Original Article

The Emotional Intelligence, Occupational Stress, and Coping Characteristics by Years of Nursing Experiences of Newly Hired Oncology Nurses

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ABSTRACT

Objective: The objective of the study was to compare and analyze the emotional intelligence, occupational stress, and coping characteristics of three groups of newly hired oncology nurses. **Methods:** Data for this secondary analysis were collected from a larger study of 114 newly hired nurses at a cancer center in the Northeastern United States. Survey data were collected using the EQi-2.0™, the Nursing Stress Scale, and the Ways of Coping Questionnaire. Dimensions of study measures were analyzed based on new graduates, 1–5 years, and >5 years of nursing experience. Analysis of variance was conducted among the three groups followed by Tukey pairwise comparisons analysis when $P = 0.05$. **Results:** New graduates scored significantly lower on the self-expression dimension (mean = 96.88; standard deviation [SD] = 13.27) than nurses with >5 years nursing experience (mean = 106.12; SD 15.02) ($P = 0.04$), and the subdimension, assertiveness (mean = 94.73; SD = 13.87) compared to nurses with >5-year nursing experience (mean = 103.94; SD = 14.86) ($P = 0.03$). Significantly higher sources of stress for new graduates were death and dying (mean = 16.45; SD = 3.37), and for the associations between the three nursing groups ($P = 0.001$). New graduate nurses used the problem-focused coping strategy of accepting responsibility (mean = 14.06; SD = 7.28) significantly ($P = 0.006$) more often than nurses with >5-year experience (mean = 8.54; SD = 4.25), and planful problem solving (mean = 16.76; SD = 5.27) significantly less often ($P =.001$) than nurses with 1–5-year experiences (mean = 20.12; SD = 7.31). **Conclusions:** Dimension scores highlight the characteristics of nurses with varying levels of nursing experience onboarding at the same time. Findings may inform model-development for improving nurse-recruitment practices and retention strategies.

Key words: Cancer, coping, emotional intelligence, newly hired nurses, occupational stress, oncology

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Introduction

Oncology work settings are known to be multifaceted and stressful environments, yet caring for patients with cancer can be one of the most rewarding of all nursing specialties.[1] In the United States, a National Cancer Institute's (NCI) designation refers to a comprehensive cancer-focused facility that engages in a wide range of oncology practices and represents unique types of occupational stress (OS) associated with caring for cancer patients, their families, various cancer therapies, and treatment regimens.[1,2] All nurses who are newly hired to the study's research setting undergo an onboarding program during the initial employment period, which starts at the date of hire and lasts approximately 3 months. Didactic classes about oncology nursing and skills sessions are provided during the first 2 weeks posthire after which they go to their assigned units. From this point, they will have increasing workloads and patient care experiences in the clinical area with a preceptor. Although some newly hired nurses may easily acclimate to stressful and emotional experiences in these highly complex oncology care facilities, others may lack the skill to cope with the pressures emanating from the oncology workplace.[3-6] Consequently, nurses with insufficient skills and abilities to cope with their stress may also affect aspects of their nursing practice.[7,8]

Background

Nursing is a social and emotional discipline that requires effective relationships among health-care providers when administering care to patients and their families. In the 1990s, emotional intelligence (EI) emerged from intelligence theory and encompasses emotional and social dimensions, skills, and competencies enabling individuals to relate with others, adapt to their immediate surroundings, and therefore cope with environmental stressors.[8-12] The reported evidence also supports that nurses with high EI had positive associations with nursing work performance,[7,13,14] improved communication and interpersonal relationships,[15] and organizational outcomes related to patient safety.[16-19]

Developing EI during undergraduate education or prior work experiences may be inconsistent or absent, yet nurses are expected to instinctively understand emotions in themselves and others, as well as manage them in clinical settings.[8,20,21] EI is reported as a factor for the academic success of nursing students[21,22] and the successful acclimation to the nursing workplace.[7,14,23] Several studies included EI characteristics as a criterion alternative to grade point averages and found that higher EI in student nurses was predictive of success in baccalaureate programs.[22,23] However, there is limited reported evidence analyzing the EI characteristics of newly hired nurses, and whether they are related to how the nurses acclimate to oncology work settings.

