


PAPER

Factors associated with possible complicated grief and major depressive disorders

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Abstract

Objective: Complicated grief (CG) is considered a distinctive symptom from other bereavement-related mental impairments such as major depressive disorder (MDD). CG and MDD may appear independently or co-morbidly; however, the factors associated with each situation are unclear.

Methods: We conducted a nationwide cross-sectional questionnaire survey involving bereaved family members of cancer patients in 175 institutions. The following items were included in the questionnaires to assess the prevalence of CG and MDD, and the following associated factors: demographic characteristics; bereaved family depression (Patient Health Questionnaire-9) and grief status (Brief Grief Questionnaire); structure and process of care (Care Evaluation Scale); overall care satisfaction; and achievement of a good death (Good Death Inventory).

Results: A total of 9123 questionnaires were returned. The prevalence of CG and MDD was 14% and 17%, respectively. Additionally, 58% of the possible CG participants showed co-morbid symptoms. Common factors that showed significant association with either independent or co-morbid symptoms of CG and MDD were pre-existing mental impairment; belief in the survival of the soul after physical death; unpreparedness for the death; poor physical or psychological health status; and the belief that the deceased felt themselves as a burden to others (all $P < 0.05$). The duration of bereavement did not remain significant after multivariate analysis.

Conclusions: While there were many common factors associated with both CG and MDD independently, few participants exhibited associations to both CG and MDD. Therefore, CG and MDD can be considered as distinctive symptoms, which frequently appear co-morbidly.

KEYWORDS

bereavement, cancer, caregiver, depression, grief, palliative care

1 | INTRODUCTION

Complicated grief (CG) is condition which is distinguished from normal grief, in terms of duration, intensity, differential symptom, and/or disruption of function criteria. There are recent arguments whether this excessive grief condition should be called CG or prolonged grief.^{1,2}

However, the term CG has been used in numerous studies for past decades and widely accepted.

CG is considered as independent entity distinct from other related mental disorders; however, it frequently co-occurs with other mental disorders, such as major depressive disorder (MDD).^{1,3-5} Therefore, appropriate assessment is important clinically to determine and provide the most effective supports for individuals suffering from these types of difficulties during bereavement. This is because treatments for CG typically focus on psychological interventions, such as counseling or cognitive approaches, while other similar mental

disorders, especially MDD, are often successfully treated through pharmacological interventions.⁶

Previous studies have reported that widely 2% to 15%⁶⁻⁹ and 10% to 26%^{6,10} of family caregivers suffer from CG and MDD, respectively. One of the major determinants of bereavement-related impairment is reported to be the cause of death, such as sudden death, suicide, and violent death, for which it is difficult to provide sufficient care at the end of life.⁶ In comparison, death from cancer that is treated in a palliative care setting is generally considered to be associated with higher quality care. However, there remains certain percentages of bereaved family caregiver that suffer from severe grief disorders. Similar to other nations, cancer is a leading cause of death in Japan. Therefore, it is important to make an approach to the bereaved who lost their loved one from cancer, considering the negative health impact that may cause by CG.⁶

There are various factors that have been reported as being associated with CG and MDD of the bereaved, either commonly or distinctively. For the common factors, some studies have found that female gender, spousal relationship, pre-existing mental disorders, lack of preparedness for the death, less social support, religious belief, annual income of the family caregiver, and place of death may increase the risk for poorer bereavement outcomes related to CG and MDD.¹¹⁻¹³ In their literature review, Lichtenthal and colleagues reported several differences between CG and MDD.⁵ Caregiver burden, close relationship with the deceased, and lack of preparedness for the death were found to be distinctive risk factors for CG. However, there were several limitations in previous studies with regard to addressing the differences between CG and other mental disorders related to bereavement. Specifically, previous research has lacked sufficiently large sample sizes, and there were wide ranges in the duration of symptoms after the loss, resulting in a limited ability to identify and/or compare the above factors directly and comprehensively. Our hypothesis is that there are both similarities and differences in the factors related to CG and MDD. In our large, multicenter study of bereaved family caregivers of cancer patients who received palliative care, we aimed to comprehensively examine the prevalence of CG and MDD, appearing either independently or co-morbidly, and to elucidate the similarities and differences in the characteristics of these family members.

