The Relationship Between Clinical Teaching Effectiveness and Emotional Intelligence in Clinical Nurse Faculty in Pre-licensure Baccalaureate Programs in New York State

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The Relationship Between Clinical Teaching Effectiveness and Emotional Intelligence in Clinical Nurse Faculty in Pre-licensure Baccalaureate Programs in New York State

A dissertation submitted to the Graduate Faculty in the Nursing Department in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

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The Relationship Between Clinical Teaching Effectiveness and Emotional Intelligence in Clinical Nurse Faculty in Pre-licensure Baccalaureate Programs in New York State:

by Caroline Mosca

This manuscript has been read and accepted for the Graduate Faculty in the Nursing Program in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

It is important to evaluate the Clinical Teaching Effectiveness (CTE) of nurse faculty because clinical teaching is one of the most effective pedagogies in nursing education (Billings & Halstead, 2012). However, clinical faculty must be able to manage effectively the stressors of the clinical setting, where lessons can be unpredictable and the environment is often laden with intense emotion (Gerolamo & Roemer, 2011; Ondrejka, 2013; Roberts, Chrisman, & Flowers, 2013). Emotional Intelligence (EI) may facilitate CTE because higher EI has been associated with improved management of stress in both nursing and the general workplace (Goleman, 1995; Görgens-Ekermans & Brand, 2012; Karimi, Leggat, Donohue, & Cooper, 2014). EI modulates the stress response and may enhance faculty’s ability to teach in the clinical setting (Ondrejka, 2013). However, to date, only one study has investigated the relationship between EI and CTE in nursing faculty, and this study was limited to a small sample at one institution (Allen, Ploeg, & Kaasalainen (2012). The present study investigated the relationship between EI and CTE from a stratified sample of clinical nursing faculty at baccalaureate institutions in New York State. Results from this study may be used to enhance the understanding of the role EI plays in CTE and can, in turn, be used for future faculty development.
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I want to particularly thank my husband, Michael, for his unwavering support in all my academic pursuits. I promise this is the last degree sweetheart. I also want to dedicate this project to my three beloved children, Michael, Jeanine, and Christopher, and my two special grandchildren, Chandler and Gabriel. They are the future, and the reason to make the world a kinder, better place.
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CHAPTER ONE

Introduction and Background

The anticipated aging of the American population and nursing workforce is a universal factor that contributes to the prediction of a long-term nursing shortage (American Association of Colleges of Nursing [AACN], 2014; National League for Nursing [NLN], 2012). Paralleling and compounding the current nursing shortage is a nursing faculty shortage, and nursing programs routinely turn away qualified candidates because of a shortage of nursing faculty (AACN, 2014; Institute of Medicine [IOM], 2010). Many nursing programs are unable to fill open faculty positions, and faculty encounter significant stress as they manage increasing numbers of students (AACN, 2014; Gerolamo & Roemer, 2011; Roberts, Chrisman, & Flowers, 2013). In the context of this acute nursing faculty and nursing workforce shortage, optimizing the effectiveness of existing clinical instructors is paramount because they develop the roots of students’ future practice (Benner, Sutphen, Leonard, & Day, 2010; Knox & Mogan, 1985; Nehring, 1990). Emotional Intelligence (EI) may be a variable that increases Clinical Teaching Effectiveness (CTE) by modulating the effect of stress on clinical nurse faculty (Allen, Ploeg, & Kaasalainen, 2012; Goleman, 1995).

EI has been defined as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990, p. 189). EI may facilitate the effectiveness of clinical teaching because higher EI has been associated with improved management of stress in both nursing and the general workplace (Goleman, 1995; Görgens-Ekermans & Brand, 2012; Karimi, Leggat, Donohue, & Cooper, 2014). EI may also support teaching using the affective domain, an essential competence of nursing educators (Halstead, 2007; Ondrejka, 2013). CTE is the
measured outcome of a teaching-learning process that enables students to apply theoretical knowledge, psychomotor skills, and affective attitudes to ever-changing patient situations, and requires a different set of skills than classroom instruction (AACN, 2008; Knox & Mogan, 1985; Ondrejka, 2013). Managing emotions is an integral part of CTE, and EI may help faculty manage the complex emotional responses that can occur when goals for holistic care conflict with the goals of a market-driven health care system (Adair & McConnell, 2014; Allen et al., 2012; Chan, Sit, & Lau, 2014; Görgens-Ekermans & Brand, 2012; Karimi et al., 2014). EI also enhances a faculty’s sense of self-awareness and allows for a more seamless integration of the cognitive, psychomotor, and affective domains of learning, which help students build holistic practice (Ondrejka, 2013). EI has been associated with greater teacher self-efficacy and improved student outcomes in secondary school faculty (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010; Chan, 2004) and postsecondary faculty (Jenkins, 2006; Singh & Jha, 2012). However, research on the relationship between EI and clinical teaching in nursing faculty is very limited (Allen et al., 2012). This study investigated the relationship between EI and CTE in clinical nursing faculty teaching in pre-licensure baccalaureate nursing programs in New York State.

Problem Statement/Need for the Study

While an abundance of research has investigated the link between EI and outcomes in various settings, there is a dearth of research examining the relationship between the EI of clinical faculty and CTE (Allen et al., 2012; Freshwater & Stickley, 2004). To date, Allen et al. (2012) have been the only researchers to investigate this relationship and find a statistically significant relationship (p < .01) between overall EI and CTE. These findings are of merit and similar to associations with EI and improved performance in other areas of nursing, namely
nursing students (Beauvais, Brady, O’Shea, & Quinn-Griffin, 2011; Benson, Ploegg, & Brown, 2010), staff nurses (Codier, Kamikawa, Kooker, & Shoultz, 2009; Sharif, Rezaie, Keshavarzi, Mansoori, & Ghadakpoor, 2013), and nurse administrators (Cummings, Hayduk, & Estabrooks, 2005). However, few studies have examined the role of EI in teaching effectiveness of nursing faculty and only Allen et al. (2012) investigated how the EI of clinical faculty correlated with teaching effectiveness. Unfortunately, Allen et al.’s research is limited in generalizability to other settings because the sample (n = 47) was small and restricted to one institution. As nursing faculty continue to work within an enduring faculty shortage, factors such as EI that may impact CTE need to be identified and used for faculty development.

