

Integrative Review of Facility Interventions to Manage Compassion Fatigue in Oncology Nurses

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Problem Identification: Oncology nurses are regularly exposed to high-stress situations that may lead to compassion fatigue, and many institutions have implemented interventions to reduce burnout in nurses, but knowledge on the feasibility, effectiveness, and nurses' experience of interventions is lacking.

Literature Search: Electronic search of literature published from 1992–2015 was performed to evaluate in-facility interventions to manage compassion fatigue in oncology nurses. Databases used included CINAHL®, PubMed, Web of Science, Google Scholar, and PsycINFO®.

Data Evaluation: The goal was to evaluate the effectiveness, feasibility, and nurses' experience of interventions to manage compassion fatigue. The study designs, methods, and limitations were independently screened by the authors.

Synthesis: Of 164 studies, 31 met eligibility criteria.

Conclusions: The majority of the studies were conducted in Western countries, which suggests the need for additional research in other settings to determine effective interventions that address compassion fatigue and stress cross-culturally. Quantitative and qualitative studies failed to gain high scores in terms of quality. Limited conclusions can be drawn from small studies that report on outcomes with many confounding variables, such as turnover rate or general health of nurses, from a single institution.

Implications for Research: Lack of empirical precision in evaluating the effectiveness, feasibility, and nurses' experiences of interventions indicates a need for future, more rigorously designed experimental studies. Because of the global increase in the number of patients being diagnosed and living with cancer, oncology nurses should be able to recognize and manage compassion fatigue.

Although oncology nursing can be a worthwhile and gratifying career, the highly stressful incidents oncology nurses experience in caring for patients may affect their psychological well-being (Quinal, Harford, & Rutledge, 2009; Zander, Hutton, & King, 2010). Oncology nurses are likely to experience compassion fatigue by repeated exposure to patients who are undergoing numerous and repeated traumas associated with oncology, such as the aggressive side effects of chemotherapy and severe pain experienced in the end stages of cancer (Kash et al., 2000; Potter et al., 2010). This is further compounded by nurses' lack of technical and theoretical tools to assess patients' physical and emotional responses, making them feel powerless and potentially leading to compassion fatigue (Lupo et al., 2012). Compassion and empathy often attract nurses to oncology, but empathy for patients with cancer may also result in harmful emotional and physical aftereffects in nurses (McSteen, 2010). The psychological trauma experienced by healthcare workers is currently a subject of interest. The definitions of burnout, secondary stress syndrome, secondary stress in traumatology, secondary victimization, secondary traumatic stress, secondary survivor, compassion fatigue, and vicarious

traumatization are used interchangeably, which is sometimes confusing (Coetzee & Klopper, 2010; Najjar, Davis, Beck-Coon, & Doebbeling, 2009).

The symptoms of secondary traumatic stress disorder (STSD) are the same as those of post-traumatic stress disorder (PTSD), and can occur as a consequence of helping those with PTSD (Figley, 2003). In his formal definition of compassion fatigue, Figley (2005) likened compassion fatigue to STSD in workers in clinical practice who first witness pain, suffering, and distress. Compassion fatigue is explained as a situation of fatigue stemming from encounters with compassion stress (Figley, 1995), and it surfaces suddenly and without warning, leaving the sufferer feeling confused and helpless (Figley, 2005). The central element in compassion fatigue is a healthcare workers' capacity for empathy, which enables him or her to enter into a beneficial affiliation with patients (Sabo, 2011). Compassion fatigue has also been said to comprise secondary trauma and burnout (Adams, Figley, & Boscarino, 2007). Compassion fatigue in healthcare professionals may result in occupational hazards related to tiredness and anxiety, including administering incorrect medications, failing to observe patients' deteriorating condition, failure to ensure patient safety, and reducing quality of care (Boyle, 2011; Kash et al., 2000; Medland, Howard-Ruben, & Whitaker, 2004; Potter et al., 2010).

In the current article, oncology nurses are defined as professional nurses with or without additional oncology qualifications who are currently employed in oncology units, wards, palliative units, or hospices. Occupational grief of oncology nurses is frequently associated with stress, burnout, and attrition. Nurses display significant grief-related symptoms that may, with time, lead to burnout or compassion fatigue (Popkin et al., 2011). Hospice nurses, in particular, are skilled in supporting family members with bereavement, but they frequently ignore their own bereavement. They can become like family to patients, but the cumulative consequence of multiple deaths, coupled with an inability to address each individual death, can be traumatic and devastating, producing chronic stress that renders nurses susceptible to compassion fatigue (Carter, Dyer, & Mikan, 2013; Macpherson, 2008).

Globally, the number of individuals being diagnosed and living with cancer is growing, which further burdens overwhelmed oncology healthcare workers. In addition, the rapid advances in treatment modalities for cancer and the increased survival of patients with cancer expands the need for competent, empathetic, and up-to-date nursing care (van Rooyen, le Roux, & Kotzé, 2008). The literature shows that the impact of compassion fatigue on oncology healthcare professionals results in decreased quality of nursing care, absenteeism, and decreased retention of staff, which is

compounded by reduced numbers of nurses trained in oncology (Gillespie, 2013; Girgis, Hansen, & Goldstein, 2009; Medland et al., 2004; Potter et al., 2010).

Only a paucity of evidence-based interventions has been shown to be effective for either the prevention or treatment of compassion fatigue or burnout in healthcare professionals caring for people with cancer (Emanuel, Ferris, von Guten, & von Roenn, 2011). In addition, the formal training of oncology healthcare professionals does not include any solid basis of psychosocial awareness, knowledge, or skills to facilitate emotional coping (Le Blanc, Hox, Schaufeli, Taris, & Peeters, 2007).

Giarelli, Denigris, Fisher, Maley, and Nolan (2016) reiterated the reality of compassion fatigue experienced by oncology nurses and further displayed the necessity of prevention strategies to assist oncology nurses in assessing their own risk of developing and managing compassion fatigue.

The aim of the current study was to identify and assess the evidence regarding the effectiveness, feasibility, and nurses' experience of in-facility interventions to manage compassion fatigue in oncology nurses. The review questions included the following:

- What is the effectiveness of an in-facility intervention to manage compassion fatigue in oncology nurses?
- What is the feasibility of an in-facility intervention to manage compassion fatigue in oncology nurses?
- What are nurses' experiences of an in-facility intervention to manage compassion fatigue?

Design

The review was performed using the integrative review method described by Whittemore and Knafl (2005), comprising problem identification, a literature search, data evaluation, data analysis, and presentation.