Prior research of newly hired nurses in an NCI facility[24] found significant relationships between a nurse's EI, OS, and coping. Although that study utilized only the total scores for each construct, the dimension scores of individual study measures were not analyzed but were available for analysis. The principal investigator of this study recognizes that data may not be considered timely. However, studies from the recently reported literature that analyzed the dimensions of study measures related to years of nursing work experiences were limited and predominantly conducted outside the United States. For this reason, the purpose of this secondary analysis of the prior study's data was to compare the dimension scores of EI, OS, and coping measures in newly hired nurses and group them by years of nursing experiences.[24] It is proposed that evaluating dimension scores of EI, OS, and coping of the study's sample will illustrate group differences, strengths, and areas for improvement and thus provide the opportunity for examining nurses of varying levels of experience who are all onboarding at the center, at the same time.

Emotional Intelligence and conceptual framework

The Bar-On model[10,11] used in this study conceptualizes EI as interrelated emotional and social dimensions, skills, and competencies that enable individuals to identify emotions in themselves and others, manage, and use emotions in problem-solving and reasoning and adapt to their immediate surroundings and successfully cope with stressful environmental demands. The Bar-On model, now known as the EQi 2.0™,[25] is a mixed-model and encompasses EI abilities, emotion-related competencies, and personality traits. This process-oriented model targets an individuals' potential to adapt and cope with their environment, resulting in their propensity for job performance, leadership, and effectiveness.

The ability to self-express one's feelings and self-perceived feelings about self and relate to others is the intrapersonal dimension of EI. The interpersonal dimension involves skills in developing and maintain relationships for building trust and compassion, i.e., empathy and social responsibility. The ability to manage stress and make decisions facilitates an individual's adaptability to stressful situations using problem-solving and emotional management strategies.[25]

Emotionally intelligent abilities and skills are essential for professions involving emotions such as nursing, which involves providing empathetic, patient-focused care.[16,18] One study found significant correlations between EI and judgment and adaptability in nurses.[22] Improved quality of patient care was found among nurses with high EI, evidenced by a lower prevalence in C. difficile and

Methicillin-Resistant *Staphylococcus aureus* infections, falls with injury, and pressure ulcers, compared to nurses with lower EI.[16,20] Improving a nurses' EI through workshops was also related to improved health promotion in nurses, which can also improve their work performance.[8,26]

Occupational stress

OS is the intense and negative experiences emanating from the work setting that influences an individuals' behavior[27] and leads to feelings of professional incompetence, particularly in new nurses.[3] Stress develops in reaction to a lack of nursing experience, making mistakes with negative outcomes, administering incorrect medications and treatment regimens, a lack of ability to influence demanding situations, heavy work assignments, and shift work.[3] Several studies found that the adverse effects of OS included decreased professional satisfaction, decreased psychological and physical health,[2,4,28] and lack of adequate coping skills[4,5,29] to address the stress in the work setting.

Coping

Coping relates to thoughts and behaviors individuals use to manage stressful situations.[30] During a stressful event, the nurse re-appraises the situation and determines a coping strategy that is either problem-focused coping (PFC) or emotion-focused coping (EFC). A PFC strategy uses problem-solving skills and seeking social support as an alternative means to decrease stress. An EFC strategy relies on decreasing negative emotions caused by perceived harm or threat using emotional tactics including venting, withdrawing, avoiding, or seeking more information.[30] However, the inability to resolve and cope with OS can lead to psychological withdrawal and job dissatisfaction,[31] increased burnout,[32] and symptoms leading to poor health.[26,28] Conversely, nurses who effectively manage their own emotions and understand emotions in their patients would make more empathetic clinical decisions that positively influence patient care.[7,17,18]

Methods

Study design, participants, and procedures

This secondary analysis compared the EI, OS, and coping characteristics among 114 newly hired nurses recruited during the initial employment period at an NCI facility in the eastern United States. Power analysis was previously reported.[24] All eligible newly hired nurses who met inclusion criteria and were hired between the timeframe from September 2013 to January 2015 were invited to participate. At the 8th–12th-week posthire, all newly hired nurses received web links to the study surveys and completed them within 2 weeks. Nurses reporting to the principal investigator or who had prior nursing experience in an NCI facility were excluded. Results indicate nurses' responses at one point in time.

