Improving Nursing Practice through Emotional Intelligence (EI): Desired Attributes of EI in Nurse Leaders as Identified by Clinical Nurses

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Abstract

An emerging body of literature supports the importance of effective leadership to navigate ever-changing complex healthcare environments. Not all nursing leaders possess necessary elements of emotional intelligence (EI) which is foundational to supporting nurses directly impacting patient care. Although numerous studies connect high levels of EI with successful leaders outside healthcare, few studies have been conducted within nursing practice.

A project was undertaken to determine which attributes (also referred to as facets) of EI are most desired by clinical nurses in charge nurses and nurse managers. The purpose of the study is to improve charge nurse and nurse manager EI through identification of specific competencies that need development. Four hundred and eleven registered nurses were recruited from acute and critical care units, labor and delivery, and pediatric nursing units at a large academic medical center in the Pacific Northwest of the United States. A descriptive study approach used two cross-sectional surveys to collect data. Clinical nurses ranked most desired EI traits in nurse leaders and these survey results were compared to EI assessments of charge nurses and nurse managers. Results of one-way ANOVA showed significant differences in specific EI traits when compared to a variety of demographics. The findings in the study were unexpected as the highest levels of EI traits in nurse leaders differed considerably from the EI attributes most strongly preferred by clinical nurses. The outcomes of the study indicate a need for further development of nurse leader EI in the specific areas of adaptability, assertiveness, stress management, and empathy. Additional research is needed to determine most effective methods for developing specific EI attributes.

Keywords: emotional intelligence, leader effectiveness, adaptive leadership, emotional intelligence development, nurse leaders, leadership development, nurse managers, charge nurses

Introduction

In the challenging environments of complex healthcare systems, not all nurse leaders cultivate the skills required to support strong patient outcomes. According to the Institute of Medicine's (IOM) *Future of Nursing: Leading Change, Advancing Health* (2011), nurses need leadership skills to influence patient safety and quality care. Fennimore and Wolf (2011) claim many leaders in the nursing profession are not well prepared to meet the challenges of leading in a complex adaptive system. Nurse leaders must be engaged, flexible, and demonstrate collaborative approaches to problem-solving. Successful leadership is essential as it impacts the nurse's role in managing within the complex nature of acute settings, ultimately influencing the quality and safety of patient care.

Description of the Problem

Strong nursing leadership is a critical element of the complex adaptive systems within Oregon Health and Science University (OHSU) inpatient hospital setting. Following a review of four research studies, Bharwaney, Reuven, and MacKinlay (2011) concluded intelligence quotient (IQ) is required for effective leadership, yet emotional intelligence (EI) is more essential. Consequently, it is necessary to identify desired characteristics of OHSU nurse leaders and to assess current levels of nurse leader EI so that strategies can be planned to support EI development in the future.

Readiness for change. In 2017, OHSU received the renewal of Magnet® designation from the American Nurses Credentialing Center (ANCC). The Magnet Recognition Program® has recognized organizations for quality patient care, nursing excellence and innovations in professional nursing practice since 1994 (ANCC, n.d.). The readiness for change at OHSU is strong as Magnet surveyors reported disappointing results related to trust, respect, and relationship management within nursing. The Magnet survey process provided multiple

opportunities for the official surveyors to interact directly with OHSU nurses and a pattern of concern was raised by nurses regarding lack of management visibility and point of care availability. Based on learnings from the Magnet appraisers and feedback received from nursing employees, plans were made to increase supervisory support for patient care (Dana Bjarnason, personal communication, April 18, 2018). Efforts to strengthen relationships between OHSU nurse leaders and their direct reports can be positively impacted by higher levels of EI in nurse leaders. Interpersonal relationships and collaborative skills supported by strong EI lead to better nursing leadership and can result in improved retention and employee satisfaction (Bianco, Dudkiewicz, & Linette, 2014).

All employees and ultimately patients are affected by the problem of lower than desired levels of EI amongst some nurse leaders. Emotional intelligence correlates with multiple highly desired leadership traits, e.g. reflection, resiliency, quality and safety of patient care, and change management. Effective leadership is associated with improved employee engagement and work environment that supports positive outcomes (Failla & Stichler, 2008).

Literature Review

Emotional intelligence is described as "a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand others, relate with them and cope with daily demands" (Bar-On, 2006, p.13). According to Cummings, Hayduk, and Estabrooks (as cited in Foltin, 2012) in a study of over 6,000 nurses employed at acute care facilities in Alberta, Canada, nurses working with leaders demonstrating strong EI reported increased quality of patient care, greater teamwork, and more job satisfaction than nurses working with leaders lacking EI. Beyond a review of studies linking high levels of EI with patient outcomes and benefits to employees, additional literature review was performed to explore relevant information related to EI in nursing. Various descriptions of EI and popular

models of EI were explored, as well as and the benefits of various components of EI.

Models of Emotional Intelligence

"Emotional intelligence" has been around since at least the 1960s. There are several models described in the literature, the most prominent of which are the ability EI model and the trait EI model. These models define, conceptualize, and measure emotional intelligence differently. The concept of EI as a personality construct was developed by Dr. Reuven Bar-On; EI described as a set of abilities was introduced by Drs. John Mayer and Peter Salovey, and Dr. Daniel Goleman created a mixed model of EI that incorporates both personality and ability (Codier & Odell, 2013). The current literature predominately focuses on the two principal models of EI: ability EI and personality trait EI.

Ability model. Drs. Mayer and Salovey (as cited in Cabello, Sorrel, Fernandez-Pinto, Extremera, & Fernandez-Berrocal, 2016) define the ability model of emotional intelligence as the ability to gauge one's own emotions as well as those of others. The ability model uses a deductive approach to identify four branches that are related in a hierarchically: (a) the ability to accurately perceive emotions, (b) the ability to use emotions to facilitate thought, (c) the ability to understand emotions, and (d) the ability to manage emotions (Petrides, 2017). Test of ability EI is used widely among researchers. The model assesses the abilities to perceive emotions, facilitating thought, understanding emotions, and managing emotions (Cabello et al., 2016). Ability-based models have a strong cognitive component due to the necessity of processing emotional information and measurement tools typically rely on performance-based tests.

The most common measure of ability EI is the Mayer, Salovey, and Caruso Emotional Intelligence Test (MSCIET). A challenge that ability EI test have is the inherent subjectivity of emotional experience. In contrast to cognitive ability test, tests of ability EI cannot be objectively scored due to a lack of clear criteria. Ability EI tests have attempted to bypass this problem by

using alternative scoring procedures, but without marked success (Petrides, 2017).

Trait model. K.V. Petrides' trait EI model is defined as a set of emotional perceptions located at the lower level of personality hierarchies. According to Petrides (2016) trait emotional intelligence concerns perceptions of emotional abilities, and how well an individual believes in terms of understanding, regulating, and expressing emotions in order to adapt to the environment and maintain well-being. Trait EI takes into consideration the emotional abilities and skills, personality characteristics and behavioral dispositions that influence the ability to cope successfully with environmental demands and pressures (Agnoli, Pittarello, Hysenbelli, & Rubaltelli, 2015). The sampling domain of trait EI aims to provide comprehensive coverage of the emotion-related aspects of personality (see Table 1). Due to the nature of trait EI being dependent on self-perceptions, commonly used tools for measurement rely on self-reporting questionnaires.

