







Wish you were here: The Dutch, German, and English Yearning in Situations of Loss Short Form

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Abstract

Objective(s): Yearning, a hallmark of grief disorders, relates to rumination and potentially to cognitive avoidance. We developed an 8-item short form of the only existing validated yearning measure, the Yearning in Situations of Loss Scale (YSL), to improve its validity and administration ease.

Method: Cross-sectional surveys were conducted among bereaved Dutch ($N = 313$) and German ($N = 235$) community samples and an American treatment-seeking sample ($N = 95$). All samples completed the YSL, and community samples additionally measures of rumination, loss-related avoidance, complicated grief (CG), and depression.

Results: A one-factor model provided a good fit to the YSL Short Form (YSL-SF) in the community samples. A two-factor structure (cognitive and emotional yearning) best fitted the YSL-SF in the treatment-seeking sample. YSL-SF scores correlated positively with rumination, loss-related avoidance, and with CG symptoms whilst controlling for rumination and loss-related avoidance.

Conclusion: The YSL-SF appears an easy-to-administer and valid measure of yearning after bereavement.

KEYWORDS

emotion, longing, persistent complex bereavement disorder, prolonged grief disorder, questionnaire, reliability, scale, validity

1 | INTRODUCTION

Yearning can be defined as unsatisfied, intense, and future-oriented appetitive desire toward a lost person (Davis, Shaver, & Vernon, 2003; Robinaugh et al., 2016). Yearning is a common human experience and a frequent topic in art and popular culture. It has been an inspiration for countless poems, books, songs, sculptures, and paintings. Within psychiatry, yearning has now also earned a prominent place as one of the defining features of disorders characterized by severe, persistent, and disabling grief reactions, also termed complicated grief (CG).

Persistent Complex Bereavement Disorder (PCBD), included as a proposal in the fifth edition of the *Diagnostic and Statistical Manual of Mental disorders* (DSM-5; American Psychiatric Association, 2013), and Prolonged Grief Disorder (PGD), included as a formal disorder in the 11th edition of the International Classification of Diseases (ICD-11; World Health Organization, 2018), both contain severe and persistent yearning for the deceased as a defining symptom. Yearning, assessed with a single item, has been demonstrated to both be the most common response to loss in the first 2 years of bereavement (Maciejewski, Zhang, Block, & Prigerson, 2007) and one of the most frequently experienced symptoms of CG (Simon et al., 2011). Despite its high prevalence and centrality in grief disorders, definitions of yearning vary, empirical investigations are scant, and only a handful of studies on this topic have employed multi-item validated scales to assess yearning (for related critiques: O'Connor & Sussman, 2014; Robinaugh et al., 2016). A particular problem is an overreliance on one-item measures in yearning research, which is based on the assumption that the underlying construct of yearning is homogeneous, whereas yearning is often considered to be a multifaceted, complex construct (Robinaugh et al., 2016). Therefore, it appears important to clearly define yearning, theoretically distinguish it from related constructs, and develop an easy-to-administer, internationally applicable, and valid scale to assess it. This will provide a tool to study yearning in adaptation to bereavement, similar to how worry is investigated in the context of anxiety (Meyer, Miller, Metzger, & Borkovec, 1990; Tallis, Eysenck, & Mathews, 1992).

Examining its definition in more detail first, it can be surmised that yearning can best be described as a cognitive-affective process (Boddez, 2018; Kaplan et al., 2018; O'Connor & Sussman, 2014; Robinaugh et al., 2016). Conceptually, it appears useful to distinguish the cognitive components of yearning from its affective components, as many effective cognitive-behavioral CG treatments specifically target cognitive processes to achieve changes in affective disturbances (e.g., Boelen, de Keijser, van den Hout, & van den Bout, 2007; Shear, Frank, Houck, & Reynolds, 2005). Cognitively, yearning consists of repetitive counterfactual thoughts in which the present situation is compared to what life would have been like had the loss been prevented and vivid imaginations of an alternative reality in which the deceased is still alive. Affectively, it is a bittersweet emotional experience, as the cognitive process of yearning may elicit both positive affect (e.g., feelings of affection towards the deceased) and negative affect (e.g., experiencing the frustration of the desire to be with the deceased). Indeed, fMRI research has demonstrated that bereaved participants with and without CG showed pain-related neural activity in response to reminders of the deceased, yet only people with CG showed reward-related activity in the nucleus accumbens, with the latter activity being positively associated with yearning (O'Connor et al., 2008). Moreover, yearning is correlated positively with postloss depression and anxiety symptoms and loneliness (O'Connor & Sussman, 2014; Robinaugh et al., 2016).

Yearning has a logical place among other processes proposed to play a key part in adaptation to bereavement. Conceptually, it shows the most similarities to grief rumination, defined as the process of thinking recurrently and repetitively about the causes and consequences of a loss (Eisma & Stroebe, 2017; Eisma et al., 2014a). Both processes consist of perseverative cognitive activity and focus on recurrent comparisons of the present reality with a wanted, but unattainable alternative reality, that is, counterfactual thought (Roese & Epstude, 2017). However, there are also differences between both constructs: rumination is predominantly past-oriented and verbal (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008) whereas yearning is proposed to focus more strongly on the present and future and contains vivid imagery (Robinaugh et al., 2016). Unlike rumination, yearning is also considered a motivational aspect of seeking proximity to an absent attachment figure (Bowlby, 1973), which is assumed to play an integral part in the persistence of CG by some contemporary grief theorists (Boddez, 2018; Shear et al., 2007). It is plausible that rumination and yearning often go hand in hand, with a bereaved person switching from one process to the other repeatedly. For example, someone who ruminates about what he could have done to prevent the loss in an attempt to mentally “undo” the loss (cf., Davis, Lehman, Wortman, Silver, & Thompson, 1995) could thereby elicit thoughts and imagery about how wonderful it would be if the deceased would still be alive today.

The similarities between yearning and rumination also provide clues on how yearning fits within models of psychological adaptation to bereavement. Several researchers have proposed that rumination could (partly) serve as cognitive avoidance of the most painful aspects of the loss, such as the fact that the separation from the deceased is permanent and irrevocable (Boelen, Van Den Hout, & Van Den Bout, 2006; Stroebe et al., 2007). Such avoidance is assumed to lead to difficulties in integrating memories about the loss in existing autobiographical memory and/or interference with acceptance of the death, and, therefore, with adaptation to bereavement (Boelen et al., 2006; Stroebe et al., 2007; Worden, 2009). Indeed, empirical evidence supports strong links between postloss rumination and cognitive, emotional, and loss-related avoidance, and CG symptoms (Eisma et al., 2013; Eisma et al., 2015; Eisma et al., 2014a; Morina, 2011). Against this background, it appears logical to assume that imagining a reality in which the loss would not have happened (i.e., yearning) could serve a similar cognitive avoidant function as mentally trying to change the events leading up to the loss (i.e., rumination). This could partly explain why exposure-based treatments in which clients gradually approach avoided aspects of the loss are particularly effective in treating CG (e.g., Boelen et al., 2007; Bryant et al., 2014; Shear et al., 2005).

Based on the above, we view yearning as a prevalent cognitive-emotional experience after bereavement that is theoretically and clinically relevant to study. Yet, to date, there is just one validated scale to assess it: the Yearning in Situations of Loss scale (YSL; O'Connor & Sussman, 2014). An initial psychometric investigation and a subsequent validation study in a large bereaved treatment-seeking sample provided some evidence for the construct validity of the YSL in bereaved people (e.g., high internal consistency, evidence for convergent and divergent validity; O'Connor & Sussman, 2014; Robinaugh et al., 2016). Nevertheless, the YSL suffers from a number of limitations, which limit its utility in international research and practice. First, with 21 items, it is a long scale, which restricts its administration ease. Second, it has only been validated in English. Third, perhaps most importantly, it has limited content validity, as many YSL items also assess related but distinct constructs such as loneliness (e.g., “Without ___ I feel alone”), and other symptoms of grief disorders, such as difficulties undertaking social or other activities (e.g., “I don't feel like going out as much without ___”). Fourth, some YSL items were potentially unsuitable for administration among bereaved samples with varying causes of loss, as they appear exclusively applicable to people who lost their partner (e.g., “I feel there is just no one who can love me the way ___ did”). Therefore, the aim of the present study was to develop and validate a brief version of the YSL, without content overlap with related but distinct constructs, suitable for administration in heterogeneous bereaved samples across multiple languages.

