

## Original Article

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# Bereavement risk assessment of family caregivers of patients with cancer: Japanese version of the Bereavement Risk Assessment Tool

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## Abstract

**Objectives.** The Bereavement Risk Assessment Tool (BRAT) seems to be useful in identifying those who are likely to suffer from the more severe consequences of bereavement. To date, however, only a few studies have examined bereavement risk using the BRAT. This study investigated bereavement risk in family caregivers of patients with cancer using the Japanese version of the Bereavement Risk Assessment Tool (BRAT-J). We also investigated the relationship of bereavement risk with psychological distress and resilience among caregivers to determine the validity of the BRAT-J.

**Methods.** We conducted family psychoeducation in the palliative care unit of Tohoku University Hospital with participants who were recruited in this study. Among the participants, 50 family caregivers provided their written informed consent and were included in this study. Participants were assessed using the BRAT-J and completed the Japanese version of the Kessler Psychological Distress Scale (K6) and the Tachikawa Resilience Scale (TRS).

**Results.** According to the BRAT-J, five individuals (10%) were in the high category of bereavement risk (level 4 or 5). We also found that family caregivers of patients experienced many different pressures, such as facing the unknown; their own work; and insufficient financial, practical, or physical resources. These issues are associated with various mental problems. Additionally, the level of bereavement risk was significantly correlated with K6 scores ( $\rho = 0.30$ ,  $p = 0.032$ ), and the TRS score ( $\rho = -0.44$ ,  $p = 0.001$ ). These correlations confirmed previous findings and that the BRAT-J can be an efficient screening tool for the bereavement risk of family caregivers of patients with cancer.

**Significance of results.** It appears that the BRAT-J is useful in predicting the likelihood of difficulties or complications in bereavement for family caregivers and could help to provide support with these issues when needed.

## Introduction

In palliative care, family caregivers are included in the unit of care and the assessment of their bereavement risk could improve the provision of support. The loss of a close family member is known to be one of the most stressful events in a person's life (Haley et al., 2001). Although most bereaved individuals overcome their grief over time without any intervention, a minority of individuals experience severe and long-term consequences (Schut & Stroebe, 2005). Previous studies indicated that this minority of individuals are more likely to be at risk of negative bereavement-related outcomes such as poorer mental health, diminished quality of life, and risk of suicide (Ajdacic-Gross et al., 2008; Boelen, 2013; Ghesquiere et al., 2011). This is referred to as complicated or prolonged grief (Prigerson et al., 2009). Unfortunately, research indicates that those experiencing negative bereavement do not seek help (Currow et al., 2008); therefore, to provide psychological help to those who need it, it is necessary to identify those likely to suffer from the more severe consequences of bereavement.

The Bereavement Risk Assessment Tool (BRAT) was developed by the health professionals of Victoria Hospice Society in Canada (Rose et al., 2011). Because the BRAT is based on observation, it requires staff to be trained in its use and has several complex factors that are rated subjectively. The BRAT can be used before the patient's death for recording and analyzing the bereavement needs of caregivers and staff in a timely manner. This strategy avoids duplication of assessment and reduces the likelihood of missing caregivers for the assessment. This tool includes risk and protective factors based on previously published reports and clinical evidence.

**Table 1.** Demographic characteristics of participants (N = 50)

	n (%)
Age (years)	
20s	1
30s	1
40s	1
50s	15
60s	19
70s	10
80s	3
Sex	
Male	8 (16.0)
Female	42 (84.0)
Relationship to patient	
Spouse/partner	31 (62.0)
Parent	9 (18.0)
Son/daughter	5 (10.0)
Sibling	5 (10.0)

As the study by Bonanno et al. (2002) suggested, individual resilience is a common reaction to bereavement that protects against prolonged grief. Stroebe et al. (2006) argued against examining any specific factor in isolation and suggested that the assessment of risk should include factors that mitigate future potential harm in the adjustment to loss. From this point of view, the BRAT is somewhat effective because it considers both risk and relevant resiliencies. To date, however, only a few studies have examined bereavement risk using the BRAT. Rose et al. (2011) estimated the inter-rater reliability of the BRAT using case studies, with 36 psychosocial professionals completing the BRAT on 10 caregivers of hospice palliative care patients. In that study, four of the 10 caregivers were considered to be at a high risk for bereavement (level 4 or 5). In addition, Hirooka et al. (2016) developed a preliminary Japanese version of the BRAT (BRAT-J) and assessed 25 family caregivers of patients with cancer. They reported that nine participants (36%) were at moderate risk and one (4%) was at a high risk for bereavement.

There are no conclusions regarding the degree of bereavement risk of family caregivers of patients with cancer, which suggests that research is required to clarify this issue. The relationship of bereavement risk with psychological distress and resilience among caregivers also needs to be examined to determine the validity of the BRAT-J. In this study, we investigated the following: (1) the degree of bereavement risk of family caregivers of patients with cancer and (2) the relationship of bereavement risk with psychological distress and resilience among caregivers.