Many issues influence the nursing faculty shortage, but the common denominator is that, like the nursing shortage, it is only predicted to worsen (AACN, 2014). Financial compensation and high workloads are key factors preventing the recruitment of new faculty to academia because economic incentives in the clinical realm are far more attractive and perceived as more equitable to the work expended (Disch, Ewardson, & Adwan, 2004). Additionally, nursing faculty have frequently found that their highly developed clinical skills are not valued in academia because the academic environment emphasizes research and scholarship over clinical excellence (McDermid, Peters, Daly, & Jackson, 2013). This creates barriers for recruitment as well as promotion and tenure, especially for clinically experienced nursing faculty. As a group, nursing faculty have also earned far less money than similarly qualified nurses employed in health care settings and less money than their peers in other disciplines in academia (Kaufman, 2007a). Not surprisingly, 25% of these nursing faculty respondents planned to leave their positions, which further exacerbated the faculty shortage (Kaufman, 2007b).
In response to the growing faculty shortage, nursing programs hire many clinical adjunct faculty who can maintain their higher-paying clinical jobs while serving as adjunct faculty (McDonald, 2010; McDermid et al., 2013; Roberts et al., 2013). While clinical adjunct faculty are often clinical experts, they are also novice educators who need a great deal of mentoring to transition into a faculty role. The literature is replete with suggestions to provide increased orientation and mentoring of clinical adjunct faculty by full-time faculty (Koharchik, 2014; McDermid et al., 2013; McDonald, 2010; Waldrop & Chase, 2014; Zupiniac, 2011). However, the feasibility of extensive orientation and mentoring programs for clinical adjunct faculty is not realistic or sustainable, given the high workloads of nursing faculty (Gerolamo & Roemer, 2011). The lack of mentoring creates significant stress for adjunct faculty in the role transition from expert clinician to novice educator (McDonald, 2010; McDermid et al., 2013; Roberts et al., 2013). This poses a conundrum because, according to Billings and Halstead (2012), clinical teaching is one of the most effective methods of instruction, yet often the least experienced educators are responsible for a significant amount of clinical teaching in many nursing programs (Koharchik, 2014).

The nursing faculty shortage raises concern about CTE as faculty continue to teach in stress-laden environments. Extrinsic stressors such as sustainable workloads, inequitable compensation, and inability to mentor new faculty are related to societal trends and thus not likely to be resolved in the near future. This demands a new approach to the problem. An alternative may be to examine intrinsic motivators for job performance, such as EI, that may empower faculty with the competencies needed to be effective, despite societal and economic trends that are depleting resources in nursing education. EI reflects the intrinsic, dispositional traits of individual faculty and has been associated with greater CTE (Allen et al., 2012) and
improved overall effectiveness in the workplace (Goleman, 1995; Schutte, & Loi, 2014). Intrinsic motivators are more powerful predictors of workplace performance than extrinsic motivators and can transcend the stressors of the workplace, improving overall job performance (Chrusciel, 2008; Lavoie-Tremblay, Blanchard, Taylor, Pelletier, & Villeneuve, 2009).

Since EI has been linked to improved job performance and CTE, examining the role EI plays in the CTE of clinical nursing faculty may provide insights that can be used for faculty development. Enhanced EI may assist faculty in embracing one of the core competencies of effective nurse instructors: the ability to facilitate learner development and socialization (Halstead, 2007). Within this competence, it is expected that educators will “create learning environments that facilitate learners’ self-reflection, personal goal setting, and socialization to the role of the nurse” and “foster the development of learners in these areas: cognitive domain, psychomotor domain, affective domain” (NLN, 2012a, p. 2). EI supports the affective domain of teaching, improves communication, and helps faculty socialize students into the profession (Ondrejka, 2013). In the context of an acute nursing faculty shortage, optimizing the effectiveness of existing clinical educators is paramount and facilitating EI may be an important variable in this process.

**Significance of the Study**

Since 2004, the United States has consistently ranked last on measures of health care outcomes compared to other developed nations, despite having the greatest per capita health care expenditure in the world (Davis, Stremikis, Schoen, & Squires, 2014). In tandem with this health care crisis, the United States is also faced with an enduring nursing shortage, which is inextricably linked to the nursing faculty shortage (AACN, 2014). In the face of this crisis, it is imperative that nursing faculty are effective clinical educators and can promote the development
of clinical reasoning skills, while integrating the utility of knowledge from the social sciences and humanities (Benner et al., 2010; McIntyre & McDonald, 2013). Only the clinical setting can provide experiences with live patients in the real-time context of the health care system, which helps students build experiential knowledge, develop clinical decision-making skills, and assimilate the diversity of knowledge learned in their nursing programs (Lisko & O’Dell, 2010). Clinical faculty plays a key role in facilitating this process and socializing student into the profession.

The ability of clinical faculty to deliver quality instruction while balancing the stressors of the academic and clinical environments will become even more important in years to come as the country faces a nursing shortage that is predicted to be one of the worst in U.S. history (AACN, 2014). As an intrinsic trait, EI may be a variable that affects CTE and may transcend the ubiquitous external stressors inherent in a clinical nursing faculty role. Yet, the link between these two variables is not clear because prior research was limited to a small sample at one institution (Allen et al., 2012). No other research has been conducted to investigate this phenomenon. To address this gap in the research, this study investigated the relationship between the EI of clinical nursing faculty and CTE from a stratified sample of clinical nursing faculty in pre-licensure baccalaureate nursing programs in New York State. While these results will only be generalizable to nursing faculty in New York State, this research may provide insights into the relationship between EI and CTE and may be used for faculty self-development and potential improvement of CTE in other nursing programs.

**Theoretical Rationale**

Salovey and Mayer (1990) defined EI as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s
thinking and actions” (p. 189). The measurement of EI has been used in many employment and academic settings to predict outcomes that cannot be explained by traditional cognitive intelligence measurement tools (Goleman, 1995). It is particularly applicable as a framework for examining the CTE of nursing faculty because EI addresses the affective domain of the teaching-learning process. Affective teaching is a core competence of effective nursing instruction (NLN, 2012a). Competence in the affective domain enables faculty to implement a collaborative teaching-learning relationship in which students can conceptualize a professional value system that has meaning to them (Ondrenjka, 2013). Faculty who prioritize the emotional aspects of patient care serve as role models for holistic practice and, in turn, may inspire students to behave in a manner that values emotional interactions in patient care (Allen et al., 2012; Freshwater & Stickley, 2004).

Freshwater and Stickley (2004) emphasized that EI should be at the core of every nursing curriculum because it will help prevent the “McDonaldization” (p. 96) of health care, where technical skills are emphasized, the patient is a product, and nursing care is homogenized. However, it is important to consider societal context in this discussion because modern society places a high value on technology and empirical knowing. Empirical knowledge is commonly thought of as indicative of greater cognitive intelligence, even though EI may have a far greater impact on workplace effectiveness and general success in life (Goleman, 1995; Ondrejka, 2013; Schutte & Loi, 2014). Nursing programs may have inadvertently embraced this societal value by prioritizing the acquisition of psychomotor nursing skills over the emotional aspects of a nurse-patient relationship that develops from affective learning (Benner et al., 2010; Ondrejka, 2013). This trend is concerning because the ability to teach in the affective domain has been clearly identified as a core competence of effective nursing instruction (NLN, 2012a). The affective
domain of learning builds caring, holistic nursing practice (Ondrejka, 2013). The theory of EI has led to the development of measurement tools that can quantify EI, thus creating a mechanism that may identify traits of faculty that are indicative of high EI. From this analysis, the factors of EI can be correlated with the factors of CTE. These results may provide a greater understanding of the intrinsic, emotional motivators that provide the foundation for CTE, and may facilitate a more seamless integration of the cognitive, affective, and psychomotor learning domains in clinical teaching (Ondrejka, 2013).

**Research Questions**

1. What is the relationship between the total score of Emotional Intelligence (EI) and the total score of Clinical Teaching Effectiveness (CTE) of clinical nurse faculty teaching in pre-licensure baccalaureate programs?

