

The Effectiveness of Bereavement Support for Adult Family Caregivers in Palliative Care: A Meta-Analysis of Randomized Controlled Trials

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Key words

Adult caregiver, bereavement support, grief, meta-analysis, palliative care, randomized controlled trials

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Accepted November 30, 2020

doi:10.1111/jnu.12630

Abstract

Purpose: This meta-analysis aimed to summarize and synthesize the effectiveness of bereavement support for adult family caregivers in palliative care.

Methods: Meta-analysis was conducted. The databases of the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane, Embase, Medline, PubMed, Scopus, and Web of Science were comprehensively searched from inception until January 2020. This study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and standard methods for conducting a meta-analysis. Data analysis was performed using Comprehensive Meta-analysis version 3.0, and the random-effects model was adopted.

Findings: In total, 19 randomized controlled trials with an overall sample size of 2,690 participants met the inclusion criteria. The study showed that bereavement support had a significant effect on reducing grief (Hedges' g score = -0.198; 95% confidence interval [CI] -0.310 to -0.087), depression (Hedges' g score = -0.252; 95% CI -0.406 to -0.098), and anxiety (Hedges' g score = -0.153; 95% CI -0.283 to -0.023); however, high heterogeneity was present. No statistically significant difference was shown for traumatic feelings. Based on moderator analysis, a group format was more effective for grief, a combined individual and group format for depression, and an individual format for anxiety. Bereavement support was more effective when delivered by professionals, when delivered in more than six sessions, and need to be evaluated within 6 months.

Conclusions: Bereavement support was effective in reducing grief, depression, and anxiety. The majority of the included studies had moderate heterogeneity, which limited the comparability of the evidence. Therefore, more robust randomized controlled trials are needed to confirm these study results.

Clinical Relevance: This meta-analysis provides evidence that bereavement support delivered in the palliative care setting is effective for reducing grief, depression, and anxiety. Nurses and other healthcare professionals can make recommendations for adult family caregivers based on this study in reducing psychological symptoms due to a loss in the palliative care domain.

Caregivers of patients with advanced illnesses can exhibit more intense and complicated distress due to the pressures in providing care and the impending death of their loved ones (Chu et al., 2011). The response to the loss of a person can vary in different people, ranging from typical to severe psychological reactions. Grief usually occurs in family caregivers after loss, and prolonged grief disorder occurs in 9.8% of the adult bereaved population (Lundorff, Holmgren, Zachariae, Farver-Vestergaard, & O'Connor, 2017). Given the recent addition of prolonged grief disorder in the 11th edition of the International Classification of Diseases (ICD-11) and persistent complex bereavement disorder in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; Prigerson et al., 2009), the need to find effective bereavement interventions for family caregivers in palliative care has become even more urgent.

Literature suggests that psychotherapy interventions and bereavement support can be utilized to prevent and resolve cases of psychological health disorders due to complicated grief (Näppä et al., 2016). Bereavement support has been recommended as a more acceptable and flexible intervention to support bereaved families through the grieving process (Breen et al., 2017; Näppä, Lundgren, & Axelsson, 2016). Bereavement support assists bereaved persons through Worden's four tasks of mourning: integrating the loss of a loved one into their reality, processing the pain and grief, adjusting to a world without the deceased and maintaining a healthy bond to the deceased person, and moving forward to continue their lives.

Bereavement support can be adopted at a relatively low cost in most settings, including hospitals, communities, and long-term care facilities, as well as at home by trained healthcare professionals, peers, volunteers, or even other family members, and can involve various media or methods such as phones calls and memorabilia items (Breen et al., 2017). Unfortunately, bereavement support in palliative care for family caregivers is inadequate, since service is usually prioritized for patients and rarely provided as needs-based bereavement care for other populations (Gramm, Trachsel, & Berthold, 2020). Another study reported that only 43% of caregivers with prolonged grief disorder take advantage of professional bereavement services (Lichtenthal et al., 2011). Nurses can play an important role in the care and support of the bereaved.

