft ontvangen. Dit interview kan negatieve reacties en emoties oproepen. Daarom wil ik dit interview voor uw eigen

veiligheid nu beëindigen. Gaat u hiermee akkoord? Ik wil u bedanken voor uw openheid en eerlijkheid. Heeft u nog vragen voor mij op dit moment? Dan wil ik u nogmaals hartelijk danken voor uw interesse in deelname aan het onderzoek.

Einde interview

De volgende vragen gaan over uw overleden dierbare(n).

Is een dierbare van u overlijden tijdens de coronacrisis die is begonnen in maart 2020.

- ○ ja
- ○ nee (indien nee beëindig het interview)

Hoeveel dierbaren van u zijn overleden sinds maart 2020?

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Wat is uw relatie met de overleden dierbare?
De dierbare is mijn:

- ○ Partner
- ○ Kind
- ○ Vader/moeder
- ○ Broer/zus
- ○ Opa/oma
- ○ Kleinkind
- ○ Vriend(in)
- ○ Geen van bovenstaande, namelijk mijn:
  _____

[Instructie interviewer: Vervang [____] door de naam van de overledene of relatie tot overledene,
bijvoorbeeld "Op welke leeftijd is Jan overleden?" OF "Op welke leeftijd is uw man overleden?"]

Op welke leeftijd is [____] overleden?

[getal]

_____

Wat is de datum waarop [____] is overleden? (dd/mm/jjjj)

_____

Wat is de oorzaak van het overlijden van [____]?

- ○ Corona
- ○ Lichamelijke ziekte (bijvoorbeeld ouderdom, kanker, hart- en vaatziekten, bij geboorte overleden)
- ○ Ongeval (bijvoorbeeld ongeluk, verkeersongeval, verdrinking, vergiftiging)
- ○ Zelfdoding
- ○ Moord of doodslag
- ○ Anders, namelijk: _____

Heeft u de uitvaart van uw overleden dierbare bij kunnen wonen?

- ○ Ja, ik was bij de uitvaart aanwezig
- ○ Ja, ik heb de uitvaart online gevolgd
- ○ Nee, ik kon niet bij de uitvaart aanwezig zijn

In hoeverre heeft u het overlijden van [___] als onverwacht beleefd?

1 is helemaal niet onverwacht, 2 is een beetje onverwacht, 3 Nogal onverwacht, 4 is erg

onverwacht, en 5 is volledig onverwacht.

- ○ 1, Helemaal niet onverwacht
- ○ 2, Een beetje onverwacht
- ○ 3, Nogal overwacht
- ○ 4, Erg onverwacht
- ○ 5, Volledig onverwacht

In hoeverre heeft u afscheid kunnen nemen van uw overleden dierbare?

- ○ 1, Helemaal niet
- ○ 2, Een beetje
- ○ 3, Enigszins
- ○ 4, Voldoende
- ○ 5, Goed

[indien meerdere dierbaren zijn overleden tijdens coronacrisis herhaal vragen op pag. 5 t/m 7]

De volgende vragen gaan over de impact van het coronavirus

Heeft u het coronavirus (gehad)?

- ○ Ja
- ○ Nee
- ○ Weet ik niet

Indien, ja bij vorige vraag dan: Hoe is dit vastgesteld?

- ○ Ik heb de symptomen van het coronavirus (gehad)
- ○ Ik had een positieve test
- ○ Een dokter heeft bevestigd dat ik het had

Kent u iemand die het coronavirus heeft gehad?

- ○ Ja
- ○ Nee

Indien, ja bij vorige vraag dan: Is één van deze personen een nabij familielid/gezinslid of vergelijkbare verwante?

- ○ Ja
- ○ Nee

Bent u op dit moment in zelf-isolatie?

- ○ Ja
- ○ Nee

Heeft u besloten tot zelf-isolatie om te voorkomen dat u geïnfecteerd wordt met het coronavirus door andere mensen?

- ○ Ja

- ○ Nee

Heeft u besloten tot zelf-isolatie omdat u symptomen heeft?

- ○ Ja
- ○ Nee

Bent u getest voor het coronavirus?

- ○ Ja
- ○ Nee

Verzorgt u op dit moment iemand die is gediagnosticeerd met het coronavirus?

- ○ Ja
- ○ Nee

Heeft u, in de afgelopen week, één va deze symptomen gehad?
Klik allen die van toepassing zijn.