2. What is the relationship between the factors of EI and the factors of CTE in clinical nurse faculty teaching in pre-licensure baccalaureate programs?

**Hypotheses**

1. Research Question #1:

   H₀: There will be no statistically significant relationship between the total score of Emotional Intelligence and the total score of Clinical Teaching Effectiveness of clinical nurse faculty teaching in pre-licensure baccalaureate programs.

   H₁: There will be a statistically significant relationship between the total score of Emotional Intelligence and the total score of Clinical Teaching Effectiveness of clinical nurse faculty teaching in pre-licensure baccalaureate programs.
2. Research Question #2:

H₀: There will be no statistically significant relationship between the factors of EI and the factors of CTE in clinical nurse faculty teaching in pre-licensure baccalaureate programs.

H₁: There will be a statistically significant relationship between the factors of EI and the factors of CTE in clinical nurse faculty teaching in pre-licensure baccalaureate programs.

**Research Design**

A descriptive correlational design was used to answer the research questions and test the hypotheses. The Schutte Self-Report Emotional Intelligence Test (SSREIT) was used to measure EI and the Nursing Clinical Teaching Effectiveness Inventory (NCTEI) was used to measure CTE. Correlational statistical analyses were done on the data to examine relationships between total scores on the SSREIT and the NCTEI and the relationships between individual factors of each test.

**Definition of Terms**

*Emotional Intelligence:* Salovey and Mayer’s (1990) research formed the conceptual basis for this study, with EI defined as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (p. 189). Three categories of EI were identified: appraisal and expression of emotions, regulation of emotions, and utilization of emotions (Salovey & Mayer, 1990). These were represented by the following four factors in the SSREIT: perception of emotions, management of emotions in self, management of others’ emotions, and utilization of emotions (Schutte et al., 1998).
Clinical Teaching Effectiveness: The conceptual definition of CTE is derived from The Baccalaureate Essentials for Professional Nursing Practice and is defined by how effectively a clinical instructor prepares nursing students to “practice with patients, including individuals, families, groups, communities, and populations across the lifespan and across the continuum of health care environments” and facilitates instruction in which the student “understands and accepts the variations in care, the increased complexity, and the increased use of health care resources inherent in caring for patients (AACN, 2008, p. 4). Knox and Mogan (1985) operationalized a method to measure CTE from the results of a qualitative study (Mogan & Knox, 1983) investigating students’ perceptions of effective clinical faculty. Five factors of CTE were identified and operationalized in the development of the Nursing Clinical Effectiveness Inventory (NCTEI): teaching ability, nursing competence, evaluation, interpersonal relationships, and personality traits (Knox & Mogan, 1985).

Clinical Nursing Faculty: Registered nurses employed as nursing instructors or professors in a baccalaureate pre-licensure nursing program who have taught in the clinical setting within the last two years and have a minimum of one clinical teaching experience.

Nursing Student: An individual matriculated into a baccalaureate pre-licensure nursing program.

Limitations

The present study has the following limitations:

1. There may be environmental variables that impact EI that were not measured.
2. There may be demographic variables that impact EI that were not measured.
3. The instruments are self-report measures and are subject to the respondents’ honesty in reporting.
Delimitations

The study has the following delimitations:

1. Only schools in New York State were chosen and results may not be generalizable to other geographic regions.
2. Measurements of EI are restricted to the parameters defined in the SSREIT.
3. Measurements of CTE are restricted to the parameters defined in the NCTEI.

Assumptions

It is assumed that (a) EI impacts clinical performance and (b) the CTE of clinical faculty impacts students’ clinical performance.

Summary

The nursing faculty shortage has led to faculty managing larger classes and clinical groups (AACN, 2014). In an attempt to alleviate the shortage, nursing programs have employed increasing numbers of adjunct faculty, who may be clinical experts but also need mentoring because they are novices in the faculty role (McDermid et al., 2013; Roberts et al., 2013). This places great demands on the workload of full-time faculty, who are already managing larger groups of students and balancing the needs for service and scholarship with teaching (Gerolamo & Roemer, 2011). These societal trends have placed extra stressors on nursing faculty. This is particularly concerning in the clinical setting, given that clinical instructors form the roots of practice for graduate nurses, and it is important to measure and nurture the development of CTE in faculty (Knox & Mogan, 1985; Lovric et al., 2014; Nehring, 1990).

Emotional Intelligence may increase CTE by modulating the stress response, thereby enhancing faculty’s ability to teach in the affective domain and model holistic nursing practice, despite extrinsic stressors (Allen et al., 2012; Freshwater & Stickley, 2004; Ondrejka, 2013). EI
has been associated with more effective instruction in both secondary and postsecondary settings and improved overall workplace performance (Brackett et al., 2010; Chan, 2004; Goleman, 1995; Jenkins, 2006; Schutte & Loi, 2014; Singh & Jha, 2012). Emotional Intelligence may identify the underlying, intrinsic traits that affect CTE. The external constraints and stressors of the nursing faculty shortage show little sign of receding, and an understanding of intrinsic motivators for CTE, such as EI, may be useful for professional development of clinical nursing faculty.
CHAPTER TWO

Literature Review

Introduction

This quantitative study investigated the relationship between the independent variable of emotional intelligence (EI) of clinical nurse faculty and the dependent variable of clinical teaching effectiveness (CTE) of clinical nurse faculty. The overall EI score was compared to the overall CTE score, and the four factors of EI (perception of emotions, management of emotions in self, management of others’ emotions, and utilization of emotion) were further analyzed and correlated with the five factors of CTE (teaching ability, nursing competence, evaluation, interpersonal relationships, and personality traits) (Knox & Mogan, 1985; Schutte et al., 1998). Data were obtained from 34 baccalaureate institutions in New York State that are accredited by the National League for Nursing (NLN) or The Commission on Collegiate Nursing Education, with proportional representation from each school according to the size of the nursing program.

The following literature review presents the theory of emotional intelligence, discusses the historical and philosophical development of the theory, and examines relevant literature on the topic. Additionally, existing literature on the concept of clinical teaching effectiveness is discussed, with attention to the significance of exploring the link between EI and CTE.

Literature supporting the rationale for the research methodology is also discussed, along with an analysis of existing research that demonstrates a gap in the literature and establishes this study as original research.

Theoretical Basis: Emotional Intelligence

According to the seminal work of Salovey and Mayer (1990), EI is the “ability to monitor emotions, discriminate among them, and use the information to guide thinking and action”
(p. 189). Different models of EI have evolved since the theory first appeared in the professional literature in 1990, such as Salovey and Mayer’s (1990) ability model and Schutte et al.’s (1998) trait model, which are discussed in greater detail later in this chapter. However, despite the appearance of these two different models, the theoretical basis of EI remains largely the same, with the underlying assumption that people have different capabilities for understanding and expressing emotion that are rooted in underlying skills (Salovey & Mayer, 1990). Schutte et al. (1998) and Mayer and Salovey (1997) both based their models on Salovey and Mayer’s (1990) original work, and created measurement tools that quantify EI. While these models are operationalized differently, they both measure the fundamental concepts of Salovey and Mayer’s (1990) theory: appraising and expressing emotions, regulating emotions, and using emotions in adaptive ways. Measurement of these concepts provides insight into how emotions enhance an individual’s ability to manage the stressors of the environment (Schutte, Malouff, & Bhullar, 2009). Clinical teaching is a stressful endeavor, and EI may modulate the effect of stress on individuals. It stands to reason that EI may be a variable that impacts CTE (Allen et al., 2012).