Evidence on the effectiveness of interventions to improve complicated grief in bereaved families has shown inconsistent results. Forte, Hill, Pazder, and Feudtner (2004) found the pharmacological approach was the most effective intervention for overcoming depression in bereaved families. Meanwhile, Wiegand and La (2019) demonstrated that a psycho-educational approach had a better outcome compared to other forms of intervention to improve defined outcomes of grief, depression, anxiety, and post-traumatic stress. Previous reviews focused on children and adolescents (Currier, Holland, & Neimeyer, 2007; Rosner, Kruse, & Hagl, 2010), suicide-specific interventions (Andriessen et al., 2019; Linde, Treml, Steinig, Nagl, & Kersting, 2017), all causes of death (Forte et al., 2004; Johannsen et al., 2019; Wittouck, Van Autreve, De Jaegere, Portzky, & van Heeringen, 2011), and psychotherapy interventions (Currier, Neimeyer, & Berman, 2008). No metaanalysis was found on the effects of bereavement support on adult family caregivers in palliative care. The current study examined the effectiveness of bereavement support on reducing psychological outcomes following the death of a family member due to terminal illness or natural aging processes for adult caregivers in the palliative care domain.

Methods

Reporting Standards

The current review was conducted and guided by the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA), and the protocol was registered in PROSPERO (CRD42020162144).

Search Strategy and Selection Criteria

The literature search was performed using key words, subject headings (MeSH terms), and Boolean operators based on the population ("bereaved family"

OR "widowed family" OR "adult caregiver" OR "family caregiver" AND "palliative care"), intervention ("bereavement support"), comparator (any type of comparison), and outcome ("grief"). A comprehensive literature search in the databases of the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane, Embase, Medline, PubMed, Scopus, and Web of Science was initially done in November 2019, and an updated search was conducted on January 14, 2020. Relevant meta-analyses, reviews, and reference lists were also manually screened to identify additional eligible studies, including in Google Scholar. There were no exclusions based on language. Email requests were sent to the corresponding authors of eligible studies asking for missing information.

The inclusion criteria were (a) randomized controlled trials (RCTs) assessing the effect of bereavement support in bereaved families; (b) adult (18 years and older) family caregivers (nonpaid and nonprofessional caregivers related to the patient by blood or friendship) where the majority of the participants (more than 50% of the participants in the study) experienced the loss of a loved one due to lifelimiting health problems or other natural aging conditions in all settings (hospital, long-term care, community, or at home); and (c) outcome of interest of caregivers with grief and depression, anxiety, or traumatic feeling symptoms. The exclusion criteria were (a) studies that applied psychotherapy approaches such as interpersonal therapy (ITP) and cognitivebehavioral therapy (CBT); (b) studies that clearly stated that grief was caused by an unexpected death, including violence, accidents, suicide, or disaster; (c) studies performed in children, adolescents, people with intellectual disability, or professional caregivers; and (d) inability to extract data (no information provided by author after request).

Outcome Measures

The primary outcome of this current study was grief. Grief is a normal process triggered by the death of a family member, but can develop into prolonged or complicated symptoms (Garcia, Landa, Grandes, Pombo, & Mauriz, 2013). The secondary outcomes included (a) depression, (b) anxiety, and (c) traumatic feelings. Depression is defined in the DSM-5 as a persistent feeling of sadness experienced as hopelessness and loss of interest lasting for at least 2 weeks (Sandler, Tein, Cham, Wolchik, & Ayers, 2016). Anxiety is characterized by exaggerated feelings of fear and worry, and traumatic feelings are stress caused by a traumatic event or a series of traumatic events (Kissane et al., 2006).

