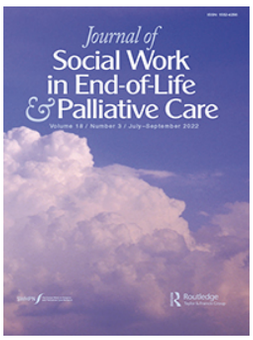

Routledge
Taylor & Francis Group

Journal of Social Work in End-of-Life & Palliative Care

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/wswe20

The Effects of Bereavement Time on the Relationship Between Coping Strategies and Psychological Distress

Tomohiro Uchida, Noriaki Satake, Chiin Takayama, Akari Uno, Toshimichi Nakaho, Akira Inoue & Hidemitsu Saito

To cite this article: Tomohiro Uchida, Noriaki Satake, Chiin Takayama, Akari Uno, Toshimichi Nakaho, Akira Inoue & Hidemitsu Saito (2022) The Effects of Bereavement Time on the Relationship Between Coping Strategies and Psychological Distress, Journal of Social Work in End-of-Life & Palliative Care, 18:3, 235-251, DOI: 10.1080/15524256.2022.2093315

To link to this article: https://doi.org/10.1080/15524256.2022.2093315

JOURNAL OF SOCIAL WORK IN END-OF-LIFE & PALLIATIVE CARE
2022, VOL. 18, NO. 3, 235–251
https://doi.org/10.1080/15524256.2022.2093315

The Effects of Bereavement Time on the Relationship Between Coping Strategies and Psychological Distress

Tomohiro Uchida[a], Noriaki Satake[b], Chiin Takayama[a], Akari Uno[c], Toshimichi Nakaho[d], Akira Inoue[b], and Hidemitsu Saito[e,f]

[a]Division of Psychology, Shokei Gakuin University, Natori, Japan; [b]Palliative Care Center, Tohoku University Hospital, Sendai, Japan; [c]Graduate School of Education, Tohoku University, Sendai, Japan; [d]Department of Palliative Care Medicine, Miyagi Cancer Center, Natori, Japan; [e]Psychiatric Nursing, Tohoku University School of Medicine, Sendai, Japan; [f]Department of Psychiatry, Midorigaoka Hospital, Shiogama, Japan

ABSTRACT

The purpose of this study was to investigate the relationship between bereaved individuals' coping patterns, mental health, and time post-loss. A questionnaire using the Coping with Bereavement Scale (CBS) and the Kessler Psychological Distress Scale (K6) was completed by 173 family members of individuals who died from cancer between August 2013 and March 2016. Confirmatory factor analysis revealed a three-factor solution for the CBS comprised of "life orientation," "avoidance," and "retaining ties" with the deceased. Scores on retaining ties were significantly but weakly correlated with K6 scores; however, the intensity of this relationship increased with more time post-bereavement, and individuals who retained strong ties with the deceased for two years or more demonstrated poorer mental health. Although retaining ties with the deceased might be an adaptive psychological process following bereavement, in this study, long-term persistence with that coping strategy was associated with greater overall psychological distress. Further research is needed to identify optimal coping methods to address evolving needs during the bereavement process.

KEYWORDS

Coping; family caregivers; period after bereavement; psychological distress; retaining ties

Losing a spouse or close relative is one of the most stressful events that can occur in a person's life (Haley, LaMonde, Hab, Narramore, & Schonwetter, 2001). Previous studies have found that most bereaved individuals eventually overcome their grief without intervention (Aranda & Milne, 2000; Stroebe, Schut, & Stroebe, 2007); however, 5–33% of individuals experience prolonged and severe post-loss psychological distress, which is widely referred to as complicated grief or prolonged grief disorder (Schut & Stroebe, 2005; Tsai, Kuo, Wen, Prigerson, & Tang, 2018). Individuals experiencing complicated grief are at heightened risk for poor mental health,

CONTACT Tomohiro Uchida to_uchida@shokei.ac.jp Division of Psychology, Shokei Gakuin University, 4-10-1, Yurigaoka, Natori, Miyagi 981-1295, Japan

including anxiety, depression, insomnia, and suicide (Ajdacic-Gross et al., 2008; Boelen, 2013; Ghesquiere, Haidar, & Shear, 2011). In contrast to the typical spontaneous resolution of grief, these prolonged outcomes often require intervention.

Reducing the likelihood of prolonged bereavement-related outcomes requires the ability to identify and predict potential risk factors. A number of studies have highlighted coping methods as a strong predictor of post-loss outcomes (Eisma et al., 2014a; Eisma, Boelen, Schut, & Stroebe, 2017; Kissane, McKenzie, & Bloch, 1997). The variety of strategies that individuals employ to cope with loss can be broadly classified as either proactive or avoidant. Proactive coping styles include problem-solving, actively engaging in emotional and cognitive dialogue, and reframing as means of processing grief (Carver & Scheier, 1994; Folkman & Lazarus, 1985). Such active processes often manifest as help-seeking behaviors (i.e., counseling, therapy, religion, and spiritualization) and are generally associated with positive mental health and quality of life outcomes (Cousins, Servaty-Seib, & Lockman, 2017; Drapeau, Cerel, & Moore, 2016; Schnider et al., 2007). However, other coping habits are perceived as maladaptive, such as rumination, social withdrawal, avoidance, denial, distraction, and retaining ties with the deceased, among others. These avoidant coping styles are widely associated with increased levels of depression, anxiety, guilt, and poorer overall quality of life (Boelen & Reijntjes, 2016; Pham et al., 2018; Tsai et al., 2018).

