Introduction and evaluation of a therapeutic adherence and competence scale for grief-focused cognitive behavioural therapy

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ABSTRACT

Background: There is no therapeutic competence and adherence scale for grief-focused cognitive behavioural therapy (grief-focused CBT). However, given the growing body of evidence for the efficacy of grief-focused CBT, such a scale is needed both to ensure the internal validity of clinical trials and to facilitate psychotherapy process research.

Objective: To develop and undertake a psychometric evaluation of a therapeutic adherence and competence scale for grief-focused CBT.

Methods: The scale was developed in two steps. (I) Five experts on the treatment of prolonged grief disorder provided feedback on the relevance and appropriateness of the items. The scale was revised to reflect their feedback. The final therapeutic adherence and competence scale for grief (TACs-G) consisted of 15 adherence and 16 competence items. (II) Psychometric evaluation of the TACs-G was based on the rating of 48 randomly selected PG-CBT sessions by two independent raters. The videos were recorded in the context of a randomized controlled trial (RCT; DRKS00012317). ICC was used to calculate inter-rater reliability and TACs-G stability over time (re-evaluation of 10 sessions after 12 months).

Results: The five experts confirmed the relevance and appropriateness of the items. Interrater reliability was found to be high for the total adherence and competence scores (ICC = 0.889 and 0.782, respectively) and moderate to excellent for individual items (ICC = 0.509–1.00). The TACs-G stability over time was found to be strong for both adherence (ICC = 0.970) and competence total scores (ICC = 0.965).

Conclusions: The TACs-G for CBT is a reliable instrument that can be used not only to ensure internal validity but is also suited for psychotherapy process studies. Additionally, it provides a valuable database for targeted feedback in training settings.

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Antecedentes: No existe ninguna escala de competencia terapéutica y adherencia para la terapia cognitiva conductual centrada en el duelo. Sin embargo, dado el emergente cuerpo de evidencia para la eficacia de la TCC centrada en el duelo, se necesita una escala para asegurar la validez interna de los ensayos clínicos y para facilitar el proceso de investigación en psicoterapia.

Objetivo: Desarrollar y ejecutar una evaluación psicométrica de una escala de adherencia terapéutica y competencia para terapia cognitiva conductual focalizada en el duelo (PG-CBT) en español y en inglés.

Método: La escala fue desarrollada en dos pasos. (I) Cinco expertos en el tratamiento del trastorno por duelo prolongado dieron retroalimentación en la relevancia y la idoneidad de los ítems. La escala fue revisada para reflejar su retroalimentación. La escala final de adherencia y competencia terapéuticas para el duelo (TACs-G) que utilizan tanto en español como en inglés) consta de 15 ítems de adherencia y 16 ítems de competencia. (II) Se realizó una evaluación psicométrica de la TACs-G basada en el puntaje de 48 sesiones de PG-CBT seleccionadas al azar por 2 evaluadores independientes. Los videos fueron grabados en el contexto de un ensayo controlado aleatorizado (RCT; DRKS00012317). Se utilizó un coeficiente de correlación intraclass (ICC por sus siglas en inglés) para calcular la confiabilidad inter evaluador y la estabilidad de la TACs-G durante el tiempo (re-evaluación de 10 sesiones después de 12 meses).

Resultados: Los cinco expertos confirmaron la relevancia y adecuación de los ítems. La confiabilidad entre evaluadores fue alta para las puntuaciones totales de adherencia y competencia (ICC = 0.889 y 0.782, respectivamente) y de moderada a excelente paraitems
1. Introduction

By March 2022, there had been more than 6.1 million COVID deaths worldwide (WHO, 2022). Given that each deceased person leaves behind at least nine relatives (Verdery, Smith-Greenaway, Margolis, & Daw, 2020) and that these deaths mostly occurred suddenly, unexpectedly, and with little or no time for the bereaved to say goodbye, it is not surprising that an increase in prolonged grief disorder (PGD) can be assumed (Eisma & Boelen, 2021). Accordingly, the need for effective and grief-specific treatments has intensified.

Over the past decade, PGD has been extensively investigated and has recently been included in ICD-11 and DSM-5-TR in 2018 and 2022, respectively (APA, 2022; WHO, 2018). In parallel to the debate about diagnostic criteria for this disorder, considerable efforts have been devoted to researching effective therapeutic approaches. In a recent meta-analysis Johannsen et al. (2019) reported medium effect sizes (g = 0.41) for grief-specific psychological interventions (including Cognitive Behavioural Therapy (CBT) but also emotional supportive and psychoeducational approaches). Randomized controlled trials (RCTs) on the efficacy of CBT interventions for PGD even observed large effects (Boelen, de Keijser, van den Hout, & van den Bout, 2007; Bryant et al., 2014; Bryant et al., 2017; Rosner, Bartl, Pfoh, Kotoučová, & Hagl, 2015; Rosner, Lumberk, & Geissner, 2011; Rosner, Pfoh, Kotoučová, & Hagl, 2014; Shear et al., 2014; Shear et al., 2016). However, none of these studies used state-of-the-art techniques to control whether the intervention was implemented as planned. In scientific research, such a procedure is broadly referred to as controlling for treatment integrity. According to Barber, Triffleman, & Marmar (2007), state-of-the-art techniques involve the rating of audiotapes or videotapes using psychometrically evaluated scales by independent raters.