Search Methods

A preliminary search of CINAHL®, MEDLINE®, PubMed, and Google Scholar was conducted to ascertain relevant keywords and Medical Subject Headings (MeSH) terms. The following search terms were used: *compassion fatigue*, *burnout*, *secondary traumatic stress*, *secondary survivor*, *vicarious traumatization*, *countertransference*, *psychosocial interventions*, *strategy*, *plan*, *coping skills*, *treatment*, *coping strategies*, *self-care*, *support*; and *in-facility interventions*; and *in-facility psychosocial support interventions*; and *nurses*, *oncology nurses*, *hospice nurses*, *palliative nurses*.

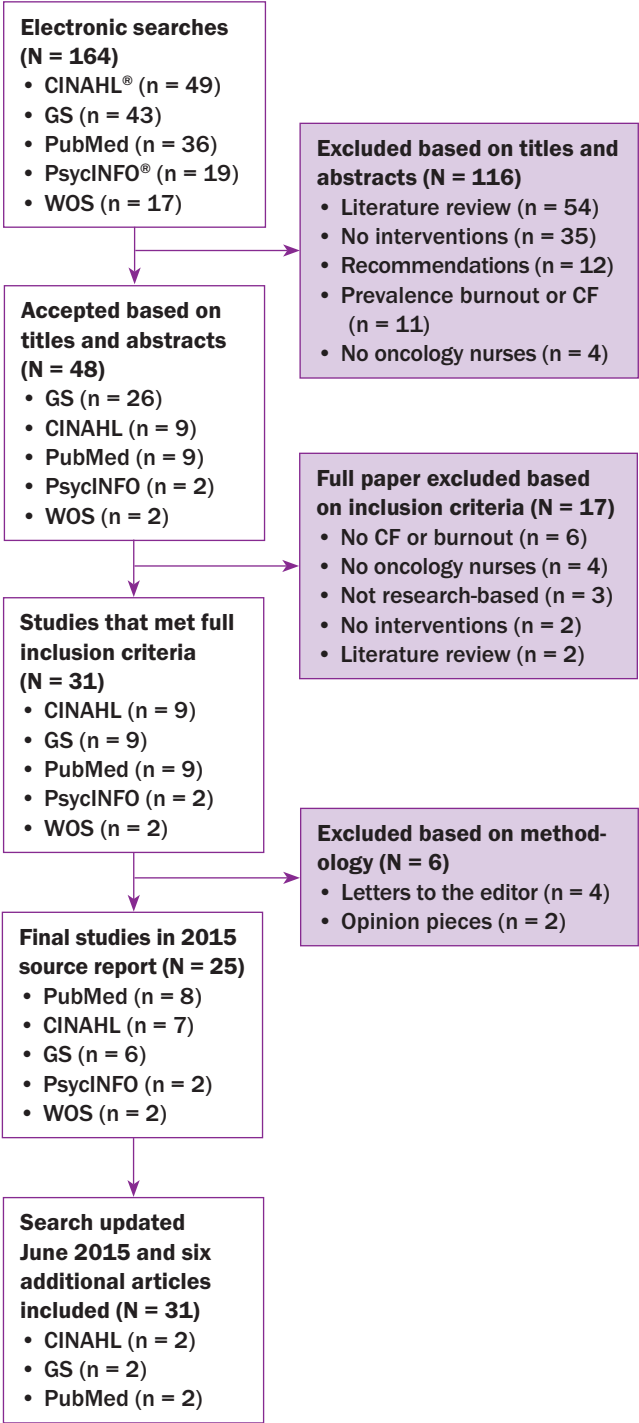
A systematic search of Cochrane Library, JBI Library, DARE, CINAHL®, PubMed, EBSCO Host, SABI-NET, and PsycINFO® was conducted to help define the

MeSH terms. Information was retrieved from English literature published from 1992 to July 2015.

Eligibility Criteria

Selection criteria included English articles published in the past 25 years (compassion fatigue was first described in 1992) on in-facility psychosocial

FIGURE 1. Flowchart of Literature Search and Collection



CF—compassion fatigue; GS—Google Scholar; WOS—Web of Science

interventions or strategies for oncology nurses to manage burnout, secondary stress syndrome, secondary victimization, secondary traumatic stress, secondary survivor, vicarious traumatization, and compassion fatigue. Also included were quantitative and qualitative studies conducted in in-facility settings (i.e., hospitals, clinics, and hospices), as well as systematic, integrative, and thematic reviews. Searches also included studies of oncology nurses who may or may not have had specialist oncology training, hospice nurses, and palliative care nurses who worked full time (20–40 hours per week) in units or wards, outpatient chemotherapy units, inpatient adult and pediatric oncology wards, and hospices. Excluded were studies dealing only with other healthcare professionals and studies of interventions conducted outside of facilities.

An intervention was defined as a plan of action, program, or strategy aimed at addressing the psychosocial needs of oncology nurses to manage compassion fatigue and burnout. Psychosocial interventions of included studies were based within a healthcare facility and included any intervention focused on psychological or social factors rather than biologic factors. Psychosocial interventions could include health education, social support, stress relief, and physiologic elements, such as exercise (Aycock & Boyle, 2009).

Outcomes of the review measure the effectiveness, feasibility, and nurses’ experience of the interventions. The effectiveness of the interventions was measured by their success. The feasibility of the intervention was evaluated with an analysis of its use, cost-effectiveness, and necessary resources (including cost and time). Qualitative descriptions indicated whether the participants and the stakeholders were satisfied with the interventions.

Literature Search

Two reviewers independently screened the retrieved articles for eligibility. The initial search resulted in 164 articles, which were further examined by reviewers. One hundred and sixteen studies were excluded after an examination of the titles and abstracts. Of the 48 articles retained, 17 studies were excluded by the two researchers after a full-text assessment against inclusion criteria. Six of the remaining 31 were excluded because of methodology (opinion pieces and letters to the editor), with 25 articles remaining. A final search resulted in the addition of six studies. A total of 31 articles were included in the current review (see Figure 1).

Data Evaluation

Two reviewers independently appraised the studies. Any disagreements would have been discussed

with a third reviewer, which was unnecessary. The quality of the qualitative studies was assessed using a rating system developed by Cesario, Morin, and Santa-Donato (2002), which has also been used by other reviewers (Maree & Schmollgruber, 2014). This tool assesses descriptive vividness, methodologic congruence, analytical preciseness, theoretical connectedness, and heuristic relevance.