Rumination has been variously conceptualized as a strategy that increases the availability of negative cognitions (e.g., Nolen-Hoeksema, 2001) and an avoidance strategy that serves as an escape from admitting the facts of the loss and confronting the most painful aspects of the bereavement experience (Boelen, Stroebe, Schut, & Zijerveld, 2006; Eisma et al., 2014a, 2015). Previous studies have linked rumination (i.e., repetitive thoughts about a sustained loss), retaining ties with the deceased, and regularly recounting fond memories with poor mental health outcomes, including depression (Boelen, Stroebe, et al., 2006; Eisma et al., 2014a, 2015; Field, Gal-Oz, & Bonanno, 2003; Scholtes & Browne, 2015). Nolen-Hoeksema and colleagues describe rumination as a depressive behavior whereby the bereaved individual repetitively and recurrently focuses on grief-related emotions in a passive manner rather than taking action to relieve their distress (Nolen-Hoeksema, 2001; Nolen-Hoeksema, McBride, & Larson, 1997; Nolen-Hoeksema, Parker, & Larson, 1994). Studies have demonstrated the negative impact of depressive rumination on grief recovery, including higher levels of depression, anxiety, posttraumatic stress, and complicated grief (Eisma et al., 2014b, 2015; Morina, 2011; Nolen-Hoeksema et al., 1997), particularly in cases when this strategy persists for several months

after the loss (Nolen-Hoeksema et al., 1994). However, some researchers have also differentiated between adaptive or deliberate and maladaptive or intrusive rumination, whereby the former entails more self-focused thinking and active coping behavior directed toward understanding and resolving emotional reactions (Eisma et al., 2014a).

Similarly, retaining ties with the deceased, also known as continuing bonds (Klass, Silverman, & Nickman, 1996), is not necessarily maladaptive, and continued connections are not always an indicator of poor mental health (Bonanno, Wortman, & Nesse, 2004; Carnelley, Bolger, Wortman, & Burke, 2006; Shaver & Tancredy, 2001). A growing body of literature has proposed that continued bonds with deceased loved ones often provides comfort and facilitate coping, serving as a critical element of grief adaptation rather than a symptom of poor mental health (e.g., Asai et al., 2010; Klass et al., 1996; Klass & Steffen, 2018). Stroebe and Schut (2005) suggested that positive reminiscing about the deceased could in fact be interpreted as a sign of coming to terms with grief. Field and Friedrichs (2004) found retaining bonds to be a positive coping mechanism among widows whose spouses had died more than two years ago. Foster et al. (2011) study among bereaved family members reported that although continuing bonds were a source of distress among a minority of parents and siblings, most experienced comforting effects through reminiscing about, engaging in inner conversations with, or sensing the presence of the deceased. Niemeyer, Baldwin, and Gillies (2006) proposed that cases of negative adaptation were linked to the nature of the relationship with the deceased as well as the ability of the bereaved to make sense of the death.

Several researchers have highlighted religion and culture as salient factors in the relationship between continuing bonds and healthy coping (e.g., Bray, 2013; Klass, 2006). In particular, strong continued bonds have been associated with lower levels of distress over the long term in non-western societies characterized by communal grieving rituals (Hussein & Oyobode, 2009; Suhail, Jamil, Oyebode, & Ajmal, 2011). For example, Suhail et al. (2011) study of grief adaptation among Pakistani Muslims revealed that participants' religion provided a basis for coping and adjustment through dreaming and talking to the deceased, engaging in reminiscence, and rationalizing and accepting the death.

Bonanno et al. (2005) compared bereavement coping strategies in the United States and China, finding that whereas initial grief processing was not a significant predictor of long-term distress or perceived health in Chinese participants, in the United States, processing early in bereavement was a strong positive predictor of long-term distress and poorer perceived health even after accounting for participants' initial distress levels. Notably,

bereaved participants in the Chinese sample demonstrated more acute distress and poorer perceived health in the early months of bereavement than those in the United States; however, the former showed greater improvement over time and evinced less distress and similar levels of perceived health as the U.S. sample by 18 months post-loss. They attributed the difference to contrasting cultural approaches to bereavement coping: whereas mourning among westerners is typically aimed at "accepting the finality of the death and overcoming the emotional pain of attachment," Chinese grief work emphasizes reinforcing cultural beliefs and continuing the relationship with the deceased (Bonanno et al., 2005). In this context, the authors found overall higher levels of reported deliberate grief avoidance across time in the Chinese participants relative to the U.S. sample. However, Burton et al. (2012) cross-cultural study of coping strategies in the U.S. and China added coping flexibility (i.e., employing multiple coping and emotion regulation strategies) as a variable and compared asymptomatic conjugally bereaved individuals and married couples. They found that coping strategies were similar within each subsample across cultures and that lower coping flexibility was more associated with pathological grief regardless of culture. Similarly, Taku, Cann, Tedeschi, and Calhoun (2009) study of deliberate vs. intrusive rumination and post-traumatic growth among Japanese and U.S. participants indicated that ongoing constructive rumination was associated with greater growth in both groups. Although there were differences between the groups in terms of the post-event time periods when deliberate rumination was most significant for contributing to post-traumatic growth, the authors suggested that these distinctions might be attributable to differences between samples (e.g., mean age) rather than sociocultural factors.

Despite the above, psychological distress remains a significant post-bereavement mental health concern (Boelen & Reijntjes, 2016; Pham et al., 2018; Tsai et al., 2018), and such responses may be prolonged and exacerbated in the presence of certain avoidant coping styles (Eisma et al., 2017). However, a better understanding is needed of the relationship between specific coping strategies, time post-loss, and psychological distress. Specifically, it is unclear whether there are transitional points or discernible changes in optimal coping strategies as the time post-loss increases.