To develop the short form of the YSL (YSL-SF) we first inspected the content of the items, selecting only those items that assessed cognitive or affective aspects of yearning, and removing items assessing other constructs or items that appeared only suitable for loss of a romantic partner. Next, for a Dutch and German bereaved community sample, the following procedure was followed. First, we conducted confirmatory factor analyses, examining a one-factor solution (cf., original YSL; Robinaugh et al., 2016) and two-factor solutions for the YSL-SF. With respect

to the factor structure of the YSL-SF, based on the idea that yearning consists of cognitive and affective components, we expected that a model with two latent variables could best explain the scores on the YSL-SF. We also conducted factorial comparisons of the most suitable factor solution for the Dutch and German YSL-SF to examine cross-cultural factorial equivalence; we expected that configural, weak, and strong factor invariance could be established. We further predicted that the YSL-SF would show high internal consistency. Predictions regarding convergent validity were that YSL-SF scores would be positively associated with grief rumination and loss-related avoidance. Criterion-related validity was examined by testing three predictions. First, we expected that YSL-SF scores would be higher in widow(er)s compared to people who experienced other types of bereavement (Robinaugh et al., 2016). Second, we expected that YSL-SF scores would be more strongly associated with CG symptoms than depression symptoms. Third, we expected that YSL-SF scores would be related to CG symptoms even after controlling for relevant demographic and loss-related characteristics, loss-related avoidance, and grief rumination. Last, we conducted a preliminary investigation of the psychometric properties of an English YSL-SF by repeating the factor analyses and reliability analyses in a smaller American treatment-seeking bereaved sample.

2 | METHODS

2.1 | Procedure

Dutch and German bereaved adults were recruited as part of a Bachelor's degree-research practicum. Ethical approval for this study was obtained from a local ethical review board and adhered to the Code of Ethics of the World Medical Association (Declaration of Helsinki). Dutch and international (predominantly German) students in the practicum were asked to recruit in their personal networks three adults who had experienced bereavement of a first degree relative in the past 5 years (but students were allowed to diverge from these criteria if they experienced difficulty recruiting people meeting these criteria). A survey could be administered via post, face-to-face (a questionnaire would be filled out with the student present), or via email (a questionnaire would be emailed, filled in, scanned, and sent back). Participants were provided with an information letter containing information on issues relevant to the research (e.g., study aims, advantages and disadvantages of participation, data handling). All participants provided written informed consent before study participation. Data were collected in March and April of 2017 and 2018.

The American bereaved sample consisted of widow(er)s who participated in a mindfulness-based grief intervention trial after the death of their spouse or romantic partner. The study received approval from the local ethical review board and adhered to the Code of Ethics of the World Medical Association (Declaration of Helsinki). Participants were recruited through letters to bereaved family members found in newspaper obituaries and flyers included in mailings from a local hospice. Exclusion criteria were: length of bereavement of <6 months or >4 years, being younger than 18 or older than 85 years of age, current serious mental or physical health disorder(s), acute suicidality, current participation in grief therapy, completion of the University of California, Los Angeles Mindful Awareness Practices Level 1 course, and regular meditation or progressive muscle relaxation practice. The present study utilizes baseline self-report data from the intervention trial that was collected using an online survey through Qualtrics Survey Software. All participants provided written informed consent before study participation. Recruitment ran from August 2015 to May 2017.

2.2 | Participants

Three-hundred and thirteen participants completed the survey in Dutch and 235 completed the survey in German. The Dutch sample was predominantly female (62%), middle-aged ($M = 45.02$ years; standard deviation [SD] = 18.53), and relatively highly educated with 46% having completed college or university (see Table 1). Most Dutch

participants lost a parent (56%), due to natural causes (91%), on average approximately 2.5 years ago ($M = 30.56$ months; $SD = 24.83$ months), and perceived the loss as expected (53%). The German sample similarly primarily consisted of middle-aged ($M = 47.36$; $SD = 17.03$) women (63%) who were relatively highly educated (48% college or university). Most German participants experienced parental loss (57%), due to natural causes (95%), on average approximately 3 years ago ($M = 38.13$ months; $SD = 44.16$ months), and viewed the death as expected (53%). Dutch and German participants were not significantly different with regard to any sociodemographic or loss-related characteristics (see Table 1).

The American sample comprised 95 older treatment-seeking widow(er)s ($M = 67.46$ years; $SD = 8.90$ years). The majority of participants were female (79%) and highly educated (86% reported at least college). All participants experienced the death of a spouse or romantic partner. On average, the American sample was bereaved for approximately a year ($M = 14.77$ months; $SD = 9.05$), and a little more than half of the sample expected the loss (54%). The American sample was significantly older than the Dutch and German samples ($F(2, 640) = 66.55, p < .001$; both $ps < .05$ in Tukey post hoc tests), contained more females ($\chi^2(2, N = 643) = 9.93, p < .01$), and had a shorter time since the loss ($F(2, 637) = 18.06, p < .001$; both $ps < .05$ in Tukey post hoc tests). Due to differences in assessed background characteristics between the European and American samples, we were only able to compare these samples on selected variables.

2.3 | Measures

The following constructs were assessed in the Dutch and German samples. In the English sample, only the YSL was analyzed.

2.3.1 | Yearning

The original YSL (O'Connor & Sussman, 2014; Robinaugh et al., 2016) was administered to assess yearning in the English sample and a Dutch and German YSL was created using a translation back-translation procedure. Two persons fluent in English and either German or Dutch translated the YSL items into Dutch and German. Next, two other persons fluent in these languages independently back-translated the scales. Minor differences between the original and back-translated YSL were discussed with the original authors of the scale and changes were made to the items of the translated scales to ensure comparability. To develop the YSL-SF we conducted a content-analysis of all items. We first excluded 10 items that appeared to assess PGD/PCBD symptoms (American Psychiatric Association, 2013; World Health Organization, 2018) or CG symptoms covered by the Inventory of Complicated Grief-Revised (ICG-R; Prigerson & Jacobs, 2001; e.g., the item "I am distracted from things that are happening around me because I am thinking about ____" assesses cognitive preoccupation with the deceased). Next, we excluded three items that seemed only suitable for conjugally bereaved persons (e.g., "I feel there is just no one who can love me the way ____ did"). The remaining items were classified as affective or cognitive yearning items: in total nine items (five affective yearning items, e.g., "The feeling of wanting ____ back is so strong it is indescribable"; four cognitive yearning items, e.g., "I find myself wishing that things could be the way they were when I was with ____.") were retained for further analyses to develop the YSL-SF.

2.3.2 | Grief rumination

The 15-item Utrecht Grief Rumination Scale (UGRS; Dutch version: Eisma et al., 2012; Eisma et al., 2014b; German version: Doering, Barke, Friehs, & Eisma, 2018) was used to assess grief rumination, defined as repetitive and

recurrent thinking about causes and consequences of a loss. Participants indicated how often they experienced certain thoughts during the past month, on a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*). Example items include: "How often did you ask yourself in the past month ... what you have done to deserve this?" and "...if you could have prevented the death?" The internal consistency of the UGRS was, $\omega = 0.93$ and $\omega = 0.94$, for the Dutch and German samples, respectively.