The mixed-methods studies were assessed using the criteria outlined by O'Caithain, Murphy, and Nicholl (2008). The six categories evaluated in relation to these criteria were success of the study, mixed-methods design, quantitative component, qualitative component, integration, and inferences made.

The quality of quantitative articles was assessed using criteria proposed by the Effective Public Health Practice Project (2009) (i.e., selection bias, study design, confounders, blinding, data collection methods, withdrawals and dropouts, intervention integrity, and analysis appropriate to question). The quality of the systematic reviews was assessed using Assessing the Methodological Quality of Systematic Reviews (2015). These criteria included a priori design, duplicate study selection and data extraction, literature search, list of studies, scientific quality of the studies, methods for combining the findings of the studies, publication bias, and conflict of interest.

Data Synthesis

Data were extracted using the tool developed by Sparbel and Anderson (2000). The data extracted were author(s), journal, year, study design, methodology, participants, instruments, data collection, reliability, validity, analyses, interventions, outcomes, and the quality or level of evidence.

Search Results

A total of 164 publications were identified for potential inclusion in this review. Publications were found in Google Scholar ($n = 43$), PubMed ($n = 36$), CINAHL ($n = 49$), PsycINFO ($n = 19$), and Web of Science ($n = 17$). Of the 164 publications, 139 were excluded because they did not meet inclusion criteria. The majority of publications were published in the United States (42%), followed by Europe (17%) and Canada (10%), among others.

Description of the Studies

A total of 31 publications were selected for final inclusion. Eight were qualitative studies, of which five were descriptive, two were explorative, and one was a case study on the formulation of an emotional safety policy. Fifteen were quantitative studies, of which two were randomized, controlled trials, five were quasiexperimental, and eight were nonexperi-

mental/descriptive. Six were mixed-methods studies, and two were reviews (one systematic review and one thematic review).

Methods for collecting data included questionnaires ($n = 22$), interviews ($n = 6$), focus groups ($n = 4$), record reviews ($n = 2$), observation ($n = 2$), narrative writing, storytelling ($n = 2$), and anecdotal evidence ($n = 1$).

Questionnaires were the most common method for collecting data, followed by interviews and focus group discussions. The following questionnaires were used: Maslach Burnout Inventory (MBI) ($n = 7$, Dutch version and Turkish version), Link Burnout Inventory Questionnaire (LBI) ($n = 1$), Professional Quality of Life scale (ProQOL) ($n = 4$), team-building questionnaire ($n = 1$), Pittsburgh Sleep Quality Index ($n = 1$), Center for Epidemiological Studies Depression Scale ($n = 1$), Perceived Stress Scale ($n = 1$), Beck Depression Inventory ($n = 1$), Hogan Grief Reaction Checklist ($n = 1$), Inventory of Social Support ($n = 1$), Stress Self-Assessment Checklist ($n = 1$, Turkish version), Ways of Coping inventory ($n = 1$), nurses stress scale ($n = 1$), nurses coping with stress questionnaire ($n = 2$, one French version), and self-reported practice scale ($n = 1$). The majority of studies were conducted at single sites; only one study resulted from collaborative research between researchers from the United States and Israel.

Levels of evidence for the various studies were noted as follows. Levels of evidence for qualitative studies were either level QII: fair or level QIII: poor. Levels of evidence for quantitative studies were either moderate or weak. Mixed-methods studies were either fair or good, and the systematic review and thematic review were both of medium quality (see Table 1).

Purposive sampling was used for selection in all the studies. Sample sizes varied from 6–664 participants. The mean sample size was 94 for quantitative studies, 13 for qualitative studies, and 64 for mixed-methods studies. Participants in two studies included multidisciplinary oncology team members, and the number of oncology nurses was not indicated.

Effectiveness of In-Facility Interventions

To evaluate the effectiveness of the interventions, the current reviewers looked to see if any of the authors had conducted evaluations (e.g., pre-/post-test evaluations) showing an improvement in outcomes (i.e., a decrease in compassion fatigue or burnout). The systematic review identified 12 articles that reported interventions using multiple measurement tools. The outcomes reported in the systematic and thematic reviews were “variable and inconclusive” (Carton & Hupcey, 2014, p. 291).

Of 31 articles, four had not conducted an evaluation of the intervention, either because the studies were

TABLE 1. Summary of Articles Included in Systematic Review

Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Absolon & Krueger, 2009	Qualitative, descriptive design Anecdotal quotes	Oncology nurses Memorial Sloan Kettering Cancer Center in New York	Aim: To identify oncology nurses' stressors in caring for patients with gynecologic cancer and to learn strategies for addressing the effects of compassion fatigue in their lives Intervention: A group of nurses hired a yoga instructor and participated in 10 weekly sessions (18 months) before work. A support group led by a social worker was also started.	No formal evaluation existed; however, the researchers and participants assisted in creating a network for care and developing strategies for compassion fatigue.	Nurses' experience	Poor
Altounji et al., 2013	Nonexperimental, post-test design Retreat evaluations	64 pediatric hematology nurses Urban pediatric hematology unit in Louisiana	Aim: To heal nurses from past trauma and stress and to provide effective coping strategies through off-site retreats Intervention: Three off-site self-care retreats (empowerment, moral distress, sustaining role as a pediatric hematology oncology nurses, yoga, massage, a group walk on the beach to reflect on people they were grieving for, relaxation and reflection, "back to our roots")	Participants reported rejuvenation (yoga), feeling appreciated, a revived passion for the job, and a distancing of themselves from work. Themes identified were rejuvenation, feeling appreciated, and a revived passion for job. Feasibility: The budget was limited, even with some donated and discounted services.	Effectiveness, feasibility	Weak
Bruneau & Ellison, 2004	Mixed-methods, nonexperimental, pre-/post-test design Qualitative exploratory interviews before and after the study	18 palliative care nurses National Health Service community hospital in the United Kingdom	Aim: To quantify the work-related stress of palliative nurses in a community hospital, explore how well the nurses coped with stress, and evaluate the impact of a dedicated stress-reduction program on nurses Intervention: Two two-hour sessions; explored participants' knowledge and experience of stress, stress types, and stressors; sessions included cognitive restructuring of stress experience, relaxation techniques, progressive muscle relaxation, and group discussion.	No statistical evidence of change in total stress and coping scores was reported following the stress-reduction program. Most nurses did not find their work particularly stressful and felt well equipped to cope with palliative care stress. Substantive qualitative evidence suggested that the nurses felt the program was enjoyable and helpful.	Effectiveness, nurses' experiences	Good
Carter et al., 2013	Nonexperimental, descriptive, correlational pilot study Questionnaires	9 hospice nurses Nonprofit urban hospice in Texas	Aim: To test the feasibility of cognitive behavioral therapy in an insomnia intervention for hospice nurses with chronic bereavement Intervention: Five weeks of cognitive behavioral therapy provided in two one-hour educational sessions; sessions included cognitive therapy, stimulus control, sleep hygiene, and relaxation techniques.	The cognitive behavioral therapy intervention appeared to positively affect sleep onset latency and total sleep time ($p = 0.001$), and was well accepted by participants.	Effectiveness	Weak

