

Developing Emotional Intelligence Ability in Oncology Nurses: A Clinical Rounds Approach

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Emotional intelligence abilities have been demonstrated to correlate positively with important workplace outcomes in research from fields as disparate as academia, organizational development, psychology, sales, military leadership, and human relations (Mayer, Salovey, & Caruso, 2008). Demonstrated outcomes include reduced burnout and improved staff retention, team performance and communication, safety, and customer satisfaction (Cherniss, Grimm, & Liautaud, 2010; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009). Those findings suggest an entirely new approach to improving nurses' work environments as well as the quality and safety of patient care, which could be particularly important in specialty areas such as clinical oncology where turnover and burnout rates are high (Barnard, Street, & Love, 2006; Medland, Howard-Ruben, & Whitaker, 2004; Pffferling & Gilley, 2000; Potter et al., 2010). A literature review conducted by the authors in fall 2011 revealed no published nursing research investigating the impact of a program to develop the emotional intelligence abilities of nurses. Given the potential significance for workforce, workplace, and patient outcome improvement, this pilot study was undertaken to evaluate the feasibility and impact of a program designed to develop emotional intelligence abilities in oncology nurses.

Literature Review

In the general workforce research literature, measured emotional intelligence scores correlate positively with important workforce or workplace outcomes such as performance, reduced burnout, improved retention, team performance and communication, safety, and customer satisfaction (Abraham, 2005; Côté & Miners, 2006; Martin, 2008; Rosete & Ciarrochi, 2005; Schutte, Malouff, Thornsteinsson, Bhullar, & Rooke, 2006). A developing body of emotional intelligence research in nursing has demonstrated similar findings, although no specific interventions to develop emotional intelligence in nurses have been studied. In nurses, emotional intelligence scores correlate with performance level in nurse leaders and in nurses delivering bedside clinical care.

Purpose/Objectives: To explore the feasibility and impact of an emotional intelligence ability development program on staff and patient care.

Design: A mixed method, pre/post-test design.

Setting: A tertiary care hospital in urban Honolulu, HI. Rounds took place on a 24-bed inpatient oncology unit.

Sample: 33 RNs in an oncology unit.

Methods: After collection of baseline data, the emotional intelligence rounds were conducted in an inpatient oncology nursing unit on all shifts during a 10-month period.

Main Research Variables: Demographic information, emotional intelligence scores, data from rounds, chart reviews of emotional care documentation, and unit-wide satisfaction and safety data.

Findings: The ability to identify emotions in self and others was demonstrated less frequently than expected in this population. The low test response rate prevented comparison of scores pre- and postintervention.

Conclusions: The staff's 94% participation in rounds, the positive (100%) evaluation of rounds, and poststudy improvements in emotional care documentation and emotional care planning suggest a positive effect from the intervention. Additional research is recommended over a longer period of time to evaluate the impact emotional intelligence specifically has on the staff's identification of emotions. Because the intervention involved minimal time and resources, feasibility for continuation of the intervention poststudy was rated "high" by the research team.

Implications for Nursing: Research in other disciplines suggests that improvement in emotional intelligence ability in clinical staff nurses may improve retention, performance, and teamwork in nursing, which would be of particular significance in high-risk clinical practice environments.

Knowledge Translation: Few research studies have explored development of emotional intelligence abilities in clinical staff nurses. Evidence from this study suggests that interventions in the clinical environment may be used to develop emotional intelligence ability. Impact from such development may be used in the future to not only improve the quality of nursing care, but also potentially limit the negative effects of high-stress environments on nurses.

Higher emotional intelligence scores correlate with lower levels of perceived stress, positive stress adaptation, less burnout, and positive conflict styles (Augusto Landa,

Lopez-Zafra, Berrios Martos, & Aguilar-Luzón, 2008; Birks, McKendree, & Watt, 2009; Budnik, 2003; Lando, 2007; Montes-Berges & Augusto, 2007; Morrison, 2008; Por, Barriball, Fitzpatrick & Roberts, 2011; Tjiong, 2000). In nurses, emotional intelligence scores also correlate with parameters of physical and emotional wellness, longer career length, anticipated retention in current jobs, and adaptive responses to organizational change (Augusto Landa et al., 2008; Budnik, 2003; Codier, Kamikawa, Kooker, & Shoultz, 2009; Codier, Kooker, & Shoultz, 2008; Codier, Muneno, & Freitas, 2011; Cummings, Hayduk, & Estabrooks, 2005; Farmer, 2004; Gertis, Derksen, & Verbruggen, 2004; Humpel, Caputi, & Martin, 2001; Lando, 2007; Montes-Berges & Augusto, 2007; Shanta, 2007; Vitello-Ciccio, 2002; Young-Ritchie, Laschinger, & Wong, 2009).