2.3.3 | Loss-related avoidance

The Depressive and Anxious Avoidance in Prolonged Grief Questionnaire (DAAPGQ: Dutch version: Boelen & Van Den Bout, 2010) is a nine-item measure, assessing different types of bereavement-related avoidance. The Dutch version was translated into German using a translation procedure similar to the YSL translation procedure. In the present study, we used the four items measuring anxious avoidance, defined as deliberate avoidance of stimuli associated with the loss, driven by the fear of what will happen on confrontation with these reminders (Boelen & Eisma, 2015). An example item is: "I avoid situations and places that confront me with the fact that [-] is dead and will never return." Items are rated on an 8-point scale ranging from 1 (*not at all true for me*) to 8 (*completely true for me*). Reliability estimates of the anxious avoidance subscale of the DAAPGQ were, $\omega = .85$, for the Dutch sample and, $\omega = 0.79$, for the German sample.

2.3.4 | Depression symptoms

Depression symptoms were assessed with the Center for Epidemiologic Studies Depression (CESD) Scale (Radloff, 1977); Dutch version: Beekman et al., 1997; German version: Jahn et al., 2018). On the 20-item CESD Scale, respondents indicated how often they had experienced certain depressive feelings or exhibited certain depressive behavior in the past week on a 4-point scale ranging from 0 (*rarely*) to 3 (*most of the time*). The internal consistencies of the Dutch and German CESD Scale were $\omega = 0.91$ and $\omega = 0.94$, respectively.

2.3.5 | CG symptoms

CG symptoms were assessed with the ICG-R (ICG-R: Prigerson & Jacobs, 2001; Dutch version: Boelen, Van Den Bout, De Keijsjer, & Hoijsink, 2003). The Dutch ICG-R consists of 29 statements about the frequency and intensity of CG symptoms. Answers are given on a 5-point scale ranging from 0 (*almost never*) to 4 (*always*). Since only the ICG (Prigerson et al., 1995), but not its revised version (Prigerson & Jacobs, 2001) had been translated into German (Lumbeck, Brandstätter, & Geissner, 2012), items included only in ICG-R were added to the German version using a similar translation back-translation procedure as for the YSL items creating a 30-item German ICG-R. For optimal comparability, we also used a 30-item Dutch ICG-R. Next, we removed three items from the ICG-R in both languages assessing yearning or closely related constructs: "I think about ____ so much that it is hard for me to do the things I normally do" (item 2), "I feel myself longing and yearning for ____" (item 5), "I feel lonely ever since ____ died" (item 22). Reliabilities of the Dutch and German ICG-R were $\omega = 0.96$ and $\omega = 0.96$, respectively.

2.4 | Statistical analyses

Preliminary analyses included calculating frequencies or means, and standard deviations for sociodemographic, loss-related variables, and outcome measures. We also analyzed group differences between the Dutch, German

(and on selected variables American) samples on these variables using χ^2 -tests, *t* tests, and analysis of variances (ANOVAs).

We hypothesized that yearning would consist of a cognitive and an affective component. There were nine eligible items in the YSL (five cognitive, four affective), yet an even number of items (four cognitive, four affective) was judged to be preferable to calculate meaningful total yearning scores if our factor analysis would support a two-factor model. We, therefore, chose to run confirmatory factor analyses (CFA's) on eight-item and nine-item Dutch and German YSL-SF versions separately. Specifically, we tested two structural models for both versions comparing the fit of a one-factor model to the fit of a two-factor model with two correlated latent variables (i.e., affective and cognitive). If nine- and eight-item versions as well as one- and two-factor solutions did not differ between models, and both models would yield an acceptable fit, we decided that we would choose the most parsimonious model, with the lowest number of items. Since Item 4 ("I daydream about ____") was the cognitive item that had the lowest loading on the nine-item YSL-SF one-factor solution, we chose to remove this item for the eight-item YSL-SF CFAs.

Multiple indices were used to assess model fit, including the χ^2 statistic, the comparative fit index (CFI), the root mean square error of approximation (RMSEA), the Tucker-Lewis index (TLI), and the standardized root mean square residual (SRMR). Model fit was considered good (or acceptable) when the χ^2 was not significant (however, this measure is sensitive to sample size), when the CFI and TLI were ≥ 0.95 (acceptable: 0.90), when the RMSEA value was ≤ 0.05 (acceptable: 0.08), and when the SRMR was below or equal to 0.05 (acceptable: 0.08; Brown, 2015; Hu & Bentler, 1999; Kline, 2011). The χ^2 difference test was used to compare the one and two-factor models. To establish the factor structure of the English YSL-SF, we repeated the same CFA procedure (one vs. two-factor solution) in the English-language sample. Before conducting all CFAs, we checked for collinearity, outliers, univariate, and multivariate normality in both samples. Because some items were univariate nonnormally distributed (i.e., in the Dutch [German] sample, Items 4, 6, 8, 10, and 21 [Items 6 and 8] had absolute skew over 3 and Items 6 and 8 had absolute kurtosis over 3), the assumption of multivariate normality was not tenable. Therefore, we used the diagonally weighted least squares estimation (Li, 2016).

Next, we tested the cross-cultural equivalence of the Dutch and German versions of the YSL-SF by conducting multigroup CFAs on the most suitable factor model from the previous step. Measurement equivalence was tested by comparing a model in which the factor loadings and covariances among the factors were allowed to vary across both language groups (Model 1: configural invariance) to a model in which the factor loadings (Model 2: weak invariance) and the intercepts (Model 3: strong invariance) were constrained to be equal across language groups, establishing the tenability of invariance constraints (Brown, 2015). Tests of invariance were assessed by examining the χ^2 difference test (a nonsignificant $\Delta\chi^2$ suggests a significantly better fit for the more constrained model), as well as a change in CFI (< 0.01 is acceptable) since the change in χ^2 can be considered too strict (Cheung & Rensvold, 2002). We did not conduct cross-cultural comparisons with the American sample because of its different sample characteristics and smaller sample size.

To establish the reliability of the YSL-SF (and its subscales), internal consistency (omega), item-total correlations, and mean inter-item correlations were calculated in both samples. Fisher Z tests were used to compare item-total correlations between all language groups.

With respect to convergent validity, zero-order correlations were computed to assess associations between scores on the YSL-SF, grief rumination, and loss-related avoidance. Correlation coefficients between Dutch and German language groups were compared with Fisher Z tests.

With respect to criterion validity, ANOVA's were used in both language groups to examine whether yearning distinguishes groups that have been shown in previous studies to experience more yearning, that is, widow(er)s versus people who experienced other losses.

To further establish criterion validity, zero-order correlations of the YSL-SF with CG and depression symptoms were calculated and compared across Dutch and German samples using Fisher Z tests. Next, two hierarchical multiple regression analyses of associations between yearning and symptoms of CG and depression were

conducted in both samples. In both regression models (i.e., the first model with CG and second with depression as dependent variables), demographic (i.e., gender, age) and loss-related covariates (i.e., time since loss) which could potentially affect adjustment to the loss were entered in a first step. The second step included loss-related avoidance and grief rumination. Last, yearning was added to the model.

Nonparametric tests were conducted when test assumptions were violated (Fisher's exact test instead of χ^2 -test if cell counts <5; two-samples the Wilcoxon rank-sum test instead of t test when assumptions of normality were violated; Spearman's ρ instead of Pearson's correlation if assumptions of normality were violated; Kruskal-Wallis test instead of analysis of variance for violations of normality and homogeneity of variance; robust linear regression [bootstrapping] instead of regular linear regression). Missing data on item scores for all variables in the Dutch and German samples ($N = 548$) were minimal (0.3%; YSL: $n = 32$; YSL-SF: $n = 17$, ICG-R: $n = 39$; CESD: $n = 48$; UGRS: $n = 14$; DAAPGQ: $n = 9$) and thus all analyses are based on the raw data (i.e., listwise deletion). All statistical analyses were conducted in R (version 3.3.1). Factor structure of the YSL-SF was assessed with the package Lavaan (Rosseel, 2012). Comparisons of correlations between language groups were done using the R package Cocor (Diedenhofen & Musch, 2015). Bonferroni-corrections were applied to account for possible alpha error accumulation due to multiple comparisons for all correlation analyses (i.e., $\alpha = .05/24$ tests = 0.002).