- ☐ Koorts
- ☐ Hoesten
- ☐ Keelpijn
- ☐ Hoofdpijn
- ☐ Verkoudheidssymptomen
- ☐ Kortademigheid
- ☐ Geen van deze symptomen

Er volgt nu een lijst van zorgen die mensen mogelijk hebben in relatie tot het coronavirus. Geef alstublieft voor elke vraag aan hoe bezorgd u hierover bent op een schaal van 1 tot 5. 1 = helemaal niet bezorgd en 5 = extreem bezorgd

	Hele maal niet	Een beetje	Matig)	Best veel	Extreem
1. Hoe bezorgd bent u over in quarantaine zijn?	○	○	○	○	○
2. Hoe bezorgd bent u over besmet zijn met het coronavirus?	○	○	○	○	○
3. Hoe bezorgd bent u over het infecteren van anderen?	○	○	○	○	○
4. Hoe bezorgd bent u om gestigmatiseerd of afgewezen te worden vanwege het coronavirus?	○	○	○	○	○
5. Hoe bezorgd bent u over uw baanzekerheid vanwege het coronavirus?	○	○	○	○	○
6. Hoe bezorgd bent u over de financiële gevolgen van de coronavirus uitbraak?	○	○	○	○	○
7. Hoe bezorgd bent u over een tekort aan voedsel of dagelijkse producten als gevolg van het coronavirus?	○	○	○	○	○
8. Hoe bezorgd bent u over het vermogen van de overheid om de coronavirus situatie te beheersen?	○	○	○	○	○
9. Hoe bezorgd bent u over het vermogen van het gezondheidssysteem om te zorgen voor coronavirus patiënten?	○	○	○	○	○

Er volgen nu vragen over mogelijk psychologische hulp die u heeft ontvangen.

Heeft u ooit voor uw eigen problemen hulp ontvangen van een psycholoog, therapeut of psychiater **voorafgaand aan** het overlijden van uw dierbare?

- ○ Nee
- ○ Ja

Heeft u ooit hulp ontvangen van een psycholoog, therapeut of psychiater **met betrekking tot** het overlijden van uw dierbare?

- ○ Nee
- ○ Ja

[indien “ja” op vorige vraag] Ontvangt u op dit moment hulp van een psycholoog, therapeut of psychiater **met betrekking tot** het overlijden van uw dierbare?

- ○ Nee
- ○ Ja

Hartelijk dank voor uw antwoorden. Wij zijn nu klaar met het eerste deel van het onderzoek.
Het tweede deel van dit interview bestaat uit vragen over emotionele reacties die u mogelijk heeft ervaren. Zoals eerder aangegeven stellen wij iedere deelnemer dezelfde vragen zodat wij straks de antwoorden met elkaar kunnen vergelijken.
Ik zal u elke keer vragen een getal te verbinden aan uw antwoord. Zoals eerder aangegeven, voelt dit misschien onnatuurlijk, maar wij kunnen uw gegevens alleen verwerken wanneer wij op deze manier uw antwoorden noteren.
Heeft u pen en papier bij de hand? Het kan u helpen om de antwoorden op te schrijven.
Als u wilt kunt u even een pauze nemen om bijvoorbeeld wat te drinken.
Bent u klaar om te starten met het tweede deel?
Wij starten nu met 9 vragen over sombere gevoelens die u mogelijk heeft ervaren in de afgelopen twee weken.

PHQ-9

Hoe vaak hebt u in de afgelopen 2 weken last gehad van één of meer van de volgende problemen? U kunt kiezen uit de antwoorden 1 helemaal niet, 2 verscheidene dagen, 3 meer dan de helft van de dagen, 4 bijna elke dag.

	Helemaal niet	Verscheidene dagen	Meer dan de helft van de dagen	Bijna elke dag
1. Hoe vaak hebt u in de afgelopen 2 weken last gehad van weinig interesse of plezier in activiteiten?	○	○	○	○
2. Hoe vaak hebt u in de afgelopen 2 weken last gehad van u neerslachtig, depressief of hopeloos voelen?	○	○	○	○
3. Hoe vaak hebt u in de afgelopen 2 weken last gehad van moeilijk inslapen, moeilijk doorslapen of te veel slapen?	○	○	○	○
4. Hoe vaak hebt u in de afgelopen 2 weken last gehad van u moe voelen of gebrek aan energie hebben?	○	○	○	○
5. Hoe vaak hebt u in de afgelopen 2 weken last gehad van weinig eetlust of overmatig eten?	○	○	○	○
6. Hoe vaak hebt u in de afgelopen 2 weken last gehad van een slecht gevoel hebben over uzelf — of het gevoel hebben dat u een mislukkeling bent of het gevoel dat u zichzelf of uw familie teleurgesteld hebt?	○	○	○	○
7. Hoe vaak hebt u in de afgelopen 2 weken last gehad van problemen om u te concentreren, bijvoorbeeld om de krant te lezen of om tv te kijken?	○	○	○	○
8. Hoe vaak hebt u in de afgelopen 2 weken last gehad van zo traag bewegen of zo langzaam spreken dat andere mensen dit opgemerkt kunnen hebben? Of het tegenovergestelde, zo zenuwachtig of rusteloos zijn dat u veel meer bewoog dan gebruikelijk?	○	○	○	○