Data Extraction and Risk of Bias

Two researchers (C.Y.K. and N.Y.) screened the articles by title and abstract first and then excluded studies by screening through the full text (Figure S1). The descriptions of the eligible study characteristics, including the causes of death, participant characteristics (number of samples of the experimental and control groups, age, and gender), characteristics of the support (type, session, and duration), and results evaluated (measurement tools and indicators) are listed. The Cochrane Risk of Bias tool (RoB version 2.0, London, UK) was used by two independent raters to assess the quality of all included RCTs. RoB 2.0 has five domains of bias arising from the randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome, and selection of the reported result (Sterne et al., 2019). Disagreement of results between the two raters was discussed when necessary with a third expert reviewer. The final rating of each domain for each study was classified as "high," "some concerns," and "low" risk of bias.

Statistical Analysis

Results reported in the selected articles were analyzed using the Comprehensive Meta-Analysis program (version 3.0; Biostat Inc., Englewood, NJ, USA), and the random-effects model was adopted in the analysis considering variations among the included studies (Serghiou & Goodman, 2019). The interpretation of the pooled effect size was 0.2 to 0.49 as a small effect, 0.5 to 0.79 as a medium effect, and ≥0.8 as a large effect, with p < .05 indicating statistical significance (Lakens, 2013). A X²-based test using Cochran's Q statistic with statistically significant results was used to indicate that the true effect size was not the same for all studies (p < .10), and the I^2 statistic identified and quantified heterogeneity. Scores of 25%, 50%, and 75% indicated low, moderate, and high heterogeneity, respectively (Huedo-Medina, Sánchez-Meca, Marín-Martínez, & Botella, 2006). Subgroup analysis and meta-regression were also conducted for moderator analysis among the included studies (Higgins, Thompson, Deeks, & Altman, 2003). The Egger's regression intercept and Begg and Mazumdar rank correlation were also used to identify publication bias on grief, depression, anxiety, and traumatic feeling outcomes. A sensitivity analysis was performed to investigate the influence of each study on the overall effect by excluding one study at a time.

Results

Descriptions of Studies

From the electronic databases, 1,961 articles were retrieved, and 291 duplicate articles were excluded. After that, 1,670 research reports were further excluded based on the title and abstract for the following reasons: there was no relevant population; the study focus was unrelated to the topic; the study was nonquantitative research; or the reports in question were nonresearch articles, review articles, or in the form of a study protocol. An additional 44 studies were excluded for the following reasons: the full text was unavailable; they were nonrandomized controlled studies; or the study topic did not pertain to bereavement support intervention. Finally, 18 articles (Aho, Tarkka, Astedt-Kurki, Sorvari, & Kaunonen, 2011; Dionne-Odom et al., 2016; Duberstein et al., 2019; Garcia et al., 2013; Goodkin et al., 1999; Guldin, Vedsted, Jensen, Olesen, & Zachariae, 2013; Holland, Currier, & Gallagher-Thompson, 2009; Kentish-Barnes et al., 2017; Kissane et al., 2006, Kissane et al., 2016; Lichtenthal & Cruess, 2010; Lilford, Stratton, Godsil, & Prasad, 1994; MacKinnon et al., 2015; Nam, 2016, 2017; Rosenbaum, Smith, Yan, Abram, & Jeffe, 2015; Sandler et al., 2016; Sikkema, Hansen, Kochman, Tate, & Difranceisco, 2004) were eligible and included in the final analysis for this study, but one study by Sikkema et al. (2004) was analyzed separately because they provided two data sets for both male and female participants (see Table S1).

Study Characteristics

The publication years of the included studies were between 1999 and 2019. The settings of the studies were in the United States (8 studies), Europe (6 studies), Australia (2 studies), and Asia (3 studies). From these included studies, 2,690 participants were identified and randomly assigned to experimental groups (1,495 participants) and control groups (1,195 participants). The range of the sample size in each study varied from 26 to 407 people. Most participants were women (62%), with the participants' mean age reported as 19.7 to 72.0 years. The type of therapist or facilitator was professional (8 studies) and combination (8 studies). The bereavement support format was individual (12 studies), groups (5 studies), and mixed of individuals and groups (3 studies). The frequency of the interventions was either fewer than six sessions or greater than or equal to six sessions, with 8 studies in each category, while the assessment time was categorized as <6 months (8 studies), 6 to 12 months (5 studies), and >12 months (3 studies).