In an attempt to address the aforementioned gap, this study investigated the relationship between bereavement coping strategies and self-reported psychological distress as a function of time post-loss. Specifically, this study sought to address the following research question: Do the relationships between coping strategies and psychological distress change over time post-bereavement?

Methods

Research design

This was a cross-sectional study entailing the administration of surveys at two time points a year apart (September 2016 and September 2017). Due to the difficulty of tracking bereaved families over a number of years, this study recruited bereaved families experiencing various periods of bereavement. Data collection was divided into two time periods to increase the number of participants.

Measures

The questionnaire consisted of several closed-ended and free-response items regarding services at the palliative care ward as well as two psychological scales. To gauge participants' psychological distress, this study used the Japanese version of the Kessler Psychological Distress Scale (K6; Furukawa et al., 2008. The K6 consists of six items measured on a 5-point Likert scale (0–4). Higher scores indicate more severe psychological distress (Kessler et al., 2003). The Japanese version of the K6 has been previously validated with high discrimination between individuals with and without psychological distress (AUC = 0.94, 95% confidence interval = 0.88–0.99; Furukawa et al., 2008). A cutoff point of 9/10 has been used to screen for mood or anxiety disorders (Sone et al., 2016; Suzuki, Fukasawa, Obara, & Kim, 2014), and that was adopted in this study. Cronbach's alpha for the K6 was 0.89 as reported by Matsuoka et al. (2012). In this study, the Cronbach's alpha coefficient was 0.93.

The study also used the Coping with Bereavement Scale (CBS). The CBS is a 14-item self-report measure designed to assess the strategies by which Japanese individuals attempt to cope with loss. All items are scored on a 4-point scale from 0 (disagree) to 3 (agree). The study by Sakaguchi, Kashiwagi, and Tsuneto (2001) demonstrated a three-factor solution, mapped onto the following methods of coping: (1) "Life orientation," i.e., positive coping oriented to future life experiences; (2) "Avoidance," a coping strategy that entails suppressing memories of the deceased; and (3) "Retaining ties," i.e., maintaining "continuing bonds" with the deceased (Klass et al., 1996) Internal consistencies of the three components were 0.78, 0.78, and 0.70, respectively. In this study, the Cronbach's alpha coefficients were 0.76, 0.79, and 0.77, respectively.

Sample and procedures

The study's target sample was family members of individuals who died from cancer in the palliative care unit of Tohoku University Hospital

(Sendai, Japan) from August 2013 to March 2016. During consultations with presiding physicians while their family member was hospitalized, in addition to information about a follow-up group program for families of deceased patients, subjects were given a form to indicate consent to receive the questionnaire survey via postal mail.

The first survey was conducted in September 2016 and targeted family members of individuals who died in the palliative care unit of Tohoku University Hospital from August 2013 to March 2015. The second survey was carried out in September 2017 and targeted the family members of individuals who died in the palliative care unit of Tohoku University Hospital from April 2015 to March 2016. In cases when patients belonged to multiple families, the individual who visited the patient most often while they were hospitalized was asked to provide answers. Return of the questionnaire form via postal mail was deemed an expression of consent to participate in this study. Of the 347 questionnaires sent, 173 were returned with usable data. The response rate was 49.9%.

The research design for this study was approved by the Ethics Committee of Tohoku University Graduate School of Medicine and Tohoku University Hospital.

Analysis

Exploratory and confirmatory factor analysis were conducted for the 14 CBS items. Univariate analyses (*t*-test and one-way ANOVA) were used to examine the relationship between CBS subscale scores and respondent characteristics and K6 scores and respondent characteristics. In addition, Pearson's correlations between CBS subscale scores and K6 scores stratified by time post-loss were calculated to investigate the relationship between psychological distress and coping strategies. Statistical analyses were conducted with IBM SPSS statistical software and AMOS, version 20.0 (IBM Japan, Tokyo, Japan). All testing was two-tailed, and the significance level was set at $\alpha = 0.05$.

Results

Demographic characteristics and K6 scores

Demographic characteristics of the participants are shown in Table 1. The majority of participants were female (62.3%) and were spouses or partners of the patient/deceased (60.4%). Additionally, the majority were within two years post-loss (83.6%).

The mean K6 score was 6.44 ($SD = 5.88$), and 44 participants (27.0%) had scores higher than the cutoff point (> 9) for the detection of

Table 1. Demographic characteristics and K6 scores ($N = 173$).

		K6 scores				
	n (%)	*M*	*SD*	*t*	*F*	*p*
Age (years)						
Under 40 s	25 (14.7)	4.96	4.88		1.16	.33
50 s	37 (21.8)	5.86	6.27			
60 s	65 (38.2)	6.72	5.48			
Over 70 s	43 (25.3)	7.59	6.75			
Sex						
Male	61 (37.7)	5.86	5.46	1.06		.29
Female	101 (62.3)	6.89	6.11			
Relationship						
Spouse	102 (60.4)	7.74	5.97		**5.95**	**.00****
Child	45 (26.6)	4.82	5.26			
Other	22 (13.0)	4.05	5.50			
Period after bereavement						
Less than 1 year	63 (36.8)	6.85	6.43		.33	.72
One year to less than 2 years	80 (46.8)	6.05	4.84			
Two or more years	28 (16.4)	6.70	7.33			

Note. SD: standard deviation.
Other include siblings, son-in-law, daughter-in-law, and relatives.
**$p < .01$.