This lack of verification is not uncommon in psychotherapy research. In their review, Perepletchikova, Treat, and Kazdin (2007) reported that treatment integrity was adequately addressed in only 3.5% of trials on psychosocial interventions published in the most influential psychiatric and psychological journals. Nevertheless, a high level of treatment integrity is a prerequisite for ensuring the internal validity of psychotherapy studies (Perepletchikova & Kazdin, 2005; Schlosser, 2002; Weck, Grikscheit, Höfing, & Stangier, 2014).

Treatment integrity encompasses treatment differentiation, adherence, and competence (Waltz, Addis, Koerner, & Jacobson, 1993). Treatment differentiation requires that different treatments are distinguishable from one another in terms of critical aspects (e.g. the therapist of a depth psychology-oriented therapy refrains from behavioural expositions; Weck, Bohn, Ginzburg, & Stangier, 2011). Competence pertains to the skill level demonstrated by the therapist when delivering the treatment as well as how the therapist interacts with the patient (Weck et al., 2011). Adherence describes the extent to which a therapist uses interventions and approaches prescribed by the treatment manual and avoids the use of intervention procedures proscribed by the manual (Waltz et al., 1993). Thus, the adherence measurement ensures internal validity in clinical trials (Moncher & Prinz, 1991; Waltz...
et al., 1993) as changes in the dependent variable (treatment outcome) can be attributed to the independent variable (intervention). In addition, external validity is achieved when results are generalizable. This is not the case when the independent variable (intervention) is not replicable because the intervention was not carried out as planned (Weck et al., 2014). Thus, adherence ratings are recommended in textbooks on psychotherapy research (Lambert, 2013). However, adherence should not only be addressed as a methodological requirement. It could also be a predictor (assuming that the elements prescribed in the manual are the active components in therapy, adherence should positively predict outcome), moderator (higher adherence could lead to more improvement regarding the outcome), or mediator (adherence might establish or explain the relationship between intervention and outcome). Thus, the study of adherence can be helpful for the interpretation of outcomes, and can contribute to the accurate identification of therapy-specific, active components (e.g. exposure or cognitive restructuring; Barber, Sharpless, Klostermann, & McCarthy, 2007). Finally, a well-designed and evaluated grief-focused adherence and competence scale could be used beyond the research setting in therapists’ skills training.

To the best of our knowledge, no adherence or competence scale has been developed for any grief-focused preventive or therapeutic intervention so far. Thus, with the aim of advancing the field of PGD treatment research, we developed a grief-focused adherence and competence scale for CBT in this study. The basis for our scale structure was the adherence and competence scale for developmentally applicable beyond the context of testing adherence manual by Rosner, Pfoh, Rojas, et al. (2015). The content of the scale was based on the integrative CBT for prolonged grief disorder (PG-CBT) manual by Rosner, Pfoh, Rojas, et al. (2015). The PG-CBT by Rosner, Pfoh, Rojas, et al. (2015) served as a content basis, as it comprises a range of different session-specific CBT interventions (e.g. introduction of a personalized disturbance model, cognitive restructuring). It, therefore, complies with the request of Perepletchikova et al. (2007) to measure treatment integrity based on a manual with session-specific descriptions. In addition to this, PG-CBT shares certain similarities with other grief-focused manuals (e.g. in sensu exposure, cognitive restructuring of dysfunctional grief-related thoughts, see for example, Shear, 2015). Consequently, the scale is applicable beyond the context of testing adherence to the PG-CBT manual. In the following, we provide detailed information on the structural and content basis of the scale, and we describe the item validation based on an expert survey (step I of the scale development).

2. Development of the TACs-G

As there are no grief-focused CBT adherence and competence scales, we screened the literature for adherence and competence scales for other disorders. Among others, we found scales for depression, eating disorders, anxiety disorders, and post-traumatic stress disorder (PTSD; Folke et al., 2017; Ginzburg et al., 2012; Gutermann et al., 2015; Shaw et al., 1999; von Consbruch, Clark, & Stangier, 2012). Due to similarities in symptoms between PGD and PTSD (e.g. avoidance of reminders; see Djelantik, Smid, Kleber, & Boelen, 2017), we decided to use the scale of Gutermann et al. (2015) as a structural basis for our scale.