Risk of Bias and Publication Bias

Seven studies had a low risk of bias, and seven more studies had some concern in the risk of bias in their respective domains. The remaining five studies were classified as high risk due to the high risk of bias mostly in the randomization process. There was no evidence of publication bias for all the outcomes. The Egger's regression intercept revealed a p value of .41, while the Begg and Mazumdar rank correlation showed the p value was greater than .10. From the funnel plot, the studies were scattered symmetrically for both sides. For depression, the Begg and Mazumdar rank correlation showed a p value of .065, and Egger's regression intercept had a p value of .535. For anxiety, the Begg and Mazumdar rank correlation showed a p value of .076, and Egger's regression intercept had a p value of .129. For traumatic feelings, the Begg and Mazumdar rank correlation showed a p value of 1.00, and Egger's regression intercept had a p value of 0.92.

Effectiveness of Bereavement Support on Primary Outcome: Grief

Bereavement support had a statistically significant effect on grief, with a relatively small effect size, with Hedges' *g* score at -0.198 (95% confidence interval [CI] -0.310 to -0.087; Figure 1). The result remained significant after sensitivity analysis, with Hedges' *g* score at -0.198 (95% CI -0.309 to -0.087). After five studies with a high risk of bias were deleted, the result persisted with significant effect (Hedges' *g* score at -0.206; 95% CI -0.319 to -0.092). Moderate heterogeneity was identified, with I^2 at 44.962% and the Q value at 32.705 (*p* = .018), and moderator analysis was performed.

Effectiveness of Bereavement Support on Secondary Outcomes: Depression, Anxiety, and Traumatic Feelings

Sixteen studies assessed the effect of bereavement support on depression, and results suggested a small effect size, with Hedges' g score at -0.252 and 95% CI from -0.406 to -0.098 (see Figure 2). With the value of $I^2 = 63.773\%$ and the Q value = 41.405,



Test for overall effect: Z = -3.483 (p = 0.000)

Figure 1. Forest plot: effectiveness of bereavement support on grief (n = 19). CI = confidence interval.

there was also moderate heterogeneity. Nine studies identified anxiety as their outcome from the bereavement support, and the results revealed a significant effect on anxiety (p = .021), with a relatively small effect size (Hedges' *g* score at -0.153; 95% CI -0.283 to -0.023), and no heterogeneity was identified ($l^2 = 0.000\%$, Q value = 5.110, p = .746; see Figure S2). Three studies assessed the effect of bereavement support on traumatic feelings; no significant effect was identified (p = .645), with a relatively small effect size (Hedges' g score at 0.249; 95% CI -0.810 to 1.308;see Figure S3). A high level of heterogeneity was identified, with $l^2 = 95.675\%$ and Q value = 46.242 (p = .000).

Moderator Analysis

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Moderator analysis was performed for the primary outcome of grief and also for the secondary outcomes of depression and anxiety (see Table S2).

Facilitator of Bereavement Support

Bereavement support was more effective when delivered by healthcare professionals trained on grief (Hedges' g score = -0.248; 95% CI -0.355 to -0.140),

and no significant result was found when it was delivered by a combination of professionals and other types of support (by other family members, peers, or additional supports such as condolence letter or DVD). A similar result was found for anxiety outcome, since professional approaches were more effective (Hedges' g score = -0.226; 95% CI -0.438 to -0.013) than a combination of professionals and nonprofessionals. For depression, the combination of professional-led interventions and other supports was more effective (Hedges' g score = -0.192; 95% CI -0.310 to -0.073).

Format of Bereavement Support

Moderator analysis between formats revealed that bereavement support was more effective when delivered by group format in grief (Hedges' g score = -0.278; 95% CI -0.534 to -0.023) than individual format. However, the results showed that bereavement support was more effective when delivered by a combination of individual and group formats in depression (Hedges' g score = -0.216; 95% CI -0.381 to -0.051), and individual format was more effective in anxiety (Hedges' g score = -0.276; 95% CI -0.543 to -0.010).