Ethical approval

The organization's Institutional Review Board (IRB: X13-023) approved the study. Using web link to online surveys, volunteer participants completed the demographic questionnaire to confirm eligibility and consent to participate. They had the right to terminate participation at any time. All study measures were completed in one session to maintain participant anonymity. Permissions were obtained for study measures.[25,33-35]

Instruments

The demographic questionnaire determined study eligibility, age, gender, years of nursing work experiences, and prior working experiences and setting (non-NCI or NCI facility). Education levels were not included in the questionnaire since baccalaureate degrees are entry-level requirements at the organization and advanced practice nurses (e.g., nurse practitioners) would have commensurate credentials. A nurse's role was also not included since that the level of detail could identify the responders who are also employees of the organization.

The self-report Emotional Quotient Inventory: EQi 2.0™[25] measures emotionally and socially intelligent behavior as it relates to the potential for success. The EQi 2.0™ is a 1-5-15 model of EI that comprises one total score, five main dimensions, and 15 subdimensions, and measures EI on a 5-point format Likert scale (1, "never/rarely"; 5, "almost always/always"). A total emotional quotient score and dimension scores were based on a mean of 100 and a standard deviation of 15. Scores range from 0 to 140. Scores of 89 and below indicated low emotional and social functioning; 90–109 were average; and 110–130 were above average and predictive of strong, well-developed emotional skills and social functioning.[25] The α coefficient was 0.93 in the original study.[24]

The self-reporting Nursing Stress Scale[33] provides scores for seven dimensions and one total score that are indicative of the sources and frequency of OS that nurses experience during daily activities. Responses are in a 4-point format Likert scale (1, "Never"; 4, "Very frequently"). Scores ranged from 0 to 102. High dimension scores (51–102) indicate more frequent exposures to OS than low scores (0–50). The α coefficient was 0.94 in the original study.[24]

The self-reporting Ways of Coping Questionnaire[34,35] has eight dimensions and details the frequency of cognitive and behavioral coping strategies to address stressful encounters in a 4-point format, Likert scale (0, "Not used"; 3, "Used a great deal"). Relative scores[36] used in this

analysis represented the proportion of total coping efforts used on each coping dimension. Higher scores represent greater stress perceived by nurses. Total scores ranged from 0 to 100. The standard deviation for PFC and EFC is based on a percentage of 100, as PFC increases EFC decreases and vice versa. The α coefficient was 0.95 in the original study.[24]

Statistical analysis

Descriptive data for the sample's dimension scales of EI, OS, and coping were tabulated into groups based on their years of nursing experience and included new graduates, nurses with 1–5 years' experience in varied work settings, and nurses with >5 years of nursing experience who may also be advanced practitioners. An analysis of variance (ANOVA) was used for comparisons between the three groups of nurses by years of experience and Tukey honest significant difference *post hoc* testing was conducted to test all pairwise comparisons among means when the ANOVA $P < 0.05$. Data were analyzed using the STATA Statistical Software: Release 13. (2013) (College Station, TX: StataCorp LP).[37]

Results

Demographic characteristics

The final sample [Table 1] was comprised 114 newly hired nurses who met eligibility criteria and completed all three study surveys.

Emotional Intelligence scores

The EI scores [Table 2] for all three groups of newly hired nurses ranged from average (mean = 94.73; standard deviation [SD] = 13.87) to above average (mean = 112.29; SD = 10.18). Overall, new graduate nurses scored significantly lower on the self-expression dimension (mean = 96.88; SD = 13.27) than nurses with >5-year nursing experience (mean = 106.12; SD 15.02) ($P = 0.04$), and the subdimension, assertiveness (mean = 94.73; SD = 13.87) for new graduates, compared to (mean = 103.94; SD = 14.86) nurses with >5-year nursing experience ($P = 0.03$).

Total stress scores

Total stress scores [Table 3] were significantly higher among the new graduates in this study compared to nurses with more nursing experience. New graduate nurses had significantly higher ratings of death and dying as a source of stress (mean = 16.45; SD = 3.37), and there were significant differences between the three groups ($P = 0.001$). New graduates had significantly higher perceptions of workload ($P = 0.012$), uncertainty regarding treatment ($P = 0.012$), and conflict with other nurses ($P = 0.014$) compared to nurses with >5-year experience.