Table 2. The confirmatory factor analysis for the coping with bereavement scale ($n = 160$).

Items		I	II	III
1 I encouraged myself to carry on without the deceased.		.71		
2 I tried to live for the deceased, as well.		.81		
3 I decided it was not the time to get depressed.		.49		
4 I made my daily life my ultimate priority.		.34		
5 I found purpose in living.		.64		
6 I thought about the rest of my life.		.54		
7 I would avoid thinking about the deceased.			.86	
8 I would forget about the deceased.			.76	
9 I would not speak about the deceased.			.72	
10 I acted as if nothing happened.			.50	
11 I reflected on the words and gestures of the deceased.				.76
12 I talked with the deceased in my mind.				.80
13 I often visited the deceased's grave and places that held fond memories of the deceased.				.68
14 I carried around photographs and personal effects of the deceased.				.56
Cronbach (α)		.76	.79	.77
Factor correlation	I		.01	.47
	II			−.52
	III			

depressive disorder. Spouses of the deceased tended to report greater psychological distress than did children or those reporting other relationships. However, there were no significant differences in psychological distress between genders, age groups, or time post-loss.

Factor analysis for the CBS

The confirmatory factor analysis was conducted for the 14 CBS items. In reference to Sakaguchi et al. (2001), the factor structure was set up with "Life Orientation," "Avoidance," and "Retaining Ties" as distinct factors. Table 2 shows estimated factor loadings for each question item and

correlations between factors. The model's goodness of fit indices were $\chi^2(74) = 174.78$, $p < .001$, GFI= .86, AGF = .80, CFI= .87, and RMSEA = .09. Although they did not reach the recommended level (Hu & Bentler, 1999), in order to maintain comparability with Sakaguchi et al. (2001), these reference values were treated as acceptable ranges. All items had a salient loading (> .30), and the α coefficient attained a sufficient value for all factors.

Comparison of CBS scores

The mean (SD) of the "Life Orientation" "Avoidance," and "Retaining Ties," was 11.53 (3.85), 7.86 (3.14), and 2.42 (2.55), respectively. Females ($M = 8.35$, $SD = 3.01$) of the deceased tended to report "Retaining ties" to a greater extent than did males ($M = 6.90$, $SD = 3.16$; $t[156] = 2.88$, $p < .01$). Spouses ($M = 8.36$, $SD = 3.04$) of the deceased tended to report "Retaining ties" to a greater extent than did children ($M = 7.11$, $SD = 2.98$) or those reporting on other relationships ($M = 6.90$, $SD = 3.43$; $F[2, 162] = 3.67$, $p < .05$). Meanwhile, no significant difference according to age or Period after bereavement was indicated for "Retaining ties." Moreover, no difference due to Demographic Characteristics was found for "Life Orientation" or "Avoidance."

Correlation between psychological distress and coping with bereavement

Retaining ties scores were correlated with psychological distress overall and this was the strongest for respondents testing 2 or more years after their loss ($r = .11$ at half a year to less than 1 year, $r = .17$ at 1 year to less than 2 years, $r = .64$ at 2 years or more) (Table 3). In fact, the only statistically significant findings were for participants who completed the measures two years or more post-loss.

To remove the effect of sex or relationship on these correlations, partial correlation analysis was conducted for all participants and found no noticeable differences between the result of the partial and the usual correlation analysis. Upon carrying out a χ^2 test for all three periods after bereavement for gender, age, and relationship bias, no statistically significant biases were found. Further, no significant relationship was observed between period after bereavement and age.

Discussion

The purpose of the present study was to investigate the relationship between bereavement coping strategies and self-reported psychological distress as a function of time post-loss. It was found that individuals who

Table 3. Pearson correlation of psychological distress and coping with bereavement within the period after bereavement.

	K6 score							
	Total ($n = 165$)		At less than 1 year ($n = 63$)		At 1 year to less than 2 years ($n = 80$)		At 2 or more ($n = 28$)	
	r (95%CI)	*p*	*r* (95%CI)	*p*	*r* (95%CI)	*p*	*r* (95%CI)	*p*
Coping with bereavement								
Life Orientation	−.05 (−.20—.10)	.52	−.05 (−.29—.20)	.70	−.14 (−.35—.08)	.25	−.09 (−.45—.29)	−.66
Avoidance	−.01 (−.16—.14)	.97	−.03 (−.28—.22)	.82	−.03 (−.25—.19)	.77	−.01 (−.38—.36)	.96
Retaining Ties	**.25 (.10—.39)**	**.00****	.15 (−.10—.38)	.24	.17 (−.05—.37)	.15	**.64 (.35—.82)**	**.00****

**$p < .01$.
Bolded values represent P-values significant at alpha = 0.05.

were more than 2 years post-loss and reported stronger tendencies to retain ties with the deceased also reported greater psychological distress. Individuals who did not have proactive daily life orientations reported greater psychological distress. Avoidance was not significantly correlated with psychological distress.

Bereavement is strongly associated with increased incidence and severity of depression and other mental health concerns (Boelen, 2013; Tsai et al., 2018). According to the cutoff point for the Japanese version of the K6, 44 participants (27.0%) were suspected to have psychological distress, including potential depression. However, the likelihood of experiencing this level of psychological distress was not associated with time post-loss. These results are similar to those of previous studies showing that more than one-third of bereaved family members met the criteria for psychological distress at six months post-death and 29% of bereaved family members met the criteria at 13 months post-death (Thomas, Hudson, Trauer, Remedios, & Clarke, 2014). Therefore, it seems unlikely that psychological (mal)adaptation to bereavement occurs simply as a function of time post-loss; rather, it seems likely that it is influenced by a number of internal and external factors. With respect to internal factors, respondents' engagement with various coping methods was quantified using the CBS. The present factor analysis agreed with a previous three-factor solution comprised of "Life orientation," "Avoidance," and "Retaining ties" (Sakaguchi et al., 2001).