Table 1. *The sampling domain of trait emotional intelligence in adults* (Petrides, 2009)

Factors	Facets	High scorers perceive themselves as
Well-being		
	Trait optimism	Confident and likely to "look on the bright side"
	Trait happiness	Cheerful and satisfied with their lives
	Self-esteem	Successful and self-confident
Sociability		
	Emotion management (others)	Capable of influencing other people's feeling
	Assertiveness	Forthright, frank, and willing to stand up for their rights
Emotionality		
	Social awareness	Accomplished networkers with excellent social skills
	Trait empathy	Capable of taking someone else's perspective
	Emotion perception (self and others)	Clear about their own and other people's feeling
	Emotion expression	Capable of communicating their feelings to others
	Relationships	Capable of having fulfilling personal relationships
Self-control		
	Emotion regulation	Capable of controlling their emotions
	Impulsiveness (low)	Reflective and less likely to give in to their urges
	Stress management	

Auxiliary facets		Capable of withstanding pressure and regulating stress
	Self-motivation	Driven and unlikely to give up in the face of adversity
	Adaptability	Flexible and willing to adapt to new conditions

According to Petrides (2017) trait EI measures are more widely used both in the scientific literature and in practical applications than the ability EI model. In general, they have "higher internal consistencies, more stable factor structures, and are grounded on established psychometric and mathematical models. Meta-analyses have shown that measures of trait EI outperform measures of ability EI by large margins" (p. 4). A comparison of ability and trait models of EI are presented in Table 2.

Table 2. *A comparison of ability and trait models of emotional intelligence*

Abilities	Traits
Perceive emotion in oneself and others	Adaptability/Assertiveness/Emotion expression
Utilize emotions to facilitate thinking	Emotion management (others)/Emotional perception (self and others)
Understand emotional meaning	Emotion/Impulsiveness (low)/Relationships
Manage emotions	Self-esteem/Self-motivation/Social awareness/Stress management
	Trait empathy/Trait happiness/Trait optimism

Components of Emotional Intelligence

Self-awareness. The first component of EI is self-awareness; it can be described as the ability to recognize your own moods and emotions, as well as their effect on others. As reported by Bradberry and Greaves (2009), greater than 80 percent of people high in self-awareness demonstrate top job performance; and people demonstrating strong self-awareness develop a straightforward and honest understanding of what they do well, and "what situations push their buttons" (p. 25). Being willing to recognize and tolerate negative feelings demands a high-level

of self-awareness; contemplation of feelings in hopes of learning their origin can impact one's ability to control reactions to uncomfortable events (Spear, 2015).

Self-regulation. The second component of EI is self-regulation. It is described as "the process by which we consciously turn an instinctive emotional response into some sort of lesser response to or no response at all" (Savel & Munro, 2016, p. 104). Self-regulation enables a person to use self-awareness of emotions to stay flexible and direct behavior in a positive manner.

Motivation. The third component of EI is motivation. According to Goleman (as cited in Fox, 2013) motivation has significance in a person's desire to work, improve, and achieve personal and organizational goals. Cooper (2015) describes competencies associated with motivation as demonstrating a drive to achieve while striving to improve or meet standards of excellence, commitment to aligning goals with an organization, and optimism in pursuing goals despite obstacles.

Empathy. The fourth component of EI is empathy. Empathy is defined as the ability of one person to relate and understand the situational circumstances of another human being (Stueber, 2013). Empathy is foundational to being able to sense others' feelings and taking an interest in their concerns, which is valuable when meeting customer needs. In building on self-awareness, individuals that recognize their own emotions are more skilled at understanding the emotions of others.

Social skills. The final component of EI is the demonstration of social skills. Exhibiting tactics of persuasion, communication and conflict management skills, management of change, and building relationships are all characteristics of strong social skills (Cooper, 2015). Individuals demonstrating diverse aspects of social skills are successful in team building, which is a foundation for effective leadership.

Impact of Emotional Intelligence

The relationship between emotional intelligence and leadership has been well validated in the literature. According to Goleman, Boytazis, and McKee (as cited in Tyczkowski et al., 2015), a study conducted in Boston with greater than 20,000 executives found that EI was twice as important as cognitive abilities and technical skills in determining leadership ability. As stated by Parker and Sorensen (2008) high levels of emotional intelligence is a necessary component of transformational leadership in which leaders develop constructive and positive relationships with followers. Change is inevitable in healthcare environments. Emotional intelligence plays a role in navigating in the midst of evolving organizations. According to Foltin and Keller (2012) leading change requires a number of factors, including cognitive intelligence and organizational savvy, but EI is the decisive factor in successful change management. Most adaptive healthcare organizations are now attempting to use people with high emotional intelligence to lead management teams during times of significant change (Raithatha, 2015). Abilities to perform in demanding and stressful environments are essential. Emotional intelligence improves leadership; therefore, EI is essential for supporting a culture of patient quality and safety, and contributes to healthy relationships of interdisciplinary team members.

Gaps and Limitations

The literature lacks research focused on charge nurse and nurse manager levels of EI, as during literature reviews no prior studies were found. More knowledge is needed to determine recommendations for EI development and training for nurse leaders. Within EI development and training there is potential for emphasizing the power of EI and the importance of emphasizing motivation and not manipulation. Prevalence and causes of lower levels of EI or investigating other epidemiology factors were not included in the project as the project focus is on current EI assessments which can lead to future EI development opportunities.

Relate the Literature to Organizational Problem

Leaders with developed EI demonstrate skills such as delegation which impacts productivity. Emotionally intelligent leaders are noted to be self-aware with increased self-confidence supporting the ability to handle stressful situations, or recognize and manage stress early (Ellis, 2017). The Emotional Intelligence Framework is a competence model which emphasizes emotional competencies are learned capabilities based on EI that contribute to effective work performance; and research has identified these competencies as frequently differentiating outstanding performers from average ones within the workplace (Mangubat, 2017). By determining areas of greatest opportunity to develop EI competencies, it is believed that intentional training can lead to higher levels of EI resulting in increased nurse satisfaction and ultimately better patient outcomes.

Purpose of the project

Not all nursing leaders possess the necessary elements of emotional intelligence (EI) that are foundational for navigating through an ever-changing healthcare environment. Although recent research strongly correlates EI with effective leadership, some organizations are not aware of the growing list of positive outcomes related to leaders exhibiting high levels of EI. The project purpose is to improve OHSU charge nurse and nurse manager EI through identification of specific competencies that need development. Emotional intelligence assessments of charge nurses and nurse managers provide data for analysis and determination of greatest opportunities for improvement, and to what degree current nurse leader EI correlate with desired characteristics.

Project Implementation

Setting

Oregon Health and Science University is the state's only academic medical center and is located in Multnomah County within Portland, Oregon. It was the setting for the project. The function of the healthcare center is to better serve all patients that are admitted to the 576 licensed OHSU inpatient beds. The medical center's inpatient services are available twenty-four hours a day. There is high-level organizational leadership support to move forward with the project as its purpose aligns well with current strategic goals of the organization. Engagement in the project was voluntary and not mandated.

Participants

Inclusion and exclusion criteria. The data was collected from nurse managers, charge nurses, and nurses who regularly provide bedside care in the inpatient setting of OHSU. Eligibility of participants was not restricted beyond a requirement to currently be employed at OHSU as a clinical nurse. During the first phase of data collection all clinical nurses working in adult acute care, adult critical care, women's health, and pediatrics were invited to participate; and during the second phase of data collection all nurse managers, including assistant nurse managers, working in the inpatient settings were invited to participate. Those excluded were personnel with less than 1 year of leadership experience. In addition, those in corrective action within the last year or not meeting performance standards of their current role were not included.

Size and rationale. Through a series of three emails, 1549 clinical registered nurses were provided a web link to a REDCap survey and invited to complete the brief online survey. Approximately 28 nurse managers and assistant nurse managers, and 364 charge nurses were invited to complete the online version of the Trait Emotional Intelligence Questionnaire (TEIQue). The rationale for limiting the project to only OHSU nursing unit leadership is related to the desire to gain organizational feedback that will significantly aid in determining specific plans for future EI development opportunities for OHSU nursing leaders.