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TABLE 1. Summary of Articles Included in Systematic Review (Continued)

Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Carton & Hupcey, 2014	Systematic review	12 studies North American and European countries	Aim: To systematically review the literature on the services and interventions available to address healthcare provider grief Intervention: Time varied; single/multiple sessions; all included an educational component, some degree of personal reflection, role-playing, group discussions, relaxation techniques, and patient-care conferences.	Nonexperimental study participants were pleased (positive significant results existed) with the interventions. The quasiexperimental studies showed mixed results between studies from the United States and studies from the United Kingdom. Nonexperimental studies included evaluation forms, closed- or open-ended questions, interviews, and qualitative analysis. Quasiexperimental studies included pre-, post-, and post-post-tests.	Effectiveness	Medium
Delvaux et al., 2004	Longitudinal, randomized design Questionnaires	116 oncology nurses 33 urban or rural hospitals with cancer care facilities in Brussels	Aim: To assess the impact of a psychological training program on the stress, attitudes, and communication skills of healthcare professionals who care for patients with cancer Intervention: 105 hours of stress psychological training programs in three weeks: 30 hours of theoretical information and 75 hours of role-playing/experiential exchanges	After three months, positive changes ($p = 0.05$) in stress levels among oncology nurses were observed by the researchers. Trained nurses felt less stressed in general, less stressed by giving “painful” or “ineffective” care, and better prepared to provide emotional support to patients and their family members.	Effectiveness	Moderate
Edmonds et al., 2012	Nonexperimental, pre-/post-test design MBI	88 pediatric oncology nurses, 37 surgical oncology nurses, and 11 general oncology nurses Four major hospitals in Toronto, Canada	Aim: To assess changes in emotional exhaustion after the intervention Intervention: One-day session, “Care for the Professional Caregiver,” a presentation of vicarious traumatization, model of adaptive coping with grief, coping strategies, self-care strategies, consequences of burnout, and relaxation; booster session to support and refresh self-care practices, including an opportunity to debrief	The program led to a decrease in emotional exhaustion among oncology nurses ($p = 0.003$), and 98% were extremely satisfied with the program. An improvement in General Health Questionnaire scores ($p = 0.003$) (nurses’ depression and ability to sleep) was reported. Feasibility: A major challenge of the study was the cancellation of sessions because of nursing shortages.	Effectiveness, feasibility	Weak

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TABLE 1. Summary of Articles Included in Systematic Review (Continued)

Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Fetter, 2012	Nonexperimental, descriptive design Surveys	50 oncology nurses Oncology unit in a hospital in Lancaster, Pennsylvania	Aim: To provide a bereavement support program to nurses who care for patients in end-of-life care and their families, and to significantly reduce compassion fatigue Intervention: Staff discussion of feelings, remembrance tree, bereavement cards, journal entries (memories, anecdotes), self-reflection, self-care, care packages for families	Staff behavior was observed and informal discussions with staff occurred using open-ended questions (n = 25). Eighty-eight percent thought that the initiatives helped bring some closure. The turnover rate of staff decreased from 12.5% to 7.5%, reflecting the helpfulness of the program.	Effectiveness	Weak
Fillion et al., 2006	Qualitative, exploratory design Short essays relating to meaningful experiences in palliative practice	7 palliative care nurses Palliative care hospice in Quebec, Canada	Aim: To increase job satisfaction and quality of life and to prevent burnout in nurses providing palliative care through a meaning-centered psychoeducational group intervention Intervention: Development of an intervention with experts; manual compiled; included four sessions (two hours); pilot testing of intervention with palliative nurses; short essays by participants relating to meaningful experiences in palliative practice	The identified themes included sources of meaning, accomplishment at work, attitudinal change and affective experiences, and humor to find meaning.	Nurses' experience	Poor
Hilliard, 2006	Quasiexperimental, pre-/post-test design ProQOL	17 hospice workers (nurses, social workers, and chaplains) Urban and rural professional hospice workers in New York	Aim: To evaluate the effects of music therapy on compassion fatigue and team building among professional hospice workers Intervention: Experimental group 1: ecological music therapy approach; experimental group 2: didactic music therapy approach. Participants attended six one-hour music sessions once a week. Interventions were planned and facilitated by a music therapist and included guided meditation, lyric analyses, music, and movement.	The analyses showed a significant increase in team building (standard score = -3.022, p < 0.05). No significant difference in compassion fatigue between groups was reported.	Effectiveness	Weak
Houck, 2014	Nonexperimental, descriptive design Needs analysis prior, survey, postevaluation	21 oncology nurses; also included palliative care nurses Oncology units in a community hospital in the United States	Aim: To evaluate the assistance nurses preferred to effectively design a support program to help them stay emotionally and physically healthy Intervention: Running-on-Empty Program: three one-hour sessions on cumulative grief and compassion fatigue, holistic self-care, and spiritual self-care; how to rejuvenate, recharge, and refill; focus-group discussion	Nurses appreciated the focus on self-care, recognized the need to prioritize emotional health, and felt less isolated when asking for support. The program presented an opportunity for discussion of other activities to support nurses (e.g., remembrances for patients, grief teams, group debriefings, professional assistance).	Effectiveness	Weak

