

Distress and Coping Self-Efficacy in Inpatient Oncology Nurses

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Purpose/Objectives: To examine distress and coping self-efficacy in inpatient oncology nurses.

Design: Cross-sectional survey design.

Setting: Oncology Nursing Society (ONS) chapter meetings and Hunter-Bellevue School of Nursing, both in New York, New York, as well as social media.

Sample: 163 oncology nurses who work with an inpatient adult population.

Methods: Participants were recruited through the ONS New York, New York, area chapter meetings, Hunter College, and ONS Facebook pages. An adapted Nurse Distress Thermometer (NDT) measured distress levels. The Occupational Coping Self-Efficacy Questionnaire for Nurses (OCSE-N) used a Likert-type scale to measure coping self-efficacy. Open-ended questions elicited additional perceptions of nurse respondents.

Main Research Variables: Descriptive statistics summarized sample demographics. A Pearson correlation between distress levels and coping self-efficacy scores was calculated. Low, normal, and high coping scores were compared to mean distress levels.

Findings: Survey participants showed high levels of distress, with a mean NDT score of 8.06. Those with higher coping self-efficacy scores reported less distress. A moderate, negative correlation was shown, with a statistically significant Pearson coefficient of -0.371 . Responses to the open-ended questions revealed common stressors and pointed to solutions that institutions might implement to support nurses.

Conclusions: Because coping self-efficacy related to lower distress levels in inpatient oncology nurses, institutional-level support for oncology nurses should be provided.

Implications for Nursing: Interventions aimed at coping self-efficacy may prepare oncology nurses to cope better with their professional demands. Future research should explore how nurse distress affects patients.

Oncology nurses regularly experience a variety of closely related types of distress, such as compassion fatigue, burnout, occupational stress, and moral distress. Oncology nurses are at particular risk for all of these overlapping phenomena (Davis, Lind, & Sorensen, 2013; Potter et al., 2010; Toh, Ang, & Devi, 2012; Traeger et al., 2013) because they are often the ones who must carry out what they consider to be medically futile treatments that may cause pain in a dying patient (Davis et al., 2013; Lazzarin, Biondi, & Di Mauro, 2012; Pavlish, Brown-Saltzman, Jakel, & Fine, 2014; Sirilla, 2014). Those who work in inpatient oncology are at increased risk for psychological distress because they often develop close relationships with patients whose treatments fail and who eventually die under their care (Moya del Pino, 2012).

The term *nurse distress* (ND) captures the multifactorial nature of oncology nurses' distress and, therefore, is not limited to the distinct categories previously described in the literature. ND refers to the occupational, organizational, relational, emotional, personal, moral, spiritual, and ethical dimensions of stress that interfere with oncology nurses' ability to cope with their professional demands.

Nurses who suffer from ND may become cynical and have difficulty experiencing and demonstrating empathy (Edmonds, Lockwood, Bezjak, & Nyhof-Young, 2012; Perry, Toffner, Merrick, & Dalton, 2011). Post-traumatic symptoms, such as intrusions, avoidance, and hyperarousal, may result (Mealer & Jones, 2013). ND may lead to errors and high rates of turnover and has been shown to negatively affect patient satisfaction (Edmonds et al., 2012; McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken, 2011; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004).

The purpose of this study was to assess distress levels and coping self-efficacy (CSE) in oncology nurses who work in the adult inpatient setting. This study aimed to (a) examine distress levels and CSE in inpatient adult oncology nurses, (b) examine the relationships between distress scores and the participants' demographic characteristics, (c) examine the relationship between CSE and ND, and (d) identify contributing factors and coping strategies of inpatient oncology nurses.

The Theory of the Nurse as Wounded Healer framework (Conti-O'Hare, 2002) guided the study's design. This framework emphasizes the role of emotional self-awareness in cultivating resilience when caring for suffering patients (Bush, 2009; Grafton, Gillespie, & Henderson, 2010). Self-evaluation of distress and coping abilities may help oncology nurses develop a compassion identity (Corso, 2012) and reduce their vulnerability to the deleterious effects of ND.