The PG-CBT by Rosner, Pfoh, Rojas, et al. (2015) served as a content basis, as it comprises a range of different session-specific CBT interventions (e.g. introduction of a personalized disturbance model, cognitive restructuring). It, therefore, complies with the request of Perepletchikova et al. (2007) to measure treatment integrity based on a manual with session-specific descriptions. In addition to this, PG-CBT shares certain similarities with other grief-focused manuals (e.g. in sensu exposure, cognitive restructuring of dysfunctional grief-related thoughts, see for example, Shear, 2015). Consequently, the scale is applicable beyond the context of testing adherence to the PG-CBT manual. In the following, we provide detailed information on the structural and content basis of the scale, and we describe the item validation based on an expert survey (step I of the scale development).

2.1. Content basis of the scale

The scale’s content was informed by the PG-CBT manual by Rosner, Pfoh, Rojas, et al. (2015). PG-CBT comprises 24 individual, weekly sessions (see session content description in Supplement Table A). 20 of these 24 sessions are divided into three phases (A, B, C). The remaining four sessions are optional sessions, which are reserved for discussing specific events (e.g. court hearing for inheritance disputes or anniversaries). Each phase entails a different focus in grief treatment. Phase A comprises stabilizing, exploring, motivating, and goal setting. It starts with an open clinical talk, which focuses on coping mechanisms employed by the patient to deal with their grief. Furthermore, the patient’s grief behaviour is identified by means of a disturbance model. In this context, family experiences of dealing with grief (learned grief behaviour) and secondary losses are also revealed. In addition, the deceased is introduced,
whereby one-sided representations (e.g. idealization) are questioned. At the end of phase A, therapy goals are formulated and the motivation to change is encouraged.

Phase B concentrates on re-interpreting and confronting grief. It is, therefore, the central aspect of the PG-CBT. As part of cognitive restructuring, patients are asked to name their most stressful thoughts. Various techniques are used for cognitive restructuring. Furthermore, the exposure takes place in this phase. During exposure the patient is confronted with the worst moment regarding the loss. Finally, phase B finishes with the ‘visiting the grave’ exercise. The goal of this exercise is reconciliation or correction of unfinished situations and obtaining permission to continue with one’s life.

Phase C deals with integrating and transforming grief into concluding thoughts. After the patient has received the deceased’s permission to create a future life with a new goal orientation (during the ‘visiting the grave’ exercise), the focus shifts to the patient’s future roles, hopes, and wishes. In addition, the patient decides what he wants to keep from the deceased, and what he wants to leave behind (material as well as immaterial). The last sessions revolve around the end of the treatment; accordingly, achievements are reflected upon, and relapse prevention is carried out.

### 2.2. Structural basis of the scale

The Adherence (TAS) and Competence Scale (TCS) by Gutermann et al. (2015) served as the inspiration for the scale’s structure and the wording of the items. The TAS and TCS are based on a cognitive processing therapy manual for adolescents suffering from PTSD. The TCS consists of 21 items, which are derived from the Cognitive Therapy Scale by Weck, Hautzinger, Heidenreich, and Stangier (2010), as well as 7 treatment-specific competence items. The TAS comprises 12 items, which can be rated in each session irrespective of the therapy phase. Hence, in order to include phase-specific elements (e.g. reading and editing the trauma report) which are not the content of each session, Gutermann et al. (2015) had to create one item that summarizes the 44 phase-specific interventions. Consequently, the advantage of an uncomplicated rating comes at the cost of information loss. In this respect, our scale differs significantly from that of Gutermann et al. (2015), as we wanted to capture phase-specific interventions in detail. The correct and detailed recording of phase-specific intervention was critical in this study because the scale is to be used not only to ensure internal validity of the treatment, but also to create a database for process research. In this regard, we also deemed it important to clearly differentiate between adherence and competence. As Barber, Triffleman, et al. (2007) and Dobson and Singer (2005) have pointed out, these two constructs have often been mistaken for each other, making it difficult to clearly attribute the outcome effects to adherence or competence, or to identify interaction effects. While adherence ratings examine the extent to which a treatment was carried out, competence ratings address the manner in which it was carried out (Barber, Triffleman, et al., 2007). Establishing a sound rapport with the patient, for example, is more a matter of competence than adherence, yet this aspect is often assessed as part of adherence measurement (see for example Dittmann et al., 2017). To avoid such interference, we followed recommendations from previous work (Barber, Triffleman, et al., 2007; Dobson & Singer, 2005) to measure adherence separately from competence. Consequently, the scale comprised adherence items with separate but associated competence items.