"Retaining ties" refers to concepts such as "continuing involvement with the deceased," "feeling a bond with the deceased," and "sense of connection with the deceased" (Bonanno et al., 2004; Shaver & Tancredy, 2001), and this coping style is thought to be an important component for understanding the psychological adaptation of bereaved family members. Retaining ties, which has been linked to rumination in previous studies, is often associated with poorer mental health outcomes, similar to those observed here (Eisma et al., 2014a, 2017). In contrast, "avoidance" has traditionally been viewed as a maladaptive coping style for bereavement (Raphael, 1983). Notably, Currier, Irish, Neimeyer, and Foster (2015) found a strong association between avoidance and complicated grief among participants with high levels of continuing bonds with the deceased. However, other studies have suggested that avoiding unpleasant emotions as a coping style during bereavement is not necessarily maladaptive (Bonanno, Keltner, Holen, & Horowitz, 1995; Fraley & Bonanno, 2004). Rather, as Fraley and Bonanno (2004) demonstrated, whereas fearful avoidance can negatively influence the ability to adapt to loss, dismissing avoidance—i.e., redirecting one's attention away from negative experiences (Fraley, Davis, & Shaver, 1998) was associated with resilience. Our findings agree with this interpretation, as avoidance was not correlated with psychological distress via the K6. It is

possible that for some individuals, short-term use of purposeful distraction may be a strategy in response to depression (Nolen-Hoeksema & Morrow, 1993). Furthermore, Stajduhar, Martin, and Cairns (2010) suggested that a positive outlook on life is associated with longer-term psychological well-being post-bereavement.

More importantly, the results revealed that bereaved individuals who retained strong ties with the deceased 2 or more years following bereavement demonstrated poorer mental health. Although retaining ties with the deceased may be an adaptive psychological process shortly after bereavement (Bonanno et al., 2004; Carnelley et al., 2006; Shaver & Tancredy, 2001), found was that persistence in this coping strategy for 2 years or more was moderately associated with greater psychological distress. Previous studies found that bereaved individuals who retained ties with the deceased demonstrated poorer mental health (Boelen, Stroebe, et al., 2006; Eisma et al., 2014a, 2015; Field et al., 2003; Scholtes & Browne, 2015). While a plausibly natural response to loss in the short-term sample evidence, including the present findings, other research has repeatedly demonstrated the potential for negative mental health outcomes in the long-term for individuals who engage in more prolonged ruminative coping behaviors (Eisma et al., 2014a, 2017). Indeed, Field et al. (2003), identified a correlation between higher grief scores and strong continued bonds 5 years after the loss. However, another study indicated that associations between continued bonds and psychological distress among widows who had been bereaved for more than 2 years were less consistent (Field & Friedrichs, 2004).

These findings require further corroboration, as well as more detailed information regarding how current life events and other factors such as social supports or religious or spiritual beliefs may contribute to psychological distress to fully uncover the nature of the relationship between retaining ties to the deceased and K6 scores long after bereavement (Bray, 2013; Hussein & Oyobode, 2009; Suhail et al., 2011). Similarly, it is also important to examine the role of other factors in contributing to this relationship. Neimeyer, Baldwin, and Gillies (2006) emphasized the significance of the relationship between the bereaved and the deceased and the nature of the death role in impacting the level of psychological distress and highlighted the role of sense-making as a moderator of complicated grief symptoms among those with high levels of post-loss attachment. Stroebe and Schut (2005) suggested that retaining ties was more likely to be detrimental in cases of problematic ties during the lifetime of the deceased, as such bonds tend to be more insecure, dependent, or conflicted. Future studies should consider collecting more information on relationships between the deceased and their bereaved family members.

This study's findings are also notable due to cross-cultural similarities between the Japanese sample and samples in other socio-cultural contexts.

In Japan, widely accepted practices such as regular cemetery visits, holding on to the deceased's belongings, and making offerings at the family altar might be associated with different psychological outcomes relative to western societies (Asai et al., 2012). Asai et al. (2012) hypothesized that their Japanese sample would evince results similar to those in Chinese and other East Asian societies, whereby "avoidance" has been found to have no effect on psychological states and "continuing bonds" had a reduced effect. Notably, they found that these strategies had more complex effects than expected, as avoidance and continuing bonds had both adaptive and maladaptive aspects. However, they did not examine the influence of time post-loss on psychological outcomes. The authors of this study suggest that in the context of this study, "retaining ties" is an effective short-term coping mechanism; however, such culturally-embedded attachments to the deceased are potentially harmful over the long term. Further research is needed to clarify cross-cultural similarities and differences in the impacts of this and other ruminative coping strategies.

This study has several implications for social work practice. Professionals need to be aware that whereas "retaining ties" can be effective in the short term, maintaining such linkages over a prolonged period can be detrimental to the bereaved. Professionals also need to account for the time post-loss when devising strategies to counsel bereaved individuals and families. In addition, although cross-cultural effects remain inconclusive, professionals may need to consider cultural factors such as communal grieving and deliberate avoidance, which have been demonstrated to have positive effects on grief recovery in many non-western societies (e.g., Asai et al., 2012; Bonanno et al., 2005; Suhail et al., 2011). Effective social work practices may include life-oriented support to help bereaved individuals avoid social isolation and discover a new purpose or meaning in their lives.