The idea that emotions support successful management of stress is controversial because modern Western society has dichotomous views on the value of emotions in governing human action (Salovey & Mayer, 1990). One end of the spectrum supports the assumption that emotions are disorganized processes that disrupt cognitive function, while the other end of the spectrum supports the assumption that emotions are adaptive processes that organize cognitive thought and subsequent action (Salovey & Mayer, 1990). The theory of EI subscribes to the latter assumption, and maintains that emotions are not antithetic to the successful adaptation of human beings, but are rather a form of intelligence that is integral to the very nature of human adaptation.
Philosophical Underpinnings of Emotional Intelligence Theory

The philosophical roots of EI theory date back to Socrates (approximately 300 BC), who asserted that people should pursue virtue through knowledge of the self, and use their inner nature to guide moral action (Payne, 1985). Socrates’ philosophy was widely criticized and he was condemned to death for “not recognizing the gods recognized by the state, introducing new divinities, and corrupting the young” (p. 7). Despite Socrates’ untimely demise, his student, Plato, continued to study the philosophy and believed thought, emotion, and free will were interrelated and that “All learning has an emotional base” (as cited in Assanova & McGuire, 2009, p. 1). The controversy continued, however, and Socrates’ philosophy clashed with the widely held tenets of Greek Stoicism, which alleged that reason was superior to emotion. The influence of the Stoics guided much of the development of Judeo-Christian doctrine, and the promise of immortality in exchange for following a predetermined set of life rules was in direct opposition to Plato’s assertion that inner reflection and free will should guide human action (Payne, 1985). This dichotomy in thought continued to fluctuate over the century, but the advent of the scientific revolution in the late 1500s, based on positivist philosophy, brought a new emphasis on rationality as superior to emotional responses, and had little room for ideas that could not be “proven” (Ondrejka, 2013; Payne, 1985). However, Darwin’s (1872) theory of evolution once again stressed the importance of emotions in the survival and adaptation of human beings, and both schools of thought remained viable, although rational thought continued to be commonly perceived as indicative of overall intelligence and predictive of life success (Payne, 1985).

Despite persistent societal beliefs into the 20th century that scientific, rational thought was solely indicative of intelligence, the concept of emotions as a component of intelligence
continued to develop. Thorndike and Stein (1937) investigated the idea of “social intelligence” and postulated that the ability to manage and understand people was an element of overall intelligence that was poorly understood, yet played a significant role in how individuals manage their environments. Around the same time period, Wechsler (1940) identified that individuals with equivalent cognitive intelligence quotients (IQs), as measured by the Stanford-Binet test, had varying abilities to manage and cope with stressors and found a 30-50% total factorial variance between individuals. This suggested that coping skills and life success were determined by factors other than scores on traditional intelligence tests. Gardner (1983) proposed that multiple forms of intelligence are used to process information and adapt to the environment. However, it was not until Payne (1985) coined the term *Emotional Intelligence* in a doctoral dissertation that a theoretical framework for EI began to develop. Salovey and Mayer (1990) first introduced EI in the psychology literature in and, since then, a great deal of research has established EI as a new theory of intelligence (Schutte, Malouff, & Thorsteinsson, 2013).

**Modern Development of Emotional Intelligence Theory**

The theoretical framework of EI identified three categories of abilities that impact successful adaptation to the environment: appraisal and expression of emotions, regulation of emotions, and utilization of emotions in solving problems (Salovey & Mayer, 1990). From this conceptual basis, Mayer and Salovey (1997) refined the original three concepts as perceiving emotions, facilitating thought, understanding emotions, and managing emotions—thus separating the appraisal and expression of emotions into separate categories. These four concepts were used to develop the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (Mayer, Salovey, Caruso, & Sitarenios, 2001). Goleman (1995) popularized the term EI with the bestseller *Emotional Intelligence—Why It Can Matter More Than IQ* and found that cognitive
intelligence only accounted for 20% of employee achievement in the workplace. This brought the concept of EI into the mainstream of modern culture, and paved the way for a wider acceptance of the role emotions play in workplace success. Schutte et al. (1998) developed a model of EI based on Salovey and Mayer’s (1990) seminal work and created the Schutte Self-Report Emotional Intelligence Test (SSREIT), which was used in this study to measure the EI of clinical nurse faculty. Bar-On (2006) also developed a model of EI and the Emotional Quotient Inventory (EQ:i). Although these researchers had slightly different adaptations of the original theory, the underlying conceptual basis remained the same—namely that EI is a complex interplay of the expression, appraisal, and utilization of emotions that impacts performance and adaptation to the environment (Salovey & Mayer, 1990). There also is general consensus among researchers that EI is a competence that can be learned by helping individuals develop skills to manage their emotions (Bar-On, 2006). Several different operational models have developed from the original theoretical constructs of EI.

Models of Emotional Intelligence Theory

EI has been conceptualized in several different operational models, which can be broken down into two categories: trait EI and ability EI (Schutte et al., 1998). These categories are not theoretically different, but rather represent different operational perspectives of EI. Psychological theories rely heavily on operational definitions that measure behavioral and thought processes, and models of EI are best understood through operational rather than conceptual definitions (Petrides, 2010). Ability EI models measure the ability of individuals to accomplish tasks and solve emotional problems through the accurate assessment and management of emotions, and EI is measured in ability models by performance (Samad, 2014). Trait EI models, on the other hand, examine EI as a constellation of intrinsic personality
constructs that reflect dispositional tendencies, and measurement of EI in trait models relies heavily on self-perception (Petrides, 2010).

Despite the difference in the measurement techniques of trait and ability models of EI, both models measure the same concepts of the theory. For example, an ability model of EI would measure the concept of appraising emotions in others by showing an individual a picture of a face and measuring whether the person could accurately identify the expressed emotions (Mayer et al., 2001). On the other hand, a trait model of EI would measure that same concept by asking an individual to rate their ability to identify emotions in others via facial expression (Schutte et al., 1998). The ability model measures performance and the trait model measures self-perception of performance. Although perspectives on EI may differ in the literature, the general consensus is that EI can be developed and improved over time through training or therapy, and may predict performance better than cognitive intelligence in many areas of life (Bar-On, 2006; Schutte et al., 2009; Van Der Zee, Thijs, & Schakel, 2002). Ability and trait measurements of EI should not be considered as opposing elements of EI theory, but instead as harmonizing, operationalized aspects of the same conceptual basis (Schutte et al., 2009).