Emotional intelligence has been identified as a significant concept for nursing practice (Bulmer Smith, Profetto-McGrath, & Cummings, 2009; Codier, Muneno, Franey, & Matsuura, 2010; Kooker, Shoultz, & Codier, 2007). In addition, evidence shows that measured emotional intelligence ability correlates significantly with measures of professionalism and self-compassion in nurses as well as patients' perception of nurse caring (Codier et al., 2011; Heffernan, Quinn Griffin, McNulty, & Fitzpatrick, 2010; Rego, Godinho, McQueen, & Cunha, 2010). Programs designed to develop emotional intelligence abilities in general workforce employees have demonstrated evidence of improved emotional intelligence scores, workforce and workplace outcomes, safety, and customer satisfaction. Such programs have been of particular significance in employees at risk for early burnout, those in high-intensity environments, and when the costs of recruitment, retention, and orientation are high (Grant, 2007; McEnrue, Groves, & Shen, 2010; Nelis et al., 2009).

Most of the existing research on programs to develop individual emotional intelligence has been conducted within the context of leadership and organizational development. Programs have focused on individuals and teams. Interventions designed to develop emotional intelligence ability have included skill building, expressive writing, and coaching (Cherniss et al., 2010; Clarke, 2010; Kirk, Schutte, & Hine, 2011; Kotsou, Nelis, Grégoire, & Mikolajczak, 2011; Kruml & Yockey, 2011; McEnrue, Groves, & Shen, 2009; Muya & Kacirek, 2009). Evidence shows that face-to-face and online programs are of equal efficacy, and retesting as much as one year later demonstrated retention of emotional intelligence (Kruml & Yockey, 2011).

The purpose of this descriptive, exploratory pilot study was to evaluate the feasibility and impact of an emotional intelligence development program (EI Check-In Rounds) on inpatient oncology nurses. Research questions (RQs) included the following.

- Do the emotional intelligence abilities of nurses change after a 10-month period of EI Check-In Rounds?
- What are the strengths and weaknesses in the nurses' demonstrated emotional intelligence?
- Does nurse documentation of patients' emotional issues and planning for emotional care change after participation in EI Check-In Rounds?
- Does nurse satisfaction change across the study period?
- Do nurse turnover and nurse sick leave data for the unit differ significantly after the study period?

Theoretical Framework

As a concept, emotional intelligence evolved from decades of intelligence research and investigation into the relationship between thinking, feeling, and performance (Akerjordet & Severinsson, 2007). Since 2000, three major models of emotional intelligence have emerged: the ability model, the personality model, and the mixed model (Mayer, Salovey, & Caruso, 2004). The models differ in their definition of emotional intelligence, the disciplines from which they emerged, and the measurement instruments used (see Table 1).

For the purpose of this study, the ability model of emotional intelligence was used. In research outside nursing, its validity has been demonstrated across a wide range of organizational, educational, and workforce research (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). In nursing, it has been used in more than a dozen descriptive studies of emotional intelligence (Bulmer-Smith, Profetto-McGrath, & Cummings, 2009). The ability model defines emotional intelligence as a

Table 1. Comparison of Emotional Intelligence (EI) Models

Variable	Personality Model	Ability Model	Mixed Model
Definition	EI is a function of personality.	EI is an ability.	EI is both ability and a function of personality.
Context of origin	Community health	Cognitive psychology	Organizational development
Instrumentation	Emotional Quotient Inventory	Mayer-Salovey-Caruso EI Test	Emotional Competence Inventory
Limitations	Face and discriminant validity issues related to overlap with personality tests	Rigorous face and validity testing documented	Face and discriminant validity issues related to overlap with personality tests

Note. Based on information from Mayer et al., 2004.

set of abilities. Using emotional intelligence abilities, a person reasons about emotions and also uses emotions to facilitate reasoning. The operational definition for emotional intelligence used in the ability model includes four specific abilities (i.e., the four-branch model): (a) accurate identification of emotions, (b) use of emotions to reason, (c) understanding emotions, and (d) emotional self-management (Mayer et al., 2004).

Methods

Design

This pilot study used a mixed method, pre/post-test design. The intervention planned for the inpatient oncology unit was called EI Check-In Rounds. Two study research team members were selected to lead rounds during a 10-month period.

Setting and Sample

The study took place at a tertiary care hospital in urban Honolulu, HI. Rounds took place on a 24-bed inpatient oncology unit staffed by 33 RNs. The study research team included two members of the pain and palliative care department, one staff member from the oncology unit, and a research mentor from the University of Hawai'i-Manoa. The patient population included individuals with new cancer diagnoses, patients receiving active therapy and symptom management, and those receiving palliative or hospice care.