Coping scores

Nurses in all groups used more PFC coping compared to EFC strategies [Table 4]. The self-control EFC coping strategy was endorsed significantly more frequently by nurses with >5-year experience (mean = 15.99; SD = 3.94) compared to nurses with 1–5 years of nursing experience (mean = 13.09; SD = 4.31). New graduate nurses reported using the PFC coping strategy of accepting responsibility (mean = 14.06; SD = 7.28) significantly ($P = 0.006$) more often than nurses with >5 years' experience (mean = 8.54; SD = 4.25) and planful problem-solving (mean = 16.76; SD = 5.27) significantly less often ($P = 0.001$) than nurses with 1–5-year experiences (mean = 20.12; SD = 7.31).

Discussion

This study examined the dimension scores of the EI, OS, and coping measures and present characteristics of three groups of newly hired oncology nurses during the initial employment period. New graduates, nurses with 1–5, and >5 years of nursing experience were found to have average to above-average EI functioning relevant to other nursing studies.[14,22,23] The EI self-expression dimension and subdimension assertiveness scores were significantly lower for new graduates compared to nurses in the other groups and suggested that a nurses' ability to effectively communicate their feelings increased with years of nursing experience. Findings were consistent with

Table 1: Demographics and proportions of newly hired nurses				
Demographics Grouped by years of experience	**(n=114), n (%)**	***n* (%)**		
		Group 1: New graduates (n=60)	**Group 2: 1-5 years' experience (n=37)**	**Group 3: >5 years' experience (n=17)**
Age range				
20-30	78 (68)	44 (73)	30 (81)	4 (24)
31-40	26 (23)	13 (22)	5 (14)	8 (47)
>41	10 (9)	3 (5)	2 (5)	5 (29)
Gender				
Female	108 (95)	57 (95)	34 (92)	17 (100)
Male	5 (4)	2 (3)	3 (8)	0
Undocumented	1 (1)	1 (2)	0	0

Table 2: Emotional intelligence scores by nurse-group					
Emotional Quotient inventory (EQi) 2.0™ [14,15,27] Dimensions and Sub-dimensions	(*n*=114), mean (SD)†			*P* (ANOVA)	*Posthoc* Tukey HSD
	Group 1: New graduate (*n*=60)	Group 2: 1-5 years' experience (*n*=37)	Group 3:>5 years' experience (*n*=17)		
Self-perception	106.98 (11.60)	105.19 (11.94)	109.12 (14.57)	0.532	N/A
Self-regard	101.45 (11.63)	102.78 (11.67)	104.47 (16.57)	0.656	N/A
Emotional self-awareness	107.47 (11.55)	102.59 (13.32)	110.53 (13.74)	0.061	N/A
Self-actualization	109.75 (10.95)	107.43 (10.85)	109.47 (13.36)	0.607	N/A
Self-expression	**96.88 (13.27)**	100.57 (13.24)	**106.12 (15.02)**	**0.042**	**1 versus 3***
Emotional expression	102.88 (13.79)	105.73 (13.98)	109.24 (13.35)	0.218	N/A
Assertiveness	**94.73 (13.87)**	99.62 (13.11)	**103.94 (14.86)**	**0.034**	**1 versus 3***
Independence	93.87 (13.82)	95.08 (14.89)	100.29 (14.70)	0.266	N/A
Interpersonal	110.18 (12.16)	109.14 (12.58)	112.29 (10.18)	0.670	N/A
Interpersonal relationships	106.03 (12.62)	107.00 (11.76)	110.29 (8.67)	0.427	N/A
Empathy	112.25 (11.12)	110.08 (12.06)	110.71 (11.00)	0.644	N/A
Social responsibility	107.53 (12.53)	105.86 (13.08)	110.82 (11.56)	0.407	N/A
Decision making	104.68 (13.33)	102.86 (13.26)	105.59 (16.31)	0.744	N/A
Problem-solving	97.17 (12.64)	98.35 (13.97)	99.00 (18.19)	0.859	N/A
Reality testing	105.88 (14.59)	102.41 (11.56)	107.06 (12.33)	0.361	N/A
Impulse control	108.60 (13.46)	106.24 (14.66)	107.82 (15.56)	0.729	N/A
Stress management	101.53 (12.66)	100.76 (12.58)	103.47 (17.71)	0.790	N/A
Flexibility	99.97 (13.85)	99.46 (14.68)	103.47 (15.16)	0.610	N/A
Stress tolerance	99.27 (11.99)	98.57 (13.07)	102.88 (13.18)	0.484	N/A
Optimism	104.53 (12.81)	103.86 (10.58)	102.24 (18.82)	0.817	N/A
Well-being indicator: happiness	103.77 (12.27)	105.54 (9.53)	103.24 (16.35)	0.731	N/A
EQ total	104.83 (12.53)	104.41 (12.62)	108.47 (15.70)	0.538	N/A

