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Research Paper

Satisfaction with life after partner loss: Time-varying and time-invariant components and their associations with prolonged grief

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ABSTRACT

Background: Recovery after the death of a loved one involves decreasing sadness and grief, but also involves maintaining and strengthening satisfaction with life (SWL). Greater SWL may buffer the development of emotional problems following loss, including symptoms of prolonged grief. There is limited knowledge on how SWL may develop following loss and how it relates to such symptoms. The aim of this study was to examine to what extent SWL following partner-loss was characterized by time-invariant (trait-like) and time-varying (state-like) components and to examine associations of these components with long-term prolonged grief.

Method: Data were available from elderly bereaved people who lost their partner. They provided self-reported data on SWL at two, six, 13, 18 and 48 months post-loss and rated prolonged grief severity at 48 months. Latent trait-state-occasion (TSO) modeling was employed to distinguish the time-invariant and time-varying components of SWL. Regression analysis tested associations of these components with prolonged grief at 48 months.

Results: In this sample, SWL consisted of significant time-invariant and time-varying components. The time-varying components were larger than the time-invariant component at 4 of 5 assessment points. At 48 months post-loss, the time-varying component of SWL was more strongly associated with concurrently assessed prolonged grief than was its time-invariant component.

Conclusion: After partner loss, SWL appears to be more strongly “state-like” than “trait-like”. This suggests that it may be successfully boosted by external influences (including bereavement care interventions).

Introduction

The death of a loved one is a frequently experienced and potentially disrupting event, although evidence shows that most people experience stable healthy functioning in the face of loss (Galatzer-Levy, Huang, & Bonanno, 2018). In recent years, a growing number of studies have examined the nature and prevalence of emotional problems following loss, including depression, traumatic stress, and prolonged grief (Komischke-Konnerup, Zachariae, Johannsen, Nielsen, & O'Connor, 2021) as well as static and malleable factors associated with these problems (e.g., including characteristics of the loss and cognitive behavioural coping processes; see, e.g., Boelen and Smid 2017; Shear 2015). Understanding the negative emotional consequences of loss and underlying mechanisms thereof has great theoretical and clinical relevance. However, the process of adjusting to the death of a loved one not

only involves mitigating negative psychological outcomes (e.g., sadness, grief), but also involves maintaining and strengthening positive psychological functioning (cf. Wood & Tarrier, 2010). One critical manifestation of positive functioning is satisfaction with life (SWL), referring to the subjective appraisal of one's quality of life (Diener, Emmons, Larsen, & Griffin, 1985). Being able to experience life as satisfying in the midst of adversity may buffer the potential development of prolonged grief reactions. Understanding how SWL may develop in the face of bereavement and how it relates to negative outcomes, including prolonged grief, bears theoretical and clinical relevance.

There is limited research on SWL after bereavement and how that is associated with better or worse long term outcomes. Xiu et al. (2016) found that lower SWL was associated with increased prolonged grief severity in Swiss and Chinese samples of bereaved parents. Trembl et al. (2022) similarly found lower SWL to be associated with elevated

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prolonged grief symptoms in a large heterogeneous sample of elderly bereaved people. Research on the development of SWL over time after loss is lacking, while it is plausible that both SWL and its relationship with grief reactions are changing in the aftermath of a loss.

Knowledge about SWL has been facilitated by the development of the SWL Scale, that includes five items about satisfaction with the present and past life (Diener et al., 1985; Joshanloo, 2022). Longitudinal studies with repeated measures have shown that the level of SWL as assessed with this scale, has both a trait (i.e., a stable, time-invariant) component and occasion (i.e., situation-dependent, time-varying) components. To our knowledge, no studies have yet examined to what extent SWL following the death of a loved one is time-invariant (stable) vs. time-varying (situational). In addition, it is an outstanding question to what extent both components of SWL are differentially associated with long-term grief. Understanding the trait-state dimensions of SWL after loss has implications for understanding the effects of interventions. If the level of SWL is completely time-invariant, this suggests that the causes of SWL are stable over time (and may be less sensitive for external, situational, even *therapeutic* influences). Alternatively, if the level of SWL is completely time-varying, this indicates that the causes of SWL vary across time (and may be more sensitive to such influences).