The target participants for this study were the 33 RNs working on the oncology unit; although only 10 provided demographic information through the pre-test, all were permitted to participate in rounds (see Table 2). A volunteer convenience sampling approach was planned. Target participants included experienced nurses and new graduates with a wide range of ages and educational backgrounds. Typical of urban Honolulu, a broad range of cultures and ethnicities were represented in the nursing staff. Nurses working full- or part-time in either a staff or charge nurse role were invited to participate. Float and traveler RNs, licensed practical nurses, nursing students, and nursing assistants were excluded from the study. The nurse manager was actively supportive of both the study and staff participation but, as the focus of the study was clinical staff nurses, she was not involved in the study as a participant.

Data Collection

Data collection included (a) electronically collected demographic and career information; (b) emotional intelligence scores as measured by MSCEIT scores collected on a Web-based psychological testing site; (c) qualitative participant response data collected during

Table 2. Demographic Characteristics (N = 10)

Characteristic	\bar{X}	Range
Age (years)	37	24–55
Years in nursing	9.5	1–34
Years in present job	7	< 1–25
Characteristic	n	
Bachelor's degree	10	
Ethnicity		
Caucasian	3	
Asian	4	
Not specified	3	
Full-time work	10	
Job title		
Staff nurse	9	
Charge nurse	1	

EI Check-In Rounds, including participants' rating of mood and energy prior to rounds, and post-rounds report of rounds efficacy; (d) emotional care data compiled through chart reviews before and after the study intervention period; and (e) nurse satisfaction, nurse retention, and patient safety and satisfaction data from annually collected hospital-wide data sources.

The Mayer-Salovey-Caruso Emotional Intelligence Test, version 2 (MSCEIT v.2), is an internationally recognized instrument for the measurement of emotional intelligence that has been in use across dozens of professions and in numerous nursing studies involving nurses, nurse leaders, and patient populations (Mayer et al., 2004). The MSCEIT v.2 measures emotional intelligence through the performance of emotional tasks and has rigorously demonstrated validity and reliability. The split half reliability for the total emotional intelligence score is 0.94. The reliability scores range from 0.65–0.78 for the subscores. Test-retest reliability for the MSCEIT is reported at $r = 0.86$ ($p < 0.001$). Factor analysis has confirmed the general validity of the four-branch model and the evidence for discriminant validity is good (Brackett & Mayer, 2003; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Mayer et al., 2004; Palmer, Gignac, Manocha, & Stough, 2005).

The MSCEIT v.2 reports a total emotional intelligence score and six subscores: identification of emotions, use of emotions to facilitate reasoning, understanding emotions, managing emotions, experiential emotional intelligence, and strategic emotional intelligence. The last two subscores are aggregate scores that reflect combinations of two subscores. The score for experiential emotional intelligence combines the scores for identification of emotions and use of emotions to facilitate reasoning. The score for strategic emotional intelligence similarly combines the scores for understanding emotions and managing emotions. The MSCEIT scores

range from 0–200 and descriptive ranges are as follow: less than 89 (below average), 90–109 (average), and 110 or greater (above average).

In the quantitative evaluation that proceeded each rounds session, participants were asked to rate their emotional state using a two-axis graph on which they self-reported their energy and mood; this tool has not been validated. To measure changes in nurse satisfaction, data from the nurse satisfaction survey used yearly by the facility were used. Survey categories included work assignments, nurse-nurse interaction, nurse-physician interaction, decision making, autonomy, professional status, pay, job enjoyment, professional development, nursing management support, nursing administration, and perceived quality of care.

To measure changes in the identification and nursing care management of emotions, chart reviews were done before and after the study intervention period. During each survey, a convenience sample of 25 charts were randomly selected and reviewed to identify how frequently patient emotions and care planning for emotional problems were documented.

During the EI Check-In Rounds, nurses were asked three questions: (a) “What is going on emotionally with your patients today?” (b) “What is going on emotionally with you today?” and (c) “How do you deal with difficult emotions related to work?” Rounds leaders noted participants’ responses and, at the close of the study, performed frequency distributions and qualitative analysis of the data for themes.

Procedures

Staff members who responded to the study invitation were directed to a URL link to access the study Web site. The study site offered prospective participants detailed information about the study, electronic informed consent forms, demographic and career information surveys, and a URL link to the MSCEIT v.2 on a secure, internationally recognized psychological testing site.

Study data were analyzed using descriptive and inferential statistical methods with SPSS®, version 16. Univariate analysis (i.e., frequencies, central tendency, and standard deviation) was planned to evaluate the RQs. Demographic and career information was analyzed with emotional intelligence scores and subscores using bivariate analyses (i.e., chi-square, Spearman’s rho, zero-order correlations, analysis of variance [ANOVA]) and, when appropriate, multivariate ANOVA. For comparison of group responses, two proportion Z tests were used. Qualitative data were analyzed using Q-sorts, frequency distributions, and inductive analysis of themes.