Recruitment of participants. In January 2018, email invitations to participate in research were sent to nurses listed on distribution email lists managed by OHSU nurse managers. Nursing units invited to participate were limited to acute care, critical care, and pediatric nursing departments inpatient units. Clinical nurses were sent an invitation containing an embedded link to a REDCap survey requesting participation in the short 5-minute survey asking for ranking of most preferred EI traits in nurse leaders. A different email was distributed to charge nurses and nurse managers inviting them to participate in the full-length TEIQue assessment. Two follow up reminder emails were sent during February and March of 2018.

No compensation for participation was offered. All nurse managers were provided equal opportunity to participate anonymously and voluntarily. There was not a formal consent process; by completing and returning the survey, participants agreed to participate in the survey process. Information regarding the project purpose, a description of what data would be collected, storage of information, and use of data was included as an attachment to each sent email. An institutional review board (IRB) application was submitted for an expedited review as there was limited risk to the participants. Anticipated barriers and challenges to the project evolved around the possibility of a relatively small sample size and potential for limited willingness of current nurse leaders to participate in an EI assessment project (see Appendix E).

Protection of participants. Emotional intelligence assessments were conducted while taking actions to maintain confidentiality. Data management included retention of printed data in a locked office and/or encrypted digital files. Use of ID numbers was further supported by efforts to maintain the confidentiality of all project participants. During the study, no identifiable information was required so there was little chance of a breach of confidentiality. Data for the project is stored in Oregon Clinical and Translational Research Institute's (OCTRI's) installation of REDCap, a highly secure and robust web-based research data collection and management

system.

Survey responses and demographic information were anonymous unless the participant desired to obtain a copy of EI assessment results and provided an email address. The data collected was kept confidential on an OHSU encrypted computer protected by a password known only by the project facilitator. The collected information was combined with information from all participants taking part in the study. Although the results of the study may be published, identifying information will remain private. Additionally, before and during the assessment process, communication to staff members intentionally addressed potential nursing concerns about being identified and inform nursing staff that their participation will be anonymous and voluntary.

Consent Process

Details about the study were provided to participants in Information Sheets (see Appendix A and Appendix B). The research presented no more than minimal risk and involved no procedures for which written documentation of consent was required outside of the research context.

Barriers and challenges

A low participation rate for completing the online 25-minute survey by nurse leaders was the greatest concern identified in late March 2018. In addition, without an ability to offer compensation, few nurse leaders were motivated to complete the questionnaire. In March 2018, informal feedback was solicited by the project facilitator asking nurse leaders for examples of contributing factors that had resulted in minimal engagement by nurse leaders in the EI assessment. The greatest barrier to charge nurses completing the approximate 25-minute TEIQue was an inability to remain logged into a computer at work without interruption for the necessary

time to complete the lengthy research tool. If a nurse found it necessary to prematurely log out of the computer prior to completing the survey, it was necessary to start over which led to an unwillingness to participate in the research. An alternate plan for data collection was determined and proven to be highly successful. The project facilitator printed out paper copies of the assessment tool and passed them out to charge nurses at daily scheduled hospital staffing meetings. A brief verbal summary description of the planned project was provided. Envelopes were attached to the assessment tools with pre-printed instructions as to where to return completed forms. It was then necessary for the project facilitator to manually enter the results of the TEIQue and demographics into the REDCap survey system. Taking these extra steps led to more than doubling the total response rate of research participants.

Project Implementation

Methods

Strategies for improving EI levels of nurse leaders is not within the scope of the project. An accurate assessment of the current state was needed in anticipation of determining what future resources should be accessed. First, qualitative data was obtained from current bedside staff nurses identifying which qualities in nurse leaders are most desired. Data was not gathered through the use of individual or group interviews. Instead, feedback was collected using REDcap by requesting participants rank facets of trait EI according to perceived importance in charge nurse qualities. For data analysis, results were imported into Statistical Package for the Social Science (SPSS) computer software designed by International Business Machines (IBM) Corporation. Emotional intelligence assessments of charge nurses and nurse managers provided data for analysis and determination of greatest opportunities for improvement, and to what degree current nurse leader EI levels correlate with desired characteristics. It was critical that the project facilitator personally engaged in educating, informing, and inviting participation of

OHSU nurse leaders. In addition to using email, presentations at the nursing unit level and formal nurse leadership meetings, and one-on-one conversations contributed to the participation rate. Co-workers within OHSU management team positively contributed to the success of the project by "managing up" its importance and encouraging others to participate. Dana Bjarnason, OHSU Chief Nursing Officer, was a key member of the team and encouraged project involvement. Teamwork was also reflected by the use of a statistician to aid in the final determination of study design, i.e. correct selection of software tools for analysis of key variables.

The approach to the descriptive study used two cross-sectional surveys to collect data from clinical nurses and nurse leaders during the spring of 2018. The analysis of data collected was used to describe EI facets in nurse leaders desired by clinical nurses and to compare the clinical nurse perspective with formal EI assessments of OHSU charge nurses and nurse managers. The project received an expedited category 7b from the OHSU Institutional Review Board.

Data collection

As previously mentioned, data was gathered from current bedside staff members to determine most highly desired nurse leader qualities. Surveys were distributed using Research Electronic Data Capture (REDcap), a secure web application for building and managing online surveys and databases. Participants were asked to rank facets of trait EI in order of preferred nurse leader qualities (see Appendix C). Quantitative data collection sources include the results of the Trait Emotional Intelligence Questionnaire (TEIQue) created to represent 15 facets of trait EI, yielding 10 items per facet for the full-length form of 153 items (see Appendix D). "In contrast to many self-report measures of EI, which leave much to be desired theoretically as well as psychometrically, the TEIQue is characterized by a strong theoretical and psychometric basis"

(Andrei., Siegling, Aloe, & Petrides, 2016, p. 262). Thirteen of the 15 facets of trait EI contribute to four oblique factors: (a) well-being, (b) self-control, (c) emotionality, and (d) sociability, whereas the remaining two, namely adaptability and self-motivation, contribute directly to the global trait EI score, without going through any specific factor (Andrei, Siegling, Aloe, & Petrides, 2016).

The compiled project data was uploaded to the London Psychometric Laboratory which provided EI assessment scores that were further analyzed following the manual entry of variables into SPSS computer software. The rationale for using SPSS software as it is known for its powerful statistical analysis capabilities. Descriptive statistics included frequencies, means, standard deviations, and one-way ANOVA data analyzed for project purposes. Correlations for specific EI variables were compared to study participants demographics.

Use of information systems and technology. In addition to the use of REDCap and SPSS software, computer emails and PowerPoint presentations were valuable technologies used to solicit participation in the project study. Additional use of information systems included storage of collected data and analysis reports as mentioned previously.

Accuracy of collected information ensured. Data analysis was impacted by the quality of data obtained. With the goal in mind of maintaining the integrity of research, gathering accurate data through selection of appropriate secure data collection instruments and by providing clear instructions to participants was vital. In order to reduce the likelihood of selecting biased questions, a test group was used when finalizing the design of the REDcap feedback tool. The importance of answering questions truthfully was emphasized.

Unintended Consequences

To increase the likelihood of participation by OHSU charge nurses, invitations to engage in the research project were extended to all charge nurses working in the inpatient setting instead

of limiting the number of invitations to only two charge nurses per unit as originally planned during the design of the project. An unintended consequence of the TEIQue assessment tool requiring approximately 25-minutes to complete is that nurse leaders were hesitant to use a computer at work in fear of being logged off prematurely. It was necessary to add a paper form option with instructions to return the assessment to the project facilitator who manually entered the data into REDCap survey system.

Ethical considerations

The American Nurses Association (ANA) Code of Ethics for Nurses describes obligations and duties of professional nurses and is "an expression of nursing's own understanding of its commitment to society" (ANA, 2015, p. 5). Statements pertaining to relationships to patients, with colleagues and others, and collaborative efforts are included in the code of ethics, all impacted by the EI abilities of individuals interacting with one another.