2 | METHODS

We conducted a cross-sectional, anonymous, self-report questionnaire survey between May and July 2014. This was undertaken as part of the J-HOPE 3 study,¹⁴ which was one of the projects of the Japan Hospice Palliative Care Foundation. In total, 175 institutions, including 20 acute care hospitals, 133 palliative care units, and 22 home hospice services (all members of Hospice Palliative Care Japan (HPCJ)) participated in the study. To identify potential subjects, we asked each institution to identify and list up to 80 consecutive bereaved family members of patients who had died between October 2011 and January 2014.

The inclusion criteria were (1) the patient had died of cancer; (2) the patient was aged 20 years or older; and (3) the bereaved family

member was aged 20 years or older. The exclusion criteria were (1) the patient had received palliative care for <3 days; (2) contact information for family caregivers was missing; (3) deaths caused by any medical or surgical treatment or that had occurred in an intensive care unit; (4) if the primary physician judged that the family caregiver had suffered serious psychological distress; and (5) the potential participant was incapable of completing the self-report questionnaire because of health issues and/or disability. Although one of the proposed criteria for clinical diagnosis of CG was a duration of bereavement of longer than 6 months (to reveal if there are differences in the severity of grief and/or depression over time after bereavement), we included some participants who had experienced bereavement within 6 months.

The questionnaires were sent to the bereaved family members identified by each participating institution. The participants were asked to return the completed questionnaire to the secretariat office (Tohoku University) within 2 weeks. We sent a reminder to non-responders after 2 weeks subsequent to sending the questionnaire. A document explaining the aims and procedures of the J-HOPE 3 study was sent along with the questionnaire, and the return of a completed questionnaire was considered as consent to participate in the study. Ethical approval for the study (2015-1-436) was granted by the ethical committee of Tohoku University and by those of all participating institutions.

2.1 | Questionnaires

Brief Grief Questionnaire. We used the Brief Grief Questionnaire (BGQ)¹⁵ to assess for CG. The reliability and validity of the Japanese version have been confirmed.^{7,15,16} The BGQ comprises 5 items addressing CG-related status (difficulty accepting the death of a loved one; grief interfering with daily life; troubling images or thoughts about the death; and avoiding things related to the deceased), each rated on a scale of 0 to 2, with a higher score representing a more severe grief reaction. A total score ≥ 8 indicated that the respondent was likely to develop CG.

Patient Health Questionnaire 9. The Patient Health Questionnaire 9 (PHQ-9) is a widely accepted instrument that comprises 9 items used to assess the severity of depression in both clinical practice and scientific research.¹⁷ The reliability and validity of the scale, as well as the Japanese version of the questionnaire,¹⁸ have been confirmed. Responses were rated on a scale from 0 to 3, with total scores ranging from 0 to 27. A score of ≥ 10 represented a valid cut-off point for moderate to severe depression.

Overall Care Satisfaction. The question used was "Overall, were you satisfied with the medical care the patient received at the place of death?". Participants were asked to respond using a 6-point Likert scale (1: *absolutely dissatisfied* to 6: *absolutely satisfied*).

Care Evaluation Scale, version 2—Short Version. The Care Evaluation Scale (CES) was developed to measure end-of-life (EOL) care from the perspective of bereaved family members, with a focus on the structure and process of care. The short version of the CES consists of 10 representative items, and the validity and reliability of the scale have been confirmed.^{19,20} Each item was rated using a 6-point Likert scale ranging from 1 – 6 (1: *absolutely agree* to 6: *absolutely disagree*), with higher scores indicating better care.