Intervention

The EI Check-In Rounds took place for 10 months on all shifts and at random intervals, based on availability of

the rounds leaders and the nursing staff. Two members of the study research team, both members of the pain and palliative care department, served as leaders for each rounds session. The leaders met individually with nurses working on the oncology unit. Before rounds, nurses were asked to rate their own emotional state on a “mood versus energy” graph. The rounds leader then asked nurse participants to identify emotions they and their patients were experiencing that day. Nurses also were asked how they coped with difficult emotions related to work, and brief discussion ensued. At the end of rounds, nurses were asked to rate the efficacy of the rounds experience. The rounds co-leader recorded all quantitative and qualitative data gathered during rounds. At the close of rounds, the co-leaders reviewed the data, checking for clarity and accuracy. Rounding sessions with each nurse were limited to five minutes. An exemplar sample of EI Check-In Rounds is included in Figure 1.

The study investigators completed human subjects training as required by the study facility. The study received approval from institutional review boards of the University of Hawai’i-Manoa (co-sponsor of the study) and the hospital facility. Each participant was identified for study purposes using a self-selected study code. No personal identifiers were collected during the course of the study.

Findings

Rounds were conducted 69 times on the oncology unit during the study period of September 2009 to September 2011. Rounds were done on day, evening, and night shifts. A total of 31 (94%) of the nurses on the unit who met inclusion criteria participated in the study. Multiple participation in rounds by some staff resulted in 69 total nurse participation sessions. An average of two to three nurses at a time took part in rounds (range = 1–5). A total of 134 patients were discussed during rounds. Not all participants provided demographic information at the study outset, but of those who did, demographic characteristics varied widely. Participants reported that they anticipated staying in their current nursing job for an average of 17.8 years (range = 3–36 years). They reported anticipating total career lengths of 8–44 years ($\bar{X} = 26.2$).

Results are reported as follows according to the RQs for the study.

Research question 1: *Do the emotional intelligence abilities of nurses change after a 10-month period of EI Check-In Rounds?* Pre- and post-emotional intelligence testing was performed, but participation in post-testing was too low to permit statistically adequate comparison groups.

Research question 2: *What are the strengths and weaknesses in the nurses’ demonstrated emotional intelligence?* Data on nurses’ ability to identify their emotions was gathered using mixed methodology.

Time goal: Five minutes maximum

Setting: El Check-In Team “huddles up” with a nurse in a private area of the unit.

Team Leader (TL): So, what is going on emotionally with your patients today?

RN: Mrs. J. has a new cancer diagnosis. The medical care team is suggesting aggressive chemo[therapy]. The family is still pretty much in denial, asking everyone who comes in the room, “How’s she doing,” and hoping for the answer they want to hear. James, you know him, been here forever, pretty much same old, same old. He’s just not getting any better. Everybody is still hopeful but it is just getting harder and harder every day to not see him get better. No one’s talking about the plan. Mr. B. is not doing well. We’ve refocused on comfort and stopped chemo[therapy]. Mrs. S. has finished her chemo[therapy] and is planning for discharge tomorrow. She’s fine but her kids haven’t seen her for two weeks.

TL: So who, would you say, is the most emotionally challenging?

RN: They are all bad.

TL: Been a tough week?

RN: Yes!

TL: You say the plan is shifting for Mr. B., but what’s going on emotionally?

RN: Well, you know how it goes. The care plan has shifted but he hasn’t made the shift; I think he is still fighting.

TL: And the team?

RN: Well, he’s been here forever . . . us, too, I guess.

TL: Sounds like the patient and the team are in transition emotionally. How’s that going?

RN: Well, we have been rotating the nurses with him because he has been so angry. It is hard to take.

TL: How’s that going? Is it supporting him?

RN: Well, it doesn’t seem very satisfying to be with him one day and not the next. It is really sad, but it’s going to be sad when he dies because he hasn’t seen his grandson yet. He doesn’t want to tell him to come home early from school. So, maybe his anger is really not about us nurses. Maybe he’s angry about that. I’m going to ask him about that.

TL: Sounds good, thanks.

(Rounds go on to the next nurse.)

Figure 1. Emotional Intelligence Check-In Rounds: An Exemplar

Emotional Intelligence Scores

About 30% of the participants in the study completed prestudy emotional intelligence testing (MSCEIT v.2) (see Table 3). More nurses demonstrated identifying emotions as their highest score than any other emotional intelligence ability. None of the participants had managing emotions as their highest score. No emotional intelligence scores or subscores correlated with demographic or career information data.