For the purposes of this study, the SSREIT was used to measure trait EI. Petrides and Furnham (2001) identified the importance of self-perception in trait EI by describing trait EI as “a constellation of behavioral dispositions and self-perceptions concerning one’s ability to recognize, process, and utilize emotion-laden information” (p. 278). The SSREIT uses self-perception to measure EI and has been used extensively worldwide. The reliability and validity of the tool is discussed in Chapter Three.
Trait Emotional Intelligence and Clinical Teaching Effectiveness

Measuring the relationship between the teaching effectiveness of clinical faculty and EI is the focus of this study, and at first glance an ability model of EI may seem more suitable than a trait model. Indeed, this study measured the ability of faculty to teach effectively, and self-perception of emotions or dispositional traits may seem inconsequential at first glance. However, trait models of EI capture traits that lead to better workplace outcomes and have been particularly effective when used in organizational culture to predict internal locus of control (Johnson, Batey, & Holdsworth, 2009; Petrides, 2011). Individuals with an internal locus of control are generally motivated intrinsically and, as discussed previously, intrinsic motivators are better predictors of job performance than extrinsic motivators (Lavoie-Tremblay et al., 2009). A trait model of EI may identify intrinsic traits that provide motivation for clinical faculty’s job performance better than an ability model. Additionally, the categories of personality traits and interpersonal relationships comprise 40% of Mogan and Knox’s (1987) Nursing Clinical Teaching Effectiveness Inventory (NCTEI), which was used to measure CTE. The inclusion of personality traits and interpersonal relationships in the NCTEI mirrors the conceptual basis of EI, because appraisal, expression, and regulation of emotions could be considered integral parts of personality and interpersonal relationships, and may be associated with the ability to teach in unpredictable clinical settings.

Stressors inherent in the faculty role may influence the CTE of nursing faculty, and higher EI may help faculty teach more effectively in stressful and unpredictable clinical environments (DeSantis, 2012; Kaufman, 2007a; McDermid et al., 2013; Roberts et al., 2013). The work of clinical nursing faculty is often fraught with unanticipated stressors that tax the emotions and require a great deal of emotional labor (Dalpezzon & Jett, 2010; Gerolamo &
Higher EI has been positively associated with better performance in jobs that entail emotional labor, such as nursing and teaching (Benner et al., 2010; Joseph & Newman, 2010). Karimi et al. (2014) used the SSREIT to measure EI in staff nurses and the effect on stress, emotional labor, and emotional dissonance. They found the moderating effects of EI on stress, emotional labor, and emotional dissonance to be significant (p < 0.05). Por, Barriball, Fitzpatrick, and Roberts (2011) also used the SSREIT to measure EI in nursing students and the association with well-being and perceived stress. They found EI was positively related to well-being (p < 0.05) and negatively related to perceived stress (p < 0.05). Singh and Jha (2012) found a positive correlation (p < 0.01) with higher EI and teaching effectiveness in medical and engineering faculty. Given these links, it is likely that higher EI may help nursing faculty successfully manage the emotional labor and challenges inherent in clinical teaching with nursing students.

Clinical teaching is challenging and requires competent educators who can successfully integrate the cognitive, psychomotor, and affective domains of learning in unpredictable clinical settings (Allison-Jones & Hirt, 2004; Benner et al., 2010; Halstead, 2007; Ondrejka, 2013; Zupiniac, 2011). The clinical environment often provokes unsettling emotional responses for both students and educators. A positive learning environment that encourages free exchange of ideas and open dialogue is an essential competence of nurse educators, and helps students link their own emotions and values to the principles of nursing practice (NLN, 2012a; Ondrejka, 2013). However, creating this environment requires faculty who are able to manage the stressors of the clinical setting, while simultaneously managing the emotions of the student, self, and patient.
EI may moderate the effect of stress on the performance of clinical faculty. The trait intelligence measure of EI may be particularly predictive because individuals who score high on these measures of EI are more likely to view stressors as challenges and display less physiological reactivity (as displayed by lower salivary cortisol) and less psychological reactivity when encountering stressors (Mikolajczak, Roy, Luminet, Fillee, & de Timary, 2007). This finding is significant in that this study used a trait measurement of EI: the SSREIT. Higher trait EI may increase adaptive responses to stress and improve CTE (Schutte & Loi, 2014). The SSREIT is based on a trait model and was used to measure EI in clinical nurse faculty because it may identify self-perceptions and dispositional traits that impact CTE.

**Conceptual Basis of Trait EI**

The SSREIT is based on a trait model, but incongruously, the constructs of the tool were developed from Salovey and Mayer’s (1990) original conceptual work on EI, which was later used to create an ability model of EI: the MSCEIT (Mayer & Salovey, 1997). However, the adaptation of the SSREIT from Mayer and Salovey’s (1990) work supported Schutte et al.’s (2009) premise that ability and trait models are not mutually exclusive, but instead measure complementary dimensions of EI. The context and purpose of the measurement determine the appropriate selection of the model and tool. The SSREIT, based on a trait model of EI, was chosen for this study because measurement of intrinsic, dispositional traits may provide more information on the link between EI and CTE. However, both models are based on the same conceptual foundation.

Three concepts of EI were depicted in Salovey and Mayer’s (1990) theory: appraisal and expression of emotions, regulation of emotions, and utilization of emotions. These concepts were represented in the original version of the SSREIT, but subsequent factor analyses suggested
the following four factors as a representation of the constructs instead: perception of emotions, managing emotions in the self, managing others’ emotions, and utilizing emotions (Ciarrochi, Chan, & Bajgar, 2001; Petrides & Furnham, 2001; Saklofske, Austin, & Minski, 2003). These four factors are currently used when analyzing the SSREIT. They represent broad constructs of EI and are used to measure self-perception of emotions, with an underlying assumption that these emotions influence EI and an individual’s ability to manage the stressors of his or her environment (Schutte et al., 2009).

**Emotional Intelligence as a Unique Construct/Criticism of the Theory**

The theory of EI has only been in the professional literature since 1990, with many subsequent studies leading to somewhat diverse interpretations, as mentioned previously in the comparison of different operational models of EI (Salovey, Brackett, & Mayer, 2005). As EI theory is relatively new, this inquiry and debate are not unexpected and future research will guide the development of different ways to measure the construct, perhaps uncovering new directions for the use of EI theory in society. To place the diverse interpretations of EI theory in perspective, cognitive intelligence tests have existed since 1905 and were based on general intelligence theory; moreover, there is a plethora of measurement tools and literature supporting the construct of cognitive intelligence (Becker, 2003). However, even with over 100 years of research, the value of cognitive intelligence tests has evolved over time, and new knowledge has led to the development of new theories of intelligence, one of which is EI (Salovey, Mayer, & Caruso, 2000). The emergence of a new theory of intelligence does not negate the fact that cognitive intelligence exists. Instead, the emergence of EI theory serves to enhance the overall understanding of the true nature of intelligence(s). EI theory reflects the growth of knowledge in the field of intelligence and a willingness to consider alternate forms of intelligence. However,
to be considered a theory, a construct must identify a unique property and have a unique variance unrelated to other constructs.

Uncertainty over whether EI measures a new construct or has a unique variance has been a frequent criticism during the development of EI theory (Brackett & Mayer, 2003; Salovey & Mayer, 1990). Although research has consistently linked higher EI to improved outcomes in the workplace and academia, some researchers have raised concern that measures of EI are too closely correlated with the Big Five personality traits (neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness), which are well established measures of personality constructs (Andi, 2012; Brackett & Mayer, 2003; Van der Linden, Tsaousis, & Petrides, 2012). This correlation could indicate that EI scores may reflect well-known personality traits instead of representing a unique measurement of EI (Van der Linden et al., 2012).