Projected costs

The IRB provided permission to move forward using the TEIQue assessment tool and no cost was incurred for EI evaluation of participants. For research purposes, the TEIQue assessment tool is available without charge. Outside of the significant time spent during data analysis, financial costs were not incurred. Expenses for future development of EI in nurse leaders are outside of scope for the project.

Validity of Trait EI Questionnaire (TEIQue)

A large body of literature attests to the criterion validity of the TEIQue assessment instrument. "Both primary and meta-analytic studies have consistently shown that, compared to other self-report measures of EI, the TEIQue has superior psychometric properties and greater validity, including incremental validity" (Andrei, Siegling, Aloe, Baldaro, & Petrides, 2016, p. 263). For the purpose of the project, no permission was sought to use the TEIQue assessment

tool. As stated by developers of the assessment tool "provided there is no commercial usage, TEIQue instruments can be used for research purposes without permission" (London Psychometric Laboratory, 2018, para. 1).

Quantitative Data Analysis

The data was analyzed using both Microsoft Excel software and SPSS computer software. During analysis of the clinical nurse data, the relative rank and frequency of EI characteristics were determined. Descriptive statistics were used to characterize the nurse leader sample and the 15 subscales for EI.

Measures

Trait Emotional Intelligence Questionnaire (TEIQue) has 153 items which are rated on a seven-point scale ranging from 1 (strongly disagree to 7 (strongly agree) and encompasses 15 facets (Adaptability, Assertiveness, Emotion Control, Emotion Expression, Emotion Management, Emotion Perception, Empathy, Happiness, Impulse Control, Motivation, Optimism, Relationships, Self-esteem, Social Awareness, Stress Management). The facets are grouped into four factors: (a) Emotionality, (b) Self-control, (c) Sociability, and (d) Well-being. Adaptability and Motivation subscales are not integrated into the four factors and are considered additional with independent subscales (Petrides, 2009).

Internal consistency

Cronbach's alphas of the TEIQue subscales and factors are presented (see Table 3). Among the 15 subscales, 11 had acceptable to excellent reliability varying between 0.72 and 0.88. Four subscales have Cronbach's alphas below 0.70: (a) empathy (0.60), (b) impulse control (0.61), (c) stress management (0.65), and (d) emotions management (0.59). Internal consistency at the global level was excellent with a total score of 0.88.

Table 3. *Means, Standard Deviation, and Cronbach's Alpha Scores for Emotional Intelligence Facets (n=80)*

	Mean	SD	α
EI Facet			
Self Esteem	5.25	0.69	0.75
Emotion Expression	5.23	0.93	0.86
Motivation	5.25	0.66	0.75
Emotion Regulation	4.94	0.72	0.77
Happiness	5.98	0.74	0.86
Empathy	5.32	0.56	0.60
Social Awareness	4.97	0.74	0.82
Impulse Control	5.23	0.64	0.61
Emotion Perception	5.23	0.68	0.77
Stress Management	5.12	0.62	0.65
Emotion Management	4.68	0.70	0.59
Optimism	5.67	0.91	0.87
Relationships	5.84	0.69	0.74
Adaptability	4.75	0.81	0.81
Assertiveness	4.91	0.87	0.80
Well Being	5.63	0.66	0.78
Self-Control	5.10	0.53	0.72
Emotionality	5.40	0.58	0.81
Sociability	4.85	0.64	0.76
Total Alpha	5.22	0.45	0.88

Key Findings

The project focused on emotional intelligence traits in nurse managers working in the nursing division of Oregon Health and Sciences University in Portland, Oregon. Of a total of 1546 contacted clinical nurses, 411 participated in the short online survey, yielding a response rate of 27 percent. Participants represented 27 nursing inpatient units, as well as the nursing resource management float pool. Of 392 nurse leaders invited to participate in the full-length

TEIQue assessment, a total of 80 charge nurses and nurse managers completed the assessment, yielding a response rate of 20 percent. As traditionally noted in the nursing profession, more females than males participated, a greater number of nurse leaders under age 40, more charge nurses and those with less than 10 years' experience completed the TEIQue assessment (see Table 4).

Table 4. *Nurse Leader Demographics (n=80)*

	N	Percent
Gender		
Male	13	16.3
Female	67	83.7
Age		
25-40 years	49	61.3
41-50 years	19	23.7
51+ years	12	15.0
Role		
Charge Nurse	62	77.5
Nurse Managers	18	22.5
Years of Experience		
1-10 years	43	53.7
11-20 years	24	30.0
20+ years	13	16.3

Trait EI Scores Compared to Gender Differences. Significant gender differences were found pertaining only to sociability, which is a combination of assertiveness, emotion management, and social awareness, with men scoring higher. The mean score for sociability was 5.20 for males and 4.78 for females, and the standard deviation was 0.67 for males and 0.61 for females resulting in a statistically significant p-value of 0.03 (Table 5). A prior study of 260 participants focused on gender differences in measured and self-estimated trait EI reported:

Males believed they had higher EI than females. Most of the correlations between measured and self-estimated scores were significant and positive, thereby indicating that people have some insight into their EI. Correlations between measured and self-estimated scores were generally higher for males than females, and a regression analysis indicated that gender was a significant predictor of self-estimated EI (Petrides & Furnham, 2000, p. 449).

Table 5. *Gender Differences on Sociability EI Scores*

			95% Confidence Interval for Mean		
	Mean	SD	Lower Bound	Upper Bound	p
Assertiveness					
Male	5.15	0.95	4.57	5.72	0.296
Female	4.87	0.86	4.66	5.08	
Social Awareness					
Male	5.42	0.68	5.01	5.84	0.014
Female	4.88	0.72	4.70	5.06	
Emotion Management					
Male	5.03	0.63	4.65	5.41	0.043
Female	4.60	0.69	4.44	4.78	
Sociability					
Male	5.20	0.67	4.80	5.61	0.030
Female	4.78	0.61	4.64	4.93	

Note. Significant at the p <0.05 level.

Trait EI Scores Compared to Role Differences. Significant role differences were found pertaining only to emotion regulation. The mean score for emotion regulation in charge nurses was 4.85 and higher in nurse managers with a mean score of 5.23. The standard deviation was 0.72 for charge nurses and 0.53 for nurse managers resulting in a statistically significant p-value of 0.049 (Table 6).

Table 6. *Role Differences and EI Scores*

				95% Confidence Interval for Mean		
	N	Mean	SD	Lower Bound	Upper Bound	p
Emotion Regulation						
Charge Nurse	62	4.85	0.72	4.67	5.04	0.049
Nurse Managers	18	5.23	0.66	4.90	5.56	

Note. Significant at the p <0.05 level.

Trait EI Scores Compared to Age Differences. Significant age differences were found pertaining to motivation, emotion regulation, impulse control, emotion perception and stress management (see Table 7).

Table 7. *Age Differences and EI Scores*

				95% Confidence Interval for Mean		
	N	Mean	SD	Lower Bound	Upper Bound	p
Motivation						
25-40-year olds	49	5.15	0.70	4.95	5.35	
41-50-year olds	19	5.22	0.50	4.98	5.46	0.023
51+ year olds	12	5.73	0.57	5.36	6.09	
Emotion Regulation						
25-40-year olds	49	4.78	0.72	4.58	4.99	
41-50-year olds	19	4.99	0.57	4.72	5.27	0.009
51+ year olds	12	5.48	0.73	5.02	5.94	
Impulse Control						
25-40-year olds	49	5.16	0.68	4.96	5.35	
41-50-year olds	19	5.12	0.51	4.87	5.36	0.016
51+ year olds	12	5.72	0.44	5.43	5.99	
Emotion Perception						
25-40-year olds	49	5.18	0.64	4.99	5.36	
41-50-year olds	19	5.08	0.73	4.73	5.44	0.035
51+ year olds	12	5.68	0.57	5.32	6.04	

Stress Management						
25-40-year olds	49	4.96	0.62	4.76	5.13	
41-50-year olds	19	5.28	0.55	5.02	5.54	0.006
51+ year olds	12	5.53	0.52	5.20	5.85	

Note. Significant at the p <0.05 level.