Energy and Mood

The greatest percentage of nurses (34 reports or 49% of all rounds participants’ reports) indicated that they

were experiencing high mood and high energy. A lower percentage (17 or 25%) reported low energy and low mood. The remaining 25% (17) of participants reported unequal levels of mood and energy.

Qualitative Findings

For the qualitative exploration of the nurses’ ability to identify emotions in themselves and their patients (corresponding to RQ 2), participants were asked, “What is going on emotionally with your patients today?” and “What is going on with you emotionally today?” The 69 participant reports contained a total of 267 responses to both questions. Three researchers categorized each participant response into one of six categories, derived from a thematic analysis of the responses. For 53% (n = 142) of the participant responses, the three researchers were in 100% agreement on the participant response category. For 36% (n = 96) of the participant responses, two of the three researchers agreed. The raters only disagreed on 11% (n = 29) of the responses. The six thematic response categories were as follows.

Judgmental or evaluative: The questions “What are you feeling?” and “What are your patients feeling?” were sometimes answered with simple statements or judgments, including, “OK,” “fine,” “good,” and “bad.” Of all the participant responses, the largest number (38%) responded with a judgment or evaluation.

Emotional: Thirty-two percent of responses to the questions, “What are you feeling?” and “What are your patients feeling?” reflected actual emotions. The most common response was “sad” (20 responses), followed by “anxious” (11), “frustrated” (10), “angry” (7), and “depressed” (7).

Admission status: Some participants responded with statements referring to admission status, such as “going home tomorrow” and “long length of stay.” Twelve percent of responses were represented by this category.

Physical: The most common responses in this category were “tired,” “sleepless,” “in pain,” and “poor pain control.” Eleven percent of responses were represented by this category.

Behavioral: In some cases, descriptions of behavior, such as “restless,” “hypervocal,” and “busy,” were reported. Six percent of responses were represented by this category.

Diagnostic: Participants also responded with medical or psychiatric patient diagnoses such as “obsessive compulsive disorder” and “bipolar.” One percent of responses were represented by this category.

A comparison of responses to the questions, “What are you (the nurse) feeling?” and “What is the patient feeling?” revealed no statistical difference between the nurses’ ability to identify emotions in themselves and their ability to identify emotions in their patients. (p = 0.46). Nurses did, however, somaticize (i.e., describe emotions

Table 3. Emotional Intelligence Scores

Category	\bar{X}	Range
Total	99	79–107
Experiential emotional intelligence	100	85–121
Strategic emotional intelligence	100	79–106
Identifying emotions	101	85–129
Using emotions to reason	100	86–116
Understanding emotions	100	70–113
Managing emotions	99	91–106

Note. Total scores range from 0–200: < 89 (below average), 90–109 (average), and ≥ 110 (above average).

as physical assessment findings) less frequently in self-reports than when describing their patients' emotions ($p = 0.01$). Responses that constituted judgments (e.g., "good," "bad," "OK") were no more frequent in the nurses' reports of their own emotions than when they described patient emotions ($p = 0.45$). The incidence of identifying an emotion by description of behavior was greater when nurses were describing patient emotions than their own emotions. That occurred at a level approaching significance ($p = 0.07$). An interesting but not statistically significant number of nurses who were unable to identify their own emotions also were not able to identify emotions in their patients, which may suggest a relationship between nurses' emotional self-care ability and the ability to care for patients emotionally, an idea that deserves additional study. Comparisons of these findings are summarized in Table 4.

Managing Emotions

A total of 135 responses were given to the question, "What do you do to deal with your emotions?" Frequency distributions and qualitative analyses were conducted to thematically group the responses. The most frequently occurring responses were "vent," "ask for help," "avoid my feelings," "talk," and "focus on tasks." Four themes emerged: (a) management of emotions through relationships ($n = 19$, or 14% of the responses), (b) management of emotions through physical outlets ($n = 9$, or 13%), (c) management of emotions through tasks and activities ($n = 26$, or 19%), and (d) use of emotional self-management strategies ($n = 77$, or 57%).

Responses in the "self-management" category were further divided into subcategories: (a) positive management ("reprioritize," "reframe," "reorganize"), (b) denial or avoidance ("don't think about it," "self-care doesn't work," "avoid feeling"), and (c) inadequate or unsuccessful self-management ("I break down every few months," "tired," "happy front," "feel drained"). The majority

($n = 62$, 81%) of the self-management responses reflected positive self-management behaviors.

Research question 3: *Does nurse documentation of patients' emotional issues and planning for emotional care change after participation in EI Check-In Rounds?* In the prestudy chart review of 25 patient records, no nursing documentation existed related to patient emotions or emotional care planning. The poststudy documentation survey reflected a significant increase in both charting related to emotions and care planning for identified emotional problems ($p = 0.003$).