The current study sought to enhance knowledge about the time-invariant (trait) and time-varying (occasional) components of SWL following loss and their associations with prolonged grief symptoms. To this end, we applied latent trait-state-occasion modeling (TSO; Cole, Martin, & Steiger 2005) to data from a sample of elderly bereaved people confronted with the death of partner, who were assessed at two, six, 13, 18 and 48 months post-loss. Prior studies have been conducted with these data (Boelen & O'Connor, 2022; O'Connor, 2010a, 2010b; O'Connor, Nickerson, Aderka, & Bryant, 2015) but none of these addressed the current study's aims. The aim of this study was twofold. The first aim was to examine to what extent the longitudinal structure of SWL, among people confronted with partner loss, was characterized by a significant time-invariant trait and by time-varying states. Considering prior research (e.g., Diener, Inglehart, & Tay, 2013; Joshanloo 2022), we predicted that SWL would encompass both time-varying and time-invariant components, with the time-invariant (stable, trait-like) component accounting for a greater proportion of variance over time. The second aim was to examine the association of time-varying and time-invariant components with long-term prolonged grief symptoms, as reported at the 48-months post-loss assessment. No prior research has examined the linkage of stable, trait-like vs. situational, state-like elements of SWL with prolonged grief. However, there is evidence that stable, trait-like variables, including healthy personality characteristics, positive worldview, and optimism are associated with a healthy course of grief (e.g., Bonanno, Westphal, & Mancini, 2011). In addition, theorizing suggests that stable, positive views on self, life, and the future promote constructive coping strategies which, in turn, foster integration of the loss into one's autobiographical database, thereby mitigating grief (cf. Boelen, Van den Hout, & Van den Bout, 2006; Maccallum & Bryant, 2013). Accordingly, we predicted that the time-invariant component of SWL would be more strongly related with prolonged grief, compared to the SWL-components that are subject to situational circumstances.

Method

Participants and procedure

Data were available from a longitudinal research project among elderly bereaved people who lost a partner, conducted in Denmark. For that project, people aged 65–80, from the region of Aarhus, who lost their spouse in 2006, were contacted via the Danish Central Person Register (CPR)—a national registration containing personal information about, e.g., socio-demographic variables and marital status—eight weeks after the loss. Eligible participants were informed about the project's aims and procedures and provided informed consent for

participating in the project. Participants were invited to complete a battery of questionnaires, including measures of prolonged grief, depression, SWL, and other variables at two, six, 13, 18, and 48 months post-loss (see, e.g., O'Connor 2010a, 2010b, O'Connor et al., 2015).

Of all 311 participants with complete data at the two months assessment (Wave 1), data from $n = 291$, $n = 186$, $n = 187$, $n = 203$ people were available at Waves 2 through 5, respectively. In the Wave 1 sample, participants had a mean age of 72.74 (SD = 4.39) years; 194 (62.4 %) were female, 117 (37.6 %) were male. They had a mean of 8.12 years of public schooling (SD = 1.57; range 5–14, $n = 12$ missing). All had lost a partner. For all participants, the time elapsed since the loss was two months (at Wave 1). Participants had co-habited with their partner 46.30 (SD = 10.67) years before the partner's death, on average. They had 2.58 (SD = 1.37, range 0–9, $n = 6$ missing) children on average; $n = 302$ (86.5 %, $n = 9$ missing) had faced a period of the partner's illness before s/he died. The self-reported cause of death was cancer in 137 (44.1 %) cases, cardio vascular disease in 84 (27.0 %) cases, dementia in 32 (2.3 %) cases, an accident in six (1.9 %) cases, diabetes in 16 (5.1 %) cases, and other causes in 91 (29.3 %) cases (occasionally participants reported more than one cause).

Measurement instruments

An adapted version of the Inventory of Complicated Grief (Prigerson et al., 1995) was used to measure prolonged grief. It includes 15 items (e.g., "I feel myself yearning for the person who died") representing symptoms of prolonged grief disorder as currently defined in DSM-5-TR (APA, 2022) and other indicators of disturbed grief.¹ Respondents rated the frequency of symptoms in the prior month, on five-point scales with anchors 1 = none/almost never to 5 = a lot/all the time. The summed score was used as an index of prolonged grief severity. The original 19-item version of the ICG has good psychometric properties (Prigerson et al., 1995). In this study, a shorter 15-item version was used (without four items measuring feeling envious of others, survivor guilt, seeing the deceased, and hearing the deceased not deemed pertinent to this sample) which also has been found to have sound psychometric properties (O'Connor, Lasgaard, Shevlin, & Guldin, 2010). In the present study, Cronbach's alpha at Wave 5 was 0.92 (at the other waves, the alphas ranged from 0.90 to 0.93).