Trait EI Scores Compared to Nurse Experience. Significant differences are noted pertaining to emotion regulation and relationships. Emotion regulation increased with years of experience and relationships are stronger in nurses with 1-5 years of experience compared to those with more experience (see Table 8).

Table 8. *Years of Experience Differences and EI Scores*

				95% Confidence Interval for Mean		
	N	Mean	SD	Lower Bound	Upper Bound	p
Emotion Regulation						
1-5 years	14	4.37	0.73	3.95	4.79	
6-15 years	44	4.95	0.65	4.76	5.15	0.001
16+ years	22	5.27	0.66	4.97	5.56	
Relationships						
1-5 years	14	6.21	0.39	5.98	6.43	
6-15 years	44	5.69	0.81	5.45	5.94	0.046
16+ years	22	5.90	0.47	5.70	6.11	

Note. Significant at the p <0.05 level.

Determination of clinical nurse rankings of desired EI attributes in nurse leaders. Of the 411 OHSU bedside nurses that completed the short survey and ranked their top five desired traits in nurse leaders, results demonstrated consistency in adaptability, stress management, assertiveness, and empathy being most valued by clinical nurses (see Table 9). A variety of

methods were used to complete the analysis. Weighted point values for rankings compared to non-weighted top 3 or 4 choices resulted in the same findings (see Appendix F and Appendix G).

Table 9. *Nurse Leader Self-assessment Rankings Compared to Desired Facets by Clinical Nurses*

Self-assessment EI Ranking per Nurse Leader	EI Facets	Nurse Leader EI Facet Mean Scores (n=80)	Desired EI Facet Ranking per Clinical RN
1	Happiness	5.98	11
2	Relationships	5.84	12
3	Optimism	5.67	9
4	Empathy	5.32	4
5	Motivation	5.25	6
6	Self-Esteem	5.25	13
7	Emotion Perception	5.23	5
8	Impulse Control	5.23	10
9	Emotion Expression	5.23	15
10	Stress Management	5.12	2
11	Social Awareness	4.97	7
12	Emotion Regulation	4.94	8
13	Assertiveness	4.91	3
14	Adaptability	4.75	1
15	Emotion Management	4.68	14

Outcomes

Due to lack of prior published studies identifying desired EI attributes in nurse leaders, no findings could be compared in literature. Prior research has observed similar findings related to age correlations with increased EI. According to Cabello et al. (2016), younger individuals scored lower on EI assessments than middle-aged adults. It is interesting to note that in the same study of 12,198 adults, women were found to score higher in EI than men which differs from the study results. An additional study conducted in India on 424 employees working in the service sector demonstrated higher EI in females with a mean score of 101.96 compared to males with a mean score of 99.04 (Pooja & Kumar, 2016). The lack of correlation between females and higher

levels of EI in the current study is likely impacted by the low participant rate of only 13 male nursing leaders.

The overall summary of project outcomes supports an understanding that EI typically increases with age and role experience. The noted poor correlation between the highest areas of EI attributes assessed in OHSU nurse leaders compared to leadership traits desired by clinical nurses supports recommendations for OHSU nurse executives to set specific goals when discussing strategic planning for development of EI in nurse leaders.

Financial Implications

According to Kroning (2015) with high demands on healthcare institutions, many patient survey responses may lead to lower reimbursements. Emotional intelligence is even more essential for healthcare workers to possess because institutions cannot afford to lose more reimbursement dollars than they currently do. While Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) surveys assess patients' perception of their healthcare experience, it does not assess nurse clinical skills. Rather, it is used to assess soft skills impacted by EI of nurses. In addition, research shows a direct relation between EI and job satisfaction. According to Ranibar et al. (2012) "emotionally intelligent people seem to be satisfied with their jobs more than others and the more job satisfaction, in turn, affects the quality of delivered services positively" (p.762). Healthcare organizations are negatively impacted financially by undesired turnover related to employee job dissatisfaction.

Practice-related Implications and Recommendations

This study has both research and practical implications. Whether communicating directly with a colleague or patient, nurses need to accurately perceive emotional expressions and use this knowledge to stimulate his or her own creative thinking to generate appropriate responses.

Acknowledging the feedback of study participants, desired EI traits of adaptability, stress management, assertiveness, and empathy are deserving of further review and recommendations for development.

Adaptability is a personality trait that helps determine how an individual will respond to change. Innovation and being an early adopter of change are examples of being adaptable. Whether responding to new policies, adjusting to updated electronic health record software or being asked to manage with fewer staff members or supplies, adaptability positively impacts the healthcare environment. The ability to integrate a patient's cultural values and beliefs into any encounter requires adaptability. Nurses should have awareness and skills to assess verbal and non-verbal cues and adapt individual care to maximize patient care.

In the current culture within healthcare, professionals have to do more with less and often feel stressed. Stress management abilities are necessary to respond to challenges with calmness and efficiency. Inability to respond to excessive stress may impact productivity and/or quality of care provided. According to Conroy and Tebbenhoff (2018) "nurses must cultivate resilience and self-awareness in the face of high patient acuity, variable staffing patterns, fatigued co-workers and other chronic and common workplace-related stressors" (p. 6).

Assertiveness is an important communication skill and is instrumental in ensuring a climate of patient safety in healthcare settings. According to Yoshinaga et al. (2018):

> Assertiveness is one of the most important skills for nurses in the workplace, especially to reduce their interpersonal stress, build effective team relationships and to provide sufficient nursing care. Assertiveness is typically defined in terms of the honest and legitimate expression of one's personal opinions, needs, wants and feelings without denying or violating the rights of the others" (p. 59).

During episodes of changes in patient conditions, lack of assertiveness may result in a substantial threat to patient safety.

One of the most familiar concepts in EI is empathy. The value of empathy cannot be overstated as it allows an individual to understand someone else's emotional state. As healthcare employees, if a patients' emotional reaction to a serious medical diagnosis or a parent's anxiety to a child's illness cannot be understood, it is unlikely that the needs of the patient can be fully met. The importance of empathy also applies between colleagues, as any stressful situation is more likely to be solved when individuals can understand and properly value another person's emotional perspective (Ioannidou & Konstantikaki, 2008).

Developing EI

What can individuals do if they have a less than optimal level of EI? Can EI be learned or improved? Daniel Goleman, a respected psychologist and author of books pertaining to EI believes it can be learned. He suggests that levels of EI improve over a significant period of time and must be practiced, reinforced, and come from a sincere desire to develop it (Goleman, 2004). Strategies for strengthening EI can be developed and influence clinical and/or leadership practices of current and future nurses selected for employment. Gerardi (2015) agrees emotional intelligence can be developed over a period of time yet EI ability is not something that can be easily taught in a lecture class. It can be developed through active listening, engagement, and participation. According to Petrides (2017) evidence suggests that EI can be taught but the process is more difficult and time-consuming than some trainers suggest. Efforts directed at helping people manage anger and emotions related to stress have been effective. Procedures developed to support awareness of others' emotions and to identify emotions accurately have demonstrated a level of success.

Intervention strategies to develop EI require a highly favorable context to be effective for most individuals. First, a high level of motivation and willingness to devote time and energy to change is necessary. Second, the trainer must have a high degree of skill and knowledge pertaining to social and emotional domains. Thirdly, the social environment requires support and encouragement. According to Petrides (2017) when all these crucial elements are present, carefully designed and implemented interventions can optimize emotional intelligence.