Good Death Inventory—Short Version. We used the short version of the Good Death Inventory (GDI) to measure patients' achievement of a good death from the perspective of bereaved family members. The short version of the GDI consists of 18 representative items from each domain, and the validity and reliability of the scale have been confirmed.^{20,21} Participants evaluated each attribute using a 7-point Likert scale (1: *absolutely disagree* to 7: *absolutely agree*).

Caregiving Consequence Inventory (care burden domain). The burden of caregiving was assessed using a 4-item domain from the Caregiving Consequence Inventory (CCI), which is a valid measure that was developed to evaluate the consequences of caregiving for bereaved family members.²²

Items from the CCI, CES, and GDI were changed into dichotomous variables as *agree* and *disagree* in consideration of the ceiling effect of each item.

2.2 | Participant characteristics

We asked the participating institutions to conduct a search of their medical databases to collect data concerning the age, gender, number of days of hospitalization or home care, and primary cancer site for each decedent. The bereaved family members were asked for details concerning their age; gender; physical and psychological health status during the caregiving period; relationship to the patient; time spent with the patient during the week before death; educational background; social support (feeling of being loved and cared for, and how they felt people listened to their worries or problems); pre-existing mental impairment; preparedness for the death (by a single question, "How prepared were you for the patient's death?"); religion; frequency of visits to a religious place; belief in the survival of the soul subsequent to physical death; medical expenditures during the month preceding the patient's death; and whether other caregivers were present. In previous studies, these questions were considered important factors related to CG and/or MDD among bereaved individuals.¹¹

2.3 | Analytic approach

First, we conducted descriptive analyses of the demographic characteristics and the severity of grief and depression as assessed by the BGQ and the PHQ-9, respectively. Then, the participants were categorized into 4 groups: the CG group (BGQ total score > 7 and PHQ-9 total score < 10); the depression group (BGQ total score < 8 and PHQ-9 total score > 9); the co-morbid group (BGQ total score > 7 and PHQ-9 total score > 9); and the asymptomatic group (BGQ total score < 8 and PHQ-9 total score < 10). We used the Pearson's correlation coefficient to investigate the relationship between the severity of CG and that of depression as assessed by the BGQ and the PHQ-9. The chi-square test and Fisher's exact test were used preliminary to identify factors correlated with the presence of CG, depression, or both. Subsequently, multinomial logistic regression analysis (backward selection) was performed, with the presence of CG, depression, or co-morbid symptoms as the dependent variables (the asymptomatic group was utilized as the reference variable) and factors with significant relationships identified in the univariate analysis mentioned above as the independent variables. A P value <0.05 was

considered statistically significant, and all tests were 2-tailed. All statistical analyses were performed with SAS Ver. 9.4, Japanese version (Cary, NC; BMDP, Los Angeles, CA).

3 | RESULTS

The data analysis included questionnaires from 9123 family members (response rate 67.2%) (Figure S1). The characteristics of patients and caregivers are shown in Table S1. With respect to caregiver characteristics, 29% were male, 71% were female, 40% had been married to the deceased patient, 74% were prepared for bereavement to some extent, and no more than 6 months had passed since bereavement for 23% of the respondents. There were no significant differences between the respondents and the non-respondents with regard to the characteristics of the deceased patients (age, gender, duration of the last admission, primary cancer site) or to the duration of bereavement after death.

In total, 14% of the participants were considered as having possible CG by BGQ cut-off points, and 17% as having possible MDD by PHQ-9 cut-off points. A moderate correlation ($r = 0.60$, $P < 0.0001$) was shown between the total scores of the BGQ and the PHQ-9. Additionally, 58% of the possible CG participants and 45% of the possible MDD participants demonstrated co-morbid symptoms (Figure 1). The total scores for both the BGQ the PHQ-9 were significantly higher in the co-morbid group ($P < 0.0001$). The results from univariate analysis are described in Table S2.