*P<0.05; †Average score (90-110), Higher scores: Greater EI. P was not significant. Bold: Dimensions; Nonbold: Sub-dimensions; N/A=No comparisons; SD: Standard deviation; EI: Emotional intelligence; EQI: Emotional quotient inventory; ANOVA: Analysis of variance; HSD: Honest significant difference

Table 3: Occupational stress scores by nurse-group					
Nursing Stress Scales (NSS)[29] Dimensions	(*n*=114), mean (SD)†			*P** (ANOVA)	*Posthoc* Tukey HSD*
	Group 1: New grad (*n*=60)	Group 2: 1-5 years' experience (*n*=37)	Group 3: >5 years' experience (*n*=17)		
Death and dying	16.45 (3.37)	14.08 (3.48)	13.76 (2.70)	0.001**	1 versus 2*, 1 versus 3*
Workload	11.88 (3.15)	10.54 (3.29)	9.53 (2.70)	0.012*	1 versus 3*
Uncertainty regarding treatment	10.82 (3.13)	9.68 (2.57)	8.65 (2.06)	0.012*	1 versus 3*
Conflict with other nurses	10.68 (3.34)	9.70 (2.63)	8.35 (1.90)	0.014*	1 versus 3*
Conflict with physicians	9.73 (2.94)	8.89 (2.49)	8.29 (1.90)	0.095	N/A
Lack of support	6.17 (2.14)	5.59 (1.89)	5.12 (1.45)	0.111	N/A
Inadequate preparation	4.23 (1.40)	3.78 (1.18)	3.59 (1.12)	0.099	N/A
Total stress score	69.96 (16.15)	62.26 (14.48)	57.29 (11.53)	0.003**	1 versus 2*; 1 versus 3*

*P≤0.05; **P≤0.01; †Higher scores: Greater perception of OS. P was not significant. N/A: No comparisons; NSS: Nursing Stress Scales; ANOVA: Analysis of variance; HSD: Honest significant difference; SD: Standard deviation; OS: Occupational stress

studies comparing EI and years of experiences of nursing groups[5,19,38,39] and consistent with the proposition that EI is a learned behavior and can improve over time.[10,11]

No significant relationships were found between nursing groups for empathy, similar to findings from another nursing study.[28] However, empathy scores were higher, but not significant, for new graduates than for nurses with more experience in this study compared to significant findings in related studies.[23,39] Possible causes for the decrease in empathy in nurses with more years of nursing experiences may be related to age, high levels of stress, skepticism, burnout,[23] nursing workload,[28]

and self-esteem[39] and requires further investigation in oncology nurses.

Previously reported total stress scores were higher in this sample compared to nurses in related studies.[24] However, a patients' death was perceived by all newly hired nursing groups as the greatest source of OS. Although new graduate nurses experienced the greatest stress for a patient's death, they were also stressed by workload, uncertainty about treatment regimens, and conflicts with other nurses.[3,26] Since significant relationships were found between new graduates and nurses with >5 experience, methods for improving working relationships between nurses need to be explored.

Table 4: Coping scores by nurse-group					
Ways of Coping Questionnaire (WAYS) [28,30] **Dimensions**	**(n=114) mean (SD)†**			*P** (ANOVA)	*Posthoc* **Tukey HSD***
	Group 1: New grad (n=60)	**Group 2: 1-5 years' experience (n=37)**	**Group 3: >5 years' experience (n=17)**		
EFC strategies					
Confrontive	7.77 (3.76)	7.31 (4.13)	7.45 (4.34)	0.846	N/A
Distancing	10.13 (5.23)	10.33 (4.59)	9.41 (4.10)	0.808	N/A
Self-control	14.57 (3.95)	13.09 (4.31)	15.99 (3.94)	0.043 *	2 versus 3*
Escape-avoidance	5.81 (4.17)	4.09 (3.66)	5.26 (4.97)	0.142	N/A
PFC strategies					
Seeking social support	18.54 (5.85)	19.78 (6.25)	18.58 (3.81)	0.562	N/A
Accepting responsibility	14.06 (7.28)	10.75 (7.08)	8.54 (4.25)	0.006 **	1 versus 3*
Planful problem solving	16.76 (5.27)	21.29 (6.14)	20.12 (7.31)	0.001 **	1 versus 2*
Positive reappraisal	12.36 (4.99)	13.36 (4.67)	14.65 (6.55)	0.243	N/A
PFC/EFC scores=Percentage of 100; as EFC increases PFC decreases and vice versa					
PFC†	61.71 (9.23)	65.18 (8.78)	61.90 (9.37)	0.174	N/A
EFC†	38.29 (9.23)	34.82 (8.78)	38.10 (9.37)	0.174	N/A