Background

Work stress has often been evaluated separately from emotional stress in oncology nurses; however, the overlapping nature of these distinct states may be most pertinent in examining the distress of this population. Cohen, Ferrell, Vrabel, Visovsky, and Schaefer (2010), in an extensive evaluation of the literature, describe the multifactorial, complex, and competing demands that oncology nurses experience. In addition, the increasing complexity of healthcare delivery creates job intensification, adding to the demands on nurses because of frequent changes in technology and treatment plan, higher turnover and acuity of patients, and redundancy (Fillion et al., 2007; Hayes et al., 2012; Pisanti, 2012).

CSE is the positive self-evaluation of one's ability to cope (Bandura, 1997). People with high levels of CSE perceive stressors more favorably. This adaptive disposition has been shown to affect distress and well-being outcomes (Pisanti, 2012). Because ND will likely never be eliminated, examining CSE as a potential mitigating factor was of particular interest. Distressed nurses who experience difficulty coping may have trouble adequately addressing the psychosocial needs of their patients. Exploring ways that institutions may help distressed oncology nurses may also help organizations to support their nursing workforce against this workplace hazard and, as a result, improve patient outcomes.

Methods

This study used a cross-sectional survey design to examine distress and CSE levels of inpatient adult oncology nurses. Eligibility criteria included RNs working with an inpatient adult oncology population. Anyone who was not an oncology nurse or who worked in an outpatient or pediatric setting was excluded from the survey.

An online survey was created, and participants were recruited by providing a flyer that included a link to the survey at two local New York, New York, chapter meetings of the Oncology Nursing Society (ONS) (about 70 attendees); the same attendees were encouraged to distribute flyers to colleagues. In addition, flyers were displayed at the Hunter-Bellevue School of Nursing at Hunter College in New York. After a low response rate ($n = 40$) in one month, recruitment was expanded to include social media, and a description with the survey link was posted on local and national ONS Facebook pages.

Procedures

The flyers, Facebook posts, and first page of the survey described the purpose of the study and provided the contact information of the principal investigator. The second page of the survey explained the risks, benefits, and voluntary nature of participation, as well as how confidentiality would be ensured. Survey completion implied assent. SurveyMonkey® was the online distributor used to administer the survey, which remained online for two months. The project was deemed exempt from review by the Hunter College Human Research Protection Program.

Instruments

Distress levels were measured with an adapted version of the Distress Thermometer (DT), a reliable, valid tool included in the clinical practice guidelines of the National Comprehensive Cancer Network ([NCCN], 2014) to screen for distress in patients with cancer.

TABLE 1. Sample Characteristics (N = 163)

Characteristic	n	%
Age (years)		
20–29	39	24
30–39	54	33
40 or older	70	43
Nursing experience (years)		
0–4	40	25
5–9	49	30
10–14	20	12
15 or greater	54	33
Oncology nursing experience (years)		
0–4	54	33
5–9	43	26
10–14	25	15
15 or greater	40	25
Missing data	1	1
Oncology certification		
Yes	98	60
No	64	39
Missing data	1	1
Job role		
Staff RN	138	85
Other	25	15
Time of shift		
Night	48	29
Day	111	68
Other	4	3
Type of employment		
Full-time	151	93
Other	12	7
Highest level of education completed		
Associate degree	16	10
Bachelor's degree	113	69
Master's degree	30	19
Doctoral degree	3	2
Missing data	1	1

Note. Because of rounding, percentages may not total 100.

The DT has been validated against the Hospital Anxiety and Depression Scale in multiple studies worldwide as a means of assessing psychological distress in patients with cancer (Donovan, Grassi, McGinty, & Jacobsen, 2014). It has been used in other populations (Boyes, D'Este, Carey, Lecathelinais, & Girgis, 2013; Holly & Sharp, 2012; Ploos van Amstel et al. 2013) and in caregivers (Haverman et al., 2013; Hughes, Sargeant, & Hawkes, 2011; Zwahlen, Hagenbuch, Jenewein, Carley, & Buchi, 2011). An adaptation of the DT, the Moral DT, used to measure moral distress in nurses, was validated against the moral distress scale, the gold standard for moral distress measurement (Wocial & Weaver, 2013). Moral DT scores of 2.99 corresponded to nurses who had left their position, and scores of 3.92 were related to those who had considered leaving the profession (Wocial & Weaver, 2013).