There are several limitations in this study that must be acknowledged. First, the sample was limited to willing respondents from a narrow population (bereaved family members of patients at a specific palliative care facility in Japan) and the study's sample size, particularly regarding those two or more years into coping with their loss, were relatively small. A larger sample size, including a wider array of manners of death and pre-loss care (e.g., those with sudden loss without palliative care) would provide more generalizable information about the relationship between bereavement coping methods and mental health among bereaved individuals. Secondly, this study employed a cross-sectional approach –therefore, the results require careful interpretation. It is essential to clarify changes over time in more detail in future longitudinal studies. Finally, a general mental health screening tool was used to quantify post-loss mental health outcomes. Future

studies should examine specific grief symptoms and precise mental health outcomes, such as depression and anxiety.

Conclusion

In conclusion, bereaved individuals who retained strong ties with the deceased, even after 2 years, demonstrated poorer mental health. However, these associations were not identified in individuals who had undergone more recent loss. Future work identifying optimal coping mechanisms that are sensitive to the evolving needs of the bereaved as time-since-loss increases is critical for identifying individuals at risk for poorer long-term bereavement-related outcomes, as well as for developing and initiating early interventions to assist these individuals.

Acknowledgment

We would like to thank Editage (www.editage.com) for English language editing.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research was partly supported by a Grant-in-Aid for Scientific Research (C) from the Japan Society for the Promotion of Science under Grants 15A04108 and 18K03086.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author, TU. The data are not publicly available due to ethical restrictions.

References

Ajdacic-Gross, V., Ring, M., Gadola, E., Lauber, C., Bopp, M., Gutzwiller, F., & Rössler, W. (2008). Suicide after bereavement: An overlooked problem. *Psychological Medicine*, *38*(5), 673–676. doi:10.1017/S0033291708002754

Aranda, S., & Milne, D. (2000). Guidelines for the Assessment of Complicated Bereavement Risk in Family Members of People Receiving Palliative Care. Melbourne: Centre for Palliative Care.

Asai, M., Akizuki, N., Fujimori, M., Matsui, Y., Itoh, K., Ikeda, M., … Uchitomi, Y. (2012). Psychological states and coping strategies after bereavement among spouses of cancer patients: A quantitative study in Japan. *Supportive Care in Cancer*, *20*(12), 3189–3203. doi:10.1007/s00520-012-1456-1

Asai, M., Fujimori, M., Akizuki, N., Inagaki, M., Matsui, Y., & Uchitomi, Y. (2010). Psychological states and coping strategies after bereavement among the spouses of cancer patients: A qualitative study. *Psycho-oncology*, *19*(1), 38–45. doi:10.1002/pon.1444

Boelen, P. A. (2013). Symptoms of prolonged grief, depression, and adult separation anxiety: Distinctiveness and correlates. *Psychiatry Research*, *207*(1–2), 68–72. doi:10.1016/j.psychres.2012.09.021

Boelen, P. A., & Reijntjes, G. S. (2016). Concurrent and prospective associations of intolerance of uncertainty with symptoms of prolonged grief, posttraumatic stress, and depression after bereavement. *Journal of Anxiety Disorders*, *41*, 65–72.

Boelen, P. A., Stroebe, M. S., Schut, H. A. W., & Zijerveld, A. M. (2006). Continuing bonds and grief: A prospective analysis. *Death Studies*, *30*(8), 767–776. doi:10.1080/07481180600852936

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*, 109e128. doi:10.1111/j.1468-2850.2006.00013.x

Bonanno, G. A., Keltner, D., Holen, A., & Horowitz, M. J. (1995). When avoiding unpleasant emotions might not be such a bad thing: Verbal-autonomic response dissociation and midlife conjugal bereavement. *Journal of Personality and Social Psychology*, *69*(5), 975–989. doi:10.1037/0022-3514.69.5.975

Bonanno, G. A., Papa, A., Lalande, K., Zhang, N., & Noll, J. G. (2005). Grief processing and deliberate grief avoidance: A prospective comparison of bereaved spouses and parents in the United States and the People's Republic of China. *Journal of Consulting and Clinical Psychology*, *73*(1), 86–98. doi:10.1037/0022-006X.73.1.86

Bonanno, G. A., Wortman, C. B., Lehman, D. R., Tweed, R. G., Haring, M., Sonnega, J., … Nesse, R. M. (2002). Resilience to loss and chronic grief: A prospective study from pre-loss to 18 months post-loss. *Journal of Personality and Social Psychology*, *83*(5), 1150–1164. doi:10.1037/0022-3514.83.5.1150

Bonanno, G. A., Wortman, C. B., & Nesse, R. M. (2004). Prospective patterns of resilience and maladjustment during widowhood. *Psychology and Aging*, *19*(2), 260–271. doi:10.1037/0882-7974.19.2.260

Bray, P. (2013). Bereavement and transformation: A psycho-spiritual and post-traumatic growth perspective. *Journal of Religion and Health*, *52*(3), 890–903. doi:10.1007/s10943-011-9539-8

Burton, C. L., Yan, O. H., Pat-Horenczyk, R., Chan, I. S., Ho, S., & Bonanno, G. A. (2012). Coping flexibility and complicated grief: A comparison of American and Chinese samples. *Depression and Anxiety*, *29*(1), 16–22. doi:10.1002/da.20888