Opinions in the literature are conflicted about the establishment of EI as a unique construct separate from personality measures; because the theory is fairly new, further research is needed to firmly establish EI as having a unique variance that is not shared with accepted measures of personality (Karim & Shah, 2014). Van der Linden et al. (2012) found that General Factors of Personality overlapped with measures of trait EI ($r = .72$), raising speculation that dimensions of EI are not unique. However, it is important to bear in mind that most psychological constructs and measurement tools relate to one or more of the Big Five personality dimensions and, consequently, some overlap in the measurement of EI may be expected (Schutte et al., 1998). Although this phenomenon has been investigated, there are inconsistencies in the research.
Examining the effect of EI when the Big Five personality constructs were controlled has yielded inconsistent results in the research. Brackett, Mayer, and Warner (2004) found a statistically significant difference between low EI in male college students and illegal drug and alcohol use, deviant behavior, and relationships with friends (rs = -0.28 to -0.45) after controlling for the Big Five personality constructs. However, this difference only applied when the MSCEIT was used. When Brackett et al. (2004) used the SSREIT and the Bar-On Emotional Intelligence Quotient Inventory in the same study, both tools shared significant variance with the Big Five (R = .70, R = .75, respectively), indicating in this study that the measurement of EI may have been independent of personality constructs only when the MSCEIT was used. However, Schutte et al. (1998) found that EI was separable from four of the Big Five personality constructs when using the SSREIT to investigate the relationship between EI and academic grade point average, but they did find a significant correlation with the personality construct “openness to experience” and EI. Then again, high scorers in “openness to experience” are described as perceiving emotional reactions as important, and some correlation between this construct and EI is predictable (Schutte et al., 1998). Karim and Shah (2014) found a statistically significant correlation between EI and suicidal ideation when the Big Five personality constructs, affectivity, and cognitive intelligence were controlled (p < .001), indicating that EI may have a unique variance above and beyond personality constructs. Nonetheless, a commonality among the research is some inconsistency in the results of studies controlling for personality constructs when measuring EI.

The inconsistencies in the research between EI and the Big Five may also indicate that an unknown factor is influencing the results, and further research may uncover this unknown factor. Andi (2012) proposed that EI could actually be a precursor to the development of personality
traits, explaining the correlation between EI and personality constructs that some researchers have found. As a precursor to personality development, EI may have a very distinct set of properties completely independent of personality measures. Should this prove to be the case, a reconceptualization of personality would emerge that assumes personality stems from EI, not vice versa. Certainly, more exploration needs to be done on the link between EI and personality, which is not the purview of this study, but it is salient because the measurement of personality traits is one dimension of CTE (Mogan & Knox, 1987). It is known that a great deal of research supports the hypothesis that EI is associated with improved performance, but further research needs to be done to establish a unique variance of EI above and beyond the effect of personality traits. Nonetheless, EI remains a promising new theory, and further research is needed to examine alternative measurement approaches, the origin of the traits associated with EI, and applications for the EI theory in society (Schutte & Loi, 2014; Schutte, Malouff, & Thorsteinsson, 2013). Examining the association between EI and CTE may uncover another societal application of EI theory and will add to the body of knowledge on EI theory.

**Emotional Intelligence in Nursing Education**

The ability of faculty to teach in the affective domain serves to develop empathic, caring behaviors in nursing students, a process that may be influenced by the EI of both the teacher and the learner (Freshwater & Stickley, 2004; Ondrejka, 2013; Wilson & Carryer, 2008). Enhanced EI of nursing faculty may improve communication, foster open dialogue, and facilitate role modeling of holistic practice. These are essential competencies of effective nurse educators and support the goals of a baccalaureate nursing education (AACN, 2010; Halstead, 2007; NLN, 2012a; Ondrejka, 2013).
Nursing students. The demands of clinical teaching necessitate that faculty teach students how to balance cognition with emotions, manage conflict, and deliver holistic care in highly charged emotional environments (Por et al., 2011). Chan et al. (2014) used the SSREIT to examine the correlation between EI and conflict management in undergraduate nursing students. EI was positively significantly associated with all conflict management styles (p ranging from < .001 to 0.05), except avoidance which had a negative correlation (p = - 0.010). These results suggest that EI may improve students’ ability to manage emotionally-laden situations in future nursing practice. Benson, Martin, Ploeg, and Wessel (2012) examined the association of EI with leadership ability and caring in undergraduate nursing students in a longitudinal study. The Bar-On Emotional Quotient Inventory: Short (EQ-i:S), Self-Assessment Leadership Instrument (SALI), Caring Ability Inventory (CAI), and Caring Dimensions Inventory (CDI) were used. Significant increases occurred in caring and EI adaptability (p < 0.01) but not in overall EI or leadership. While these studies imply an association between EI and improved caring behaviors, it seems peculiar that leadership ability is not associated with EI, particularly considering the results of Chan et al. (2013) indicating an association between better conflict management and EI in nursing students. There was also no increase in the total EI score as students progressed through the curriculum. The inconsistent results are opportunities for further research.

Furthermore, there are inconsistencies in the research investigating the development of EI in nursing students during their educational experience as well. Beauvais et al. (2011) measured EI in nursing students with the MSCEIT and correlated it with the Nursing Performance Subscale and Total Scores (6-D Scale). EI was correlated with improved overall nursing performance at α < 0.05, demonstrating that EI may improve the performance of nursing
students. Benson et al. (2010) also examined the EI of nursing students in a cross-sectional study and found the EI scores of nursing students increased as they progressed in the program (p = <0.05), with the highest scores occurring in the fourth year of study. They recommended further longitudinal research on the relationship. However, as previously mentioned, the subsequent longitudinal study performed by Benson et al. (2012) found no statistically significant increase (p = >0.05) in overall EI scores of nursing students from beginning the program to completion. In a descriptive study, Duygulu, Hicdurmaz, and Akyar (2011) also found no statistically significant increase (p = >0.05) in overall EI scores of nursing students from beginning to completion of program. Shanta and Gargiulo (2014) found that senior nursing students had higher scores than pre-nursing students in their ability to understand and reason about emotions (p < 0.05), but they had lower scores in their ability to perceive emotions accurately (p < 0.05). This indicates that one branch of EI may actually decrease as a result of the student experience. Accurately perceiving others’ emotions is an integral part of working effectively in a health care team, and it is particularly concerning that this skill may deteriorate during nursing education (Arora et al., 2010; Renaud, Rutledge, & Shepherd, 2012; Shanta & Gargiulo, 2014).