Multinomial regression analysis of items from the CES and the GDI revealed factors associated with patient and caregiver characteristics and care satisfaction in the groups of CG without MDD, the group of MDD without CG, and the co-morbid group (Table 1). The common items associated with a significant increase in both CG and MDD were pre-existing psychological impairment, belief in survival of the soul after physical death, unpreparedness for the death, poor physical and/or psychological status during caregiving, and the belief that the deceased felt themselves as a burden to others (item from the GDI). An item from the GDI associated with a significant decrease in the prevalence of both CG and MDD was the thought that the deceased had spent enough time with their families and friends. There were 3

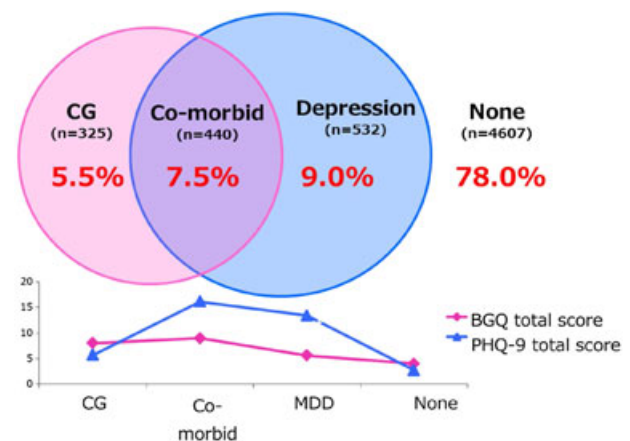


FIGURE 1 Percentage of complicated grief (CG) and depression in the bereaved and their scores in BGQ and PHQ-9