For the purposes of this survey, the DT was adapted to evaluate the broader dimension of ND. The adaptation included a definition of ND, and the tool was called the Nurse DT (NDT). Participants were asked to

look at the visual analog scale and rate their distress level. To capture the highest level of distress they experienced, respondents were asked to rate the level of ND they felt when they were most distressed, with 0 being “no distress” and 10 being “extreme distress.” When used in patients, the DT is accompanied by a problem list that asks patients about symptoms and problems they are experiencing. Because nurses were being studied, an appropriate replacement of the problem list geared toward nurses was sought to capture occupational nurse stressors.

Validated tools that have been used to measure the occupational stress of nurses, such as the Work Stressor Inventory for Nurses in Oncology (WSINO) (Borteyrou, Truchot, & Rascle, 2014) and the Nursing Stress Scale (NSS) (Gray-Toft & Anderson, 1981), capture similar nurse occupational stressors (e.g., workload, difficulties with colleagues). However, these scales are burdensome, with 51 and 34 items, respectively. The Occupational CSE Questionnaire for Nurses (OCSE-N) (Pisanti, Lombardo, Lucidi, Lazzari, & Bertini, 2008) has similar themes as the WSINO and the NSS, with only nine items and the added feature of measuring CSE. To reduce respondent burden, the OCSE-N was chosen.

The OCSE-N was validated against dimensions of Maslach's Burnout Inventory (Pisanti et al., 2008). OCSE-N scores were positively related to personal accomplishment and negatively related to depersonalization and emotional exhaustion (Pisanti et al., 2008). In a study of 1,479 Italian nurses, the OCSE-N was shown to be reliable, with a Cronbach alpha of 0.83 (Pisanti, 2012). The OCSE-N uses a five-point Likert-type like scale that has nine questions, in which participants are asked to rate their coping ability. The scores are totaled to create an overall coping rating (range = 0.9–4.5, where higher scores indicate greater coping self-efficacy).

Open-ended questions were added at the end of the survey to gain the perspective of the nurse respondents that may not have been captured in the quantitative measures. The five questions were the following:

- What is the most difficult thing to cope with about your job?
- What helps you cope? (These may be personal or organizational.)
- What, if anything, is provided at your organization to help you to better cope or reduce your burdens?
- What do you wish were provided? What would help?
- Did participating in this survey and reflecting on your emotional state help you in any way? If so, how?

Data Analysis

Descriptive statistics using SPSS®, version 22.0, were used to summarize the demographics of the sample

(i.e., age range, years of nursing experience, years of oncology nursing experience, oncology certification, job type, time of shift, and education level). The mean and standard deviation of the NDT scores and OCSE-N scores were calculated for the total group and by selected demographics.

To satisfy the third aim, a Pearson correlation between the distress levels and CSE scores was calculated. Coping scores were categorized into low, normal, and high, according to standard deviations from the mean (Pisanti, 2012). These scores were also compared to mean distress levels. Regression analyses were performed to compare the distress scores and the OCSE-N scores to the demographic characteristics.

The five open-ended responses were analyzed by question according to Alan Bryman's four stages of qualitative analysis (Gibbs, 2010). First, the responses were studied and written out by hand for the author to become familiar with them. Ideas that emerged were then grouped into initial codes according to similarities. This process was repeated to refine the codes, eliminating repetition and combining similar codes, which were then labeled and grouped into larger categories called themes. The codes were then quantified, and their frequencies were calculated by question using a Microsoft Excel® spreadsheet.

Results

A total of 163 complete responses were collected. Table 1 lists the demographic characteristics of the sample. About one-fourth of the respondents were aged 20–29 years, about one-third were aged 30–39 years, and the remaining respondents were aged 40 years or older. Nursing experience and oncology nursing experience varied, with the least number of participants having from 10–14 years of nursing experience and oncology nursing experience. Most were oncology-certified staff nurses working the day shift and were working full-time. This was a highly educated sample, with only 16 respondents having less than a bachelor's degree.