	Helemaal niet	Verscheidene dagen	Meer dan de helft van de dagen	Bijna elke dag
9. Hoe vaak hebt u in de afgelopen 2 weken last gehad van de gedachte dat u beter dood zou kunnen zijn of de gedachte uzelf op een bepaalde manier pijn te doen?	○	○	○	○

[indien antwoord op vorige vraag “2, 3 of 4” is] Uw antwoord op de laatste vraag was (herhaal het antwoord van de participant). In overeenstemming met ons onderzoeksprotocol zouden we u graag meer vragen stellen om uw veiligheid te waarborgen en, indien nodig, om uw informatie te geven over het zoeken van hulp. Vindt u dat goed?

Hebt u in de afgelopen 4 weken overwogen om uw leven te beëindigen?

○ Ja

○ Nee

[indien antwoord op vorige vraag “nee” is]
“Omdat u “nee” antwoordde zou ik graag verdergaan met het interview, als u zich nog steeds comfortabel genoeg voelt om deel te nemen. Gaat u daarmee akkoord? We kunnen ook een korte pauze nemen voordat we verder gaan. Misschien wilt u eerst even wat water drinken.”--

[indien antwoord op vorige vraag “ja” is]
Hebt u in de afgelopen 4 weken een plan gemaakt om uw leven te beëindigen?

○ Ja

○ Nee

[indien antwoord op vorige vraag “nee” is]
“Omdat u “nee” antwoordde zou ik graag verdergaan met het interview, als u zich nog steeds comfortabel genoeg voelt om deel te nemen. Zou u dat willen? We kunnen ook een korte pauze nemen voordat we verder gaan. Misschien wilt u eerst even wat water drinken.”--

[indien antwoord op vorige vraag “ja” is]
“Wat is uw plan?”

Dank u wel voor uw eerlijkheid. Het zal erg moeilijk voor u zijn om dit met mij te delen en om hierover te praten. Door wat u vertelt, heb ik het gevoel dat u misschien professionele hulp nodig hebt.

[indien antwoord op vorige vraag “ja” is]
Ontvangt u momenteel hulp van een professional met betrekking tot deze gedachten of plannen?

- ○ Ja
- ○ Nee

[indien antwoord op vorige vraag “ja” is]
Ik zou graag enkele (verdere) mogelijkheden met u willen bespreken waar u ondersteuning kunt vinden. Vindt u dat goed?
Ten eerste zou u met familie of vrienden kunnen praten bij wie u zich comfortabel genoeg voelt, en van wie u denkt dat zij u zouden kunnen steunen.

Ten tweede zou ik u willen aanraden om contact op te nemen met uw huisarts. Die kan u vervolgens doorverwijzen naar een specialist.
Hebt u een huisarts?

- ○ Ja
- ○ Nee

[indien antwoord op vorige vraag “ja” is]
Hebt u de contactgegevens van uw huisarts bij de hand? Het zou goed zijn om dit nummer te noteren en binnen handbereik te hebben (bijvoorbeeld in uw portemonnee, aan de koelkast of in uw telefoon), voor het geval u het nodig hebt in de nabije toekomst. Ook is er een gratis hulplijn die u 24 uur per dag kunt bellen als u graag met iemand wilt praten. Dit kan ook anoniem. Het telefoonnummer is 0900-0113. Er is ook een chat optie van deze organisatie, die kunt u gebruiken via de website www.113.nl. Ik zou graag willen dat u dit opschrijft, zodat u het bij u hebt in geval van nood.

[indien antwoord op vorige vraag “nee” is]
Er is een gratis hulplijn die u 24 uur per dag kunt bellen als u graag met iemand wilt praten. Dit kan ook anoniem. Het telefoonnummer is 0900-0113. Er is ook een chat optie van deze organisatie, die kunt u gebruiken via de website www.113.nl.