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Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Huggard & Nichols, 2011	Case study	Hospice staff Mercy Hospice inpatient and home care in Auckland, New Zealand	Aim: To develop an emotional safety policy that incorporated personal, professional, and organizational measures designed to protect and promote staff members' emotional safety and to minimize stress and fatigue Intervention: Needs analysis of support for staff, followed by an audit evaluating interventions based on needs analysis	Interventions identified were a good induction program, regular communication forums and performance feedback, peer support, access to regular debriefing, and management of workplace conflict. Recommends additional ways to determine if the emotional safety policy enhances staff health and well-being and ensures that staff are emotionally safe to work Feasibility: Develop an emotional safety policy, effective infrastructure, adequate staffing, and staff support practices.	Effectiveness, feasibility	Poor
Italia et al., 2008	Pilot study	32 nurses	Aim: To evaluate the reduction of burnout in oncology centers	Group A (n = 16 nurses): Medium to high level of burnout	Effectiveness	Weak
	Quasiexperimental, pre-/post-test, pre-/post-MBI	Adult and pediatric oncology units in two urban oncology centers in Italy	Intervention: Group B attended 13 weekly meetings during four months, learning psychodrama techniques, play therapies, relaxation techniques, and techniques to support children during painful procedures.	Group B (n = 16 nurses): Low to medium level of burnout. A significant decrease in the level of burnout and a general sense of improvement were observed in group B.		
Kravits et al., 2010	Quantitative, qualitative, exploratory design	248 staff nurses working in oncology Cancer center in California and community cancer organizations	Aim: To develop and evaluate a psychoeducational program that assists nurses who work in high-stress areas to develop personalized stress management plans that rely on the use of adaptive coping strategies Intervention: A single six-hour class (poem on self-care, relaxation, guided imagery, coping strategies, creation of a personalized wellness plan)	A preliminary analysis showed that the study can be useful in improving emotional exhaustion.	Effectiveness	Fair
	MBI, intention statement analysis					
Kushnir et al., 1997	Qualitative, descriptive design	15 pediatric oncology nurses	Aim: To outline an attempted intervention and difficulties encountered throughout the program Intervention: The group met every two weeks for one year. The researchers attempted to use Ballint framework; however, it was changed to a more open style of facilitation.	Factors suggested as major contributors to nurse burnout included diffuse boundaries between nurses and patients, prevalence of military metaphors, and an increased tendency of dysfunctional thinking styles.	Nurses' experience	Fair
	FGDs and anecdotal evidence	Oncology ward in a children's hospital in Israel				

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TABLE 1. Summary of Articles Included in Systematic Review (Continued)

Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Le Blanc et al., 2007	Quasiexperimental, pre-/post-test design, participatory action research Pre-, post-, and post-post-questionnaires	664 oncology care providers (doctors, nurses, radiotherapy assistants) Four urban inpatient hospitals in Holland	Aim: To evaluate the effects of a team-based burnout intervention program on oncology care providers Intervention: Team-based burnout intervention; one three-hour session per month for six months. Each session had an education and action component (communication and feedback, balancing job-related investments, forming problem-solving teams, discussing experiences). Guardian angels (staff members) were appointed to watch over team members' well-being.	The results showed that the staff in the experimental wards (n = 260) experienced slightly less emotional exhaustion (p = 0.23, p = 0.07, p = 0.32) and depersonalization (p = 0.06, p = 0.5, p = 0.51). Reports from the study lend support to the effectiveness of a participatory approach to decision making.	Effectiveness	Moderate
Leung et al., 2012	Qualitative, exploratory design Semistructured interviews conducted before and after the intervention	14 nurses in bone marrow transplantation Bone marrow transplantation hospital in Toronto, Canada	Aim: To explore nurses' experiences of meaning and hope and the effects of a meaning-centered intervention on their experiences Intervention: Seven members per group (two groups) attended five sessions. Sessions included reflecting on a book; affirmation of personal and professional values; meaning of life, particularly at the end of life; coping skills; spirituality and personal well-being; and relaxation.	The nurses found positive personal meaning and purpose in a highly stressful work culture. Themes identified were greater awareness of boundaries between personal and professional involvement, enhanced empathy from awareness of a shared mortality, and elevated hope when associating suffering with meaning.	Nurses' experience	Fair
Lupo et al., 2012	Nonexperimental, pre-/post-test design LBI	10 oncology nurses Gynecology/oncology ward in Milan, Italy	Aim: To evaluate the intervention's effect on burnout experienced by nurses Intervention: Four-hour training program meeting every two weeks for a total of 48 hours; included theory, short films, role-playing, and experiential exchanges	The LBI was completed pre- and postintervention. The level of burnout after the program had decreased (p = 0.02). Nurses were better prepared to meet patients and relatives' need for emotional support.	Effectiveness	Weak
Macpherson, 2008	Mixed-method, single-group, descriptive, repeated measures design Questionnaires and audio recordings	6 pediatric oncology nurses Urban tertiary pediatric hospital	Aim: To examine the effects of peer-supported storytelling on grieving pediatric oncology nurses Intervention: Two groups met for brief, informal storytelling sessions biweekly for two months. A storytelling session guide was provided. Participants were asked to make sense of the experience.	Significant positive correlation existed between participants' reports of the number of special patient deaths during their career and the effect of the grief sessions (Spearman's rho = 0.93, p = 0.01). Themes identified were feeling supported and meaning-making.	Effectiveness, nurses' experiences	Good

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TABLE 1. Summary of Articles Included in Systematic Review (Continued)

Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Medland et al., 2004	Qualitative, descriptive design	150 multidisciplinary oncology team members Urban oncology wards in the United States	Aim: To identify psychosocial wellness and to develop a program Intervention: One-day Circle of Care Retreat, focusing on caring/awareness reinforcement, stress management, group support, storytelling, and art therapy	Oncology nurses identified positive aspects of their role. Emerging themes included vulnerability, better management of loss, creative rituals, and mutual support.	Nurses' experience	Poor
Moody et al., 2013	Randomized, controlled trial Pre-/post-test qualitative analysis of diaries	48 pediatric oncology staff members A hospital in the United States and a hospital in Israel	Aim: To test the efficacy of a mindfulness-based course on decreasing burnout in a pediatric oncology multidisciplinary team (physicians, nurses, social workers) Intervention: The intervention group received eight weeks of education on mindfulness, meditation, and awareness. The initial six-hour session was followed up with six weekly one-hour sessions and a final three-hour session (total of 15 hours).	Almost 100% exhibited burnout at baseline. The mindfulness-based course did not result in any significant improvement in burnout scores. Qualitative diaries revealed reduced stress, inner peace, joy, compassion, better focus and self-awareness, and fewer somatic symptoms in the intervention arm.	Effectiveness	Strong
Morita et al., 2007	Quasiexperimental design Pre-/post-test questionnaire	147 nurses Urban and rural general hospitals in Japan	Aim: To explore the effects of a five-hour educational workshop focusing on meaninglessness on nurses' self-reported practice, attitudes toward caring for patients, confidence, burnout, death anxiety, and meaning of life Intervention: A five-hour educational workshop with visual presentation, role playing, discussion on communication skills, a case study, and a care plan	Self-reported practice and confidence significantly improved, whereas helplessness, emotional exhaustion ($p = 0.048$), and death anxiety ($p = 0.021$) significantly decreased. Seventy-nine percent of nurses evaluated the program as useful or very useful; 73% said that the program helped them self-disclose personal beliefs and values.	Effectiveness	Weak
Onan et al., 2013	Quasiexperimental design Pre-/post-test, pre-/postintervention assessments	30 oncology nurses Three urban oncology units in Istanbul, Turkey	Aim: To evaluate the effects of stress training on oncology nurses in relation to their stress symptoms, ways of coping with stress, and burnout situations Intervention: One 90-minute session per week for nine weeks (recognizing stress, occupational stress and burnout, coping, problem solving, relaxation, effective communication, saying no, final session assessment)	The results revealed that the program had a significant positive impact on oncology nurses' stress and burnout ($p = 0.011$, $p = 0.015$). In addition, 67% of the nurses were not pleased with working in oncology units. Sixty percent of nurses indicated that working in oncology affected their family and social life.	Effectiveness	Weak