### 2.3. Item validation

For content validation, we asked five independent German experts involved in the treatment of PGD to provide feedback on the items in the TACs-G. The experts had on average 17 years’ (SD = 7.9) clinical experience. The expert survey itself was based on the Haynes, Richard, and Kubany (1995) definition and recommendation for content validation. Thus, the experts were asked to evaluate the relevance and appropriateness of each item on a scale of 1 (not at all relevant/appropriate) to 5 (extremely relevant/appropriate). Specifically, the experts were asked to estimate whether the items represented relevant content for grief treatment and whether they were suited to capturing the therapist’s adherence/competence for the content in question. Furthermore, we asked the experts to freely comment on each item so as to generate more holistic feedback. Their feedback helped us to shorten the scale and to emphasize the difference between the adherence and competence items. In this regard, two items were formulated as pure competence items, namely, to deal with avoidance behaviour and grief-specific resource activation. The experts considered these two aspects to be a matter of skill rather than of adherence. After integrating the PGD experts’ feedback, we initiated a focus group discussion and asked a group of experts in the field of psychotraumatology and psychotherapy research for feedback. Their feedback not only improved the clarity and completeness of the items, but also eliminated redundancies between items to ensure item independence (Table D in the Supplement provides details of the modification which was undertaken based on the experts’ feedback). This intermediate step was useful in the context of our intention to develop a resource-saving scale that could be easily understood.
by less trained raters. Finally, in a last step, we contacted our initial experts again, presented our final scale and asked them to rate the relevance and appropriateness of each item (see Tables 1 and 2).

2.4. The final TACs-G

Overall, the TACs-G comprised 15 adherence and 16 competence items. For 14 adherence items, we developed matching competence items so as to clearly distinguish between adherence and competence. The 15th adherence item comprised a list of proscribed interventions, so no associated competence item was needed. Two additional competence items, namely ‘grief specific resource activation’ and ‘dealing with avoidance behaviour’ were included. For the adherence items a three-point Likert scale was used (1 = intervention is not implemented although indicated, 2 = intervention is partially implemented, 3 = intervention is implemented). For the competence scale a five-point Likert scale was used, ranging from 1 = completely insufficient competence to 5 = very good (see Supplement Table C for an overview of the TACs-G items). In addition to the TACs-G itself, an extensive rater manual with various explanations and examples was developed (Haneveld & Comtesse, 2020). During the rating process, the two raters could always refer to it in the event of any uncertainties.

3. Methods regarding psychometric evaluation of the TACs-G

3.1. Treatment

The data for this study were obtained from an ongoing multicenter RCT to evaluate grief-focused CBT in comparison with an active control condition, Present-Centered Therapy (PCT; German Clinical Trials Register, ID: DRKS00012317). The study protocol has been approved by the IRB of the Catholic University Eichstaett-Ingolstadt (2016/21). Eligible participants had to meet the criteria of a primary PGD diagnosis according to Prigerson et al. (2009) criteria as assessed using the Prolonged Grief-13 + 9 interview (Vogel, Pfoh, & Rosner, 2017). Moreover, to qualify for inclusion in the trial, participants had to be between 18 and 75 years old, and their loss had to have occurred at least 6 months before (for all inclusion criteria see the study protocol: Rosner, Rimane, Vogel, Rau, & Hagl, 2018).

3.2. Video-taped patients and therapists

This study used the data of patients who were included as pilot cases (n = 8; i.e. each therapist underwent intensive training and had to treat a supervised pilot case before entering the main trial) and data of main trial patients (n = 8). Most of the patients were female (69%). The average age was 51.2 years (SD = 9.3; range 34-69). Regarding psychiatric comorbidities, the majority (81.25%) had a co-morbid mental disorder, typically major depression or anxiety disorders according to the SKID-I interview (Wittchen, Zaudig, & Fydrich, 1997; for more details refer to Supplement Table B).

Most of the therapists were female (94%) and had on average 39.7 months’ clinical experience (SD = 19.42). All of them were clinical psychologists (12 of them were undergoing training to become a licensed therapist and 3 were licensed therapists). They had been trained in PG-CBT by the developers of the treatment manual in a 2-day workshop, and were supervised at least once every four weeks.

3.3. Raters and sampling

The ratings were undertaken by two CBT therapists (the first and fourth author of this paper). The first was a licensed psychotherapist and the second was undergoing training in psychotherapy (4 and 2 years’ clinical experience, respectively). Both raters had received training on the PG-CBT manual in a 2-day workshop (see Rosner et al., 2018). They had also attended an additional 4-hour rater training, based on the rater manual for the TACs-G (Haneveld & Comtesse, 2020). Additionally, the raters had to evaluate 10 practice videos and to reach a consensus before starting to rate the videos included in this study. To minimize rater drift, the two raters met throughout the study to discuss the videos.

The sampling was done in two steps. In a first step, we randomly selected 16 treatments (33%) from the total sample of 48 videotaped treatments (each treatment consisted of 20 sessions; the optional sessions, a maximum of four, were excluded from the sampling because their content was based on the individual patient’s need and thus not prescribed in the manual). In a second step, we randomly selected one session per phase (A, B, C respectively), from each treatment. Thus, our sample resulted in 3 sessions (representing phase A, B, C) from 16 treatments (48 sessions in total). The 16 treatments, in turn, were provided by 15 therapists. The therapists did not know which phase or which session would be selected for rating. If a video from a particular session was missing or damaged, an adjacent session was used (please refer to the Supplement, Figure A for an illustration of the stratified sampling procedure).