3 | RESULTS

3.1 | Preliminary analyses

Descriptive statistics for all variables are shown in Table 1. As can be seen, no significant differences between Dutch and German participants were found on demographic and loss-related characteristics or grief rumination levels. German participants reported greater yearning, and symptoms of CG and depression than the Dutch participants. German participants also had higher loss-related avoidance scores compared to Dutch participants. The American treatment-seeking sample expressed greater yearning on the YSL-SF ($M = 26.99$; $SD = 7.19$) compared to the European samples, $F(2, 623) = 64.04$, $p < .001$, $\omega_p^2 = 0.17$ ($ps < .01$ in Tukey post hoc tests). Participants who were sent and returned their questionnaire by post expressed modestly higher levels of yearning ($M = 18.55$; $SD = 7.94$) compared to those who filled in the questionnaire in a face-to-face setting ($M = 17.00$; $SD = 7.75$), $W = 28007$, $p < .05$, $r = -.11$ (no differences were found on other variables).

3.2 | Confirmatory factor analyses

In a first step, we assessed a model with one latent variable (yearning) with one of the nine-item loadings constrained to 1.0 to establish a metric for the latent variable. In a second step, the two-factor model with five items loading on one-factor (cognitive) and four items loading on a second factor (affective) was tested. For the two-factor model, the loading of a single item on each of the two-factors was constrained to 1.0. All other factor loadings were freely estimated. Because the cognitive and affective component measure related types of yearning, factors were assumed to be correlated. The same procedure was repeated for an eight-item factorial analysis.

In both the Dutch and German sample and for both eight- and nine-item factorial analyses, one and two-factor models did not significantly differ in terms of fit as indicated by nonsignificant χ^2 difference tests (see Table 2 and Appendix A). For reasons of parsimony, we, therefore, proceeded with an eight-item one-factor solution, for which model fit indices suggested acceptable to good fit in both samples. Standardized parameter estimates for the eight-item YSL-SF for both samples are presented in Table 2. Appendix A and two present model indices for the nine-item YSL-SF and the two-factor, eight-item YSL-SF. Appendix C contains the full Dutch and German YSL-SF.

TABLE 1 Descriptive statistics for sociodemographic, loss-related, and symptom characteristics in the Dutch and German sample

Variable	Dutch sample (n = 313)		German sample (n = 235)		Total sample (N = 548)		Difference test Two-samples Wilcoxon, χ^2 or Fisher's exact test
	M/n	SD/%	M/n	SD/%	M/n	SD/%	
Age (in years)	45.02	18.53	47.36	17.03	46.02	17.93	$W = 34,398, p = .19$
Gender (male)	119	38.0	88	37.4	207	37.8	$\chi^2 = 0.02, p = .89$
Education							$p = .06$
Primary, high school, vocational education	170	54.3	119	50.6	289	52.7	
College/university	143	45.7	112	47.7	255	46.5	
Other	0	0	4	1.7	4	0.70	
Relationship to deceased							$\chi^2 = 7.48, p = .19$
Partner	28	8.9	26	11.1	54	9.90	
Child	5	1.6	11	4.7	16	2.90	
Sibling	41	13.1	21	8.9	62	11.30	
Parent	175	55.9	134	57.0	309	56.40	
Grandparent	45	14.4	29	12.3	74	13.50	
Other ^a	19	6.1	14	6.0	33	6.0	
Time since loss (in months) ^b	30.56	24.83	38.13	44.16	33.78	34.58	$W = 32,940, p = .06$
Cause of death (nonviolent)	286	91.4	222	94.5	508	92.7	$\chi^2 = 1.90, p = .17$
Expectedness of death							$\chi^2 = 0.66, p = .72$
Expected	166	53.0	125	53.2	291	53.10	
Unexpected	100	31.9	80	34.0	180	32.80	
Both or neither	47	15.0	30	12.8	77	14.10	
Yearning (YSL-SF) ^c	16.82	7.70	18.99	7.79	17.74	7.81	$W = 28,168, p < .001$
Complicated grief (ICG-R) ^d	48.92	17.94	53.29	19.39	50.8	18.69	$W = 28,358, p < .001$
Grief rumination (UGRS) ^e	27.80	9.60	28.72	10.54	28.2	10.02	$W = 33,702, p = .41$
Depression (CESD) ^f	29.62	7.92	32.75	10.39	30.92	9.15	$W = 27,202, p < .001$
Loss-related avoidance (DAAPGQ) ^g	10.74	6.72	11.78	6.68	11.18	6.71	$W = 31,904, p = .03$
Survey administration ^h							$\chi^2 = 33.25, p < .001$
Face-to-face	198	64.1	82	38.1	280	53.4	
Written (mail, email)	111	35.9	133	61.9	244	46.6	

Abbreviation: SD, standard deviation.

^aOther category includes death of a friend, coworker, as well as extended (e.g., aunt, uncle, cousin, step-parent, or-child). Two-samples Wilcoxon rank-sum test was calculated when assumptions of normality were violated. Fisher's exact test is reported for cell counts <5.

^bTotal: 531, Dutch: 307, German: 224.

^cTotal: 531, Dutch: 302, German: 229.

^dTotal: 535, Dutch: 303, German: 232.

^eTotal: 521, Dutch: 305, German: 216.

^fTotal: 541, Dutch: 313, German: 230.

^gTotal: 524, Dutch: 309, German: 215.

^hTotal: 545, Dutch: 313, German: 232.

TABLE 2 Results of the CFA of the Dutch and German eight-item YSL-SF: overall model fit and multigroup comparisons

Model	Model fit indices					Model comparison tests		
	χ^2 (df)	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$ (df)	Δ CFI	Constraint tenable
Dutch YSL-SF								
1. One-factor model	47.69*** (20)	0.958	0.941	0.067	0.034			
2. Two-factor model with correlated factors	46.68*** (19)	0.958	0.937	0.069	0.033	1.01 (1)		
German YSL-SF								
1. One-factor model	24.26 (20)	0.993	0.990	0.031	0.025			
2. Two-factor model with correlated factors	23.28 (19)	0.993	0.990	0.032	0.024	0.98 (1)		
Multigroup comparisons (one-factor model)								
Model 1: unconstrained model (configural invariance)	71.49** (40)	0.975	0.965	0.055	0.030			-
Model 2: weak invariance (equal factor loadings)	96.23*** (47)	0.961	0.954	0.063	0.046			
Model 1 vs. Model 2						24.74*** (7)	.014	no

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Abbreviations: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; TLI, Tucker-Lewis Index; χ^2 , Chi-square; YSL-SF, Yearning in Situations of Loss Short Form.

In the next step, we examined the cross-cultural equivalence across the Dutch and German samples of the optimal model from the previous CFAs (i.e., one-factor eight-item solution). First, the unconstrained model (Model 1), which served as a baseline model in the multigroup comparisons, was tested. Excellent fit indices suggest evidence for a configural invariance model, which placed no constraints across the Dutch and German samples (see Table 2). The test of weak or loading invariance resulted in a significant difference in χ^2 values, $\Delta\chi^2(\Delta df) = 24.74 (7)$, $p < .05$, and a difference in CFI of >0.01 , suggesting that factor loadings are not equal between language groups. Given that loading invariance could not be established even when modification indices were considered, we did not test for strong invariance. Appendix B additionally contains multigroup comparisons for the two-factor, eight-item solution (these notably demonstrate weak factorial equivalence).