TABLE 1 Results from multivariate analysis

| Variables | Complicated Grief without Depression | | | Depression without Complicated Grief | | | Co-Morbid Symptoms | | |
|---|--------------------------------------|-------------|--------|--------------------------------------|-------------|--------|--------------------|-------------|--------|
| | OR | 95%CI | P | OR | 95%CI | P | OR | 95%CI | P |
| Patient gender | | | | | | | | | |
| Male | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| Female | 1.47 | 1.16 – 1.87 | 0.002 | 0.85 | 0.70 – 1.04 | 0.12 | 1.44 | 1.14 – 1.83 | 0.002 |
| Patient age | | | | | | | | | |
| <60 y | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| 60–69 y | 1.01 | 0.31 – 3.28 | 0.93 | 0.89 | 0.35 – 2.24 | 0.01 | 0.68 | 0.24 – 1.97 | 0.29 |
| 70–79 y | 1.13 | 0.34 – 3.80 | 0.55 | 0.50 | 0.19 – 1.30 | 0.10 | 0.52 | 0.17 – 1.55 | 0.46 |
| ≥80 y | 0.68 | 0.19 – 2.42 | 0.06 | 0.48 | 0.18 – 1.28 | 0.10 | 0.27 | 0.09 – 0.85 | 0.0002 |
| Bereaved family age | | | | | | | | | |
| <60 y | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| 60–69 y | 0.63 | 0.34 – 1.20 | 0.23 | 0.81 | 0.47–1.39 | 0.0004 | 1.66 | 0.79–3.52 | 0.04 |
| 70–79 y | 0.91 | 0.44 – 1.86 | 0.15 | 1.37 | 0.74 – 2.53 | 0.24 | 2.41 | 1.06 – 5.47 | 0.003 |
| ≥80 y | 1.00 | 0.42 – 2.35 | 0.19 | 1.77 | 0.86 – 3.63 | 0.04 | 3.46 | 1.36 – 8.81 | <.0001 |
| Relationship (to the deceased) | | | | | | | | | |
| Spouse | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| Child | 0.37 | 0.23 – 0.58 | 0.47 | 0.72 | 0.50 – 1.02 | 0.82 | 0.41 | 0.26 – 0.65 | 0.69 |
| Parent | 0.57 | 0.24 – 1.34 | 0.48 | 0.98 | 0.50 – 1.90 | 0.36 | 0.84 | 0.40 – 1.72 | 0.08 |
| Other | 0.22 | 0.07 – 0.72 | 0.18 | 0.68 | 0.35 – 1.33 | 0.75 | 0.27 | 0.08 – 0.89 | 0.31 |
| Presence of other caregivers | | | | | | | | | |
| Yes | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| No | 1.12 | 0.87 – 1.45 | 0.36 | 1.15 | 0.93 – 1.42 | 0.19 | 1.41 | 1.11 – 1.79 | 0.01 |
| Pre-existing mental impairment | | | | | | | | | |
| No | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| Yes | 1.72 | 1.26 – 2.35 | 0.001 | 3.14 | 2.49 – 3.97 | <.0001 | 3.25 | 2.49 – 4.25 | <.0001 |
| Perceived social support (how people listen to one's worries or problems) | | | | | | | | | |
| Quite a bit – A great deal | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| Not at all – Somewhat | 1.12 | 0.88 – 1.43 | 0.36 | 1.22 | 0.99 – 1.49 | 0.06 | 1.61 | 1.27 – 2.03 | <.0001 |
| Frequency of visits to religious places | | | | | | | | | |
| Rarely/ never | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| Often/ regularly | 1.40 | 0.97 – 2.4 | 0.07 | 1.14 | 0.86 – 1.53 | 0.36 | 1.91 | 1.28 – 2.83 | 0.001 |
| Belief in survival of the soul after physical death | | | | | | | | | |
| Disagree/ somewhat disagree | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| Agree/ somewhat agree | 1.42 | 1.12 – 1.80 | 0.004 | 1.33 | 1.09 – 1.63 | 0.01 | 1.62 | 1.28 – 2.04 | 0.001 |
| Preparedness for bereavement | | | | | | | | | |
| Prepared/ somewhat prepared | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| Not at all/ not enough | 2.38 | 1.84 – 3.09 | <.0001 | 1.77 | 1.39 – 2.25 | <.0001 | 3.67 | 2.89 – 4.68 | <.0001 |
| Care burden (items from care consequence inventory) | | | | | | | | | |
| <i>Time and changes in schedules</i> | | | | | | | | | |
| Yes | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| No | 1.78 | 1.34 – 2.37 | <.0001 | 1.12 | 0.90 – 1.39 | 0.31 | 1.27 | 0.98 – 1.65 | 0.07 |
| <i>Financial burden</i> | | | | | | | | | |
| Yes | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| No | 0.84 | 0.66–1.08 | 0.17 | 0.73 | 0.59–0.89 | 0.002 | 0.65 | 0.51–0.83 | 0.0004 |
| Duration of bereavement | | | | | | | | | |
| <6 m | Ref. | Ref. | – | Ref. | Ref. | – | Ref. | Ref. | – |
| 6 – 12 m | 1.21 | 0.76 – 1.92 | 0.67 | 0.67 | 0.46 – 0.99 | 0.90 | 0.58 | 0.36 – 0.95 | 0.40 |
| 1 – 1.5 y | 1.24 | 0.85 – 1.79 | 0.47 | 0.53 | 0.38 – 0.72 | 0.10 | 0.68 | 0.47 – 0.97 | 0.83 |
| 1.5 – 2 y | 1.17 | 0.62 – 2.19 | 0.86 | 0.70 | 0.40 – 1.19 | 0.83 | 0.54 | 0.27 – 1.09 | 0.43 |
| 2 – 2.5 y | 1.14 | 0.53 – 2.44 | 0.95 | 0.48 | 0.22 – 1.02 | 0.35 | 0.47 | 0.19 – 1.16 | 0.34 |

(Continues)