Carnelley, K. B., Bolger, N., Wortman, C. B., & Burke, C. T. (2006). The time course of grief reactions to spousal loss: Evidence from a national probability sample. *Journal of Personality and Social Psychology*, *91*(3), 476–492. doi:10.1037/0022-3514.91.3.476

Carver, C. S., & Scheier, M. F. (1994). Situational coping and coping dispositions in a stressful transaction. *Journal of Personality and Social Psychology*, *66*(1), 184–195. doi:10.1037/0022-3514.66.1.184

Cousins, C., Servaty-Seib, H. L., & Lockman, J. (2017). College student adjustment and coping: Bereaved and nonbereaved students. *Omega*, *74*(4), 386–409. doi:10.1177/0030222815598911

Currier, J. M., Irish, J. E., Neimeyer, R. A., & Foster, J. D. (2015). Attachment, continuing bonds, and complicated grief following violent loss: Testing a moderated model. *Death Studies*, *39*(1-5), 201–210. doi:10.1080/07481187.2014.975869

Drapeau, C. W., Cerel, J., & Moore, M. (2016). How personality, coping styles, and perceived closeness influence help-seeking attitudes in suicide-bereaved adults. *Death Studies*, *40*(3), 165–171. doi:10.1080/07481187.2015.1107660

Eisma, M. C., Boelen, P. A., Schut, H. A. W., & Stroebe, M. S. (2017). Does worry affect adjustment to bereavement? A longitudinal investigation. *Anxiety, Stress, and Coping*, *30*(3), 243–252. doi:10.1080/10615806.2016.1229464

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. doi:10.1016/j.jbtep.2014.11.010

Eisma, M. C., Schut, H. A., Stroebe, M. S., Boelen, P. A., van den Bout, J., & Stroebe, W. (2014a). Adaptive and maladaptive rumination after loss: A three-wave longitudinal study. *The British Journal of Clinical Psychology*, *54*(2), 163–180. doi:10.1111/bjc.12067

Eisma, M. C., Schut, H. A., Stroebe, M. S., Boelen, P. A., van den Bout, J., & Stroebe, W. (2014b). Is rumination after bereavement linked with loss avoidance? Evidence from eye-tracking. *PLoS One*, *9*(8), e104980. doi:10.1371/journal.pone.0104980

Field, N. P., & Friedrichs, M. (2004). Continuing bonds in coping with the death of a husband. *Death Studies*, *28*(7), 597–620. doi:10.1080/07481180490476425

Field, N. P., Gal-Oz, E., & Bonanno, G. (2003). Continuing bonds and adjustment at 5 years after the death of a spouse. *Journal of Consulting and Clinical Psychology*, *71*(1), 110–117. doi:10.1037/0022-006X.71.1.110

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: A study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, *48*(1), 150–170. doi:10.1037/0022-3514.48.1.150

Foster, T. L., Gilmer, M. J., Davies, B., Dietrich, M. S., Barrera, M., Fairclough, D. L., … Gerhardt, C. A. (2011). Comparison of continuing bonds reported by parents and siblings after a child's death from cancer. *Death Studies*, *35*(5), 420–440. doi:10.1080/07481187.2011.553308

Fraley, R. C., & Bonanno, G. A. (2004). Attachment and loss: A test of three competing models on the association between attachment-related avoidance and adaptation to bereavement. *Personality & Social Psychology Bulletin*, *30*(7), 878–890. doi:10.1177/0146167204264289

Fraley, R. C., Davis, K. E., & Shaver, P. R. (1998). Dismissing-avoidance and the defensive organization of emotion, cognition, and behavior. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 249–279). New York: Guilford.

Furukawa, T. A., Kawakami, N., Saitoh, M., Ono, Y., Nakane, Y., Nakamura, Y., … Kikkawa, T. (2008). The performance of the Japanese version of the K6 and K10 in the World Mental Health Survey Japan. *International Journal of Methods in Psychiatric Research*, *17*(3), 152–158. doi:10.1002/mpr.257

Ghesquiere, A., Haidar, Y. M. M., & Shear, M. K. (2011). Risk for complicated grief in family caregivers. *Journal of Social Work in End-of-Life & Palliative Care*, *7*(2-3), 216–240. doi:10.1080/15524256.2011.593158

Haley, W. E., LaMonde, L. A., Hab, B., Narramore, S., & Schonwetter, R. (2001). Family caregiving in hospice: Effects on psychological and health functioning among spousal caregivers of hospice patients with lung cancer or dementia. *Hospice Journal*, *15*(4), 1–18. doi:10.1080/0742-969X.2000.11882959

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structural analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. doi:10.1080/10705519909540118

Hussein, H., & Oyebode, J. R. (2009). Influences of religion and culture on continuing bonds in a sample of British Muslims of Pakistani origin. *Death Studies*, *33*(10), 890–912. doi:10.1080/07481180903251554

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., … Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry*, *60*(2), 184–189. doi:10.1001/archpsyc.60.2.184

Kissane, D. W., McKenzie, D. P., & Bloch, S. (1997). Family coping and bereavement outcome. *Palliative Medicine*, *11*(3), 191–201. doi:10.1177/026921639701100303

Klass, D. (2006). Continuing conversation about continuing bonds. *Death Studies*, *30*(9), 843–858. doi:10.1080/07481180600886959

Klass, D., & Steffen, E. M. (Eds.) (2018). *Continuing bonds in bereavement: New directions for research and practice*. New York, NY: Taylor & Francis.