To test the factor structure of the eight-item YSL-SF in the American sample, we conducted the same factor analyses on one and two-factor models (see Table 3). Fit indices showed a better fit for the model containing two correlated factors, $\chi^2(19, N = 95) = 29.58$, $p > .05$, CFI = 0.952, RMSEA = 0.077, than the one-factor model, $\chi^2(20$,

TABLE 3 Results of the CFA of the English eight-item YSL-SF: overall model fit

Model	Model fit indices				
	χ^2 (df)	CFI	TLI	RMSEA	SRMR
1. One-factor model	34.55* (20)	0.934	0.908	0.088	0.047
2. Two-factor model with correlated factors	29.58 (19)	0.952	0.930	0.077	0.044

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Abbreviations: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; TLI, Tucker-Lewis Index; χ^2 , Chi-square; YSL-SF, Yearning in Situations of Loss Short Form.

$N = 95$) = 34.55, $p < .05$, CFI = 0.934, RMSEA = 0.088. The two-factor solution was also favored by a significant χ^2 difference test, $\Delta\chi^2(\Delta df) = 4.99 (1)$, $p < .05$.

3.3 | Reliability

The internal consistency of the total YSL-SF was excellent in the Dutch ($\omega = 0.91$) and German ($\omega = 0.91$) samples. Internal consistency would not improve if any items were dropped. The reliability of the YSL-SF was further supported by the item-total correlations. All corrected item-total correlations of the individual items with the total score were moderate to high for the Dutch ($0.62 \geq r_{itc} \geq 0.83$) and German ($0.68 \geq r_{itc} \geq 0.79$) YSL-SF. The corrected mean item-total correlation was, $r_{itc} = 0.75$, in the Dutch and, $r_{itc} = 0.74$, in the German sample. Fisher Z tests indicated that item-total correlations did not differ between groups except for two items. The mean inter-item correlation was $r = .56$ for the total YSL-SF in the Dutch sample, and $r = .56$ for the total YSL-SF in the German sample.

In the American sample, the internal consistency of the eight-item YSL-SF and its subscales was: $\omega_{total} = 0.90$, $\omega_{affective} = 0.87$; $\omega_{cognitive} = 0.76$. Internal consistency would not improve if any items were dropped. The reliability of the YSL-SF and its subscales was further supported by the item-total correlations. All corrected item-total correlations of the individual items with the total score were high ($0.56 \geq r_{itc} \geq 0.81$). The corrected mean item-total correlation was, $r_{itc} = 0.73$ in the American sample. Furthermore, item scores all correlated positively with the subscales they belonged to. High correlations were found between items and total scores on the YSL-SF subscales affective ($0.73 \geq r_{itc} \geq 0.81$) and cognitive ($0.56 \geq r_{itc} \geq 0.78$). The mean inter-item correlation was $r = .52$ for the total YSL-SF, and $r = .62$ and $r = .47$ for the subscales affective and cognitive yearning, respectively.

3.3.1 | Convergent validity

In both the Dutch and German samples, correlations between yearning (YSL-SF) and grief rumination (UGRS) were significant and positive, $\rho = .64$, $\rho = .67$, respectively. Significant, positive associations also emerged between yearning (YSL-SF) and loss-related avoidance (DAAPGQ) in the Dutch, $\rho = .44$, and German sample, $\rho = .51$. Fisher Z tests suggest that these correlations did not differ between the Dutch and German samples.

3.3.2 | Criterion-related validity

Levels of yearning differed significantly between loss types in the Dutch, $H(4) = 20.84$, $p < .001$, and German sample, $H(4) = 24.77$, $p < .001$ (note: these analyses did not include people bereaved of a child because this group was too small). Post hoc comparisons using Dunn's test adjusted with Benjamini-Hochberg method indicated that Dutch participants who experienced the death of their romantic partner ($M = 23.26$, $SD = 8.34$; $Mdn = 22.00$) expressed significantly greater yearning compared participants who lost a parent ($M = 16.20$, $SD = 7.34$; $Mdn = 14.00$, $p < .001$), grandparent ($M = 14.84$, $SD = 6.86$; $Mdn = 13.00$, $p < .001$), sibling ($M = 16.53$, $SD = 6.66$; $Mdn = 14.50$, $p < .01$), or other loved one ($M = 17.79$, $SD = 9.11$; $Mdn = 15.00$, $p < .05$).

Using the same analyses, similar results were found in the German sample; participants who experienced the death of their romantic partner ($M = 27.30$, $SD = 8.58$; $Mdn = 30.00$) reported significantly greater yearning compared to participants who lost a parent ($M = 18.15$, $SD = 6.95$; $Mdn = 17.00$, $p < .001$), grandparent ($M = 15.54$, $SD = 5.48$; $Mdn = 15.00$, $p < .001$), sibling ($M = 19.43$, $SD = 8.97$; $Mdn = 16.00$, $p < .001$), or other loved one ($M = 17.92$, $SD = 7.04$; $Mdn = 14.50$, $p < .001$).

Furthermore, zero-order correlations (see Table 4) suggested that YSL-SF scores were more strongly associated with CG ($\rho = .80$, $\rho = .81$) than depressive symptom scores ($\rho = .36$, $\rho = .42$) in the Dutch and German sample,

TABLE 4 Spearman's Rho correlations of the YSL-SF with measures of complicated grief, depression, grief rumination, and loss-related avoidance

	Sample	Rumination (UGRS)	Loss-related avoidance (DAAPGQ)	Complicated grief (ICG-R) ^a	Depression (CESD)
YSL-SF: total score	Dutch	0.64	0.51	0.80	0.36
	German	0.67	0.44	0.81	0.42

Note: All effects are significant at $p < .001$.

Abbreviations: CESD, Center for Epidemiologic Studies Depression Scale; DAAPGQ, Depressive and Anxious Avoidance in Prolonged Grief Questionnaire; ICG-R, Inventory of Complicated Grief-Revised; UGRS, Utrecht Grief Rumination Scale; YSL-SF, Yearning in Situations of Loss Short Form.

^aThree items capturing (constructs similar to) yearning were removed from the ICG-R to reduce content overlap with the YSL-SF.

respectively. The associations of yearning with CG and depression were significantly different in the Dutch ($Z = 11.02$; $p < .001$) and German sample ($Z = 9.00$; $p < .001$).

Hierarchical multiple regressions on CG and depression symptoms provided further evidence for the criterion validity of the YSL-SF (see Table 5). Yearning was concurrently associated with symptom-levels of CG over and above relevant demographic and loss-related variables and grief rumination and loss-related avoidance in the

TABLE 5 Multiple hierarchical regression analyses on complicated grief and depression symptoms

	Dutch sample (n = 313)			German sample (n = 235)		
	β	adj. R^2	ΔR^2	β	adj. R^2	ΔR^2
Outcome: complicated grief (ICG-R) ^a						
Step 1		.07	-		.04	-
Age	-.26***			-.05		
Gender	.06			.24***		
Time since loss	-.05			-.04		
Step 2		.63	.56***		.69	.65***
Grief rumination (UGRS)	.62***			.73***		
Loss-related avoidance (DAAPGQ)	.30***			.17***		
Step 3		.76	.13***		.79	.10***
Yearning (YSL-SF)	.50***			.45***		
Outcome: depression (CESD)						
Step 1		.04	-		-.00	-
Age	-.20***			-.00		
Gender	.05			.09		
Time since loss	.01			-.09		
Step 2		.27	.23***		.43	.43***
Grief rumination (UGRS)	.35***			.69***		
Loss-related avoidance (DAAPGQ)	.26***			-.05		
Step 3		.27	.00		.44	.01
Yearning (YSL-SF)	-.07			.13		

Note: *** $p < .001$.

Abbreviations: CESD, Center for Epidemiologic Studies Depression Scale; DAAPGQ, Depressive and Anxious Avoidance in Prolonged Grief Questionnaire; ICG-R, Inventory of Complicated Grief-Revised; UGRS, Utrecht Grief Rumination Scale; YSL-SF, Yearning in Situations of Loss Short Form.

^aThree items capturing (constructs related to) yearning were removed from the ICG-R to reduce content overlap with the YSL-SF.