Als u het ermee eens bent, zal ik deze informatie via email naar u versturen zodat u het kunt teruglezen als dat nodig is.

Zou u mij misschien kunnen vertellen wat u zo meteen gaat doen nadat we dit gesprek hebben afgerond? (Als de participant bij iemand anders in de buurt is of specifieke plannen heeft voor de rest van de dag, antwoordt met:)
Oké, nu ik weet dat u niet alleen bent op dit moment/dat u vandaag nog andere plannen hebt zou ik graag het gesprek willen afronden. Dit interview zullen we nu beëindigen, omdat we u niet willen belasten met verdere vragen. Voor nu zou ik u graag willen bedanken voor uw openhartigheid en voor uw tijd voor dit gesprek vandaag. Ik wil u heel veel sterkte wensen.
(Als de participant alleen is, antwoordt met:)
Naar aanleiding van wat u me net hebt verteld, maak ik me zorgen over uw veiligheid. Voordat we dit gesprek afsluiten wil ik graag samen een plan maken over wat u nu gaat doen. Belooft u me dat u contact opneemt met uw huisarts of dat u 0900-0113 belt wanneer u de telefoon hebt opgehangen? Oké, nu ik weet dat u hierna iemand gaat contacten die hierin gespecialiseerd is, zou ik nu graag het gesprek willen afronden. Dit interview zullen we nu beëindigen, omdat we u niet willen belasten met verdere vragen.
Voor nu zou ik u graag willen bedanken voor uw openhartigheid en voor uw tijd voor dit gesprek vandaag. Ik wens u veel sterkte toe.

TGI-CA
Instructie interviewer: Vervang [____] door de naam van de overledene of relatie tot overledene, bijvoorbeeld "…het overlijden van Jan" OF "…het overlijden van uw zoon".

Ik ga u vragen stellen over verschillende rouwreacties. Geef a.u.b. aan in hoeverre u deze reacties hebt gehad in de afgelopen maand, naar aanleiding van het overlijden van [____]. U kunt kiezen uit de antwoorden 1 is nooit, 2 is zelden, 3 is soms, 4 is vaak en 5 is altijd.
Instructie interviewer: Indien de respondent meerdere verliezen heeft meegemaakt, lees dan onderstaande voor.

[indien meerdere dierbare zijn verleden] Ik ga u vragen stellen over verschillende rouwreacties. Geef a.u.b. aan in hoeverre u deze reacties hebt gehad in de afgelopen maand, naar aanleiding van het overlijden van uw dierbare. U gaf aan meerdere verliezen te hebben meegemaakt. Ga dan uit van het verlies dat in deze periode het meest in uw gedachten is en/of op dit moment het meest ingrijpend is. Kunt u aangeven om welke dierbare het gaat? U kunt kiezen uit de antwoorden 1 is nooit, 2 is zelden, 3 is soms, 4 is vaak en 5 is altijd.

	Nooit	Zelden	Soms	Vaak	Altijd
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?	○	○	○	○	○

Hartelijk dank voor uw antwoorden. Wij zijn al over de helft met het interview.
Instructie interviewer: Indien deelnemer meerdere dierbaren heeft verloren: Welke dierbare heeft de deelnemer gekozen voor het beantwoorden van de 22 vragen over rouwreacties? Geef hieronder de relatie aan met de dierbare. Bijvoorbeeld "oudste zoon van deelnemer" of "vader van deelnemer".

PCL-5
Nu volgen een aantal vragen over problemen die mensen kunnen ondervinden na een zeer stressvolle gebeurtenis. Geef a.u.b. aan in hoeverre u er in de afgelopen maand last van hebt gehad als gevolg van het overlijden van [___].
1 is helemaal niet, 2 is een beetje, 3 is matig, 4 is nogal veel, en 5 is extreem veel.