Klass, D., Silverman, P. R., & Nickman, S. L. (Eds.). (1996). *Continuing bonds: New understandings of grief*. New York, NY: Taylor & Francis. doi:10.4324/9781315800790

Matsuoka, Y., Nishi, D., Nakaya, N., Sone, T., Noguchi, H., Hamazaki, K., … Koido, Y. (2012). Concern over radiation exposure and psychological distress among rescue workers following the Great East Japan Earthquake. *BMC Public Health*, *12*(1), 249. doi:10.1186/1471-2458-12-249

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. doi:10.1097/NMD.0b013e3182392aae

Neimeyer, R. A., Baldwin, S. A., & Gillies, J. (2006). Continuing bonds and reconstructing meaning: Mitigating complications in bereavement. *Death Studies*, *30*(8), 715–738. doi:10.1080/07481180600848322

Nolen-Hoeksema, S., McBride, A., & Larson, J. (1997). Rumination and psychological distress among bereaved partners. *Journal of Personality and Social Psychology*, *72*(4), 855–862. doi:10.1037/0022-3514.72.4.855

Nolen-Hoeksema, S., Parker, L. E., & Larson, J. (1994). Ruminative coping with depressed mood following loss. *Journal of Personality and Social Psychology*, *67*(1), 92–104. doi:10.1037/0022-3514.67.1.92

Nolen-Hoeksema, S. (2001). Ruminative coping and adjustment to bereavement. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 545–562). Washington, DC: American Psychological Association.

Nolen-Hoeksema, S., & Morrow, J. (1993). Effects of rumination and distraction on naturally occurring depressed mood. *Cognition and Emotion*, *7*(6), 561–570. doi:10.1080/02699939308409206

Pham, S., Porta, G., Biernesser, C., Payne, M. W., Iyengar, S., Melhem, N., & Brent, D. A. (2018). The burden of bereavement: Early-onset depression and impairment in youths bereaved by sudden parental death in a 7-year prospective study. *The American Journal of Psychiatry*, *175*(9), 887–896. doi:10.1176/appi.ajp.2018.17070792

Raphael, B. (1983). *The Anatomy of Bereavement*. New York, NY: Basic Books.

Sakaguchi, Y., Kashiwagi, T., & Tsuneto, S. (2001). The relationship between coping patterns and mental health after spousal loss. *Japanese Society of Psychosomatic Medicine*, *41*, 439–446. doi:10.4992/jjpsy.84.498

Schnider, K., Elhai, J., & Gray, M. (2007). Coping style use predicts posttraumatic stress and complicated grief symptom severity among college students reporting a traumatic loss. *Journal of Counseling Psychology*, *54*(3), 344–350.

Scholtes, D., & Browne, M. (2015). Internalized and externalized continuing bonds in bereaved parents: Their relationship with grief intensity and personal growth. *Death Studies*, *39*(1–5), 75–83. doi:10.1080/07481187.2014.890680

Schut, H., & Stroebe, M. S. (2005). Interventions to enhance adaptation to bereavement. *Journal of Palliative Medicine*, *8*(Supplement 1), S-140–S-147. doi:10.1089/jpm.2005.8.s-140

Shaver, P. R., & Tancredy, C. M. (2001). Emotion, attachment, and bereavement: A conceptual commentary. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp.63–88). Washington, DC: American Psychological Association.

Sone, T., Nakaya, N., Sugawara, Y., Tomata, Y., Watanabe, T., & Tsuji, I. (2016). Longitudinal association between time-varying social isolation and psychological distress after the Great East Japan Earthquake. *Social Science & Medicine*, *152*, 96–101.

Stajduhar, K., Martin, W., & Cairns, M. (2010). What makes grief difficult? Perspectives from bereaved family caregivers and healthcare providers of advanced cancer patients. *Palliative & Supportive Care*, *8*(3), 277–289. doi:10.1017/S1478951510000076

Stroebe, M., & Schut, H. (2005). To continue or relinquish bonds: A review of consequences for the bereaved. *Death Studies*, *29*(6), 477–494. doi:10.1080/07481180590962659

Stroebe, M., Schut, H., & Stroebe, W. (2007). Health consequences of bereavement: A review. *The Lancet*, *370*(9603), 1960–1973. doi:10.1016/S0140-6736(07)61816-9

Suhail, K., Jamil, N., Oyebode, J., & Ajmal, M. A. (2011). Continuing bonds in bereaved Pakistani Muslims: Effects of culture and religion. *Death Studies*, *35*(1), 22–41. doi:10.1080/07481181003765592

Suzuki, Y., Fukasawa, M., Obara, A., & Kim, Y. (2014). Mental health distress and related factors among prefectural public servants seven months after the Great East Japan Earthquake. *Journal of Epidemiology*, *24*(4), 287–294. doi:10.2188/jea.je20130138

Taku, K., Cann, A., Tedeschi, R. G., & Calhoun, L. G. (2009). Intrusive versus deliberate rumination in posttraumatic growth across US and Japanese samples. *Anxiety, Stress, and Coping*, *22*(2), 129–136. doi:10.1080/10615800802317841

Thomas, K., Hudson, P., Trauer, T., Remedios, C., & Clarke, D. (2014). Risk factors for developing prolonged grief during bereavement in family carers of cancer patients in palliative care: A longitudinal study. *Journal of Pain and Symptom Management*, *47*(3), 531–541. doi:10.1016/j.jpainsymman.2013.05.022

Tsai, W. I., Kuo, S. C., Wen, F. H., Prigerson, H. G., & Tang, S. T. (2018). Prolonged grief disorder and depression are distinct for caregivers across their first bereavement year. *Psycho-Oncology*, *27*(3), 1027–1034. doi:10.1002/pon.4629