Dutch sample, $F(6, 281) = 150.10$, $p < .001$, adj. $R^2 = .076$, $\Delta R^2 = .13$, and the German sample, $F(6, 206) = 131.60$, $p < .001$, adj. $R^2 = .079$, $\Delta R^2 = 0.10$. For depression symptoms, adding yearning to the model in the final step did not significantly improve the amount of variance explained in either sample.

4 | DISCUSSION

The aim of the present study was to develop and psychometrically evaluate a short form to assess yearning across three languages. Our analyses supported the reliability and validity of the YSL-SF in Dutch and German community-based bereaved samples and in an American treatment-seeking bereaved sample.

Based on theoretical and practical arguments, we tested both eight- and nine-item one and two-factor models, but decided to choose the more parsimonious eight-item one-factor structure if a similar model fit was found for the tested models. The construct validity of the selected eight-item YSL-SF was supported by its factor structure. An eight-item one-factor structure provided an acceptable to good model fit for the Dutch and German versions of the YSL-SF. However, a factorial comparison could not demonstrate the factorial equivalence of the Dutch and German YSL-SF. Thus, while the Dutch and German YSL-SF appear to capture the same construct, factor loadings are not equivalent, and raw scores cannot be compared between language versions without restrictions. Consistent with theoretical assumptions, a two-factor model for the YSL-SF, demonstrating affective and cognitive components of yearning, was supported in an American widowed treatment-seeking sample. Future research in large diverse bereaved samples is needed to examine if the detected differences in factor structures reflect differences between clinical and nonclinical grief responses, kinship relations with the deceased, culture, or language.

Reliability of the Dutch, German, and English YSL-SF was demonstrated by omega analyses, inter-item correlations, and item-total correlations for the total scale proved to be highly similar across the three versions of the YSL-SF. The reliability of the English YSL-SF cognitive and affective yearning subscales was also supported.

Convergent validity was demonstrated by moderate to strong positive associations between Dutch and German YSL-SF scores and grief rumination and loss-related avoidance. Theoretically, these findings are in line with the idea that grief rumination and yearning are conceptually distinct, yet closely related constructs. A widow may repeatedly ruminatively rehash the events leading up to the death (Davis et al., 1995), so that she may later vividly imagine how much brighter her future would be like if her husband would be alive today, which is accompanied by strong feelings of longing for his presence. Moreover, the positive associations between YSL-SF scores and loss-related avoidance suggest that yearning may play a role in the cognitive avoidance of aspects of the loss that are most difficult to confront, such as the permanence of separation from the deceased (Boelen et al., 2006). Indeed, yearning has been conceptualized as a repetitive thought process (Kaplan et al., 2018), and such processes (i.e., worry, rumination) have been found to be linked with the avoidance of internal experiences (Naragon-Gainey, McMahon, & Chacko, 2017). Potentially, recurrent cognitive activity after loss serves to cognitively suppress more threatening loss-related cognitions (Eisma, de Lang, & Boelen, in press; Eisma & Stroebe, 2017; Eisma et al., 2013). Clinically, these robust interrelations between yearning, rumination, and avoidance could partly explain the proven effectiveness of exposure in the treatment of CG (e.g., Boelen et al., 2007; Bryant et al., 2014).

Three analyses provided evidence for the criterion-related validity of the YSL-SF in the Dutch and German samples. First, in line with previous research (Robinaugh et al., 2016), we demonstrated that widow(er)s experience more yearning than people who lose other loved ones (but note that these comparisons did not include bereaved parents). This is in line with findings that conjugal bereavement is a risk factor for CG (Burke & Neimeyer, 2013), and suggests that the loss of an intimate partner elicits a relatively strong desire for reunion with the deceased in those left behind. Next, YSL-SF scores were more strongly related to CG symptoms than depression symptoms, confirming the centrality of yearning within CG, as also demonstrated in network analyses (e.g., Malgaroli, Maccallum, & Bonanno, 2018), and expert opinion, illustrated by yearning's prominent place within PCBD in DSM-5 and PGD in ICD-11 (American Psychiatric Association, 2013; World Health Organization, 2018). Last, hierarchical

regression analyses demonstrated that YSL-SF scores were uniquely associated with other CG symptoms, even after controlling for relevant background characteristics, loss avoidance, and grief rumination. This finding did not hold in similar analyses using depression symptoms as a dependent variable, providing further evidence for the unique role of yearning in CG.

All in all, results show that yearning can be reliably and validly assessed with the YSL-SF. A key strength of our study was the use of samples from three different countries, which allowed us to examine the equivalence of factor structures and demonstrate high consistency in convergent and criterion validity evidence for the Dutch and German YSL-SF. Our factor and reliability analyses further provided preliminary evidence for the reliability and construct validity of an English version of the YSL-SF in a treatment-seeking sample.

Some limitations of this study are notable. First, the Dutch and German samples were both convenience samples, with a relative overrepresentation of highly-educated females who lost a parent. It, therefore, remains to be established whether current findings can be generalized across samples with more lower-educated people, more men, and people with different relationships with the deceased. Second, the study design was cross-sectional, precluding conclusions on predictive validity and test-retest reliability. Third, while we were able to perform factorial comparisons with the Dutch and German samples, the American sample was too small and divergent in sample composition to incorporate the English YSL-SF in these comparisons. Additionally, various types of validity were not investigated for the English YSL-SF, so future work should further establish the validity for this version of the YSL-SF.

5 | CONCLUSION

Despite these limitations, the present study is the first to psychometrically evaluate an easily-administrable measure to assess yearning across multiple languages. We hope that the development and establishment of the validity of the YSL-SF will facilitate systematic research into the causes, correlates, and consequences of yearning, thereby increasing understanding of a cognitive-affective process that is commonly assumed to play a central role in disturbed grief reactions.

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REFERENCES

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, D.C.: American Psychiatric Publishing.
- Beekman, A. T., Deeg, D. J. H., Van Limbeek, J., Braam, A. W., De Vries, M. Z., & Van Tilburg, W. (1997). Brief communication.: Criterion validity of the Center for Epidemiologic Studies Depression scale (CES-D): Results from a community-based sample of older subjects in the Netherlands. *Psychological Medicine*, 27(1), 231–235.
- Boddez, Y. (2018). The presence of your absence: A conditioning theory of grief. *Behaviour Research and Therapy*, 106, 18–27.
- Boelen, P. A., de Keijser, J., van den Hout, M. A., & van den Bout, J. (2007). Treatment of complicated grief: A comparison between cognitive-behavioral therapy and supportive counseling. *Journal of Consulting and Clinical Psychology*, 75(2), 277–284. <https://doi.org/10.1037/0022-006X.75.2.277>
- Boelen, P. A., & Eisma, M. C. (2015). Anxious and depressive avoidance behavior in post-loss psychopathology: A longitudinal study. *Anxiety, Stress, Coping*, 28(5), 587–600. <https://doi.org/10.1080/10615806.2015.1004054>