The SWL Scale is a 5-item measure that was constructed by Diener et al. (1985) to measure the global judgement about one's life satisfaction. Respondents rate how much they agree with items (e.g., "In most ways my life is close to my ideal") on seven-point scales, with anchors 1 = strongly disagree to 7 = strongly agree. The measure has good psychometric properties (Diener et al., 2013). Cronbach's alphas for Wave 1 through Wave 5 ranged from 0.82 to 0.86.

Statistical analyses

We performed the latent TSO modeling analysis using R 4.1.2 (R Core Team, 2020) and the R lavaan package for structural equation

¹ The DSM-5-TR PGD B1 criterion (yearning/longing) was represented by the item "I feel myself longing and yearning for [...]"; the B2 criterion (preoccupation) by the item "I am preoccupied with thoughts of [...]s death"; the C1 criterion (identity disruption/feeling part of self died) by the item "I feel that a part of myself died along with [...]"; the C2 criterion (disbelief) by the item "I feel disbelief over [...]s death"; the C3 criterion (avoidance) by the item "I go out of my way to avoid reminders that [...] is gone"; the C4 criterion (pain/anger/bitterness/sorrow) by the item "I am bitter over [...]s death"; the C5 criterion (difficulty reintegrating/moving on) was not captured by the items; the C6 criterion (numbness) by the item "I feel like I have become numb or detached since the death of [...]"; the C7 criterion (meaninglessness) by the items "I feel like the future holds no meaning or purpose without [...]" and "I feel that life is empty or meaningless without [...]"; the C8 criterion (loneliness) by the item "I feel lonely since [...] died".

modeling (Rosseel, 2012). Missing data were handled using full information maximum likelihood estimation under the assumption of missing at random. Model fit was determined based on the root mean square error of approximation (RMSEA) and the comparative fit index (CFI). An RMSEA of less than 0.08 and a CFI greater than 0.95 indicates a good fit of the model to the data. Raw data were used as input and maximum likelihood estimates were obtained.

First, a TSO model without the dependent variable (symptoms of prolonged grief at 48 months post-loss) was estimated (Cole et al., 2005). The TSO model includes a series of latent state factors at specific points in time (the occasions; S_t), which are measured by multiple indicators. Each S_t is, in turn, determined by the chronic trait factor (T), as well as by the time-varying (occasion-specific) factors (OSWL_t; representing situational influences) (Fig. 1). The occasion factors refer to transient circumstances that determine S_t over and above the influence of the chronic trait factor (T). In case of good model fit, the model provides information about which part of the variance in the level of SWL at a given point in time can be explained by stability in the degree of SWL (the time-invariant trait factor) and which part can be explained by time-varying influences (the occasion-specific factors). This part of the variance can be further divided into (1) variance attributed to the prior timepoint (through an autoregressive pathway that allows correlations between adjacent measurements) and (2) unique, situation-specific variance connected to a given point in time.

The application of the model in this study was based on the TSO model as proposed by Loncke et al. (2017). The five SWL-items functioned as indicators of the latent SWL construct for each point in time. Thus, the level of SWL was indicated by the SSWL_t latent state variable (the level of SWL at a given point in time), indicated by the scores on the five items of the SWL Scale. In the model, following Loncke et al. (2017), regression coefficients of the SWL indicators with SSWL_t at a given point in time were set at 1 (Fig. 1) and we assumed homogeneity of the autoregressive pathways.

To achieve our second study aim, the association of SWL with symptom-levels of prolonged grief at Wave 5 (48 months post-loss) was examined, using regression analysis within the structural equation modeling analyses. More specifically, to test if the stable, trait component of SWL was related to prolonged grief severity, prolonged grief severity scores were regressed onto the time-invariant trait component of SWL. Simultaneously, prolonged grief scores were regressed on the time-varying occasion component at 48 months post-loss.