Table 2 shows the mean distress scores and CSE scores by selected demographics. Although some minor differences were found among demographic groups, regression analyses revealed no statistically significant differences between demographic characteristics and distress scores. The CSE scores showed little variation, with mean scores ranging from 2.57–2.81 despite an overall range of 1.2–4.3. Again, regression analyses revealed no statistically significant differences between demographic characteristics and OCSE-N scores.

To address the third aim of the study, OCSE-N scores were compared to ND levels. Those with greater CSE scores reported less distress, showing a moderate negative correlation, with a Pearson coefficient of -0.371 , which was statistically significant ($p < 0.001$). In addition, OCSE-N scores were categorized into low, normal, and high, based on one standard deviation from the mean (Pisanti, 2012), and compared to mean distress levels (see Table 3). Those with low OCSE-N scores were more distressed (9.24) compared to those who had high CSE (6.76).

Ninety-nine participants (61%) responded to at least one open-ended question, and 143 participants (88%) responded to two or more questions. Figure 1 lists the themes that emerged when analyzing these responses. Respondents found most difficulty coping with job demand; organizations that were either unsupportive or inefficient; and death, dying, and

TABLE 2. Distress and Coping Scores by Demographic Characteristic (N = 163)

Characteristic	NDT		OCSE-N	
	\bar{X}	SD	\bar{X}	SD
Total sample	8.06	1.77	2.71	0.6
Age (years)				
20–29	8.15	1.71	2.81	0.55
30–39	8.04	2.01	2.69	0.59
40 or older	8.03	1.63	2.66	0.62
Nursing experience (years)				
0–4	8	1.47	2.76	0.54
5–9	8.35	2.1	2.71	0.64
10–14	8.25	1.48	2.66	0.71
15 or greater	7.78	1.76	2.69	0.56
Oncology nursing experience (years)				
0–4	8	1.54	2.77	0.55
5–9	8.28	2.2	2.68	0.7
10–14	8.04	1.59	2.69	0.54
15 or greater	7.9	1.72	2.69	0.58
Oncology certification				
Yes	7.91	1.97	2.68	0.55
No	8.3	1.42	2.72	0.63
Time of shift				
Day	7.92	1.85	2.77	0.62
Night	8.31	1.61	2.57	0.53
Other	9	0.82	2.6	0.5
Highest level of education completed				
Associate degree	8.06	2.08	2.61	0.6
Bachelor's degree	7.95	1.81	2.76	0.6
Master's degree	8.4	1.55	2.59	0.6
Doctoral degree	8.67	1.16	2.57	0.31

NDT—Nurse Distress Thermometer; OCSE-N—Occupational Coping Self-Efficacy Questionnaire for Nurses

Note. NDT scores range from 0–10, with greater numbers indicating higher levels of distress. OCSE-N total scores range from 0.9–4.5, with higher scores indicating greater coping self-efficacy.

suffering of their patients. The coping strategies used were “getting away,” “supportive relationships,” and “cultivating personal strength.” Support provided at their institutions was often described as “nothing” or was offered at a time when the nurses were unable to attend. Survey respondents also described services, such as employee assistance programs, and listed supportive organizations, management, and coworkers as resources provided by their institutions. Survey participants stated that they wished they were provided with more resources, such as increased staff and more training. They also expressed wanting more support in the form of debriefing, groups, and counseling, as well as to be appreciated with rewards and recognition. Most of those who answered the final question felt that participation in the survey was helpful because it raised awareness and provided validation.

Discussion

This sample of inpatient adult oncology nurses reported mean distress levels of 8.06. When used in patients, a score of 4 or greater on the DT is considered moderate to severe and warrants additional evaluation and a possible referral to a mental health professional (NCCN, 2014). When an adapted DT was used to measure moral distress in healthcare professionals, a score of 8 or greater was labeled “intense” (Wocial & Weaver, 2013). The participants were asked to report their level when they felt most distressed, so the duration of this emotional state was not captured. Regardless, the fact that oncology nurses are experiencing these high levels of distress demonstrates the need to further examine the psychological toll to this professional group.