Research question 4: *Does nurse satisfaction change across the study period?* This question was measured in two ways. Nurse satisfaction surveys done hospital-wide before and after the study period showed no significant difference in nurse satisfaction between the pre- and poststudy periods. At the end of the intervention rounds, however, participants were asked to anonymously rate the efficacy of the rounds. On a Likert-type scale ranging from 1 (not at all helpful) to 5 (very helpful), 100% of the participants reported that the rounds experience was helpful to some degree. Seventeen (25%) of the participants reported that rounds were "a little helpful," 35 (50%) reported that rounds were "more than a little helpful," and 17 (25%) reported that rounds were "very helpful."

Research questions 5–6: *Do nurse turnover and nurse sick leave data for the unit differ significantly after the study period? Does patient satisfaction data collected before and after the study reflect any changes?* No significant difference existed in any of these variables between the pre- and poststudy periods.

Conclusions

Because of a low response rate in post-testing, pre- and poststudy emotional intelligence scores could not be compared. Positive effects of the intervention were, however, reflected in the staff's 94% participation in

Table 4. Comparison of Nurses' Identification of Their Own Emotions Versus Their Patients

Response Category	What is going on emotionally with you today?		What is going on emotionally with your patients today?		p
	n	%	n	%	
Emotions	109	40	91	34	0.46
Physical assessment findings	80	3	37	14	0.01*
Behaviors	3	1	19	7	0.07**
Judgments	83	37	83	31	0.46

* $p < 0.05$

** Approaching significance

rounds, positive (100%) evaluation of the impact of rounds, and improvement in emotional care documentation and planning. Because the intervention appeared to have a positive effect and involved minimal time and resources, feasibility of continued use of the intervention was rated by the research team as high.

Findings from the qualitative analysis demonstrated the nurses' identification of emotions in self and others were limited, but the MSCEIT v.2 scores demonstrated that the nurses' identifying emotions scores fell in the average range, the highest of all the nurses' emotional intelligence ability scores. In a similar apparent dichotomy, a large percentage of the participants reported positive emotional self-management strategies, but none of the pretest participants had managing emotions as their highest emotional intelligence ability score. These anomalies may suggest that the best method for identifying emotional abilities in nurses requires additional study. The rounds team leaders theorized that one explanation for the dichotomy between the qualitative and quantitative study data was that the oncology unit nurses had developed a coping strategy to deal with the characteristic emotional stress of the unit by avoiding identification of emotions despite their ability to do so. The ability to identify emotions, they theorized, was present in the nursing staff, but the habit of using the ability was not. However, the researchers do not feel sufficient data exist to make any definite conclusions.

Implications for Nursing

The current study may contribute to the existing body of descriptive research on emotional intelligence in nurses by presenting research about an intervention designed to develop emotional intelligence ability. Evidence from this study suggests that interventions in the

clinical setting that are designed to improve emotional intelligence should be explored further. Limitations of the study include demographic and setting characteristics specific to Hawaii. The quantitative data from this mixed method study, because of low participation in the pre- and post-emotional intelligence testing, preclude any significant findings. Generalizability of study findings are further limited because of the use of self-reported qualitative data. Anonymity was maintained during emotional intelligence testing and all study data was deidentified; however, participation in rounds was public and, therefore, not anonymous.

Suggestions for future research include replication of the study in a larger sample with pre- and postintervention emotional intelligence measurements, and additional exploration of different methods for identification of emotional abilities in nurses. Exploration of the relationship between emotional self-care ability in nurses and emotional patient care ability also is suggested. Various methods of developing emotional intelligence should be explored. No individual characteristic variables were available to correlate these individuals with preferred methods of emotional intelligence development. It may be that individual coaching while not on duty, content- or process-driven presentations, or team development may be superior interventions for some nurses.