*$P \le 0.05$; **$P \le 0.001$. †Higher scores=Greater use of coping strategy. *P* was not significant. N/A: No comparison; EFC: Emotion-focused coping; PFC: Problem-focused coping; WAYS: Ways of coping questionnaire; SD: Standard deviation; ANOVA: Analysis of variance; HSD: Honest significant difference

Newly hired nurses in all groups employed self-control and distancing when using EFC strategies and used more PFC than EFC strategies to deal with OS. Nurses with 1–5 years of experience using planful problem-solving significantly more than nurses with more nursing experiences and the new graduates applied analytical and problem-focused approaches toward stressful situations. Accepting one's role in a problem and rectifying it was significantly used more by new graduates compared to nurses with >5 years of experience. These differences in coping strategies used by new graduates compared to nurses in the other nursing groups may be attributed to years of nursing experience. Findings of this analysis supported that coping skills may be learned and adapted over time.[30,34]

Building on this study's findings, future research investigating dimension scores of EI, coping, and OS in newly hired oncology nurses could contribute to understanding the magnitude of OS emanating from various cancer facilities, and the EI abilities, skills, and competencies of the nurses and specific coping strategies nurses use to address OS. More importantly, future research could determine whether dimension scores of EI, OS, and coping vary in future cohorts of newly hired oncology nurses and if specific relationships exist between the dimensions that could enhance or negate nursing performance, empathy in nurses, the quality of patient care, and outcomes.[16,17,20,40,41]

Study strengths and limitations

Dimension-level characteristics of newly hired nurses emphasize the strengths and group differences related to EI, OS, and coping in newly hired nursing groups rather than total scores. The sample size was small, is limited to one specialized facility, and may not be generalizable to newly hired nurses in other facilities. All study measures were self-reported which could contribute to nonsignificant findings and reporting bias due to common method variance.[42] However, findings may inform future educational models for improving nurse-recruitment, onboarding practices, stress-reduction interventions, and retention strategies.

Implications for nursing

The dimension scores of EI, OC, and coping of the study's newly hired nurses highlight the differences and similarities of EI abilities, skills, and competencies of each group of nurses by years of experience.[38] Findings also present an insight into the high-level, work-related stress emanating from oncology work settings.[26,28] Nurses in this sample used coping strategies to address OS that were consistent with related studies[6,26] and by various demographic characteristics.[14,15,19] Integrating available EI workshops into the onboarding programs could facilitate strengthening the nurses' use of problem-solving coping strategies to deal with the OS emanating from the oncology workplace. Improving EI and coping skills, which can be taught and improved through mentored learning and training initiatives,[10,11,25] may also be a protective factor for all nurses against burnout[32] and compassion fatigue.[43]

Conclusions

The nurses in this study had an average to above-average EI. New graduate nurses were the most empathetic and had greater control over their negative emotions compared to nurses with more experience and using analytic approaches to resolve OS. Sources of OS were consistent between nursing groups with the greatest stress involving patient death. Nurses in all groups coped with OS by regulating their feelings, accepting their role in a problem. In oncology

nurses, decreased emotional, empathetic, social skills and competencies could negatively impact their ability to provide nursing care and adversely influence the quality of patient care and impact patient outcomes. Studies in the reported literature describing the EI, coping, and OS dimensions are limited and were conducted in nurses outside the United States.[14,19,26,28,39] Although this analysis used data used from a prior study,[24] findings were similar to recent nursing studies.[14,15,19,21-23,26,28,39] The collective findings could be used to inform the development of oncology-focused, supportive EI, and coping interventions to alleviate the ubiquitous OS that exists throughout the nursing workplace and in diverse cancer settings.

Conflicts of interest

There are no conflicts of interest.

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