## Method

### Participants

In the palliative care unit of Tohoku University Hospital, between September 2013 and December 2016, the average number of patients per year was 199.3 and their average stay 43.2 days. Family psychoeducation was provided to family caregivers of

**Table 2.** Frequency of BRAT-J risk levels (N = 50)

Risk level	n	%
No known risk (level 1)	8	16
Minimal risk (level 2)	17	34
Low risk (level 3)	20	40
Moderate risk (level 4)	4	8
High risk (level 5)	1	2

BRAT-J, Japanese version of the Bereavement Risk Assessment Tool.

patients (Saito et al., 2012). Individuals who met the following inclusion criteria were invited to family psychoeducation by the medical staff: (1) aged >20 years, (2) family caregivers of patients with cancer who were hospitalized in the palliative care unit of Tohoku University Hospital, and (3) judged upon observation of the medical staff to be seeking psychological help.

A total of 70 family caregivers (from 57 families) participated to family psychoeducation. Among them, 50 family caregivers provided their written informed consent and were thus included in this study. Twenty excluded caregivers were omitted for varied reasons (e.g., no time to reply after the session, declining to participate in this study, participants were  $\geq 90$  years of age).

The research design was approved by the Ethics Committee of Tohoku University Graduate School of Medicine and Tohoku University Hospital. This study complies with the principles laid down in the Declaration of Helsinki for experiments involving human participants.

### Measures

With permission from Caelin Rose, Hirooka et al. (2016) first translated the BRAT into Japanese. Then, the BRAT-J was back-translated into English and the results of the back-translation were examined and judged satisfactory by Rose. We used BRAT-J to assess the degree of bereavement risk of the family caregivers of patients with cancer; it is a 40-item, staff-administered observational checklist. Items are based on 36 risk factors and four protective factors. This checklist was designed to predict bereavement and generates a risk rating, where level 1 represents no known risk and level 5 indicates high risk. (A manual is available from Victoria Hospice at <http://www.victoriahospice.org>). The assessments were undertaken by the psychiatrist and psychologist based on the information from the informal discussions in the family psychoeducation session about caregivers' needs.

We also used the Kessler Psychological Distress Scale (K6) and the Tachikawa Resilience Scale (TRS) to investigate the relationship between bereavement risk and psychological characteristics (i.e., psychological distress and resilience). The K6 consists of six items measured on a 5-point scale (0–4). High scores indicate more severe psychological distress (Kessler et al., 2003). The Japanese version of the K6 has been previously validated (Furukawa et al., 2008). A cutoff point of 9/10 has been used to screen for mood or anxiety disorder (Sone et al., 2016; Suzuki et al., 2014), which we adopted in this study. The TRS is a 10-item self-report measure of resilience for Japanese populations. All items are scored on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree), with a total score ranging from 10 to 70. Higher scores reflect higher resilience. The reliability and validity of the TRS have been established (Nishi et al., 2013).

**Table 3.** Frequency of BRAT-J items

Item no.	Item	<i>n</i>
1	Spouse/partner of patient or deceased	31
2	Parent/parental figure of patient or deceased	5
3	Family member or friend who has taken primary responsibility for care	41
4	Significant mental illness (e.g., major depression, schizophrenia, anxiety disorder)	0
5	Significant mental disability (e.g., developmental, dementia, stroke, head injury)	0
6	Substance abuse/addiction (specify)	0
7	Considered suicide (no plan, no previous attempt)	1
8	Has suicide plan and a means to carry it out or has made previous attempt	1
9	Self-expressed concerns regarding own coping, now or in the future	9
10	Heightened emotional states (anger, guilt, anxiety) as typical response to stressors	1
11	Yearning/pining for the deceased or persistent disturbing thoughts/images >3 months	0
12	Declines available resources or support	0
13	Inability to experience grief feelings or acknowledge reality of death >3 months	0
14	Significant challenge to fundamental beliefs/loss of meaning or faith/spiritual distress	0
15	Two or more competing demands (e.g., single parenting, work, other caregiving)	12
16	Insufficient financial, practical, or physical resources (e.g., ↓ income, no childcare, illness)	8
17	Recent non-death losses (e.g., divorce, unemployment, moving, retirement)	1
18	Significant other with life-threatening illness/injury (other than patient/deceased)	0
19	Unresolved previous bereavement(s)	0
20	Death of other significant person within 1 year (from time of patient's death)	4
21	Cumulative grief from >2 other deaths over past 3 years	0
22	Death or loss of parent/parental figure during own childhood (age <19)	0
23	Lack of social support/social isolation (perceived or real; e.g., housebound)	1
24	Cultural or language barriers to support	0
25	Longstanding or current discordant relationship(s) within the family	2
26	Relationship problems with patient/deceased (e.g., abuse, dependency)	0
27	Death of parent, parental figure, or sibling	0
28	Demonstration of extreme ongoing behaviors/symptoms (e.g., separation anxiety, nightmares)	0
29	Parent expresses concern regarding his or her ability to support child's grief	0
30	Parent/parental figure significantly compromised by his or her own grief	0
31	Patient/deceased before age 35 years	0
32	Lack of preparedness for the death (as perceived or demonstrated by bereaved)	2
33	Distress witnessing the death or death perceived as preventable	0
34	Violent, traumatic, or unexplained death (e.g., accident, suicide, unknown cause)	0
35	Significant anger with other health care providers (e.g., "my physician missed the diagnosis")	0
36	Significant anger with our hospice palliative care program (e.g., "you killed my wife")	0
37	Internalized belief in own ability to cope effectively	1
38	Perceives and is willing to access strong social support network	6
39	Predisposed to high level of optimism/positive state of mind	3
40	Spiritual/religious beliefs that assist in coping with the death	0