Although not statistically significant, some differences in distress levels among age, experience, education, and certification are worth considering. Older and more experienced nurses reported less distress. Seasoned nurses may have learned how to cope

with life and job demands, or perhaps those who are burned out have left the profession or specialty (Toh et al., 2012) or have chosen to work in the outpatient setting (Davis et al., 2013). Those with higher levels of education who reported more distress may be in more difficult positions (Toh et al., 2012). Oncology-certified respondents reported lower distress levels. This may be because those who pursue certification are decidedly satisfied in their specialty (Brown, Murphy, Norton, Baldwin, & Ponto, 2010).

Higher CSE is significantly associated with less ND. Although CSE has been shown to positively affect psychological distress and well-being outcomes (Pisanti, 2012), these findings do not reveal whether more distressed nurses view themselves as less able to cope or if greater CSE reduces distress. Because CSE may be more amenable to intervention than ND, this would be an excellent area for further research.

For the OCSE-N scores, no significant differences were found among the demographic groups. This may be partly because of a limitation of this study in that the type of unit was not captured. Others have reported differences in moral distress scores among medical, surgical, bone marrow transplantation, hematology, or mixed practice settings (Sirilla, 2014). Nursing practice environments have been shown to affect ND (Davis et al., 2013; Shang, Friese, Wu, & Aiken, 2013). Because demographics were not associated with OCSE-N or distress scores, additional exploration into the open-ended questions was warranted.

The response rate for the open-ended questions was high, implying that nurses were eager to give feedback on this topic. The stressors identified in these open-ended questions (e.g., workload, staffing, death and dying) were consistent with the literature (Henry, 2014; Naholi, Nosek, & Smayaji, 2015; Toh et al., 2012). When reported coping strategies were categorized, they were also consistent with coping factors (e.g., confrontation, withdrawal, escape/avoidance, problem solving, positive reappraisal) that have been studied previously (Aycock & Boyle, 2009; Davis et al., 2013; Rodrigues & Chaves, 2008; Traeger et al., 2013). Respondents also identified self-care strategies (e.g., exercise, spirituality, relaxation), and such strategies are consistent with what has been previously described (Houck, 2014).

About half of the respondents (43%, $n = 58$) reported that nothing was provided at their institutions or that attending support groups was not feasible, which indicates that nurses may not be provided with adequate psychological support. The American Nurses Credentialing Center recognizes Magnet®-status institutions that provide nurses with adequate support, resources, and information (Williamson, 2008). Hospitals with Magnet designation

TABLE 3. Distress Levels by Occupational Coping Self-Efficacy Questionnaire for Nurses (OCSE-N) Ratings

Level	n	\bar{X} Distress	SD
Low coping self-efficacy	25	9.24	0.88
Normal coping self-efficacy	117	8.04	1.63
High coping self-efficacy	21	6.76	2.39

Note. Low coping self-efficacy is defined as OCSE-N scores 1 or less standard deviation below the mean. High coping self-efficacy is defined as OCSE-N scores 1 or greater standard deviation above the mean.

have oncology nurses who report less burnout and higher job satisfaction (Toh et al., 2012). The type of institutional support recognized by Magnet status may be what helps protect oncology nurses against burnout (Davis et al., 2013).

Several participants reported that institutional-level support was provided. On-site services to care for the mind, body, and spirit of oncology nurses, such as chaplain services, exercise classes, or a quiet room, were reported by 10% (n = 14) of respondents. Organized support in the form of groups, classes, or debriefing sessions was listed by 21% (n = 29) of respondents.

Many types of support services for oncology nurses have been described in the literature. Some have been aimed at addressing compassion fatigue and grief resolution, such as a compassion fatigue resiliency program (Potter et al., 2013), compassion fatigue training (Walton & Alvarez, 2010), a compassion fatigue and cumulative grief education intervention (Houck, 2014), and grief resolution (Hildebrandt, 2012). Others have been aimed at psychological and emotional support, such as “care for the professional caregiver” programs (Edmonds et al., 2012), support groups (Wittenberg-Lyles, Goldsmith, & Reno, 2014), psychological skills training (Traeger et al., 2013), and emotional intelligence rounds (Codier, Freitas, & Muneno, 2013). Some studies have focused on mindfulness-based stress reduction (Potter et al., 2010; Schieszer, 2014; Traeger et al., 2013) and mindful awareness group-focused work (Todaro-Franceschi, 2013). A variety of on-site professional resources, educational programs, and specialized retreats (Aycock & Boyle, 2009) have been piloted (Henry, 2014). Programs like these need to be replicated, and their effectiveness at reducing ND and improving patient outcomes needs to be demonstrated on a larger scale.