The inconsistencies in these results raise the concern that EI may not be an integral part of nursing curricula. However, largely missing from the research is an investigation of faculty EI. It stands to reason that nursing faculty may need high levels of EI to be able to model behavior that fosters EI in nursing students. More empirical research is needed on the ability of nursing curricula and nursing faculty to help students develop EI in nursing programs (Parnell & St. Onge, 2015).
Nursing faculty. It is unclear if nursing faculty have the skills to help students develop EI (Akerjordet & Severinsson, 2007; Allen et al., 2012; Freshwater & Stickley, 2004; Rankin, 2013). Although several studies have investigated the link between EI and performance in nursing students, as discussed above, the literature on EI in nursing faculty is largely theoretical, with a paucity of empirical studies examining this phenomenon (Akerjordet & Severinsson, 2007; Allen et al., 2012). Most nursing curricula incorporate components of theory that support the development of EI in students, which may lead to the assumption that EI would be a core competence of nurse faculty, and tenets of EI are indeed reflected in essential nurse educator competencies (NLN, 2012a). However, it has been suggested that the importance of EI in many nursing programs is largely rhetoric, and students are still primarily evaluated on their acquisition of empirical, practical knowledge (Freshwater & Stickley, 2004; Rankin, 2013). This raises questions about the commitment to the development of EI in nursing curricula.

The value that nursing faculty place on EI may be a reflection of societal and economic trends that set a premium on the technological aspects of health care and view the patient as a consumer (Freshwater & Stickley, 2004; Rankin, 2013). However, despite societal pressure to view the patient as a consumer, patients are not customers in the same sense as other industries, and sensitivity to patients’ emotional vulnerabilities is as important as competence in practical procedures (Rego, Godinho, McQueen, & Pina E Cunha, 2010). Nurses with high EI may be better equipped to manage the array of complex emotional responses and stressors that are inevitable when delivering care. Kaur, Sambasivan, and Kumar (2013) found a statistically significant relationship between EI and expressive caring behaviors of nurses (p < 0.001). Additionally, Rego et al. (2010) found a statistically significant correlation between EI and two factors of caring behaviors: nurse treats patient with dignity, respect, and trust (p < 0.05), and
nurse gives explanations to patient (p < 0.01). These studies demonstrated the association of EI with caring behaviors in practicing nurses. However, nurse faculty and nurse leaders may have limited awareness of EI, as it is not addressed in most graduate curricula (Ohlson, 2010; Renaud et al., 2012). Because clinical nurse faculty are role models and leaders in the profession, EI should be a core competence, yet very little attention has been given to the EI of clinical nursing faculty who establish the roots of students’ future nursing practice.

There is a dearth of research investigating the relationship between nurse faculty EI and CTE. A search on the database Cumulative Index to Nursing and Allied Health Literature (CINAHL) using the terms emotional intelligence and nurse faculty yielded no results. When the terms were changed to emotional intelligence and nursing education, there were 79 results, only two of which investigated the EI of nurse faculty, and only one which investigated the EI of clinical faculty. A dissertation by Jenkins (2006) discovered a statistically significant relationship (p < 0.05) between the EI of nurse faculty teaching in the classroom and learning outcomes, indicating that EI may be related to teaching effectiveness in nursing. However, this study was conducted on classroom teaching, and although it used didactic courses with a clinical component, it did not specifically measure CTE. Allen et al. (2012) have been the only researchers to date who have investigated the relationship between EI and CTE and found a statistically significant relationship between the EI and CTE of nursing faculty (p < 0.01). However, the sample was small and from one institution, thus limiting generalizability to other settings. Additionally, an ability model (the Bar-On EQ-i:S) was used rather than a trait model, which may not identify the intrinsic traits of faculty that impact CTE. The gap in the research identifies the need for further investigation of the link between EI and CTE using a trait model of EI.
Clinical Teaching Effectiveness

Teaching effectiveness in higher education is a complex interplay of the knowledge, skills, attitudes, and personal characteristics of faculty, but clinical teaching encompasses unique competencies that may differ from those needed in a classroom setting (Fluit, Bolhuis, Grol, Laan, & Wensing, 2010; Tigelaar, Dolmans, Wolfhagen, & Van Der Vleuten, 2004). Clinical instructors help students synthesize theoretical and experiential knowledge, and clinical teaching is one of the most effective pedagogies in nursing education (Benner et al., 2010; Billings & Halstead, 2012). Effective clinical teaching helps students integrate “knowledge acquisition, knowledge use, clinical imagination, and ethical comportment” and use the unpredictability of the environment to build clinical judgment (Benner, et al., 2010, p. 158). Thus, it is essential that clinical teaching be effectively evaluated, for the clinical setting is where students are socialized into the profession (Allen et al., 2010; Knox & Mogan, 1985).

The clinical environment is ripe with potential learning experiences and clinical faculty must to be ready on a moment’s notice to adapt learning objectives to the ever-changing clinical environment, and seize opportunities to integrate the cognitive, affective, and psychomotor domains of learning (AACN, 2008; Benner et al., 2010; Halstead, 2007; Ondrejka, 2013). The effectiveness of clinical faculty can either facilitate or hinder this process (Knox & Mogan, 1985). Hanson and Stenvig (2008) found that the competence of clinical faculty to bridge the gap between the three domains of learning was identified by students as part of a successful clinical experience. However, unlike classroom instruction, clinical teaching is secondary to the goals of the health care facility, as patient care must take precedence over the students’ learning needs (Allison-Jones & Hirt, 2004). This leaves faculty with competing goals as they juggle students’ learning needs with the safety of patients and the goals of the health care facility.
Perhaps due to the unpredictability of the environment and the inability to focus solely on students’ learning needs, clinical teaching often focuses on the attainment of psychomotor skills (Benner et al., 2010). This is unfortunate because opportunities for affective learning that could contribute to the development of EI may be lost (Benner et al., 2010; Freshwater & Stickley, 2004; Lisko & O’Dell, 2010).

**Evaluating Clinical Teaching Effectiveness**

Mogan and Knox (1983) initially investigated the unique interaction of competencies that comprise CTE in a qualitative study. From this study as well as a review of prior literature investigating CTE, five operational factors of effective clinical teaching were identified: teaching ability, nursing competence, evaluation, interpersonal relationships, and personality traits (Knox & Mogan, 1985). These terms were defined by Knox and Mogan (1985) as:

A. Teaching Ability: the process of transmission of knowledge, skills, and attitudes and the creation of an atmosphere in which this is done.

B. Nursing Competence: the clinical instructor’s theoretical and clinical knowledge used in the practice of nursing as well as the instructor’s attitude toward the profession.

C. Evaluation: the type and amount of feedback from the teacher regarding clinical performance and written clinical assignments.

D. Interpersonal Relationships: a state of reciprocal interest or communication between two or more people excluding specific therapeutic communication between nurse and patient.

E. Personality: the totality of the individual’s attitudes, emotional tendencies, and character traits, which are not specifically related to teaching, nursing, or interpersonal relationships but may affect all three. (p. 26)
The Nursing Clinical Teaching Effectiveness Inventory (NCTEI) was developed to measure the traits of CTE and consists of 48 self-report questions derived from the above five categories which are scored on a Likert-type scale of 1-7. There is a student and faculty version, each yielding similar results (Knox & Mogan, 1985). The NCTEI has been used internationally with consistent results. A literature review of key studies using the NCTEI is presented below. Psychometrics of the tool are discussed in Chapter Three.