3.4. Statistical analyses

To determine the reliability of the TACs-G scale, we calculated both interrater and intra-rater reliability.
The latter should account for the scale’s stability over time. Accordingly, re-evaluation of 10 sessions took place after 12 months – to minimize memory effects – and was conducted by the first author. To evaluate the efficiency of the TAC-G scale, the average rating time of the initial rating was analyzed. All data were analyzed using RStudio, version 1.2.5042 (RStudio, 2020).

Both inter- and intra-rater reliability were determined by calculating the intraclass correlation coefficient (ICC) using Model 2 [ICC(2,1)], according to Shrout and Fleiss (1979). The 95% confidence interval was used to determine statistical significance. According to Portney and Watkins (2009), ICCs > 0.80 can be categorized as excellent, ICCs between 0.70 and 0.80 as good, ICCs between 0.50 and 0.60 as moderate and <0.5 as not satisfactory. The ICC for the total adherence/total competence score was calculated based on the total sum score of items 1–14/1–16 per rating. Pearson’s product moment correlation (r) was used to determine the correlation between the adherence and the competence scales.

4. Results

Tables 1 and 2 display the results of the experts’ ratings for each item as well as the ICCs, the means, and the range. The five experts considered all the adherence items as appropriate with $M = 4.60$ ($SD = 0.21$; range 1-5) and relevant with $M = 4.81$ ($SD = 0.26$; range 1-5). Likewise, they deemed all the competence items to be appropriate with $M = 4.60$ ($SD = 0.22$; range 1-5) and relevant with $M = 4.81$ ($SD = 0.25$; range 1-5). Furthermore, they considered all phase-specific adherence and most phase-specific competency items ($M = 5.0$) to be particularly relevant.

The intrarater reliability for the total adherence and total competence scores was good to excellent (for adherence: ICC$_{2,1} = 0.889$, for competence: ICC$_{2,1} = 0.782$) according to Portney and Watkins (2009). With respect to the individual adherence items, the raters showed excellent agreement with one exception (Adherence Item 1, Agenda: ICC$_{2,1} = 0.796$). Regarding the individual competence items, all but two items achieved excellent intrarater reliability. Only competence items 15 (avoidance behaviour) and 16 (grief-specific resource activation), evidenced moderate agreement (Item 15: ICC$_{2,1} = 0.509$ and Item 16: ICC$_{2,1} = 0.678$). Furthermore, there was a strong positive correlation between the sum scores of the adherence and competence scales, $r = 0.80$ $p < 0.001$.

To test for the scale’s stability over time, 10 videos were randomly drawn from the sample and were re-scored by the first author. The average time between ratings was 13.1 months (range 13–14 months). Results yielded high intra-rater reliability and thus high stability over time for the sum scores of the adherence (ICC$_{2,1} = 0.970$) and the competence scales (ICC$_{2,1} = 0.965$). As can be seen in Tables 3 and 4, the intra-rater reliability for the individual adherence and competence items ranged from moderate to excellent (from 0.724 to 1.0, and from 0.530 to 1.0, respectively).

To assess the TACs-G efficiency, the rating time was analyzed. On average, it took 13.9 additional minutes ($SD = 4.8$, range from 5 to 25 min) after having watched the therapy video to finish the TACs-G rating.

5. Discussion

The aim of this study was to develop and evaluate an adherence and competence scale for grief-focused CBT. Overall, the results indicated that the TACs-G was appropriate, relevant, and efficient. It allowed a reliable assessment of therapeutic adherence and competence.

As this is the first adherence and competence scale for grief-focused CBT, it was important for us to include independent experts in this study, and to collect their feedback on item content. Overall, the five experts considered all adherence and competence items to be relevant and appropriate. More particularly, they deemed phase-specific adherence and most phase-specific competence items to be highly relevant. This ultimately reinforced our initial decision to include phase-specific elements separately rather than grouping them together in one item. Our scale was efficient, as ratings were completed relatively fast (average completion time of 14 min for 31 items) compared to previous work. Dittmann et al. (2017), for example, reported a completion time of 10 min for a pure adherence scale with 11 items. The rating time may still vary depending on the experience of the individual rater, which was not examined in this study.