Almost one-fourth (23%, n = 33) of those who answered the question about what helps with coping reported personal skills, abilities to reflect and adapt to their environment, and the capacity to find meaning in their work. These answers were coded as “resourcing” because they reflected an ability in the nurse to tap into a personal strength that seemed to transcend the stressful work environment.

Ego resources, which allow a person to act in a way that is self-protective and move toward personal growth, can be negatively affected by exposure to another person’s trauma (Sinclair & Hamill, 2007). This is known as vicarious traumatization, which has been explored as a hazard of mental health professionals previously but is applicable to oncology nurses (Aycock & Boyle, 2009; Mealer & Jones, 2013). Sinclair and Hamill (2007) emphasize not only the cultivation of this inner ego strength, but also its protection from further harm.

WHAT IS THE MOST DIFFICULT THING TO COPE WITH ABOUT YOUR JOB? (N = 144)

Job demand

- Time (n = 16) or acuity (n = 9)
- Workload (n = 41) or staffing (n = 24)
- Demands of patients and families (n = 14)

Organization

- Management (n = 23)
- System (n = 29)

Death, dying, suffering, and ethics

- Death and dying (n = 30) or suffering (n = 10)
- Ethics (n = 11)

WHAT HELPS YOU COPE? (THESE MAY BE PERSONAL OR ORGANIZATIONAL.) (N = 143)

Getting away

- Time off (n = 23) or separation (n = 17)
- Hobbies (n = 27)

Organization

- Coworkers (n = 47) or friends and family (n = 30)
- Talking or venting (n = 27)

Cultivating strength

- Self-care, mind-body-spirit (n = 39)
- Resourcing (n = 33)

WHAT, IF ANYTHING, IS PROVIDED AT YOUR ORGANIZATION TO HELP YOU TO BETTER COPE OR REDUCE YOUR BURDENS? (N = 135)

Inadequate support

- Nothing (n = 51) or bad timing (n = 7)

Organization

- Employee assistance programs (n = 14)
- Mind-body-spirit (n = 14)
- Support group or class (n = 29)

Supportive personnel or organization

- Personnel (n = 14)
- Organization (n = 29)

WHAT DO YOU WISH WERE PROVIDED? WHAT WOULD HELP? (N = 133)

Resources

- More staffing (n = 39) or more training (n = 24)
- Better communication and efficiency (n = 25)
- Reprieve (n = 22)

Support and rewards or recognition

- Debriefing, counseling, or groups (n = 21)
- Supportive leadership (n = 16)
- Rewards or recognition (n = 16)

DID PARTICIPATING IN THIS SURVEY AND REFLECTING ON YOUR EMOTIONAL STATE HELP YOU IN ANY WAY? IF SO, HOW? (N = 99)

Awareness

- Identification of the problem (n = 38)
- Awareness of need for change (n = 14)

Reflection

- Relief or validation (n = 22)

Did it help?

- Yes (n = 60) or no (n = 36)

FIGURE 1. Themes of Responses to Open-Ended Survey Questions

Grafton et al. (2010), in an extensive review of the resilience literature, describe resilience as innate and adaptable. Resilient nurses demonstrate CSE by using positive coping strategies marked by engagement, which fosters satisfaction and further resilience, as opposed to negative coping strategies, such as avoidance and withdrawal from relationships with colleagues and patients (Epstein & Schwartz Center for Compassionate Healthcare, 2014; Grafton et al., 2010). Future research should target interventions aimed at developing resilience and helping oncology professionals to cultivate this internal resource.

Limitations

When compared to a national sample of ONS members (INFOCUS Marketing, Inc., n.d.) who answered a mailing list survey, this sample was younger, with more than twice as many (24%, $n = 39$) aged 20–29 years compared to the national survey (11%, $n = 2,945$), and nearly twice as many (33%, $n = 54$) aged 30–39 years compared to the national sample (18%, $n = 4,789$). Fewer (43%, $n = 70$) respondents were aged 40 years or older compared to the national sample (72%, $n = 14,605$). This may be explained by the fact that the national survey included those who were retired and those working in academia and was not limited to those working directly with patients.