Study name	Statistics for each study						Std diff in means and 95% Cl		
	Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value		
Dionne-Odom et al., 2016	-0.265	0.306	0.093	-0.864	0.335	-0.865	0.387	│ │ │──■┼── │ │	
Duberstein et al., 2019	-0.094	0.203	0.041	-0.493	0.304	-0.465	0.642		
Goodkin et al., 1999	-0.067	0.204	0.042	-0.467	0.333	-0.329	0.743		
Guldin et al., 2012	-0.100	0.100	0.010	-0.296	0.096	-0.996	0.319		
Holland et al., 2009	-0.090	0.127	0.016	-0.339	0.159	-0.709	0.478		
Kentish-Barnes et al., 2017	-0.155	0.139	0.019	-0.428	0.117	-1.116	0.264		
Kissane et al., 2006	-0.147	0.199	0.040	-0.537	0.243	-0.738	0.460	│ │ ──∰── │ │	
Kissane et al., 2016	-0.852	0.104	0.011	-1.056	-0.649	-8.205	0.000		
Lichtenthal et al., 2010	-0.382	0.351	0.124	-1.071	0.307	-1.088	0.277	│ ┼╼┼╴│ │	
Lilford et al., 1994	-0.171	0.362	0.131	-0.880	0.538	-0.473	0.636		
Mackinnon et al., 2015	-0.300	0.396	0.156	-1.076	0.475	-0.760	0.448	│ ┼─╋┼─ │ │	
Nam, 2016	-0.531	0.314	0.099	-1.146	0.085	-1.690	0.091		
Rosenbaum et al., 2015	-0.144	0.235	0.055	-0.604	0.317	-0.613	0.540		
Sandler et al., 2016	-0.353	0.177	0.031	-0.700	-0.006	-1.996	0.046	│ │-∎-┤ │ │	
Sikkema et al., 2010a	-0.118	0.166	0.027	-0.443	0.206	-0.713	0.476		
Sikkema et al., 2010b	-0.341	0.224	0.050	-0.780	0.098	-1.522	0.128	│ │ │──╋─┤ │ │	
	-0.254	0.079	0.006	-0.410	-0.099	-3.208	0.001		
								-2.00 -1.00 0.00 1.00 2.00	
								Bereavement Support Control	
								favours favours	
Total studies: 16									

lotal studies: 16

Heterogeneity: Q value = 41.405, df = 15 (p = 0.000), l2= 63.77%Test for overall effect: Z = -3.208 (p = 0.001)

Test for overall effect: z = -3.208 (p = 0.

Figure 2. Forest plot: effectiveness of bereavement support on depression (n = 16). Cl = confidence interval.

Session of Bereavement Support

Moderator analysis revealed that bereavement support was more effective when delivered in greater than or equal to six sessions (for depression: Hedges' g score = -0.292, 95% CI -0.552 to -0.033; for anxiety: Hedges' g score = -0.215, 95% CI -0.379 to -0.051). For grief, even fewer than six sessions had a significant effect (Hedges' g score = -0.224; 95% CI -0.432 to -0.016). The amount of six sessions was used based on the categories mentioned by Osterweis, Solomon, and Green (1984).

Time of Measurement

Moderator analysis revealed measurement time was significant within 6 months (Osterweis et al., 1984) after the bereavement support (for grief: Hedges' g score = -0.303, 95% CI -0.481 to -0.126; for depression: Hedges' g score = -0.242, 95% CI -0.401 to -0.083; for anxiety: Hedges' g score = -0.411, 95% CI from -0.628 to -0.194) than after 6 months of the intervention.

Study Location

The location of the studies had an impact on heterogeneity (Hedges' g score = -0.215; 95% CI -0.317

to -0.114). Significant results were found in the United States (Hedges' g score = -0.180; 95% CI -0.312 to -0.048) and Asia (Hedges' g score = -0.541; 95% CI -0.806 to -0.277), while studies from Australia and Europe resulted in nonsignificant effects.