### Analysis

To assess the degree of bereavement risk of the family caregivers of patients with cancer, the proportion of individuals at high risk

as defined by the BRAT-J was calculated. In addition, to investigate the relationship between bereavement risk and psychological characteristics among caregivers, Spearman's correlations of

BRAT-J risk levels with K6 and TRS scores were calculated. Statistical analyses were conducted with IBM SPSS statistical software, version 20.0 (IBM Japan, Tokyo, Japan). All testing was two-tailed, and the significance level was set at 5%.

## Results

### Demographic characteristics

Demographic characteristic of participants are shown in Table 1. The majority (84%) of the participants were female, nearly two-thirds (62%) were spouses or partners of the patient/deceased, and the mean age was 62.98 years ( $SD = 11.10$ ).

### Profile of bereavement risk

According to the BRAT-J risk levels (Table 2), five (10.0%) of the 50 participants were in the category of high bereavement risk (level 4 or 5). Frequency counts for each item of the BRAT-J are presented in Table 3. The majority (82%) of the participants had primary responsibility for care, and one-quarter (24%) had two or more competing demands.

### Correlation of bereavement risk with psychological distress and resilience

The mean K6 score was 7.58 ( $SD = 4.37$ ), and 12 participants (24.0%) had scores higher than the cutoff point ( $>9$ ) for the detection of depressive disorder. K6 scores were significantly correlated with the BRAT-J risk level ( $\rho = 0.30$ ,  $p = 0.032$ ). The mean score of resilience as measured by the TRS was 45.9 ( $SD = 8.9$ ), and TRS scores were significantly negatively correlated with the BRAT-J risk level ( $\rho = -0.44$ ,  $p = 0.001$ ).

## Discussion

This study investigated bereavement risk among family caregivers of patients with cancer using the BRAT-J. Five individuals (10%) were in a high category of risk (level 4 or 5). This prevalence is lower than that reported in previous studies (Hirooka et al. 2016; Rose et al., 2011). Participants were recruited from family psychoeducation; that is, they were already seeking psychological support, which could act as a protective factor. Additionally, our results are consistent with previous studies showing that approximately 10–20% of caregivers suffer from complicated grief (Prigerson, 1995). Family members of palliative care patients are usually tasked with responsibilities that include maintenance of personal hygiene, medical care, consultations with health professionals, emotional support, and patient advocacy (Thomas et al., 2014). Participants in this study also experienced many different pressures, such as facing the unknown, their own work, and insufficient financial, practical, or physical resources; these issues are associated with various mental problems.

According to the cutoff point of the Japanese version of the K6, 12 (24%) of the 50 participants were suspected of having depression. In a previous study with family caregivers, depression rates between 12% and 59% and anxiety rates between 30% and 50% were reported (Hudson et al., 2011). Additionally, a positive correlation between BRAT-J risk level and the total K6 score was observed. This positive correlation suggests that family caregivers of patients with cancer with higher bereavement risk exhibited higher rates of psychological distress. Moreover, the present

study also found that the mean TRS scores were very close to those reported in previous studies assessing the resilience of healthy populations using the TRS (Nishi et al., 2013).

Further, resilience was negatively correlated with BRAT-J risk level, which supports previous findings that resilience is associated with adjusting better to bereavement (Bonanno et al., 2002). Family caregivers' resilience may therefore protect against prolonged grief, which requires further experimental analyses.

A limitation of the present study was the small sample size; as noted previously, the sample may have been biased because caregivers were already seeking psychological support. A larger sample size would provide more precise information about the prevalence of bereavement risk. Second, this study was cross-sectional, and future longitudinal studies would make it possible to examine the predictability of the bereavement risk of family caregivers using the BRAT-J.

In conclusion, we demonstrated that the BRAT-J can be an efficient screening tool for the bereavement risk of family caregivers of patients with cancer. The systematic assessment of bereavement risk would make it possible to promote empirical study and evidence-based clinical practice in palliative care. It appears that the BRAT-J is useful in predicting the likelihood of difficulties or complications in bereavement for family caregivers and could help to provide support with these issues when needed.

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**Conflict of interest.** The authors declare no conflict of interest.

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