Our study observed good to excellent rater accordance for the total TACs-G adherence and competence scores as well as for the individual items. This result compared favourably with the high rater ICCs found for other integrity measures of CBT for Anxiety Disorders or PTSD (see Barber, Liese, & Abrams, 2003; Bjaastad et al., 2016; Gutermann et al., 2015). Three adherence items (nos. 9, 11, 14) and one competence item (no. 9) showed a particularly high ICC coefficient of 1.00. The overall high ICC coefficients could perhaps be explained by the low to no level of ambiguity in the items, and/or by the clear instructions in the rater manual. Another factor might be the use of only two (highly trained) raters. Yet, many studies that evaluated adherence scales reported on data based on two raters (see Bjaastad et al., 2016; Folke et al., 2017; Gutermann et al., 2015). Finally, the high ICCs of the adherence items could also be due to the use of restricted scales (ranging from 1 to 3), leaving only a few options with little nuance.
In contrast to these items with very high ICC coefficients, there were also two competence items (nos. 15 and 16) that only showed moderate interrater reliability. One possible explanation for this might be that these two items were the only ones formulated as pure competence items without any associated adherence items. Thus, the raters were forced to first consider whether the intervention followed the manual and then the extent to which it was implemented. Following this, the competence item had to be rated in terms of how this intervention was implemented (completely insufficient to very good). Hence, the lack of guidance, which was otherwise provided by the adherence item, may have made the rating more difficult. Finally, other studies reported similar moderate ICC coefficients for competence scales which were not associated with an adherence rating (refer to Bjaastad et al., 2016; von Consbruch et al., 2012). This suggested that reliably estimating competence was more demanding than estimating adherence, and was also evinced by higher overall interrater reliability of adherence compared to competence (ICC = 0.889 vs. ICC = 0.782). Finally, in this context the raters ‘limited’ clinical experience may have had an impact on their ability to recognize varying skill levels, and thus to assess the therapists’ competence. However, other studies also employed raters with ‘limited’ experience by using the master students (see von Consbruch et al., 2012; Gutermann et al., 2015; Ginzburg et al., 2012; Loeb et al., 2005; Meier et al., 2015; Weck et al., 2014) and our raters were, after all, were a psychotherapist and a psychotherapist in training.

An internal consistency analysis was deliberately not undertaken in this study for two reasons. First, this would have constituted a violation of the prerequisite for such an analysis, meaning no underlying unidimensional construct could be assumed due to the phase-specific and thus heterogenous structure (Schermelleh-Engel & Werner, 2012). Second, in other studies, the utility and, by extension, the reasonable interpretation of Cronbach’s alpha in the context of treatment integrity scales has been questioned. The recommendation given was to use alternative reliability measures whenever possible (refer to the discussion of Dittmann et al., 2017; Gutermann et al., 2015; von Consbruch et al., 2012). Hence, we employed ICC_{2,1} to determine intra-rater reliability and thus the stability of the scale over time. Results yielded a strong 12-month intra-rater reliability for the TACs-G adherence, competence scores and individual items. A favourable interpretation of this result is that the scale contains precisely formulated items that allow accurate and consistent measurement of adherence and competence over time. However, memory effects cannot be ruled out. To reduce possible impacts of memory effects, future studies should consider a longer time period in between the ratings.

We observed a very strong positive correlation between TACs-G adherence and competence scores. There are three possible reasons for this. First, therapists who are good at adhering to the treatment protocol are skilled therapists with a high level of competence (Bjaastad et al., 2016). Second, raters could possibly have difficulties separating adherence from competence in their ratings (Bjaastad et al., 2016). However, in our case, raters underwent intensive training in which the difference was emphasized. In addition, the rater manual devoted an entire section to the difference between competence and adherence, which is expected to minimize rater uncertainty in this study. Previous work (Barber et al., 2003; Bjaastad et al., 2016) also found a very strong association (r = 0.96 and r = 0.70, respectively). In both studies, the differences between adherence and competence

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**Table 1. Therapeutic Adherence and Competence scale for Grief-focused cognitive behavioural therapy (TACs-G): Adherence items only: intraclass correlation coefficient, number of ratings, mean and standard deviation of items, range and mean and standard deviation of final expert ratings.**

| Item | ICC_{2,1} (CI 95%) | N | Min/Max | Appropriateness Mean (SD) | Relevance Mean (SD) |
|------|-------------------|---|---------|---------------------------|---------------------|
| 1. Agenda | .796* (.663–.880) | 96 | 2.51 (.68) | 1/3 | 4.20 (0.45) | 4.60 (0.55) |
| 2. Time management | .925* (.870–.957) | 96 | 2.22 (.84) | 1/3 | 4.20 (0.84) | 4.60 (0.55) |
| 3. Dealing with ambivalence | .800* (.670–.883) | 96 | 2.68 (.61) | 1/3 | 4.20 (0.84) | 4.80 (0.45) |
| 4. Dealing with/addressing stressors | .989* (.980–.994) | 32 | 2.75 (.44) | 2/3 | 4.20 (0.45) | 4.50 (0.45) |
| 5. Psychoeducation regarding PGM, comorbidities | .994* (.990–.997) | 34 | 2.74 (.45) | 2/3 | 4.60 (0.45) | 5.00 (0.00) |
| 6. Working with cognitions | .907* (.840–.947) | 42 | 2.57 (.55) | 1/3 | 4.80 (0.45) | 4.80 (0.45) |
| 7. Feelings of grief/Perception of emotions | .938* (.893–.965) | 23 | 2.83 (.39) | 2/3 | 4.60 (0.55) | 4.60 (0.55) |
| 8. Promoting self-help | .822* (.703–.896) | 51 | 2.51 (.70) | 1/3 | 4.80 (0.45) | 5.00 (0.00) |
| 9. A. Getting to know the patient and his grief reaction | 1.0* (1.0–1.0) | 2 | 3.00 (0.00) | 3/3 | 4.50 (0.55) | 5.00 (0.00) |
| 10.A. Introducing the deceased person | .953* (.918–.973) | 11 | 2.91 (.30) | 2/3 | 5.00 (0.00) | 5.00 (0.00) |
| 11.B. Exposure: Worst moment | 1.0 (1.0–1.0) | 12 | 2.83 (.39) | 2/3 | 5.00 (0.00) | 5.00 (0.00) |
| 12.B. Visiting the grave | .803* (.677–.886) | 14 | 2.79 (.43) | 2/3 | 4.60 (0.55) | 5.00 (0.00) |
| 13.C. Legacy, remembrance, dedication | .870* (.780–.925) | 18 | 2.67 (.49) | 2/3 | 4.80 (0.45) | 5.00 (0.00) |
| 14.C. Future prospects | 1.0 (1.0–1.0) | 18 | 2.67 (.49) | 2/3 | 4.80 (0.45) | 5.00 (0.00) |
| 15. Proscribed interventions | 1.0 (1.0–1.0) | 96 | 1.00 (0.00) | 1/1 | 4.25 (0.50) | 4.00 (0.82) |