In a study conducted by Nelis, Quoidbach, Mikolajczak, & Hansenne (2009) researchers investigated whether it is possible to increase EI. Study participants received four group training sessions of two hours and a half while control participants continued without EI training. The major finding of the study showed a significant increase in emotion identification and emotion management abilities in the training group. In addition, follow-up measures after six months demonstrated changes were persistent. No significant change was demonstrated in the control group.

An area of research in behavior change, such as emotional responses to stress, has been to look at the neurological mechanisms that predict successful change. Recent research conducted in the area of applying brain science to human behavior has led to two significant "findings" that have a major impact: neuroplasticity and automaticity. According to Eichinger (2018) "*neuroplasticity* refers to the capacity of the brain to develop and change throughout life" (p. 90). The static brain view was predominant until new research began to be published in the early 1980s. It is now recognized that the brain sloughs off dead cells and adds new ones continuously. It is possible to "rewire" parts and routines of the brain that are not working properly. The fact that the brain can be changed is profound as science is now discovering how to facilitate successful rewiring by applying neuroscience (Eichinger, 2018). The human brain is "plastic" and can learn to become more resilient. When engaging with one's stressors and challenges, a

reduction in distress and a boost in neural mechanisms for better coping can be realized. In addition, believing in the malleability of the brain can itself improve learning and behavior change (Tabibnia & Radecki, 2018).

"*Automaticity* refers to the embedded automatic routines each person has stored and uses often" (Eichinger, 2018, p. 90). The brain has a preference for simple and low-effort operations, and it prefers old and proven responses to new ones. Stored embedded routines or habits are often referred to as the brain "autopilot". Estimates put the daily use of embedded routines at 60% to 80% or what is done every day by individuals; and it is necessary for a person to intentionally override routines to implement "rewiring" of brain responses to stimuli (Eichinger, 2018).

Neuroscience can shed additional light on the underlying mechanisms of coaching and provide insights to facilitate development. As previously stated, when EI is developed with the support of trained individuals, there is potential for formal coaching to be beneficial. According to Boyatzis and Jack (2018) a study examining an approach to coaching called "coaching with compassion", i.e. coaching to the positive emotional attractor (PEA), as highly effective as it is more likely that neuro mechanisms are activated encouraging individual motivation and a willingness to address areas of required focus and an openness to ideas leading to change. In a study completed by Van Oosten (as cited in Boyatzis & Jack, 2018) coaching relationships characterized by PEA amplified the impact of EI effectiveness within the work environment. With expanding interest in the development of EI attributes, these findings within neuroscience research can serve as a launch pad for numerous other studies of potential interest to scholars.

Hiring practices

There is a need for organizations to incorporate EI assessments into hiring processes and offer opportunities to support current leaders in developing EI qualities. Emotional intelligence

may influence a potential employee's chance of getting hired. A 2011 survey found that over 70% of employer value EI more than IQ (Lorenz, 2011). Nurse leaders need to take into consideration EI abilities of potential new employee candidates as well as clinical skill potential. As stated by Kroning (2015) "it's uncommon for nurse leaders to have to coach employees on clinical skills, but quite common for nurse leaders to coach and even use disciplinary action for employees who have problems with communication, teamwork, decision making, and critical thinking skills, all of which are considered soft skills and essential components of emotional intelligence (EI)" (p. 1). It is preferred that more effort is made to hire high performing nurse applicants in hope that limited need for coaching or discipline during employment is necessary.

Nursing student curriculum

The foundation for the development of essential competencies in nursing practice begins with nursing education. According to Benner, Sutphen, Leonard, and Day (as cited in Shanta & Gargiulo, 2014), there is a significant gap between the competencies needed for contemporary nursing practice and the way nurses are currently educated. Task-oriented education does not adequately prepare nurses to meet the complex demands of practice and changing healthcare industry. Therefore, it is vital that nursing education is examined to determine how it contributes or hinders the development of explicit characteristics that will reinforce the competencies necessary to meet the challenges put forth by the IOM (2011) report. Integrating emotional intelligence into the nursing curriculum is recommended as an opportunity for students to better understand themselves which can improve effectiveness in forming relationships with patients and co-workers.

Role modeling EI

Nurse leaders can role model strong EI skills by demonstrating actions such as strong communication during stressful or chaotic circumstances. For instance, if a patient is dissatisfied

with care and threatens to leave against medical advice (AMA), a nurse leader could effectively role model by calming the patient while using communication skills mixed with a positive empathetic approach. Mentorship through role modeling can be beneficial to nurses open to making improvements in their own level of EI.

Limitations

There are limitations that should be considered when interpreting the results of the current study. The study participants were limited to one academic medical center and participation was strictly voluntary and thus self-section bias by participating nurses is possible. The sample size of this study may have contributed to the findings that were non-significant. The limited sample and the location of the study may inhibit generalizability of the findings and should be considered when reviewing the results. The inclusion of a single study setting may also limit the ability to generalize findings of this study to the population within other healthcare settings.

Summary and Next Steps

In summary, the project focus on enhancing EI in nursing leadership has been beneficial. Identifying EI traits most desired by clinical nurses and determining areas of greatest opportunity for increasing OHSU nurse leader EI provides the foundation necessary for implementing strategies to further develop nurse leader EI. Engaging many OHSU direct care nurses in research provided an opportunity for nurse voices and opinions to be heard. Efforts leading to an organizational culture that emphasizes EI is important as a means of maintaining and promoting the human qualities of compassion and empathy, as each is thought to influence patients both directly and indirectly.

Recommended next steps include providing interpretation results of TEIQue assessments to nurses who provided email addresses at the time of the survey. Upon learning which specific

EI traits scored lowest, strategies for improving EI can be implemented. Additional opportunities for EI assessment will be offered to nurses that chose not to participate in the initial study. With the support of OHSU nursing leadership, education sessions focused on the importance of EI as well as resources and methods for developing higher levels of specific traits will be offered. If there are financial costs to obtain recommended training resources, funding requests will be initiated through OHSU nursing administration. Next steps will include actions to publish study background and results. Additional research is recommended as EI assessments and implementation of development opportunities for additional nursing groups and/or interdisciplinary colleagues has the potential to widely impact healthcare environment and patients served.

Conclusion

Complex healthcare organizations need to cultivate the development of emotional intelligence in nurse leaders. In support of nurses providing direct patient care, it is vital that nurse leaders truly care for those they lead by demonstrating specific EI traits that are most desired, i.e. adaptability, stress management, assertiveness, and empathy. According to Sinek (2014) through actions of leaders demonstrating high levels of EI, trust is built resulting in high performing teams. Ultimately, nursing practice requires a combination of strong intellectual and relationship building skills that support clinical judgment (Benner, Sutphen, Leonard, & Day, 2010).

Leadership at the nursing unit level includes charge nurses, assistant nurse manager, and nurse managers. All aforementioned have a direct impact on patients, family members, physicians, and the multidisciplinary team and are poised to lead change in healthcare delivery. Nurse leaders need to inspire, motivate, influence decisions, and foster positive work environments while contributing to the mission and vision of the organization. Both cognitive

ability and EI are essential to manage in present-day healthcare environments and ultimately impact the delivery of excellence in patient care.

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Appendix A

OREGON HEALTH & SCIENCE UNIVERSITY

Information Sheet

IRB# 00017759

TITLE: Assessing Charge Nurse and Nurse Manager Emotional Intelligence

PRINCIPAL INVESTIGATOR: Kristen Crusoe, EdD, MN, RN - (541) 297-2155

CO-INVESTIGATORS: Carol Holm, MSN, RN - (503) 418-8340

PURPOSE:
You have been invited to participate in this research study because you are a registered nurse currently employed at Oregon Health & Science University (OHSU) impacted by the qualities of nurse leaders. The purpose of this study is to improve OHSU charge nurse and nurse manager emotional intelligence (EI) through identification of specific competencies that need development.