	Helemaal niet	Een beetje	Matig	Nogal veel	Extreem veel

1. In hoeverre heeft u in de afgelopen maand last gehad van regelmatig terugkerende, onaangename en ongewenste herinneringen aan het overlijden van [___]?	○	○	○	○	○
2. In hoeverre heeft u in de afgelopen maand last gehad van regelmatig terugkerende, onaangename dromen over het overlijden van [___]?	○	○	○	○	○
3. In hoeverre heeft u in de afgelopen maand last gehad van opeens het gevoel hebben of u gedragen alsof het overlijden van [___] daadwerkelijk opnieuw plaatsvindt (alsof u terug bent in de tijd dat het overlijden zich afspeelde, en het opnieuw beleeft)?	○	○	○	○	○
4. In hoeverre heeft u in de afgelopen maand last gehad van erg van streek raken wanneer iets u aan het overlijden van [___] herinnert?	○	○	○	○	○
5. In hoeverre heeft u in de afgelopen maand last gehad van een sterke lichamelijke reactie hebben wanneer iets u aan het overlijden van [___] herinnert (bijvoorbeeld: hartkloppingen, moeite met ademhalen, zweten)?	○	○	○	○	○
6. In hoeverre heeft u in de afgelopen maand last gehad van het vermijden van herinneringen, gedachten, of gevoelens die verband houden met het overlijden van [___]?	○	○	○	○	○
7. In hoeverre heeft u in de afgelopen maand last gehad van het vermijden van dingen die herinneringen zouden kunnen oproepen aan het overlijden van [___] (bijvoorbeeld: bepaalde mensen, plekken, gespreksonderwerpen, activiteiten, voorwerpen of situaties)?	○	○	○	○	○
8. In hoeverre heeft u in de afgelopen maand last gehad van moeite hebben	○	○	○	○	○

met het herinneren van belangrijke delen van het overlijden van [___]?					
9. In hoeverre heeft u in de afgelopen maand last gehad van sterke, negatieve overtuigingen hebben met betrekking tot uzelf, anderen of de wereld (bijvoorbeeld gedachten hebben zoals: ik ben slecht, er is iets vreselijk mis met mij, niemand is te vertrouwen, de wereld is door en door gevaarlijk)?	○	○	○	○	○
10. In hoeverre heeft u in de afgelopen maand last gehad van de schuld geven aan uzelf of aan anderen voor het overlijden van [___] of de gevolgen daarvan?	○	○	○	○	○
11. In hoeverre heeft u in de afgelopen maand last gehad van het ervaren van sterke, negatieve gevoelens zoals angst, afschuw, boosheid, schuld of schaamte?	○	○	○	○	○
12. In hoeverre heeft u in de afgelopen maand last gehad van verminderde interesse hebben in activiteiten die u eerder graag deed?	○	○	○	○	○
13. In hoeverre heeft u in de afgelopen maand last gehad van afstand voelen tussen uzelf en andere mensen, of u vervreemd voelen van andere mensen?	○	○	○	○	○
14. In hoeverre heeft u in de afgelopen maand last gehad van moeite hebben om positieve gevoelens te ervaren (bijvoorbeeld: niet in staat zijn om u gelukkig te voelen of om gevoelens van liefde te hebben voor de mensen die u nabij zijn)?	○	○	○	○	○
15. In hoeverre heeft u in de afgelopen maand last gehad van prikkelbaarheid, woedeaanvallen, of u agressief gedragen?	○	○	○	○	○

16. In hoeverre heeft u in de afgelopen maand last gehad van teveel risico's nemen of dingen doen die u schade zouden kunnen toebrengen?	○	○	○	○	○
17. In hoeverre heeft u in de afgelopen maand last gehad van "super alert", waakzaam of op uw hoede zijn?	○	○	○	○	○
18. In hoeverre heeft u in de afgelopen maand last gehad van u nerveus voelen of snel schrikken?	○	○	○	○	○
19. In hoeverre heeft u in de afgelopen maand last gehad van moeite hebben met concentreren?	○	○	○	○	○
20. In hoeverre heeft u in de afgelopen maand last gehad van moeite hebben met inslapen of doorslapen?	○	○	○	○	○

U heeft nu alle vragen beantwoord. Ik wil u bedanken voor uw deelname. Heeft u op dit moment vragen voor mij?
Nogmaals hartelijk dank!
Dag.

Appendix B

Assumption Checks Independent Samples T-Test for Age

The Shapiro-Wilk test indicated that age was normally distributed in the waitlist-control group, $W(33) = .971$, $p = .504$ and in the treatment group, $W(32) = .963$, $p = .332$. This means that the assumption of normality was met. Levene's test indicated that the assumption of homogeneity of variance was violated, $F(1, 63) = 4.15$, $p = .046$.

Assumption Checks Independent Samples T-Test for Symptom-Levels of PCBD at T1

Levene's test indicated that the assumption of homogeneity of variance was met, $F(1, 63) = 1.73$, $p = .193$. The Shapiro-Wilk test indicated that symptom-levels of PCBD at T1 was normally distributed in the waitlist-control group, $W(33) = .988$, $p = .974$, but not in the treatment group, $W(32) = .919$, $p = .019$. This means that the assumption of normality was violated. Therefore, a Mann-Whitney *U* Test is conducted instead of an independent samples T-test.