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TABLE 1. Summary of Articles Included in Systematic Review (Continued)						
Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Popkin et al., 2011	Pilot study: Non-experimental, descriptive Evaluated retrospective survey, planned pre-/post-test intervention evaluation of participants	8 oncology nurses 350-bed comprehensive cancer center in New York	Aim: To develop a music multidisciplinary team intervention to facilitate grief processing in a group setting Intervention: Based on four basic elements: symbolic elements (e.g., music, readings, ceremony), a safe context for expressing emotion, a time-limited structured process, and an act of reminiscing	Programmatic evaluation provided preliminary evidence supporting the face validity and acceptability of the grief intervention. The intervention allowed participants to verbalize bereavement reflections in a safe context, facilitating healthy expressions of grief	Effectiveness	Weak
Potter et al., 2013	Nonexperimental, descriptive, pilot study ProQOL	13 oncology nurses Outpatient infusion center in St. Louis, Missouri	Aim: To evaluate a resiliency program designed to educate oncology nurses on compassion fatigue Intervention: Five-week program consisting of four 90-minute sessions. In between the fourth and fifth session was a four-hour retreat to allow for debriefing. The program included promotion of resiliency, intentionality, self-validation, connection, and self-care. Small group activities (relaxation, reducing negative arousal) were included.	Secondary traumatization scores decreased ($p = 0.044$). Participants positively evaluated their ability to apply and benefit from resilience techniques. Feasibility: Time demands for participation in the five-week program may have precluded stressed staff members from participating.	Effectiveness, feasibility	Weak
Saint-Louis, 2010	Exploratory, mixed-methods design Questionnaires, MBI questionnaires, FGDs, in-depth interviews	40 multidisciplinary team members (36 nurses) Three oncology units in an academic medical center in Pennsylvania	Aim: To investigate the efficacy of a narrative intervention for oncology professionals Intervention: Five one-hour groups were held within 12 months. Participants were asked to write about a stressful/challenging/distressing encounter, uplifting narratives were shared, and group members shared comments.	Significant decreases in burnout ($p = 0.05$), compassion fatigue ($p = 0.05$), and secondary traumatic stress ($p = 0.14$) were observed. The identified themes included emotional proximity (distance), self-protection and closure, desire for intimate emotional connections and guilt, shared perspectives, confidentiality, and group care becoming self-care. Feasibility: Policies for inpatient oncology departments to promote frequent group discussions	Effectiveness, nurses' experience, feasibility	Good

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TABLE 1. Summary of Articles Included in Systematic Review (Continued)

Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Traeger et al., 2013	Mixed methods: Nonexperimental, pre-/post-test design Qualitative, exploratory FGDs	26 oncology nurses An urban outpatient chemotherapy department at a comprehensive cancer center in Massachusetts	Aim: To reduce workplace stress by developing brief psychological skills training for nurses and to evaluate program feasibility, acceptability, and preliminary efficacy in decreasing burnout and stress Intervention: Phase 1: The MBI questionnaire was distributed, followed by FGDs. Phase 2: Brief group training was developed based on the results from phase 1 to assist nurses with skills to manage difficult encounters.	Participants experienced a reduction in emotional exhaustion, no change in depersonalization, and high personal accomplishment. Feasibility: Reasons for nonparticipation among oncology nurses included scheduling conflicts and study time commitment without exchange. The length of the program was suitable; a few participants would have liked a longer time to apply the skills they learned. The training content was relevant to oncology.	Feasibility	Good
van Westrhenena & Fritz, 2013	Qualitative case study FGDs, interviews, observations, debriefing, researcher memorandums, and research field notes	19 hospice workers 9 urban and rural hospices in Gauteng, South Africa	Aim: To explore the experiences of professional hospice workers using a creative process to debrief them to facilitate the expression and communication of complex thoughts and feelings Intervention: 11 creative arts therapy workshops to facilitate self-healing skills (music, drama, art, touch therapy, storytelling, and movement)	Primary measure: Expressive arts facilitated communication and self-care and improved the well-being of the workers. Themes identified included creativity, self-care, boundaries, massage, group support, and trauma. Massage stood out as a noteworthy and affordable activity to relax. Feasibility: No attention was given to the sustainability of the program.	Nurses' experience, feasibility	Fair
Villani et al., 2012	Preliminary randomized, controlled trial	16 oncology nurses Inpatient oncology hospitals in Milan, Italy	Aim: To test the short-term effects of an innovative four-week, eight-session self-help stress management training program on oncology nurses Intervention: The four-week intervention included eight five-minute clips with narrative. Experimental group: Mobile phone stress management protocol (conceptualization of stress, skills acquisition, coping skills). Control group: Neutral videos through mobile phones.	The experimental group demonstrated significant improvement related to anxiety reduction and coping skills acquisition (no p value provided).	Effectiveness	Weak

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TABLE 1. Summary of Articles Included in Systematic Review (Continued)