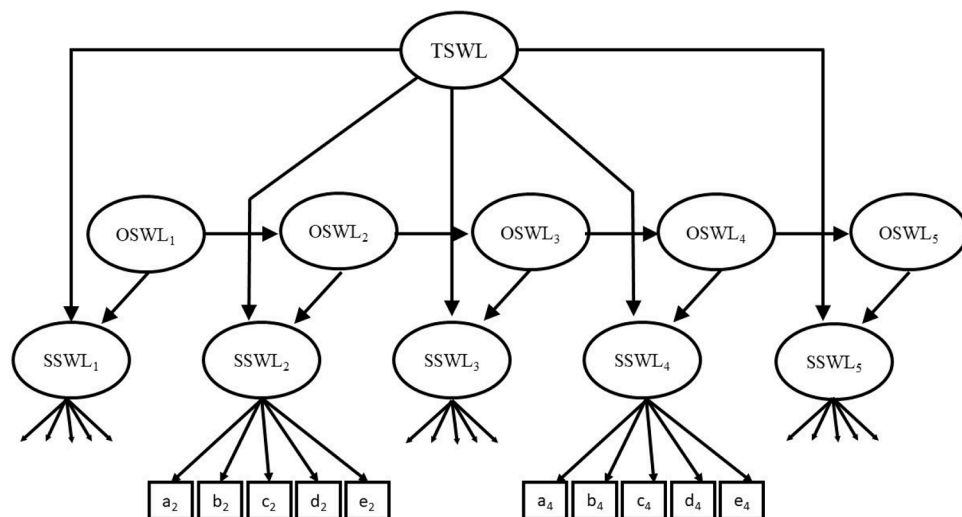


Fig. 1. Trait-state-occasion (TSO) model of satisfaction with life across measurements. *Note.* Assessments 1 through 5 took place at 2, 6, 13, 18, and 48 months post-loss. SWL = satisfaction with life; T= trait factor; O = occasion factor; S = state factor; a₁ – e₁ = items a-e at T2 and T4 (6 and 18 months post-loss). The latent variables are indicated by SSWL₂ (i.e. state satisfaction with life at 2 months post-loss) and a₁ to e₁ refer to their manifest indicators (i.e., the five SWL items). For reasons of clarity, only the indicators of the second and the fourth point in time are shown.

Results

Descriptives

Table 1 shows mean SWL scores over time. The mean prolonged grief score at 48 months post-loss for the total sample was 26.13 (SD = 9.87). For females, this score was 24.77 (SD = 10.24) and for males this score was 25.01 (SD = 8.70). Independent t-tests revealed that there were no significant differences in SWL (Table 1) or prolonged grief scores ($t = -0.17, p = .95$) between female and male participants. Using the cut-off criterium of ≥ 36 as proposed by O'Connor et al. (2010) it was found that, in the current sample, 21 participants (11.5 %) might be suffering from clinically relevant prolonged grief symptoms (11 women, 9.9 %; 10 men; 14.7 %).

Table 2 displays bivariate correlations between SWL at each timepoint and prolonged grief at 48 months post-loss. At all timepoints, lower SWL scores were significantly correlated with higher prolonged grief scores at 48 months post-loss. Interestingly, the strength of the negative correlation increased over time.

TSO models

To estimate the relative contribution of time-invariant and time-

Table 1

Satisfaction with life scores over time (M and SD) for the total sample, and for men and women separately and p-values for sex differences in scores.

		Satisfaction with life (SWL)			
		N	Mean	SD	p-value*
2 months	Total	311	25.70	5.64	
	Women	194	25.22	5.82	.10
	Men	117	26.50	5.25	
6 months	Total	219	25.53	5.77	
	Women	131	25.72	6.01	.19
	Men	85	25.33	5.45	
13 months	Total	186	25.97	5.44	
	Women	111	26.44	5.49	.39
	Men	74	25.38	5.26	
18 months	Total	187	26.00	5.78	
	Women	108	26.23	5.89	.52
	Men	74	25.64	5.70	
48 months	Total	203	26.27	5.74	
	Women	127	27.1	5.6	.99
	Men	72	25.15	5.73	

Note.

* difference in mean SWL score between men and women.

Table 2

Correlations between satisfaction with life (SWL) scores across measurements and symptoms of prolonged grief (PG) at 48 months post-loss for the total sample.