Assumption Check Mann-Whitney *U* Test for Symptom-Levels of PCBD at T1

Levene's test indicated that the assumption of homogeneity of variance was met, $F(1, 61.91) = 1.82$, $p = .183$.

Assumption Checks Chi-Squared Tests

The assumption of expected frequencies for the Chi-squared tests was violated for gender, since expected frequencies were below five and more than 20% of the expected cell frequencies was lower than five. Therefore, Fisher's exact test was used for this variable. The assumptions of expected frequencies for the Chi-squared tests for education and relationship with the deceased were met, so for education Pearson Chi-square was used.

Assumption Checks ANCOVA

A Shapiro-Wilk test indicated that symptom-levels of PCBD at T2 were normally distributed in the waitlist-control group, $W(32) = .973$, $p = .596$ and in the treatment group,

$W(23) = .966$, $p = .586$. This means that the assumption of normality was met. A scatterplot indicated that the relationship between symptom-levels of PCBD at T2 and symptom-levels of PCBD at T1 was linear in both the waitlist-control and the treatment group (see Appendix B). This means that the assumption of linearity was met. An F-test indicated that there was no interaction between symptom-levels of PCBD at T1 and condition, $F(1, 51) = 1.23$, $p = .273$. This means that the assumption of homogeneity of regression slopes was met. Levene's test indicated that the assumption of homogeneity of variance was met, $F(1, 53) = 2.19$, $p = .145$.

Assumption Checks Correlation Analysis

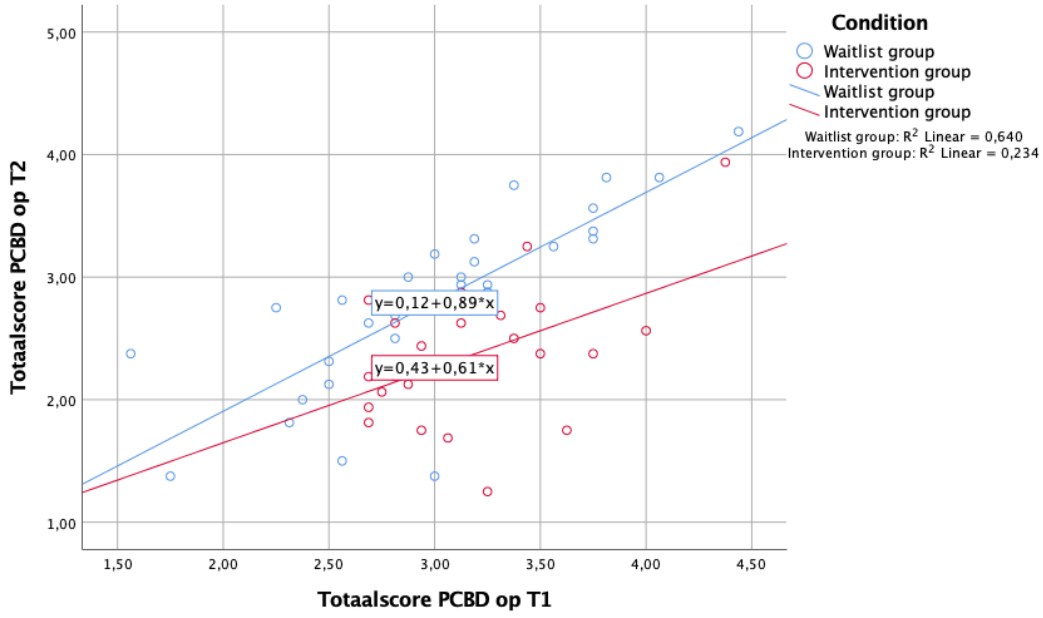
Assumption of Normality

The Shapiro-Wilk test indicated that symptom-levels of PCBD at T1 was normally distributed, $W(65) = .076$, $p = .545$. However, unexpectedness of the death was not normally distributed, $W(65) = .291$, $p < .001$.

Assumption of Linearity

Figure B1

Scatterplot for the Relationship Between Symptom-Levels of PCBD at T1 and Symptom-Levels of PCBD at T2 for the Waitlist-Control Group and the Treatment Group



Assumption of Homoscedasticity

Figure B2

Relationship Between Unexpectedness of the Death and Symptom-Levels of PCBD at T1