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References

- Abraham, R. (2005). Emotional intelligence in the workplace: A review and synthesis. In R. Schultze & R.D. Roberts (Eds.), *Emotional intelligence: An international handbook* (p. 255). Cambridge, MA: Hogrefe and Huber.
- Akerjordet, K., & Severinsson, E. (2007). Emotional intelligence: A review of the literature with specific focus on empirical and epistemological perspectives. *Journal of Clinical Nursing, 16*, 1405-1416. doi:10.1111/j.1365-2702.2006.01749.x
- Augusto Landa, J.M., López-Zafra, E., Berrios Martos, M.P., & Aguilar-Luzón, C. (2008). The relationship between emotional intelligence, occupational stress and health in nurses: A questionnaire survey. *International Journal of Nursing Studies, 45*, 888-901. doi:10.1016/j.ijnurstu.2007.03.005
- Barnard, D., Street, A., & Love, A.W. (2006). Relationships between stressors, work supports and burnout among cancer nurses. *Cancer Nursing, 29*, 338-345.
- Birks, Y., McKendree, J., & Watt, I. (2009). Emotional Intelligence and perceived stress in healthcare students: a multiinstitutional, multi-professional survey. *BMC Medical Education, 9*(61), 1-8.
- Brackett, M.A., & Mayer, J.D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin, 29*, 1147-1158.
- Brackett, M.A., Rivers, S.E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology, 91*, 780-795.
- Budnik, M.F. (2003). Emotional intelligence and burnout: Influence on the intent of staff nurses to leave nursing. *Dissertation Abstracts International, 64*(09), 4281B (UMI No. 3106490).
- Bulmer Smith, K., Profetto-McGrath, J., & Cummings, G.G. (2009). Emotional Intelligence and nursing: An integrative literature review. *International Journal of Nursing Studies, 46*, 1625-1635. doi:10.1016/j.ijnurstu.2009.05.024
- Cherniss, C., Grimm, L.G., & Liautaud, J.P. (2010). Process-designed training: A new approach for helping leaders develop emotional and social competence. *Journal of Management Development, 29*, 413-431. doi:10.1108/02621711011039196
- Clarke, N. (2010). Developing emotional intelligence abilities through team-based learning. *Human Resource Development Quarterly, 21*(2), 119-138. doi:10.1002/hrdq.20036