TABLE 1 (Continued)

| Variables | Complicated Grief without Depression | | | Depression without Complicated Grief | | | Co-Morbid Symptoms | | |
|---|--------------------------------------|-------------|--------|--------------------------------------|-------------|--------|-------------------------------|-------------|--------|
| | OR | 95%CI | P | OR | 95%CI | P | OR | 95%CI | P |
| Physical status during caregiving | | | | | | | | | |
| Good/ average | Ref. | Ref. | — | Ref. | Ref. | — | Ref. | Ref. | — |
| Bad/ very bad | 1.30 | 1.01 – 1.68 | 0.04 | 1.65 | 1.34 – 2.04 | <.0001 | 1.95 | 1.54 – 2.47 | <.0001 |
| Psychological status during caregiving | | | | | | | | | |
| Good/ average | Ref. | Ref. | — | Ref. | Ref. | — | Ref. | Ref. | — |
| Bad/ very bad | 2.74 | 2.13 – 3.52 | <.0001 | 1.87 | 1.522 – .30 | <.0001 | 2.96 | 2.28 – 3.85 | <.0001 |
| Overall care satisfaction | | | | | | | | | |
| Satisfied | Ref. | Ref. | — | Ref. | Ref. | — | Ref. | Ref. | — |
| Dissatisfied | 1.48 | 1.02 – 2.16 | 0.04 | 1.23 | 0.89 – 1.71 | 0.21 | 1.73 | 1.23 – 2.42 | 0.002 |
| Items from Care Evaluation Scale | | | | | | | | | |
| <i>Explanation to family from physician was sufficient</i> | | | | | | | | | |
| Disagree | Ref. | Ref. | — | Ref. | Ref. | — | Ref. | Ref. | — |
| Agree | 1.05 | 0.70 – 1.58 | 0.80 | 0.70 | 0.51 – 0.97 | 0.03 | 0.70 | 0.49 – 0.98 | 0.04 |
| Items from good death inventory | | | | | | | | | |
| <i>Feel like being a burden to others</i> | | | | | | | | | |
| Disagree | Ref. | Ref. | — | Ref. | Ref. | — | Ref. | Ref. | — |
| Agree | 1.64 | 1.30 – 2.08 | <.0001 | 1.37 | 1.13 – 1.67 | 0.001 | 1.62 | 1.29 – 2.03 | <.0001 |
| <i>Spent enough time with family and friends</i> | | | | | | | | | |
| Disagree | Ref. | Ref. | — | Ref. | Ref. | — | Ref. | Ref. | — |
| Agree | 0.77 | 0.61 – 0.99 | 0.04 | 0.82 | 0.67-1.01 | 0.06 | 0.76 | 0.60 – 0.96 | 0.02 |
| OR: Odds ratio | | | | | | | R-square = 0.22 | | |
| 95%CI: 95% confidence interval | | | | | | | Max scaled R-square = 0.28 | | |
| Ref: Reference variable (the asymptomatic group) | | | | | | | | | |
| OR >1.0 indicates increased likelihood to develop CG and/or MDD | | | | | | | | | |

items that were significantly associated with the co-morbid group: the unavailability of another person who could stay with the patient; the feeling that people listened and provided support; and frequent visits to religious places.

4 | DISCUSSION/CONCLUSIONS

The major finding of our study was that CG and MDD can be considered as having distinct symptoms, although they are similar in characteristics and frequently appear co-morbidly. The current study, with one of the largest samples to date and with a sufficiently high response rate, revealed the prevalence of possible CG and/or MDD as 14% and 17%, respectively, in family members who had experienced the death of their loved ones due to cancer. To our knowledge, this is the first large, multicenter study to report not only the prevalence, but also the similarities and/or differences in the characteristics of those having CG and/or MDD symptoms after bereavement.