Participation involves completion of a one-time online survey assessing the most valuable characteristics of EI in nurse leaders.

The data will be collected, scored, and analyzed to determine trends in current strengths and areas of opportunities that correlate with the EI traits as ranked most valuable by OHSU staff nurses in the initial survey.

PROCEDURES:
If you agree to participate, you will be asked to complete a survey regarding specific traits of EI and will be asked to rank them in order of most desired.

The survey should take approximately 5 minutes to complete.

If you have any questions, concerns, or complaints regarding this study now or in the future, or you think you may have been injured or harmed by the study, contact Carol Holm at 503-418-8340.

RISKS:
Although we have made every effort to protect your identity, there is a minimal risk of loss of confidentiality.

BENEFITS:
There may be no direct benefit to you as a result of participating in this study; however, you may benefit from a better understanding of your own emotional intelligence.

Your participation may benefit nursing in the future, and ultimately patients, by providing information on emotional intelligence and its relationship to nursing leadership.

CONFIDENTIALITY:
In this study, we are not receiving any identifiable information about you so there is little chance of breach of confidentiality.

Data collected will be kept confidential on a computer protected by a password known only by the principal investigator.

PARTICIPATION:
This research is being overseen by an Institutional Review Board ("IRB"). You may talk to the IRB at (503) 494-7887 or irb@ohsu.edu if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get more information or provide input about this research.

You may also submit a report to the OHSU Integrity Hotline online at https://secure.ethicspoint.com/domain/media/en/gui/18915/index.html or by calling toll-free (877) 733-8313 (anonymous and available 24 hours a day, 7 days a week).

You do not have to join this or any research study. If you do join, and later change your mind, you may quit at any time. If you refuse to join or withdraw early from the study, there will be no penalty or loss of any benefits to which you are otherwise entitled.

The participation of OHSU employees in OHSU research is completely voluntary and you are free to choose not to serve as a research subject in this protocol for any reason. If you do elect to participate in this study, you may withdraw from the study at any time without affecting your relationship with OHSU, the investigator, the investigator's department, or your grade in any course. If you would like to report a concern with regard to participation of OHSU students or employees in OHSU research, please call the OHSU Integrity Hotline at 1-877-733-8313 (toll free and anonymous).

Appendix B

OREGON HEALTH & SCIENCE UNIVERSITY

Information Sheet

IRB# 00017759

TITLE: Assessing Charge Nurse and Nurse Manager Emotional Intelligence

PRINCIPAL INVESTIGATOR: Kristen Crusoe, EdD, MN, RN - (541) 297-2155

CO-INVESTIGATORS: Carol Holm, MSN, RN - (503) 418-8340

PURPOSE:
You have been invited to participate in this research study because you are a registered nurse currently employed at Oregon Health & Science University (OHSU) impacted by the qualities of nurse leaders. The purpose of this study is to improve OHSU charge nurse and nurse manager emotional intelligence (EI) through identification of specific competencies that need development.

Participation involves completion of a one-time online questionnaire to appraise current levels of emotional intelligence in OHSU nurse leaders.

The data will be collected, scored, and analyzed to determine trends in current strengths and areas of opportunities that correlate with the EI traits as ranked most valuable by OHSU staff nurses.

PROCEDURES:

If you agree to participate, you will be asked to complete the Trait Emotional Intelligence Questionnaire (TEIQue) and a brief demographic questionnaire. The questionnaire will cover the facets of trait EI through 15 subscales, i.e. emotion control, social awareness, and adaptability. In addition, it provides scores on four factors of broader relevance ('well-being,' 'self-control,' 'emotionality,' and 'sociability').

The questionnaire should take approximately 25 minutes to complete.

If you have any questions, concerns, or complaints regarding this study now or in the future, or you think you may have been injured or harmed by the study, contact Carol Holm at 503-418-8340.

RISKS:
Although we have made every effort to protect your identity, there is a minimal risk of loss of confidentiality.

BENEFITS:
There may be no direct benefit to you as a result of participating in this study; however, you may benefit from a better understanding of your own emotional intelligence.

Your participation may benefit nursing in the future, and ultimately patients, by providing information on emotional intelligence and its relationship to nursing leadership.

CONFIDENTIALITY:
In this study, we are not receiving any identifiable information about you so there is little chance of

breach of confidentiality. Online survey responses and demographic information will be anonymous unless you desire a copy of your EI assessment results and provide an email address.

Data collected will be kept confidential on a computer protected by a password known only by the principal investigator. Your information will be combined with information from other people taking part in the study. We may publish the results of the study; however, we will keep any identifying information private.

PARTICIPATION:
This research is being overseen by an Institutional Review Board ("IRB"). You may talk to the IRB at (503) 494-7887 or irb@ohsu.edu if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get more information or provide input about this research.

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You do not have to join this or any research study. If you do join, and later change your mind, you may quit at any time. If you refuse to join or withdraw early from the study, there will be no penalty or loss of any benefits to which you are otherwise entitled.

The participation of OHSU employees in OHSU research is completely voluntary and you are free to choose not to serve as a research subject in this protocol for any reason. If you do elect to participate in this study, you may withdraw from the study at any time without affecting your relationship with OHSU, the investigator, the investigator's department, or your grade in any course. If you would like to report a concern with regard to participation of OHSU students or employees in OHSU research, please call the OHSU Integrity Hotline at 1-877-733-8313 (toll free and anonymous).

Appendix C

OHSU Staff Nurse Survey

OHSU STAFF RN SURVEY – EMOTIONAL INTELLIGENCE TRAITS

Your feedback is needed. In preparation for completing this brief survey it is important to contemplate desired characteristics in nurse leaders without reflecting on specific individuals. From the list below, choose 5 emotional intelligence traits demonstrated in charge nurses and nurse managers that are most valuable to you. Please rank them in order of most important (#1 most important).

1. _____

2. _____

3. _____

4. _____

5. _____

Trait	Brief Description
Adaptability	…flexible and willing to adapt to new conditions.
Assertiveness	…forthright, frank, and willing to stand up for their rights.
Emotion perception (self and others)	…clear about their own and other people's feelings.
Emotion expression	…capable of communicating their feelings to others.
Emotion management (others)	…capable of influencing other people's feeling
Emotion regulation	…capable of controlling their emotions
Impulsiveness (low)	…reflective and less likely to give in to their urges.
Relationships	…capable of having fulfilling personal relationships.
Self-esteem	…successful and self-confident.
Self-motivation	…driven and unlikely to give up in the face of adversity.
Social awareness	…accomplished networkers with excellent social skills.
Stress management	…capable of withstanding pressure and regulating stress.
Empathy	…capable of taking someone else's perspective.
Happiness	…cheerful and satisfied with their lives.
Optimism	…confident and likely to "look on the bright side" of life.