The letter (A, B, C) next to the item number refers to the therapy phase. ICC_{2,1} = intraclass correlation coefficients for both raters, Min = lowest rating score on a scale of 1–3, Max = highest rating score on a scale of 1–3. Relevance and appropriateness were assessed on a scale ranging from 1 to 5. *p<.001.
were stressed in the raters’ training as well. Altogether, these results suggested that rater difficulty in separating adherence from competence was not a determining factor in the correlation between adherence and competence scores. Finally, the same raters assessed both adherence and competence. Having different raters assess adherence and competence would shed light on whether the high correlations were an artefact of using the same rater.

Besides the constraints already discussed, further limitations should be kept in mind when interpreting the results of this study. The major limitation was the relatively small sample size with 48 video ratings in total. It should, nonetheless, be noted that this sample size was already larger than in comparable scale development studies (e.g. Dittmann et al., 2017; Gutermann et al., 2015 with N = 30). A recent meta-analysis by Zarafonitis-Müller, Kuhr, and Bechdolf (2014) focused on CBT studies investigating adherence and

Table 2. Therapeutic Adherence and Competence scale for Grief-focused cognitive-behavioural therapy (TACs-G): Competence items only. Intraclass correlation coefficient, number of ratings, mean and standard deviation of items, range and mean and standard deviation of final expert ratings.

| Item                                                                 | ICC2,1 (CI 95%) | N   | Mean (SD) | Min/Max | Appropriateness Mean (SD) | Relevance Mean (SD) |
|---------------------------------------------------------------------|----------------|-----|-----------|---------|---------------------------|-------------------|
| 1. Agenda                                                           | 0.946 (0.906–0.969) | 96  | 3.58 (1.07) | 1/5     | 4.60 (0.55)                | 4.60 (0.55)       |
| 2. Time management                                                  | 0.961 (0.854–0.952) | 96  | 3.83 (0.84) | 2/5     | 4.40 (0.55)                | 4.80 (0.45)       |
| 3. Dealing with ambivalence                                         | 0.901 (0.831–0.943) | 96  | 3.76 (1.10) | 1/5     | 4.40 (0.89)                | 4.80 (0.45)       |
| 4. Dealing with/addressing stressors                                | 0.988 (0.979–0.993) | 32  | 4.41 (0.67) | 3/5     | 4.60 (0.55)                | 4.60 (0.55)       |
| 5. Psychoeducation regarding PGD, comorbidities & PG-CBT           | 0.988 (0.979–0.993) | 34  | 4.21 (0.81) | 3/5     | 4.80 (0.45)                | 5.00 (0.00)       |
| 6. Working with cognitions                                         | 0.903 (0.834–0.945) | 42  | 3.93 (0.97) | 2/5     | 4.80 (0.45)                | 4.80 (0.45)       |
| 7. Feelings of grief/Perception of emotions                        | 0.918 (0.858–0.953) | 23  | 4.26 (0.92) | 2/5     | 4.00 (0.71)                | 4.60 (0.55)       |
| 8. Promoting self-help                                              | 0.825 (0.707–0.898) | 51  | 3.39 (1.19) | 1/5     | 4.60 (0.55)                | 4.80 (0.45)       |
| 9.A Getting to know the patient and his grief reaction             | 1.0 (1.0–1.0)   | 2   | 4.00 (0.00) | 4/4     | 4.60 (0.55)                | 4.80 (0.45)       |

The letter (A, B, C) next to the item number refers to the therapy phase, ICC2,1 = Intraclass correlation coefficient, Min = lowest rating score on a scale of 1–5, Max = highest rating score on a scale of 1–5.