Correspondingly, the national sample had more people with five or fewer years of nursing experience (52%, $n = 19,262$) and oncology nursing experience (67%, $n = 22,360$) compared to the current sample, which had 25% ($n = 40$) and 33% ($n = 54$), respectively. The national sample had fewer respondents with 6–10 years of nursing (6%, $n = 1,929$) and oncology nursing experience (8%, $n = 2,371$) compared to the current sample, which had 30% ($n = 49$) and 26% ($n = 43$), respectively. A similar percentage had more than 10 years of nursing experience, with 42% ($n = 14,030$) in the national sample and 45% ($n = 74$) in the current sample. More respondents (40%, $n = 65$) had greater than 10 years of oncology nursing experience in the current sample compared to the national sample (25%, $n = 6,986$).

The current sample was more educated, with a lower percentage of respondents holding less than a bachelor's degree (10%, $n = 16$) compared to the national sample (29%, $n = 9,579$); in addition, more respondents held bachelor's degrees (69%, $n = 113$) compared to the national sample (51%, $n = 17,011$). The percentage of national survey respondents who held master's (19%, $n = 5,920$) and doctoral degrees (1%, $n = 368$) were nearly identical to this sample (19% [$n = 30$] and 2% [$n = 3$], respectively). Possible reasons for this were that some recruiting was done at a senior college of nursing and in New York, where most

institutions require bachelor's degrees. Therefore, this sample may not be representative of oncology nurses as a whole.

This study was also limited by use of an online survey, which relied on a self-report measure and self-selected participation. This also may make this sample not representative of oncology nurses at large. The adaptation of the DT has not been used in this way before and, therefore, cannot be compared to other studies. Repeating the NDT to demonstrate its reliability and validating it against other tools would have strengthened this study and should be done in future studies. Asking nurses to report when they felt most distressed may make the results higher than asking them to give an average of their distress, as has been done previously (Wocial & Weaver, 2013). Having a second researcher cross-check the codes generated during qualitative analysis to demonstrate inter-rater reliability would have made that analysis more valid and auditable.

Several demographic variables might have elicited more meaningful variation in the results by demographics. This included which region of the country the respondents were practicing, as well as practice setting (type of unit) and years in current position. Organizational information, such as Magnet status and whether or not the institution held comprehensive cancer center designation by the National Cancer Institute, would have helped indicate whether these practice settings had any influence on distress and CSE. Intent to leave oncology or current position, an indicator of burnout, would have been another important metric to capture.

Implications for Nursing

The study findings are important for nurse administrators because of the significant risk to the oncology nursing workforce. New nurses need psychological support and guidance (Medland, Howard-Ruben, & Whitaker, 2004; Williamson, 2008). Older, experienced oncology nurses who leave the specialty leave novice nurses not only without educators, but also without mentors, which hurts the entire oncology organization

Knowledge Translation

- Coping self-efficacy relates to decreased distress in oncology nurses.
- Cultivating the psychological health of oncology nurses should become a standardized part of staff development.
- Interventions aimed at coping self-efficacy and resilience should be explored.

(Ayccock & Boyle, 2009). Unresolved grief has been shown to negatively affect oncology nurse retention (Hildebrandt, 2012). Therefore, institutions need to offer support that prevents this tremendous loss. Resilience and grief resolution training should be embedded into nurse residency programs and mainstream nursing education (Grafton et al., 2010; Todaro-Franceschi, 2013). Oncology nurses need to develop the ability to reflect and process their emotions as diligently as they process clinical information (Walton & Alvarez, 2010). These skills are as essential to the well-being of oncology nurses as any other type of mandated safety training and should be treated as such.

Conclusion

CSE is an attribute of resilience and, in this study, was shown to relate to lower distress levels in inpatient oncology nurses. In light of these findings, future research should develop and test interventions aimed at increasing CSE and reducing ND. The impact of ND and CSE on oncology nurses' ability to meet the psychosocial needs of patients should also be explored.

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