	SWL 2 months	SWL 6 months	SWL 13 months	SWL 18months	SWL 48months	PG 48 months
SWL 2 months						
SWL 6 months	.65**					
SWL 13 months	.63**	.71**				
SWL 18 months	.59**	.70**	.75**			
SWL 48 months	.55**	.60**	.70**	.73**		
PG 48 months	−0.14*	−0.20**	−0.30**	−0.36**	−0.49**	

Note.

* $p < .05$.

** $p < .01$.

varying variance on state SWL at a given point in time, first, a model without the outcome variable (prolonged grief levels at 48 months) was estimated. Corresponding percentages can be computed using the completely standardized regression coefficients between trait and state, occasion and state, and between adjacent measurement moments (Pre-neveau, 2016). Fig. 2 shows the percentages of variance in SWL at a given point in time that can be attributed to the stable, time-invariant trait factor, as well as the percentage of variance that can be explained by transient influences (the time-varying occasion factors). The time-varying variance can be decomposed into variance explained through the autoregressive pathway (thus occasion-specific variance determined by the level of SWL at the previous timepoint) and ‘unique’ or residual occasion-specific variance.

As the figure shows, up to half of the variance in SWL after the first year post-loss could be explained by the trait factor, ranging between 31.4 % (13 months) and 54.5 % (48 months). This percentage is substantially lower at two (22.1 %) and six months post-loss (5.2 %). On average, the (time-invariant) trait factor explained 31.2 % of the variance in SWL. The unique residual (time-varying) occasion-specific variance ranged from 44 % (48 months) to 93.1 % (6 months), with a mean of 64.2 %. The variance explained by the prior (time-varying) occasion factors varied between 2 % (6, 18, 48 months) and 4 % (13 months), with a mean of 2.5 %.

Association of time-invariant and time-varying components of SWL with prolonged grief at 48 months post-loss

The relationship of the stable (time-invariant) component and time-varying occasion-specific components of SWL with symptom-levels of prolonged grief at 48 months post-loss was estimated through regression analyses within the structural equation modeling framework. Within the

TSO model, it is assumed that non-trait variance fades away over time, or is transferred to the next point in time (through the autoregression). This means that non-chronic (occasional) variance at 48 months post-loss can only predict symptom-levels of prolonged grief to the degree that this variance is transferred over time (captured by the autoregression, which is included in the occasion factor at 48 months). Therefore, we expected only occasional variance at 48 months post-loss to be related to symptoms of prolonged grief at this point in time. Accordingly, the previous occasion factors were not included in the analysis. The TSO model showed a borderline good fit to the data for the measure of SWL (CFI = 0.86; RMSEA = 0.08).

Next, we considered standardized regression coefficients (β) for the simultaneous regression of the time-invariant (trait) factor and the time-varying (occasion) factor at 48 months post-loss on symptoms of prolonged grief. Outcomes showed that the trait effect of SWL on prolonged grief was marginally significant ($\beta = -0.28$, SE = 6.36, $p < .10$), indicating that (as a statistical trend) the stable variance in SWL was related to symptoms of prolonged grief at 48 months post-loss. Thus, an increase of one standard deviation on the SWL trait factor was associated with a 0.28 standard deviation decrease in symptoms of prolonged grief. Furthermore, we found a significant relationship between the time-varying (occasional) level of SWL at 48 months post-loss and symptoms of prolonged grief ($\beta = -0.50$, SE= 2.59, $p < .05$).

Discussion

Interest in positive psychological outcomes following loss and disturbances therein is gradually growing. Yet, there is still a scarcity of knowledge about the nature and manifestation of these outcomes and how they relate to indicators of problematic recovery, such as symptoms of prolonged grief disorder. The present study was concerned with SWL