Table 3. Stability over time for the Therapeutic Adherence and Competence scale for Grief-focused cognitive-behavioural therapy (TACs-G), Adherence items only.

| Item                                                                 | ICC2,1 (CI 95%) | N   | Mean (SD) | Min/Max |
|---------------------------------------------------------------------|----------------|-----|-----------|---------|
| 1. Agenda                                                           | 1.000          | 20  | 2.70 (0.47) | 2/3     |
| 2. Time management                                                  | 1.000          | 20  | 2.30 (0.92) | 1/3     |
| 3. Dealing with ambivalence                                         | 0.724          | 20  | 2.35 (0.75) | 1/3     |
| 4. Dealing with/addressing stressors                                | 0.974          | 6   | 2.82 (0.41) | 2/3     |
| 5. Psychoeducation regarding PGD, comorbidities & PG-CBT            | 1.000          | 6   | 3.00 (0.00) | 3/3     |
| 6. Working with cognitions                                         | 1.000          | 8   | 2.00 (0.76) | 1/3     |
| 7. Feelings of grief/Perception of emotions                        | 1.000          | 2   | 2.00 (0.00) | 2/2     |
| 8. Promoting self-help                                              | 0.972          | 11  | 2.09 (1.04) | 1/3     |
| 9.A Getting to know the patient and his grief reaction             | –              | 0   | –         | –       |
| 10.A Introducing the deceased                                      | 1.000          | 4   | 3.00 (0.00) | 3/3     |
| 11.B Exposure: Worst moment                                        | 1.000          | 4   | 2.50 (0.57) | 2/3     |
| 12.B Visiting the grave                                            | 0.947          | 4   | 2.25 (0.50) | 2/3     |
| 13.C Legacy, remembrance, dedication                               | 0.923          | 2   | 2.50 (0.71) | 2/3     |
| 14.C Future prospects                                               | 0.964          | 4   | 2.75 (0.50) | 2/3     |
| 15. Prescribed interventions                                       | 1.000          | 20  | 1.00 (0.00) | 1/1     |
| Total score                                                         | 0.970          | 20  | 13.60 (3.73) | 7/21   |

The letter (A, B, C) next to the item number refers to the therapy phase, ICC2,1 = Intraclass correlation coefficient, Model 2, Min = lowest rating score on a scale of 1–3; Max = highest rating score on a scale of 1–3.
Another limitation was the relative homogeneity of the videotaped therapists and patients (e.g. mostly female). Consequently, the results should be confirmed using a larger and more heterogeneous sample of therapists and patients. Of course, this aspect is of even greater importance when conducting a process research study. Furthermore, our study did not address the robustness of our results regarding different levels of rater experience. As mentioned before, our raters had limited clinical experience and were highly trained. Especially because the training is time-consuming and costly, future work could employ self-trained raters based on the extensive rater manual. Another drawback was that raters had to assess three videos from the same therapist and the same patient. Therefore, as in similar studies (Bryant, Simons, & Thase, 1999; Svartberg, 1999; von Consbruch et al., 2012), the data set was not independent. Thus, we could not rule out rater confounding variables. Finally, we did not test whether the raters had used the scale correctly. In order to ensure accurate scale use, Jones, Whiteside, and Neighbours (2007) suggest measuring the consistency of rater evaluations with a predetermined standard rating. In the case of our adherence and competence rating, no such gold standard was available. However, we at least ensured that the first rater performed his rating in a homogenous manner, which is illustrated by the stability over time.

Apart from these limitations, our findings suggested that the TACs-G was a reliable, appropriate, and efficient instrument for assessing competence and adherence in grief-focused CBT. The high level of reliability and the structure of the TACs-G with phase-specific items, allows for various applications in treatment process and outcome studies. For example, the scale can be employed in process research (e.g. session-by-session ratings) to identify therapy elements and associated skills which have a significant impact on symptom reduction. Moreover, the TACs-G might serve purposes that go beyond the research setting. It can identify the main therapeutic skills for a grief-focused treatment and this, in turn, can be used for the targeted teaching of these very skills. Thus, in the long run, the TACs-G might even help to improve clinical training (Perepletchikova & Kazdin, 2005). At the same time, it could serve as a feedback basis both for trainees in supervision and certification purposes (Sholomskas et al., 2005). In summary, the TACs-G may have the potential to foster competent treatment of patients with PGD, which appears to be more important than ever considering the expected COVID-induced increase in the prevalence rate (Eisma & Boelen, 2021). Ultimately, we hope that this study will help to raise overall awareness of the importance of integrity measurements – although they are costly and resource-intensive.

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Ethic statement
The study protocol has been approved by the IRB of the Catholic University Eichstaett- Ingolstadt (2016/21).

Data availability statement
The rating data and analysis code can be obtained J. Haneveld (Julia.haneveld@ku.de).

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