Reference

London Psychometric Laboratory. (2017). *Trait emotional intelligence - Overview*. Retrieved at http://www.psychometriclab.com/Home/Default/7

Appendix D

Sample (page 1 only): TEIQue Assessment Tool

Instructions

- Please complete this questionnaire on your own and in quiet conditions.
- Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. *There are no right or wrong answers*.
- Work quickly, and don't think too long about the exact meaning of the statements.
- Try to answer as accurately as possible.
- You have seven possible responses, ranging from 1=Completely Disagree to 7=Completely Agree
- Many thanks for your time and interest

		DISAGREE COMPLETELY						AGREE COMPLETELY
1.	I'm usually able to control other people	1	2	3	4	5	6	7
2.	Generally, I don't take notice of other people's emotions	1	2	3	4	5	6	7
3.	When I receive wonderful news, I find it difficult to calm down quickly	1	2	3	4	5	6	7
4.	I tend to see difficulties in every opportunity rather than opportunities in every difficulty	1	2	3	4	5	6	7
5.	On the whole, I have a gloomy perspective on most things	1	2	3	4	5	6	7
6.	I don't have a lot of happy memories	1	2	3	4	5	6	7
7.	Understanding the needs and desires of others is not a problem for me	1	2	3	4	5	6	7
8.	I generally believe that things will work out fine in my life	1	2	3	4	5	6	7
9.	I often find it difficult to recognise what emotion I'm feeling	1	2	3	4	5	6	7
10.	I'm not socially skilled	1	2	3	4	5	6	7
11.	I find it difficult to tell others that I love them even when I want to	1	2	3	4	5	6	7
12.	Others admire me for being relaxed	1	2	3	4	5	6	7
13.	I rarely think about old friends from the past	1	2	3	4	5	6	7
14.	Generally, I find it easy to tell others how much they really mean to me	1	2	3	4	5	6	7
15.	Generally, I must be under pressure to really work hard	1	2	3	4	5	6	7
16.	I tend to get involved in things I later wish I could get out of	1	2	3	4	5	6	7
17.	I'm able to "read" most people's feelings like an open book	1	2	3	4	5	6	7
18.	I'm usually able to influence the way other people feel	1	2	3	4	5	6	7
19.	I normally find it difficult to calm angry people down	1	2	3	4	5	6	7
20.	I find it difficult to take control of situations at home	1	2	3	4	5	6	7
21.	I generally hope for the best	1	2	3	4	5	6	7
22.	Others tell me that they admire me for my integrity	1	2	3	4	5	6	7
23.	I really don't like listening to my friends' problems	1	2	3	4	5	6	7
24.	I'm normally able to "get into someone's shoes" and experience their emotions	1	2	3	4	5	6	7
25.	I believe I'm full of personal weaknesses	1	2	3	4	5	6	7
26.	I find it difficult to give up things I know and like	1	2	3	4	5	6	7
27.	I always find ways to express my affection to others when I want to	1	2	3	4	5	6	7
28.	I feel that I have a number of good qualities	1	2	3	4	5	6	7
29.	I tend to rush into things without much planning	1	2	3	4	5	6	7
30.	I find it difficult to speak about my intimate feelings even to my closest friends	1	2	3	4	5	6	7
31.	I'm not able to do things as well as most people	1	2	3	4	5	6	7
32.	I'm never really sure what I'm feeling	1	2	3	4	5	6	7
33.	I'm usually able to express my emotions when I want to	1	2	3	4	5	6	7
34.	When I disagree with someone, I usually find it easy to say so	1	2	3	4	5	6	7
35.	I normally find it difficult to keep myself motivated	1	2	3	4	5	6	7
36.	I know how to snap out of my negative moods	1	2	3	4	5	6	7
37.	On the whole, I find it difficult to describe my feelings	1	2	3	4	5	6	7
38.	I find it difficult not to feel sad when someone tells me about something bad that happened to them	1	2	3	4	5	6	7
39.	When something surprises me, I find it difficult to get it out of my mind	1	2	3	4	5	6	7
40.	I often pause and think about my feelings	1	2	3	4	5	6	7
41.	I tend to see the glass as half-empty rather than as half-full	1	2	3	4	5	6	7
42.	I often find it difficult to see things from another person's viewpoint	1	2	3	4	5	6	7

Appendix E

APPROVAL OF SUBMISSION

November 28, 2017

Dear Investigator:

On November 28, 2017, the IRB reviewed the following submission:

IRB ID:	STUDY00017759
Type of Review:	Initial Study
Title of Study:	Assessing Charge Nurse and Nurse Manager Emotional Intelligence
Principal Investigator:	Kristen Crusoe
Funding:	None
IND, IDE, or HDE:	None
Documents Reviewed:	• Protocol • E_mail Request to Participate in an Online Survey-Template • OHSU Nurse Leader TEIQue Assessment Tool • Holm- HSR Course Certificate • Consent-Information-Sheet- Staff nurses • Staff Nurse Survey • Project Proposal- Holm DNP Final • PPQ- Signed • Consent-Information-Sheet- Charge Nurse • Request_for_Determination

The IRB granted final approval on 11/28/2017. The study is approved until 11/27/2018.

Review Category: Expedited Category # 7b

Copies of all approved documents are available in the study's **Final** Documents (far right column under the documents tab) list in the eIRB. Any additional documents that require an IRB signature (e.g. IIAs and IAAs) will be posted when signed. If this applies to your study, you will receive a notification when these additional signed documents are available.

Ongoing IRB submission requirements:

- Six to ten weeks before the expiration date, you are to submit a continuing review to request continuing approval.
- Any changes to the project must be submitted for IRB approval prior to implementation.
- Reportable New Information must be submitted per OHSU policy.
- You must submit a continuing review to close the study when your research is completed.

Guidelines for Study Conduct

In conducting this study, you are required to follow the guidelines in the document entitled, "Roles and Responsibilities in the Conduct of Research and Administration of Sponsored Projects," as well as all other applicable OHSU IRB Policies and Procedures.

Requirements under HIPAA

If your study involves the collection, use, or disclosure of Protected Health Information (PHI), you must comply with all applicable requirements under HIPAA. See the HIPAA and Research website and the Information Privacy and Security website for more information.

IRB Compliance

The OHSU IRB (FWA00000161; IRB00000471) complies with 45 CFR Part 46, 21 CFR Parts 50 and 56, and other federal and Oregon laws and regulations, as applicable, as well as ICH-GCP codes 3.1-3.4, which outline Responsibilities, Composition, Functions, and Operations, Procedures, and Records of the IRB.

Sincerely,

The OHSU IRB Office

Appendix F

Weighted Final Results*		**Ranking**
Adaptability	1159	1
Stress management	921	2
Assertiveness	822	3
Empathy	770	4
Emotion perception (self and others)	399	
Self-motivation	374	
Social Awareness	340	
Emotion regulation	271	
Optimism	228	
Impulsiveness	177	
Happiness	171	
Relationships	161	
Self-esteem	160	
Emotion management (others)	119	
Emotion expression	75	

*Weighted Ranking = 5 points per 1st choice, 4 points per 2nd choice, 3 points per 3rd choice, 2 points per 4th choice, & 1 point per 5th choice vote

Non-weighted Ranking Results*		**Ranking**
Adaptability	313	1
Stress management	290	2
Empathy	257	3
Assertiveness	254	4
Self-motivation	139	
Emotion perception (self and others)	133	
Social Awareness	115	
Emotion regulation	105	
Optimism	97	
Impulsiveness	79	
Happiness	72	
Relationships	65	
Self-esteem	53	
Emotion management (others)	44	
Emotion expression	32	

*Non-weighted Ranking = 1 points per choice for ranking desired EI traits in nurse leaders

Appendix G

Include Top 3 Choices Only (non-weighted)		Ranking
Adaptability	246	1
Stress management	188	2
Assertiveness	178	3
Empathy	151	4
Emotion perception (self and others)	83	
Self-motivation	76	
Social Awareness	68	
Emotion regulation	50	
Optimism	40	
Impulsiveness	32	
Self-esteem	30	
Relationships	28	
Happiness	27	
Emotion management (others)	21	
Emotion expression	12	

Include Top 4 Choices Only (non-weighted)		Ranking
Adaptability	283	1
Stress management	245	2
Assertiveness	214	3
Empathy	206	4
Self-motivation	109	
Emotion perception (self and others)	106	
Social Awareness	98	
Emotion regulation	81	
Optimism	61	
Impulsiveness	51	
Happiness	44	
Relationships	43	
Self-esteem	42	
Emotion management (others)	32	
Emotion expression	24	