Study	Design and Data Collection	Participants and Setting	Aim and Intervention	Outcomes and Feasibility	Evaluation of Intervention	Quality of Evidence
Wittenberg-Lyles et al., 2014	Qualitative, exploratory design Qualitative, exploratory interviews	10 oncology nurses Urban cancer center in Kentucky	Aim: To explore the perceived benefits and barriers of participating in a monthly oncology nurse support group Intervention: Participants attended seven support group meetings in one year and discussed the challenges of working with patients with cancer and their families and coping with patient deaths. Topics also included sharing resources, self-care, improving work-life balance, debriefing, the benefits of talking and not taking workplace issues home, and validating emotions.	Themes identified were coping practices, emotional recharge, self-care, and debriefing. An increase in self-care and improved patient and team care camaraderie were identified. Feasibility: Finding time to attend the support groups was identified as a barrier.	Nurses' experience, feasibility	Poor
Zander & Hutton, 2009	Thematic review	18 articles	Aim: To identify effective internal mechanisms for dealing with stressors associated with working in pediatric oncology and methods for managers and colleagues to enhance the coping strategies of oncology nurses Intervention: Five of the selected articles specifically reported the results of the interventions. Interventions were workshop-based, reduced stress, improved coping (mindfulness-based relaxation), and included self-care.	After an analysis of the literature, a theoretical model of effectiveness was conceptualized.	Nurses' experience	Medium

FGD—focus group discussion; LBI—Link Burnout Inventory Questionnaire; MBI—Maslach Burnout Inventory; ProQOL—Professional Quality of Life scale

Note. Levels of evidence for qualitative studies were either fair or poor. Levels of evidence for quantitative studies were either moderate or weak. Mixed-methods studies were either fair or good, and the systematic review and thematic review were both of medium quality.

pilot studies and evaluations were still to be conducted, or because they were simple surveys consisting of open-ended questions. Nine studies showed that burnout had decreased.

Two studies showed that STSD and compassion fatigue decreased with the intervention (Potter et al., 2013; Saint-Louis, 2010); however, three studies reported that the interventions had no effects on compassion fatigue and burnout (Bruneau & Ellison, 2004; Hilliard, 2006; Moody et al., 2013). Reasons for interventions not showing any difference included preexisting high levels of burnout in participants who encountered additional stress in attending the intervention (Moody et al., 2013), participants not having time to practice relaxation skills learned in the intervention (Bruneau & Ellison, 2004), and the intervention not addressing the issues of compassion fatigue (Hilliard, 2006).

Four studies reported that general health (i.e., sleep and self-care) had improved (Carter et al., 2013; Edmonds et al., 2012; Houck, 2014; van Westrhenena & Fritz, 2013), and three studies reported that death anxiety and end-of-life stress had decreased after the intervention (Leung et al., 2012; Morita et al., 2007; Popkin et al., 2011). Two studies showed heightened team building, self-reflection, and camaraderie (Hilliard, 2006; Wittenberg-Lyles, Goldsmith, & Reno, 2014).

One study reported that the intervention had reduced the staff turnover rate from 12.5% to 7.5% during the fiscal year (Fetter, 2012). Single studies described benefits of learning of coping strategies, participatory approach to decision making, problem solving, and improving family and social life.

Experiences of In-Facility Interventions

Of the 31 studies, seven had not conducted an evaluation of the

experiences by the participants. Eighteen studies showed that the participants were satisfied with the interventions, which they had found positive, useful, and enjoyable. Four studies noted that participants reported less stress after the intervention. Two studies reported that participants felt better able to offer emotional support to patients and relatives, and to accept grief and closure. Thirteen studies described participants' experiences of rejuvenation, feelings of being appreciated, coping with job difficulties, and the value of peer support groups.

Themes identified in the thematic analysis were meaning, interventions and strategies, and commitment, which collectively contributed to effective coping. Meaning, in this context, referred to interventions that were shown to be successful and that reinforced self-reflection of one's practice, which, in turn, created further enrichment of meaning (Zander & Hutton, 2009).

Feasibility of In-Facility Interventions

The current authors assessed the feasibility of interventions in all 31 articles. The timing and number of interventions varied, including one-off sessions ($n = 5$), retreats that lasted from four hours to one day ($n = 5$), and multiple sessions (2–10) varying from three weeks to six months ($n = 18$). The studies included a wide range of interventions, and no program was predominantly featured. Content of interventions was extensive and diverse: relaxation (i.e., yoga and massage) was most used ($n = 10$), followed by self-care and self-reflection ($n = 6$) and emotional and experiential exchanges in small groups ($n = 5$). Other interventions included coping skills and stress management, role playing, debriefing, problem solving, bereavement care, journals, music therapy, sleep hygiene, mobile phone to cope with stress, play therapy, spiritual care, mindfulness, storytelling, short essays, humor, work-life balance, meaning of life, wellness plans, short films, psychodrama techniques, and cognitive behavioral therapy.

Studies reported barriers related to time constraints ($n = 3$), lack of funding ($n = 1$), nursing shortage ($n = 1$), and cancellation of intervention sessions ($n = 1$). One study acknowledged that no sustainability plan existed for the intervention. The majority of studies indicated that the interventions were useful, enjoyable, and satisfactory. Two studies described cultural diversity of participants and cultural acceptance of the intervention (Huggard & Nichols, 2011; van Westrhenena & Fritz, 2013). One study reported that financial constraints limited the rewards that could have been given in the intervention. Five studies acknowledged funding that was provided by scholarships, grants, or donations. Two studies proposed that policies were

needed to support healthcare professionals in the prevention and management of burnout, which would make it easier to retain employees and increase employee productivity. The studies also recommended written policies on protective and preventive strategies to promote wellness and prevent burnout in employees. The majority of studies cited the need for management to promote or encourage group meetings or support groups to enhance personal resources for coping or to create a balance between professional and personal life, which would prevent or reduce compassion fatigue in oncology nurses.

Evaluations of feasibility in conducted studies took into account nurses' satisfaction and, in a few cases, cost. Overall feasibility related to intervention use and integration into the health system was lacking.

Discussion

This integrative review was undertaken to increase the knowledge regarding in-facility interventions to manage compassion fatigue in oncology nurses. The studies reviewed were predominantly from the United States, Europe, and Canada. Only four studies were published on interventions for compassion fatigue from 1992–2005. Twenty-seven studies were published on compassion fatigue interventions from 2006–2015. This increase in interest in managing compassion fatigue may be related to the books and articles on compassion fatigue written by Figley (1995, 2003, 2005).

Study Design

Thirteen quantitative studies were of weak quality because they were pilot studies, had small sample sizes, or had no randomization, no control groups, or no blinding, therefore limiting the potential for inferences and generalizability (Moody et al., 2013; Traeger et al., 2013). About half the interventions had a pre/post-test design. The majority of qualitative articles were descriptive. Quantitative and qualitative studies failed to gain high scores in terms of quality. Activities or interventions were planned and conducted, and evaluations were conducted retrospectively (Fillion, Dupuis, Tremblay, De Grâce, & Breitbart, 2006; Medland et al., 2004; Popkin et al., 2011; Wittenberg-Lyles et al., 2014).