- Boelen, P. A., & Van Den Bout, J. (2010). Anxious and depressive avoidance and symptoms of prolonged grief, depression, and post-traumatic stress-disorder. *Psychologica Belgica*, 50(1-2), 49–67.
- Boelen, P. A., Van Den Bout, J., De Keijser, J. O. S., & Hoijtink, H. (2003). Reliability and validity of the Dutch version of the Inventory of Traumatic Grief (ITG). *Death Studies*, 27(3), 227–247.
- Boelen, P. A., Van Den Hout, M. A., & Van Den Bout, J. (2006). A cognitive-behavioral conceptualization of complicated grief. *Clinical Psychology: Science and Practice*, 13(2), 109–128. <https://doi.org/10.1111/j.1468-2850.2006.00013.x>
- Bowlby, J. (1973). *Attachment and loss: Separation, Anxiety and Anger* (Vol. 2). New York: Basic Books.
- Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). New York, NY: The Guilford Press.
- Bryant, R. A., Kenny, L., Joscelyne, A., Rawson, N., Maccallum, F., Cahill, C., ... Nickerson, A. (2014). Treating prolonged grief disorder: A randomized clinical trial. *JAMA Psychiatry*, 71(12), 1332–1339. <https://doi.org/10.1001/jamapsychiatry.2014.1600>
- Burke, L. A., & Neimeyer, R. A. (2013). Prospective risk factors for complicated grief: A review of the empirical literature. In M. S. Stroebe, H. Schut, J. van der Bout & P. Boelen (Eds.), *Complicated grief: Scientific foundations for healthcare professionals* (pp. 145–161). New York: Routledge.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, 9(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5
- Davis, C. G., Lehman, D. R., Wortman, C. B., Silver, R. C., & Thompson, S. C. (1995). The undoing of traumatic life events. *Personality and Social Psychology Bulletin*, 21(2), 109–124.
- Davis, D., Shaver, P. R., & Vernon, M. L. (2003). Physical, emotional, and behavioral reactions to breaking up: The roles of gender, age, emotional involvement, and attachment style. *Personality and Social Psychology Bulletin*, 29(7), 871–884.
- Diedenhofen, B., & Musch, J. (2015). Cocor: A comprehensive solution for the statistical comparison of correlations. *PLoS One*, 10(4), e0121945. <https://doi.org/10.1371/journal.pone.0121945>
- Doering, B. K., Barke, A., Friehs, T., & Eisma, M. C. (2018). Assessment of grief-related rumination: Validation of the German version of the Utrecht Grief Rumination Scale (UGRS). *BMC Psychiatry*, 18(1), 43. <https://doi.org/10.1186/s12888-018-1630-1>
- Eisma, M. C., de Lang, T. A., & Boelen, P. A. (in press). How thinking hurts: Rumination, worry, and avoidance processes in adjustment to bereavement. *Clinical Psychology and Psychotherapy*. <https://doi.org/10.1002/cpp.2440>
- Eisma, M. C., Rinck, M., Stroebe, M. S., Schut, H. A., Boelen, P. A., Stroebe, W., & van den Bout, J. (2015). Rumination and implicit avoidance following bereavement: An approach avoidance task investigation. *Journal of Behavior Therapy and Experimental Psychiatry*, 47, 84–91. <https://doi.org/10.1016/j.jbtep.2014.11.010>
- Eisma, M. C., Schut, H. A., Stroebe, M. S., van den Bout, J., Stroebe, W., & Boelen, P. A. (2014a). Is rumination after bereavement linked with loss avoidance? Evidence from eye-tracking. *PLoS One*, 9(8), e104980. <https://doi.org/10.1371/journal.pone.0104980>
- Eisma, M. C., & Stroebe, M. S. (2017). Rumination following bereavement: An overview. *Bereavement Care*, 36(2), 58–64. <https://doi.org/10.1080/02682621.2017.1349291>
- Eisma, M. C., Stroebe, M., Schut, H., Boelen, P., van den Bout, J., & Stroebe, W. (2012). 'Waarom is dit mij overkomen?' Ontwikkeling en validatie van de Utrechtse RouwRuminatieSchaal. *Gedragstherapie*, 43, 369–388.
- Eisma, M. C., Stroebe, M. S., Schut, H. A., Stroebe, W., Boelen, P. A., & van den Bout, J. (2013). Avoidance processes mediate the relationship between rumination and symptoms of complicated grief and depression following loss. *Journal of Abnormal Psychology*, 122(4), 961–970. <https://doi.org/10.1037/a0034051>
- Eisma, M. C., Stroebe, M. S., Schut, H. A. W., van den Bout, J., Boelen, P. A., & Stroebe, W. (2014b). Development and psychometric evaluation of the Utrecht Grief Rumination Scale. *Journal of Psychopathology And Behavioral Assessment*, 36, 165–176.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analyses: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.
- Jahn, R., Baumgartner, J., van den Nest, M., Friedrich, F., Alexandrowicz, R., & Wancata, J. (2018). Kriteriumsvalidität der deutschsprachigen Version der CES-D in der Allgemeinbevölkerung. *Psychiatrische Praxis* 2018, 45(08), 434–442. <https://doi.org/10.1055/a-0584-9803>
- Kaplan, D. M., Palitsky, R., Carey, A. L., Crane, T. E., Havens, C. M., Medrano, M. R., ... O'Connor, M. F. (2018). Maladaptive repetitive thought as a transdiagnostic phenomenon and treatment target: An integrative review. *Journal of Clinical Psychology*, 74(7), 1126–1136. <https://doi.org/10.1002/jclp.22585>
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford.
- Li, C.-H. (2016). Confirmatory factor analysis with ordinal data: Comparing robust maximum likelihood and diagonally weighted least squares. *Behavior Research Methods*, 38(3), 936–949.
- Lumbeck, G., Brandstätter, M., & Geissner, E. (2012). Erstvalidierung der deutschen Version des "Inventory of Complicated Grief" (ICG-D). *Zeitschrift Für Klinische Psychologie Und Psychotherapie*, 41(4), 243–248. <https://doi.org/10.1026/1616-3443/a000172>

- Maciejewski, P. K., Zhang, B., Block, S. D., & Prigerson, H. G. (2007). An empirical examination of the stage theory of grief. *Journal of the American Medical Association*, 297(7), 716–723. <https://doi.org/10.1001/jama.297.7.716>
- Malgaroli, M., Maccallum, F., & Bonanno, G. (2018). Symptoms of persistent complex bereavement disorder, depression, and PTSD in a conjugally bereaved sample: A network analysis. *Psychological Medicine*, 48(14), 1–10. <https://doi.org/10.1017/S0033291718001769>
- Meyer, T. J., Miller, M. L., Metzger, R. L., & Borkovec, T. D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*, 28(6), 487–495.
- Morina, N. (2011). Rumination and avoidance as predictors of prolonged grief, depression, and posttraumatic stress in female widowed survivors of war. *The Journal of Nervous and Mental Disease*, 199(12), 921–927.
- Naragon-Gainey, K., McMahon, T. P., & Chacko, T. P. (2017). The structure of common emotion regulation strategies: A meta-analytic examination. *Psychological Bulletin*, 143(4), 384–427. <https://doi.org/10.1037/bul0000093>
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking Rumination. *Perspectives on Psychological Science*, 3(5), 400–424. <https://doi.org/10.1111/j.1745-6924.2008.00088.x>
- O'Connor, M. F., & Sussman, T. J. (2014). Developing the yearning in situations of loss scale: Convergent and discriminant validity for bereavement, romantic breakup, and homesickness. *Death Studies*, 38(6–10), 450–488. <https://doi.org/10.1080/07481187.2013.782928>
- O'Connor, M. F., Wellisch, D. K., Stanton, A. L., Eisenberger, N. I., Irwin, M. R., & Lieberman, M. D. (2008). Craving love? Enduring grief activates brain's reward center. *NeuroImage*, 42(2), 969–972. <https://doi.org/10.1016/j.neuroimage.2008.04.256>
- Prigerson, H. G., & Jacobs, S. (2001). Traumatic grief as a distinct disorder: A rationale, consensus criteria, and a preliminary empirical test. In M. S. Stroebe, W. Stroebe & R. O. Hansson (Eds.), *Handbook of Bereavement Research* (pp. 613–645). Washington, DC: American Psychological Association.
- Prigerson, H. G., Maciejewski, P. K., Reynolds, C. F., Bierhals, A. J., Newsom, J. T., Fasiczka, A., ... Miller, M. (1995). Inventory of complicated grief: A scale to measure maladaptive symptoms of loss. *Psychiatry Research*, 59(1–2), 65–79. [https://doi.org/10.1016/0165-1781\(95\)02757-2](https://doi.org/10.1016/0165-1781(95)02757-2)
- Radloff, L. S. (1977). The CES-D Scale A Self-Report Depression Scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385–401. <https://doi.org/10.1177/014662167700100306>
- Robinaugh, D. J., Mauro, C., Bui, E., Stone, L., Shah, R., Wang, Y., ... Simon, N. M. (2016). Yearning and its measurement in complicated grief. *Journal of Loss and Trauma*, 21(5), 410–420. <https://doi.org/10.1080/15325024.2015.1110447>
- Roese, N. J., & Epstude, K. (2017). The functional theory of counterfactual thinking: New evidence, new challenges, new insights. *Advances in Experimental Social Psychology*, 56, 1–79.
- Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48(2), 1–36.
- Shear, M. K., Frank, E., Houck, P. R., & Reynolds, C. F., 3rd (2005). Treatment of complicated grief: A randomized controlled trial. *Journal of the American Medical Association*, 293(21), 2601–2608. <https://doi.org/10.1001/jama.293.21.2601>
- Shear, K., Monk, T., Houck, P., Melhem, N., Frank, E., Reynolds, C., & Sillowash, R. (2007). An attachment-based model of complicated grief including the role of avoidance. *European Archives of Psychiatry and Clinical Neuroscience*, 257(8), 453–461. <https://doi.org/10.1007/s00406-007-0745-z>
- Simon, N. M., Wall, M. M., Keshaviah, A., Dryman, M. T., LeBlanc, N. J., & Shear, M. K. (2011). Informing the symptom profile of complicated grief. *Depression and Anxiety*, 28(2), 118–126. <https://doi.org/10.1002/da.20775>
- Stroebe, M., Boelen, P. A., van den Hout, M., Stroebe, W., Salemink, E., & van den Bout, J. (2007). Ruminative coping as avoidance: A reinterpretation of its function in adjustment to bereavement. *European Archives of Psychiatry and Clinical Neuroscience*, 257(8), 462–472. <https://doi.org/10.1007/s00406-007-0746-y>
- Tallis, F., Eysenck, M., & Mathews, A. (1992). A questionnaire for the measurement of nonpathological worry. *Journal of Personality and Individual Differences*, 13(2), 161–168.
- Worden, J. (2009). *Grief counseling and grief therapy: A handbook for the mental health practitioner* (4th ed.). New York: Springer.
- World Health Organization. (2018). International statistical classification of diseases and related health problems (Vol. 11th revision).