Meta-Regression Analysis

A meta-regression analysis was performed for the primary outcome of grief (see Table S3). Based on the results, all three variables of sample size (β = 0.0012; 95% CI -0.0007 to 0.0041), mean of age (β = 0.0054; 95% CI -0.0102 to 0.0111), and gender (β = 0.0017; 95% CI 0.0055 to 0.0010) showed nonsignificant relationships to the results of the current study.

Discussion

Bereavement Support and Grief Outcome

In this current meta-analysis, the purpose was to examine the effectiveness of bereavement support on reducing psychological outcomes following the death of a family member in palliative care due to terminal illnesses or the natural aging processes. This metaanalysis found that bereavement support showed significant benefits for grief. The results of this study are in line with the previous meta-analysis on other interventions that bereavement care can reduce complicated grief (Johannsen et al., 2019; Wittouck et al., 2011). Particularly in a group format, bereavement support can accommodate those with loneliness in a safe and comfortable environment for social connections where they do not feel like they are grieving alone (Sikkema et al., 2004).

In bereavement support activities such as those identified in the included studies, a bereaved person was led by professionals (recognized or credentialed clinicians) or nonprofessionals to identify the bothersome feelings, understand them, and comfortably verbalize the emotions. Based on the analysis, bereavement support was helpful for the bereaved family caregivers when delivered by professionals or trained persons such as those in the included studies of Kissane et al. (2016) and Holland et al. (2009). Healthcare professionals, such as nurses, have clinical experiences in supporting bereaved family members and have the ability to provide appropriate assurance, encouragement, constructive resolution, and referral needs when necessary. The findings also suggest the effectiveness of implementing bereavement support in a group format, which is aligned with a previous meta-analysis (Maass, Hofmann, Perlinger, & Wagner, 2020). From the results, bereavement support also seems to be effective even when conducted for fewer than six sessions, and significant results can be observed up to 6 months after the interventions, which aligns with results from the previous literature (Osterweis et al., 1984). After 6 months of loss, if there was no forward progression, the nurse should screen or evaluate the family caregiver for complicated or prolonged grief disorder (Prigerson et al., 2009).

Effectiveness of Bereavement Support on Depression

Bereavement intensifies the risk for depressive symptoms (Garcia et al., 2013), and this study's findings revealed bereavement support also has a significant effect on reducing depression levels, which is similar to results from a previous meta-analysis (Maass et al., 2020). The moderator analysis indicated that bereavement support is more effective when delivered by professionals. In addition, the combination format of the intervention was shown to be statistically effective, since some people may prefer individual contact with professionals, while others tend to choose to participate in a group format experience due to differences in coping mechanisms. The moderator analysis also showed that studies with more than six sessions seem to have larger effects and statistically significant results, since bereavement support may be more useful for depression symptoms when delivered continuously to create a supportive environment. Thus, data from this meta-analysis supports that assertion that bereavement support requires more than six sessions and should be re-evaluated after 6 months of support (Osterweis et al., 1984).

Effectiveness of Bereavement Support on Anxiety

From this study, it is important to reiterate that for those with severe anxiety, bereavement support was effective for reducing anxiety when delivered by professionals in face-to-face meetings. Further moderator analysis showed statistical significance with more than six sessions, since individuals may need more time to explore and resolve anxiety after loss. However, at the time of writing, there have been no previous meta-analyses with anxiety as an outcome in bereavement support in palliative care. Effectiveness of bereavement support on anxiety should also be evaluated within 6 months of the intervention.

Effectiveness of Bereavement Support on Traumatic Feelings

The results of the present study revealed no statistical significance for bereavement support on reducing traumatic feeling symptoms. This result does not mean there are no traumatic feelings in the loss of a family member with advanced illness. Generally, cases of sudden death such as accidents, crimes, or natural disasters, or other events that cannot be anticipated by the family, result in frequent traumatic feelings or even post-traumatic stress disorder. However, experiencing the loss of a family member from advanced illness can trigger a guilty feeling, since the caregiver may feel hopelessness about the oncoming loss, which can cause difficulty in accepting the death, leading to traumatic grief (Sanderson et al., 2013). Another possibility is that a bereaved person with traumatic grief could have more challenging and intrusive problems, since the person could be experiencing more functional impairments and psychiatric and physical problems, so bereavement support could be insufficient in helping them and more advanced therapy will be required (Shear et al., 2011).