One of the most important findings of our study is the similarity and difference in factors associated with CG and MDD, whether these symptoms appear independently or co-morbidly. First, the factors which were significantly associated with possible CG independently were female gender, dissatisfaction with the care received for the deceased, and feeling that the deceased could not spend enough time with their families and friends. This result supports the previous

findings that to decrease the risk of CG, it is important for family members, more specifically females, to feel satisfaction, and to spend enough time with the patient during the caregiving process.¹⁸ Second, the factors significantly and independently associated with possible MDD were financial burden during caregiving and insufficient explanation from the physician. Consistent with previous findings,¹ the importance of lessening the families' financial burden and providing sufficient explanation for the families about the patient's condition were supported by our results. Third, there were common factors that showed significant association with either independent or co-morbid symptoms of CG and MDD. Specifically, these included pre-existing mental impairment, belief in survival of the soul after physical death, unpreparedness for the death, poor physical/ psychological health status, and the thought that the deceased had felt themselves as a burden to others. These 5 common items are notable associated elements that could be considered as risk factors of mental impairment related to bereavement. Additionally, the unique finding of our study was that there were a few factors that were significantly associated only with co-morbid symptoms. These were items concerning social support and religious activities. Previous studies have pointed out the importance of social support^{6,23} and religious beliefs²⁴ in the grieving process. Notable from our results, the total scores from both the BGQ and the PHQ-9 were higher in the co-morbid group than in the possible CG or MDD independent groups, which indicates that the co-morbid group would have more complex or severe mental

impairment and that these individuals might seek more social support and/or spiritual/religious support. However, it would be a further challenge to clarify why these items are associated when CG and MDD appear co-morbidly.

In contrast to the results of some previous studies, we did not find a difference in the prevalence of possible CG and/or MDD over time. Maciejewski and colleagues²⁵ reported that negative grief reactions, including depression, peaked within approximately 6 months following the loss. It is possible that the intensity of grief may change over time, but it does not always occur within the same time frame for all individuals. The DSM-5 has proposed a time frame of 13 months in adults; however, there has been persistent debate as to whether it would be ethical to allow individuals to suffer for such a long time before they qualify for a clinical diagnosis.^{1,4,5} In our study, we targeted individuals who had lost their loved ones in the previous 3.5 months to 2.5 years, and our results were unable to confirm the exact criteria for the duration of bereavement for diagnosing CG. However, our findings suggest that the intensity of grief may not always depend on its duration, suggesting that it is important to assess the grieving process individually.

4.1 | Study limitations

First, the participants were limited to those who had lost a loved one in an HPCJ member facility; therefore, the findings may not represent the entire population. Moreover, representative sampling for certain types of research, such as mortality follow-up surveys based on death certification, presents a challenge in Japan. Second, because of the nature of the study design, we cannot rule out recall bias. However, according to some surveys, 3 to 12 months subsequent to bereavement may be an appropriate time frame for participant inclusion, considering both recall bias and the grieving process.^{26,27} In consideration of Japanese social customs regarding the grieving process, we conducted this survey a minimum of 3.5 months (100 days) subsequent to bereavement. Third, the subjects who did not return the questionnaire may have been suffering from severe grief or depression, although the response rate in the present study was 67.2%, which is a relatively high rate for a postal survey, compared with previous studies.²⁷ Fourth, there are arguments whether to use the term "CG" for referring the pathological grief symptoms recently.^{2,28} Finally, assessing CG and depression, we used the BGQ and the PHQ-9, which are both screening tools and therefore are not capable of providing a full clinical diagnosis.

4.2 | Clinical implications

Our findings suggest that CG and MDD can be considered as having distinct symptoms, although they are similar in characteristics and frequently occur co-morbidly. Factors such as providing sufficient explanation to help families to prepare for their loss and ensuring their satisfaction with the care provided could be major interventions performed by clinical staff during the care for patients in their EOL stage to help family members in bereavement.

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CONFLICT OF INTEREST

None declared.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

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