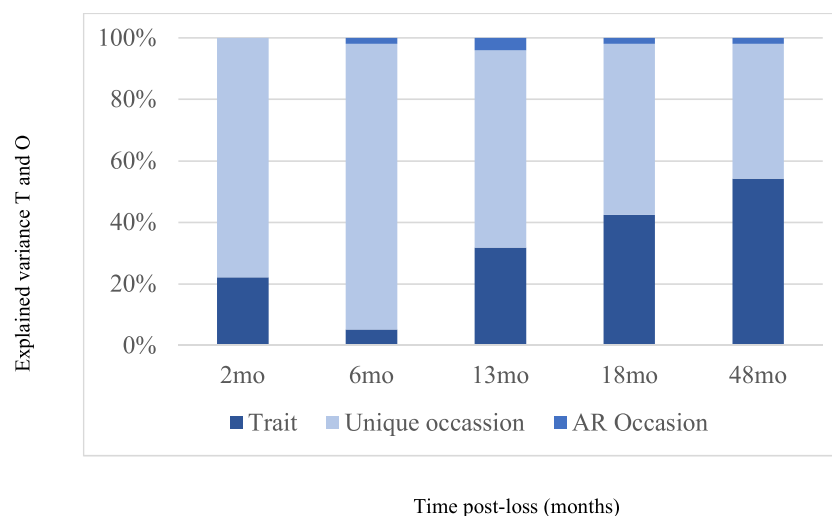


Fig. 2. Variance in SWL across measurements explained by (1) the time-invariant trait factor, (2) unique time-varying, occasion-specific variance (residual variance), (3) the previous time-varying occasion-specific factors (the autoregressive pathway, AR).

following loss and studied the extent to which SWL is trait-like and relatively stable vs. more transient and malleable, as well as the relation of the stable vs. malleable variance in SWL with symptom levels of prolonged grief. Data were available from elderly bereaved spouses who completed self-report measures of SWL at two, six, 13, 18, and 48 months post-loss and of prolonged grief at 48 months post-loss.

A first main finding was that SWL in the face of partner loss consisted of both substantial trait-like (time-invariant) and state-like (time-varying) components. The time-invariant component reflects a relatively stable tendency to perceive life as either less or more satisfactory. The time-varying component represents a perception of one's life that is more situational. The amount of time-varying variance was greater than the amount of time-invariant variance, at all but the last time points of assessment. Specifically, 56 % to 93 % of the variance in SWL was attributable to the time-varying (occasion) components of SWL at Waves 1 through 4, and 5 % to 43 % to the time-invariant (trait) component. At Wave 5, 44 % and 54.5 % were attributable to the time-varying and time-invariant components respectively.

Interestingly, there appeared to be a change between the assessments within and after the first anniversary of the death. Before that point (at the two-months and six-months assessments), the time-varying components were substantially larger than the time-invariant component; beyond that point, at the 13, 18, and 48 months assessments, there was more of a balance between both components. The findings can be interpreted as indicating that, in the first year of bereavement, there are more situational determinants of SWL or, stated differently, SWL is more amenable to circumstantial influences (e.g., smaller experiences, events, and encounters affecting the sense that life is worthwhile); beyond that point, determinants of SWL that remain relatively stable over time may become more important. (e.g., stable support network, financial, resources). This is not entirely unexpected, considering the changes and challenges that people bereaved by the loss of a partner encounter, particularly in the first year of bereavement. That is, often, this first year is characterized by many changes (in everyday activities, plans, expectations) and many new situations and challenges faced for the first time without a partner (cf. Maciejewski, Falzarano, She, Lichtenthal, & Prigerson 2022). It seems logical and understandable that, during this period, the many altered and new situations people encounter have a strong impact on SWL; for instance, small positive experiences of joy or closeness with loved ones may boost SWL, whereas a setback or confrontation with a consequence of the loss not previously recognized may take an acute toll on one's SWL. After the first year, the stable part of SWL (and determinants thereof) become more important again; possibly, this reflects that, at that time, people have managed to incorporate the loss more into their own identity and can fall back more on factors that affected SWL before the loss occurred.

Notably, the trait-like (time-invariant) component of SWL found in this study was smaller than that observed in prior research. For instance, Diener et al. (2013) review found that, across studies, 60 %–80 % of variability in SWL was trait-like and 10 %–16 % was occasional variance (see also Joshanloo 2022). It is possible that this is due, at least in part, to the fact that all our participants had recently suffered a loss. That is, in line with what we noted above, it is possible that the relatively large size of the time-varying, occasional component of SWL observed in our study has to do with the fact that, in recently bereaved people, situational determinants of SWL (i.e., smaller experiences, events, and encounters) have a more profound impact on experienced SWL, compared to more stable determinants. At the final two waves in our study, the time-invariant and time-varying components of SWL were more in line with these earlier findings. Speculatively, this may reflect that, after a period of susceptibility to fluctuations in SWL (manifesting as a skewed balance between time-varying and time-invariant components of SWL), people bereaved by the death of a partner return to a situation of more stability in SWL (accompanied by more balance between these components).