Bruneau and Ellison (2004) noted that, because of the enjoyable and helpful nature of the program, it would be problematic to limit entrance into the program. However, they also noted that the program did no harm.

Homogeneity of Participants

The homogeneity of oncology nurses (most were female) may compromise the validity of the review

(Moody et al., 2013). Participation in the studies was predominately voluntary, and selection bias could have occurred because of the self-selection of participants who may have experienced work-related stress and hoped to find assistance from the study (Leung et al., 2012; Potter et al., 2013). Conversely, time demands of multisession activities may have overwhelmed participants and precluded participation (Potter et al., 2013). Other potential barriers to attendance, which could account for the small samples, include not being released from work to attend multisession interventions and financial restrictions (Macpherson, 2008; Traegar et al., 2013).

Heterogeneity of Study Interventions

The reviewed studies were heterogeneous, with a range of interventions producing knowledge on stress, burnout, compassion fatigue, and coping strategies among nurses. The interventions were not standardized; only four studies were directed by guidelines, and seven were guided by theoretical frameworks. Despite an absence of frameworks in the design of the interventions, interventions were clinically driven and informed by participants following needs analysis and preferences tailored to meet the nurses' requests (Traeger et al., 2013). The majority of the studies reported on single interventions.

Moody et al. (2013) and Medland et al. (2004) proposed the inclusion of additional stress-reduction activities to establish a more robust intervention. Although quality ratings for the interventions tended to be low, all the articles emphasized the importance of recognizing and managing compassion fatigue, particularly in oncology nurses.

Heterogeneity of Outcomes

The majority of the studies used the standardized MBI or ProQOL instruments to assess compassion fatigue. However, evaluation was brief in some studies (Traeger et al., 2013). Seventeen studies showed pre- and post-test results that demonstrated some sustainability of the intervention.

A review of article authorship revealed that, in most cases, the authors confined their output to a single paper. Maree and Schmollgruber (2014) explained that research on cancer nursing tends to be a "fact-finding academic exercise" for qualification instead of research aimed at advancing health for patients with cancer and their families (para. 31).

Of the interventions that were evaluated for effectiveness, the majority showed a reduction in burnout, compassion fatigue, death anxiety, and staff turnover (Bruneau & Ellison, 2004; Lupo et al., 2012; Saint-Louis, 2010), which positively influenced patient care (Bruneau & Ellison 2004; Potter et al., 2013).

Knowledge Translation

- The emotional demands of the patient–nurse relationship, along with the daily challenges of caring for patients with cancer, generate significant stress for oncology nurses.
- Stress can negatively affect oncology nurses' physical and emotional health, which could lead to compassion fatigue.
- Psychological strategies may assist oncology nurses in coping with compassion fatigue and promoting compassion satisfaction.

Participants reported satisfaction with the interventions, that they learned effective coping skills, were better equipped to deal with intrusive thoughts, and had more positive feelings, making it easier for them to cope and lessening behavioral avoidance (Potter et al., 2013).

Only two of the studies were conducted in non-Western countries, suggesting the need for additional research in other countries to determine effective interventions that address compassion fatigue and stress cross-culturally (Carton & Hupcey, 2014; van Westrhenena & Fritz, 2013).

Most of the studies dealt with one-off interventions, and only a few of the interventions were conducted during an extended period of time. Successful interventions need to be conducted for longer periods for greater sustainability (Potter et al., 2013; Traeger et al., 2013). Several studies recommended institutional support to ensure that all participants were able to attend the interventions (Altounji, Morgan, Grover, Daldumyan, & Secola, 2013; Bruneau & Ellison, 2004; Lupo et al., 2012; Traegar et al., 2013).

Limitations

The current authors actively sought to access all related literature, but small samples in many of the studies limited the possibility of statistically documenting the entire impact of the intervention(s), limiting the scope for inferences and generalizability (Moody et al., 2013; Traeger et al., 2013). Interviews were conducted during short periods, and long-term effects were not explored (Leung et al., 2012). Almost half the articles reported a brief evaluation or no evaluation postintervention, which calls for further investigation to evaluate whether interventions (including one-off interventions) affect burnout, compassion fatigue, and STSD. Some interventions may have only short-term "feel good factors" (Le Blanc et al., 2007, p. 222). Limited conclusions can be drawn from the small studies that reported on outcomes with many confounding variables, such as turnover rate or general health of nurses, from a single institution. Although the current review focused on

compassion fatigue, many research studies did not clearly distinguish between compassion fatigue and burnout. Therefore, the search terms of the current study included *burnout*, *secondary traumatic stress*, and *vicarious traumatization*.

Implications for Research

Additional research, including longitudinal control studies and studies on healthcare provider grief, is indicated (Carton & Hupcey, 2014; Wittenberg-Lyles et al., 2014). Lack of empirical precision in evaluating the effectiveness, feasibility, and nurses' experience of the interventions indicates a need for future, more rigorously designed experimental studies. Most of the studies dealt with one-off interventions, with only a few of the interventions conducted during longer time periods, more of which is needed for greater sustainability (Potter et al., 2013).

Implications for Nursing

Compassion fatigue is a recognized issue in oncology. A number of related in-facility interventions have been carried out, but they have consisted of a variety of single, unevaluated interventions. The quality of many of the studies is weak; therefore, the evidence presented in this article does not advance the management of compassion fatigue. It could be of use, however, to researchers; educators, to promote compassion satisfaction; and administrators, to encourage coping among oncology nurses related to their professional and personal lives.

Conclusion

The physical and emotional demands of the patient–nurse relationship, the oncology unit, and the daily challenges of nursing patients with cancer generate significant stress in oncology nurses (Gillespie, 2013; Potter et al., 2010). This integrative review identified 31 articles that provided insight into interventions seeking to manage compassion fatigue in oncology nurses.

The majority of interventions that were evaluated for effectiveness showed a reduction in burnout, compassion fatigue, death anxiety, and staff turnover. Most studies cited the need for management to promote or encourage group meetings or support groups to enhance personal resources for coping or to create a balance between professional and personal life that would prevent or reduce compassion fatigue in oncology nurses. Participants experienced rejuvenation, feelings of being appreciated, better coping with job difficulties, and the value of peer support groups.

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