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APPENDIX A

Results of the CFA of the Dutch and German nine-item YSL-SF: overall model fit

Model	Model fit indices					Model comparison tests
	χ^2 (df)	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$ (df)
Dutch YSL-SF						
1. One-factor model	54.68* (27)	0.962	0.950	0.058	0.032	
2. Two-factor model with correlated factors	53.41* (26)	0.963	0.948	0.059	0.031	1.27 (1)
German YSL-SF						
1. One-factor model	37.82 (27)	0.984	0.979	0.042	0.030	
2. Two-factor model with correlated factors	35.72 (26)	0.986	0.980	0.041	0.029	2.10 (1)

Abbreviations: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; TLI, Tucker-Lewis Index; χ^2 , Chi square; YSL-SF, Yearning in Situations of Loss Short Form.

* $p < .05$.

APPENDIX B

Results of the CFA of the Dutch and German eight-item YSL-SF: overall model fit and multigroup comparisons for the two-factor model

Model	Model fit indices				Model comparison tests			
	χ^2 (df)	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$ (df)	Δ CFI	Constraint tenable
Dutch YSL-SF								
1. One-factor model	47.69*** (20)	0.958	0.941	0.067	0.034			
2. Two-factor model with correlated factors	46.68*** (19)	0.958	0.937	0.069	0.033	1.01 (1)		
German YSL-SF								
1. One-factor model	24.26 (20)	0.993	0.990	0.031	0.025			
2. Two-factor model with correlated factors	23.28 (19)	0.993	0.990	0.032	0.024	0.98 (1)		
Multigroup comparisons (two-factor model with correlated factors)								
Model 1: Unconstrained model (configural invariance)	69.56* (38)	0.975	0.963	0.056	0.029			-
Model 2: Weak invariance (equal factor loadings)	72.26** (44)	0.978	0.972	0.049	0.039			
Model 1 vs. Model 2						2.70 (6)	.006	yes
Model 3: Strong invariance (equal intercepts)	149.79*** (50)	0.922	0.912	0.087***	0.055			
Model 2 vs. Model 3						77.53*** (6)	.06	no

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Abbreviations: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; TLI, Tucker-Lewis Index; χ^2 , Chi-square; YSL-SF, Yearning in Situations of Loss Short Form.

APPENDIX C

Yearning in Situations of Loss Short Form (YSL-SF)—Nederlands

Geeft u alstublieft aan hoe vaak u zich op een bepaalde manier voelt door een van de reacties te selecteren. Elke lege plek verwijst naar de dierbare die u verloren heeft.

Nooit		Soms		Altijd	
1	2	3	4	5	

1.	Ik merk dat ik wens dat de dingen zouden zijn zoals ze waren toen ik bij ____ was.	1	2	3	4	5
2.	Ik heb het gevoel dat dingen perfect waren voordat ik ____ verloor.	1	2	3	4	5
3.	Ik beeld me in dat ik dingen kies om in ruil daarvoor ____ terug te krijgen.	1	2	3	4	5
4.	Het gevoel dat ik ____ terug wil is zo sterk dat het onbeschrijfelijk is.	1	2	3	4	5
5.	Ik stel me graag voor wat ik zou doen als ____ bij mij zou zijn.	1	2	3	4	5
6.	Ik wens dat ik de dingen zou kunnen doen die ik altijd deed met ____.	1	2	3	4	5
7.	Ik mis ____ evenveel als of meer dan ieder ander person die ik gemist heb.	1	2	3	4	5
8.	Ik heb het gevoel dat ik compleet gelukkig zou zijn als ik bij ____ zou zijn.	1	2	3	4	5

Yearning in Situations of Loss Short Form (YSL-SF)—Deutsch

Bitte geben Sie durch Ankreuzen einer der Antworten an, wie oft Sie sich wie beschrieben fühlen. Jede Leerstelle ____ bezieht sich auf die geliebte Person, die Sie verloren haben.

Nie		Manchmal		Immer	
1	2	3	4	5	

1.	Ich wünsche mir, dass die Dinge so wären, wie damals mit ____.	1	2	3	4	5
2.	Ich habe das Gefühl, dass vor dem Verlust von ____ die dinge perfekt waren.	1	2	3	4	5
3.	Ich stelle mir Dinge vor, die ich aufzugeben bereit wäre, wenn ich dafür ____ zurück bekäme.	1	2	3	4	5
4.	Das Gefühl, wie gerne ich ____ zurück hatte, kann man nicht beschreiben.	1	2	3	4	5
5.	Ich stelle mir gerne vor, was ich tun würde, wenn ____ bei mir wäre.	1	2	3	4	5
6.	Ich wünschte, ich könnte die Dinge tun, die ich mit ____ gemeinsam unternommen habe.	1	2	3	4	5
7.	Ich vermisse ____ so sehr oder mehr als andere Menschen.	1	2	3	4	5
8.	I habe das Gefühl das ich völlig glücklich wäre, wenn ____ bei mir wäre.	1	2	3	4	5

Yearning in Situations of Loss Short Form (YSL-SF)—English

Please indicate how often you feel the way described by selecting one of the responses. Each blank refers to your loved one that died.

		Never		Sometimes		Always	
		1	2	3	4	5	
1.	I find myself wishing that things could be the way they were when I was with ____.	1	2	3	4	5	
2.	I feel like things used to be so perfect before I lost ____.	1	2	3	4	5	
3.	I imagine and choose things I would be willing to give up in exchange for having ____ back.	1	2	3	4	5	
4.	The feeling of wanting ____ back is so strong it is indescribable.	1	2	3	4	5	
5.	I like to imagine what I would do if ____ were with me.	1	2	3	4	5	
6.	I wish I could do the things I used to do with ____.	1	2	3	4	5	
7.	I miss ____ as much or more than I have missed any other person.	1	2	3	4	5	
8.	I feel like I could be completely happy if I was with ____.	1	2	3	4	5	