Apart from examining to what extent SWL was characterized by

time-varying and time-invariant components, the second aim of this study was to examine the association of these components with prolonged grief severity at the last wave, at 48 months post-loss. When controlling the shared variance between the occasion-component and trait-component of SWL, the association of the trait-component of SWL with symptoms of prolonged grief trended toward statistical significance and the association of the occasion-component at 48 months with prolonged grief measured at the same point in time was statistical significant. Thus, not only did we find the time-varying component of SWL to be larger than the time-invariant component at almost all points in time, the time-varying component was, apparently, also more strongly associated with prolonged grief, at four years post-loss. These findings indicate that situation-specific (transient) variance in SWL exerts a greater impact on long-term bereavement outcome than variance that is relatively stable over time.

There is a growing literature on the distinction between time-invariant and time-varying components of psychological variables. Increasing evidence shows that personality variables generally have larger trait-like, time-invariant components than occasional, time-varying components (Knowles, Cole, Cox, & Olatunji, 2022; Missler et al., 2021). That we found SWL to have larger state-specific than trait-like variance, suggests that the distinction between trait and state-components may differ considerably for different psychological phenomena. Moreover, that the amount of state-specific variance in SWL in our sample of bereaved people was larger than the state-specific variance in SWL observed in earlier studies (e.g. Diener et al., 2013), suggests that sample characteristics might moderate this distinction. Taken together, the findings suggest that the association of trait- and state-components of a psychological predictor with an outcome may vary greatly, depending on which predictors and outcomes are examined, and in which samples.

Several limitations should be considered. First, our reliance on self-report measures may have inflated some of the associations between variables, caused by shared method variance. Second, the sample included elderly people who all lost their partner after life-long relationships. Hence, caution should be applied when generalizing the findings to other bereaved groups. Third, the measure we used to assess prolonged grief symptoms includes most but not all symptoms of prolonged grief disorder as defined in the DSM-5-TR and ICD-11 (Lenferink, Boelen, Smid, & Paap, 2021). Thus, future research is needed to examine the linkage of SWL with prolonged grief according to these recent definitions. Fourth, we were primarily interested in time-invariant and time-varying components of SWL over time and how they relate to disturbed grief and did not examine other outcomes and moderators of associations. Future studies are needed to examine if the stability vs. variability of SWL and associations thereof with bereavement outcomes differ between bereaved groups and different outcomes considered. Fifth, the intervals between assessments differed. Considering that equidistant measurement occasions make interpretations of outcomes of TSO models easier, future research should preferably include consistently similar time intervals. Sixth and relatedly, because time intervals were up to several months and even years, the current findings do not speak to short-term variations in SWL following loss and how these relate to problematic grief. Last, as we did not have data on SWL before the death occurred, future prospective studies including pre-loss assessments are needed to investigate changes in SWL from pre-loss to post-loss and their associations with grief reactions.

Conclusion

Notwithstanding the study's limitations, the present research has increased our understanding of the distinction between time-varying and time-invariant components of SWL in the face of partner loss, and associations thereof with long-term prolonged grief symptoms. One central finding was that the time-varying component of SWL, susceptible to situational and changing influences, was larger than the component

that was more stable, particularly in the first year of bereavement. Moreover, prolonged grief severity assessed at 48 months post-loss was more strongly associated with the time-varying than with the time-invariant component of SWL. That the time-varying components of SWL were relatively large suggests that, following partner loss, SWL can be boosted by external influences such as positive support, engagement in pleasurable activities, and smaller successes at restoration-oriented coping (cf. Lunderoff, Thomsen, Damkier, & O'Connor 2019). This bears relevance for bereavement care, in the sense that it may be useful to explicitly address engagement in potentially positive experiences that may increase SWL in providing care for the bereaved, alongside addressing ways to directly mitigate sadness and pain. Recovery from loss not only involves a decrease in pain and grief but also entails an increase in positive psychological functioning, including SWL. It would be relevant for future research to further delineate elements of positive functioning that are more stable vs. situational, to increase knowledge about factors involved in recovery from loss and to inform the development of interventions boosting recovery.

CRedit authorship contribution statement

Paul A. Boelen: Conceptualization, Writing – original draft. **Maja O'Connor:** Funding acquisition, Writing – original draft. **Marjolein A. Missler:** Conceptualization, Data curation, Formal analysis, Writing – original draft.

Declaration of Competing Interest

None.

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