Numerous databases were used to ensure that the objectives of the study could be met. The search in the database for studies in this analysis was not restricted by language, time, or type of publication to increase completeness and decrease the risk of publication bias. Thus, no publication bias was identified in the analysis. The RoB 2.0 tool for risk of bias in determining the certainty of the evidence was utilized, but studies rated with a high risk of bias were not excluded. However, a sensitivity analysis was done with the deletion of the five studies with a high risk of bias, and the effectiveness of bereavement support still maintained a significant result. Moderate heterogeneity was present for outcomes of grief and depression, and moderator analysis indicated that the therapist's type, format, frequency, and assessment time could have an effect on the results. However, the sample size, age (mean values), and gender did not influence heterogeneity. It is also recognized that social and cultural aspects could affect the measurement of the outcome, so the proxy variable of the location of the study was considered. Based on the moderator analysis, studies from the United States and Asia showed significant results. While more studies have been done in the United States (nine studies), the effect size was bigger in Asia, with only three studies (Hedges' g score = -0.180 in the United States compared to -0.541 in Asia). In addition, different locations also have different healthcare delivery structures, which may impact how palliative care is provided and how bereavement support could be offered to adult family caregivers. However, no included studies have analyzed the delivery structure in relation to bereavement support effectiveness.

Strengths and Limitations

The present review used a rigorous method to identify eligible studies and included RCTs, which provide a higher level of evidence for interventional studies. The main strength of this study is its applications for the practice of palliative care because bereavement supports are more flexible and relatively low-cost alternatives. For palliative care settings where the main focus is on patients, providing services for families requires a greater effort. Bereavement support offers alternative services for the patient's family by adapting existing resources at the facility and can prevent complicated grief, which may also require more advanced psychotherapy. The study has some of the following limitations. First, very few RCTs were available for analysis since the inclusion criteria specified adult caregivers in palliative care settings. Second, there were various levels of risk of bias in the included RCTs, showing that more rigorous RCTs need to be conducted in the future. Finally, most of the included studies (16 studies) did not capture caregiver participants' history or previous diagnosis of depression or anxiety prior to the loss of a loved one that could also lead to bias.

This meta-analysis provides evidence of the effectiveness of bereavement support for grief and other psychological symptoms in adult family caregivers in palliative care settings. Because family caregivers often seek help from nurses during palliative care, nurses play a key role in bereavement care. Nurses can provide guidance on the type of bereavement support for adult family caregivers, such as seeking help within 6 months of loss, using intervention led by professionals, and scheduling more than six sessions if possible. Also, nurses can also let family caregivers know that group support seems to have more effect in reducing grief; an individual format should be considered for anxiety and a combination (individual and group) format for depression. Overall, the meta-analysis results indicated that bereavement support does have significant effects on psychological outcomes and can be used to prevent complicated grief. These results are relevant to clinical practice, since this approach can complement interventions for bereaved family caregivers in palliative care.

Clinical Resources

- Center to Advance Palliative Care. https://www.capc.org/
- National Hospice and Palliative Care Organization. Patients and caregivers. https:// www.nhpco.org/patients-and-caregivers/
- World Health Organization. Palliative care. https://www.who.int/health-topics/palliative -care

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Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's web site:

Figure S1. PRISMA flow diagram.

Figure S2. Forest plot: effectiveness of bereavement support on anxiety.

Figure S3. Forest plot: effectiveness of bereavement support on traumatic feeling.

Table S1. Characteristic of the 19 Included Studies.Table S2. Moderator Analysis of BereavementSupport.

Table S3. Meta-Regression of Grief.