- Codier, E., Kamikawa, C., Kooker, B.M., & Shoultz, J. (2009). Emotional intelligence, performance, and retention in clinical staff nurses. *Nursing Administration Quarterly*, 33, 310–316. doi:10.1097/NAQ.0b013e3181b9dd5d
- Codier, E., Kooker, B.M., & Shoultz, J. (2008). Measuring the emotional intelligence of clinical staff nurses: An approach for improving the clinical care environment. *Nursing Administration Quarterly*, 32, 8–14. doi:10.1097/01.NAQ.0000305942.38816.3b
- Codier, E., Muneno, L., Franey, K., & Matsuura, F. (2010). Is emotional intelligence an important concept for nursing practice? *Journal of Psychiatric and Mental Health Nursing*, 17, 940–948. doi:10.1111/j.1365-2850.2010.01610.x
- Codier, E., Muneno, L., & Freitas, E. (2011). Emotional intelligence abilities in oncology and palliative care. *Journal of Hospice and Palliative Care Nursing*, 13(3), 183–188. doi:10.1097/NJH.0b013e31820ce14b
- Côté, S., & Miners, C.T.H. (2006). Emotional intelligence, cognitive intelligence, and job performance. *Administrative Science Quarterly*, 51(1), 1–28.
- Cummings, G., Hayduk, L., & Estabrooks, C. (2005). Mitigating the impact of hospital restructuring on nurses: The responsibility of emotionally intelligent leadership. *Nursing Research*, 54(1), 2–12.
- Farmer, S. (2004). The relationship of emotional intelligence to burnout and job satisfaction among nurses in early nursing practice. *Dissertation Abstracts International*, 65(08), 3945B (UMI No. 3141849).
- Gertis, L., Derksen, J.J., & Verbruggen, A.B. (2004). Emotional intelligence and adaptive success of nurses caring for people with mental retardation and severe behavior problems. *Mental Retardation*, 42(2), 106–121. doi:10.1352/00476765(2004)42<106:EIAASO>2.0.CO;2
- Grant, A.M. (2007). Enhancing coaching skills and emotional intelligence through training. *Industrial and Commercial Training*, 39, 257–266.
- Heffernan, M., Quinn Griffin, M.T., McNulty, S.R., & Fitzpatrick, J.J. (2010). Self-compassion and emotional intelligence in nurses. *International Journal of Nursing Practice*, 16, 366–373. doi:10.1111/j.1440-172X.2010.01853.x
- Humpel, N., Caputi, P., & Martin, C. (2001). The relationship between emotions and stress among mental health nurses. *Australian and New Zealand Journal of Mental Health Nursing*, 10(1), 55–60.
- Kirk, B.A., Schutte, N.S., & Hine, D.W. (2011). The effect of an expressive-writing intervention for employees on emotional self-efficacy, emotional intelligence, affect, and workplace incivility. *Journal of Applied Social Psychology*, 41(1), 179–195.
- Kooker, B.M., Shoultz, J., & Codier, E.E. (2007). Identifying emotional intelligence in professional nursing practice. *Journal of Professional Nursing*, 23(1), 30–36. doi:10.1016/j.profnurs.2006.12.004
- Kotsou, I., Nelis, D., Grégoire, J., & Mikolajczak, M. (2011). Emotional plasticity: Conditions and effects of improving emotional competence in adulthood. *Journal of Applied Psychology*, 96, 827–839.
- Kruml, S.M., & Yockey, M.D. (2011). Developing the emotionally intelligent leader: Instructional issues. *Journal of Leadership and Organizational Studies*, 18, 207–215. doi:10.1177/1548051810372220
- Lando, J. (2007). The relationship between emotional intelligence, occupational stress and health in nurses. *International Journal of Nursing Studies*, 45, 888–901.
- Martin, C.M. (2008). *A meta-analytic investigation of the relationship between emotional intelligence and leadership effectiveness*. Retrieved from ProQuest Dissertations and Theses (AAT 3303343).
- Mayer, J.D., Salovey, P., & Caruso, D.R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15, 197–215. doi:10.1207/s15327965pli1503_02
- Mayer, J.D., Salovey, P., & Caruso, D.R. (2008). Emotional intelligence: New ability or eclectic traits? *American Psychologist*, 63, 503–517.
- McEnrue, M.P., Groves, K.S., & Shen, W. (2009). Emotional intelligence development: Leveraging individual characteristics. *Journal of Management Development*, 28, 150–174. doi:10.1108/02621710910932106
- McEnrue, M.P., Groves L.S., & Shen, W. (2010). Emotional intelligence training: Evidence regarding its efficacy for developing leaders. *Kravis Leadership Institute, Leadership Review*, 10, 3–26.
- Medland, J., Howard-Ruben, J., & Whitaker, E. (2004). Fostering psychosocial wellness in oncology nurses: Addressing burnout and social support in the workplace. *Oncology Nursing Forum*, 31, 47–54.
- Montes-Berges, B., & Augusto, J.M. (2007). Exploring the relationship between perceived emotional intelligence, coping, social support and mental health in nursing students. *Journal of Psychiatric and Mental Health Nursing*, 14, 163–171. doi:10.1111/j.13652850.2007.01059.x
- Morrison, J. (2008). The relationship between emotional intelligence competencies and preferred conflict handling styles. *Journal of Nursing Management*, 16, 974–983
- Muyia, H.M., & Kacirek, K. (2009). An empirical study of a leadership development training program and its impact on emotional intelligence quotient (EQ) scores. *Advances in Developing Human Resources*, 11, 703–718. doi:10.1177/1523422309360844
- Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences*, 47, 36–41. doi:10.1016/j.paid.2009.01.046
- Palmer, B.R., Gignac, G., Manocha, R., & Stough, C. (2005). A psychometric evaluation of the Mayer-Salovey-Caruso Emotional Intelligence Test version 2.0. *Intelligence*, 33, 285–305. doi:10.1016/j.paid.2009.01.046
- Pfifferling, J.H., & Gilley, K. (2000). Overcoming compassion fatigue. *Family Practice Management*, 7(4), 39–44.
- Por, J., Barriball, L., Fitzpatrick, J., & Roberts, J. (2011). Emotional intelligence: Its relationship to stress, coping, well-being and professional performance in nursing students. *Nurse Education Today*, 31, 855–860. doi:10.1016/j.nedt.2010.12.023
- Potter, P., Deshields, T., Divanbeigi, J., Berger, J., Cipriano, D., Norris, L., & Olsen, S. (2010). Compassion fatigue and burnout: Prevalence among oncology nurses. *Clinical Journal of Oncology Nursing*, 14, E56–E62.
- Rego, A., Godinho, L., McQueen, A., & Cunha, M.P. (2010). Emotional intelligence and caring behaviour in nursing. *Service Industries Journal*, 30, 1419–1437. doi:10.1080/02642060802621486
- Rosete, D., & Ciarrochi, J.V. (2005). Emotional intelligence and its relationship to workplace performance outcomes of leadership effectiveness. *Leadership and Organization Development Journal*, 26, 388–399. doi:10.1108/01437730510607871
- Schutte, N.S., Malouff, J.M., Thorsteinsson, E.B., Bhullar, N., & Rooke, S.E. (2006). A meta-analytic investigation of the relationship between emotional intelligence and health. *Personality and Individual Differences*, 42, 921–933. doi:10.1016/j.paid.2006.09.003
- Shanta, L.L. (2007). *A quasi-experimental study of the impact of nursing education on the development of EU above the level acquired through education*. Retrieved from Proquest Dissertations and Theses. (UMI No. 3257552)
- Tjong, L. (2000). *The relationship between emotional intelligence, hardness and job stress among registered nurses* (Unpublished doctoral dissertation). University of Sarasota, Florida.
- Vitello-Ciccio, J.M. (2002). Exploring emotional intelligence: Implications for nursing leaders. *Journal of Nursing Administration*, 32, 203–210.
- Young-Ritchie, C., Laschinger, H.K.S., & Wong, C. (2009). The effects of emotionally intelligent leadership behaviour on emergency staff nurses' workplace empowerment and organization commitment. *Nursing Leadership*, 22, 70–85.