Knox and Mogan’s (1985) seminal work led to the development of the NCTEI and laid the groundwork for future studies. Their sample (n = 487) consisted of 393 baccalaureate students, 47 baccalaureate graduate nurses, and 39 clinical baccalaureate faculty. The category of Evaluation was rated the highest by all respondents, except first-year students. This is understandable because the first-year students in this study had not yet been evaluated on clinical performance and had not yet experienced the anxiety and high-stakes nature of a clinical evaluation. All groups rated the category of Personality as the lowest, debunking commonly held beliefs that evaluations are a popularity contest. Most salient from the results of this seminal work was that all groups had similar ratings of each category, indicating that the CTE is perceived by students, practicing nurses, and faculty as encompassing relatively the same dimensions (Knox & Mogan, 1985).

The NCTEI was again used by Mogan and Knox (1987) and the statement Is a good role model, which falls in the Nursing Competence category, was then rated as a most desirable trait by both students and faculty. Nehring (1990) replicated Mogan and Knox’s (1987) work and found similar results, and Is a good role model was again rated the highest by both groups. Kotzabassaki et al. (1997) also replicated Mogan and Knox’s (1987) study in Greece and found that the student group rated Is a good role model again as the most desirable trait. However, the
faculty group rated *Is organized* as the most desirable trait, but rated *Is a good role model* as the third most desirable trait. Considering this ranking is out of 48 items, it is pretty clear that both students and faculty considered being a good role model a highly desirable trait in all these studies (Kotzabassaki et al., 1997; Mogan & Knox, 1987; Nehring, 1990). The sample for all three studies was baccalaureate students, and the emphasis on role modeling may reflect the focus on professional development in baccalaureate programs.

In contrast, Sieh and Bell (1994) used the NCTEI with associate degree nursing students and found that *Corrects student’s mistakes without belittling them*, which falls in the category of *Evaluation*, was rated the highest by the students, while *Encourages a climate of mutual respect*, which falls in the category *Interpersonal relationships*, was rated the highest by faculty. *Is a good role model* was ranked eighth by both faculty and students. Again, considering there are 48 items, this is still fairly high in the ranking but certainly lower than previous studies by Mogan and Knox (1987), Nehring (1990), and Kotzabassaki et al. (1997). Gignac-Caille and Oermann (2001) also used the NCTEI with associate degree students and faculty, and similarly did not find *Is a good role model* was highly rated. They only reported the top-10 highly rated statements and *Is a good role model* was not listed. Instead, *Demonstrates clinical skill and judgment* was rated the highest by students while *Explains clearly* was rated the highest by faculty. These findings differ from those found with baccalaureate students and faculty, where *Is a good role model* was consistently rated as the most important trait (Kotzabassaki et al., 1997; Mogan & Knox, 1987; Nehring, 1990). This points to a possible inherent difference between the perceptions of students and faculty in associate degree programs versus baccalaureate programs, and may reflect a greater emphasis on professional development in baccalaureate programs.
Benor and Leviyof (1997) used the NCTEI with students from baccalaureate programs and vocational programs in Israel and found that nursing competencies were perceived by both groups as most important. The statement Is a good role model falls under this category, but the researchers did not report the data as the individual statements. Consequently, the importance of role modeling in particular in this sample of baccalaureate and vocational programs cannot be ascertained.

The differences in the perceptions of CTE of faculty and students in baccalaureate and associate degree programs call attention to the inherent differences between associate and baccalaureate programs. Baccalaureate nursing programs may emphasize professional development over attainment of skills, and students and faculty have different expectations for their education as a result (Sieh & Bell, 1994). The IOM (2010) report called for the registered nurse workforce to include 80% of baccalaureate-prepared nurses by 2020. These recommendations were based on research that associated better patient outcomes with greater percentages of baccalaureate prepared nurses in the workplace (Aiken, Clarke, Sloane, Lake, & Cheney, 2008). These findings were strengthened by Aiken et al. (2014), who similarly found better patient outcomes to be associated with higher percentages of baccalaureate-prepared nurses in the workplace. The recommendation of the IOM (2010) report that the majority of the future nursing workforce in the United States be baccalaureate-prepared, combined with research supporting the value of the baccalaureate nurse in patient care (Aiken et al., 2008, Aiken et al., 2014), provides support for including only baccalaureate faculty in this study. The professional development and socialization of nursing students have long been considered the purview of clinical faculty and it is essential that the CTE of baccalaureate clinical faculty be evaluated because they will be preparing the nursing workforce for generations to come.
Developing Clinical Teaching Effectiveness/Link With Emotional Intelligence

Even though clinical teaching is regarded as one of the most effective pedagogies in nursing education, and it is generally accepted that clinical faculty are responsible for guiding and socializing students into the profession, there is a lack of understanding about exactly how clinical faculty develop CTE (Allen et al., 2012; Benner et al., 2001; Freshwater & Stickley, 2004; Ondrejka, 2013). Mogan and Knox (1985, 1987) identified traits of CTE, but it is unclear precisely how clinical faculty should develop these traits because the clinical faculty role is very different from that of practicing nurses (McDermid et al., 2013). The NLN (2012a) has developed essential competencies for all nurse educators that include: facilitating learning; facilitating learner development and socialization; developing assessment and evaluation strategies; participating in curriculum design and program evaluation; functioning as a change agent and leader; pursuing continuous quality improvement in the nurse educator role; engaging in scholarship; and functioning within the educational environment. However, the competencies identified by the NLN (2012a) may not specifically address the unique competencies needed to manage clinical instruction, which is very different from classroom instruction (Allison-Jones & Hirt, 2004).

Clinical faculty play a different role in students’ education than classroom faculty (Allison-Jones & Hirt, 2004). Limitations inherent in the role may not involve clinical faculty in more global issues such as curriculum development and program evaluation. This is particularly relevant when considering the large numbers of adjunct clinical faculty whose focus may be not be on curriculum development and program evaluation. However, it is worth considering that these may not be essential competencies for clinical instruction. The relational aspects of clinical teaching that encompass the affective learning domain and are facilitated by higher EI
may be of higher priority in the clinical setting (Ondrejka, 2013). Two of the five categories of the NCTEI measure interpersonal relationships and personality, which address the unique relational aspects of the clinical faculty role (Mogan & Knox, 1987).

Although the literature is replete with suggestions for the development of clinical faculty, there are no clear-cut answers, and it is important to bear in mind that any faculty development must occur within the context of a worsening nursing faculty shortage and the pervasive stressors of the academic and clinical environments (Allen et al., 2012; DeSantis, 2012; McDermid et al., 2013; Roberts et al., 2013; Waldrop & Chase, 2014). One mechanism that may transcend the external stressors of health care and academia is the link between CTE and EI, but to date only one study has investigated this association (Allen et al., 2012). The link between EI and CTE remains unclear, indicating the need for further research.

Allen et al. (2012) used the NCTEI to measure the relationship between CTE and EI, and found a statistically significant relationship between CTE and EI in baccalaureate clinical nursing faculty (p = < .01); moreover, they found that only 25% of faculty possessed enhanced EI. This raised questions as to what level of EI is necessary for CTE. Higher EI scores were associated with reports of higher teaching competence and ability, higher nursing competence, and more positive personality traits (Allen et al., 2012). These results suggest that clinically effective faculty may have higher EI. Inherent here are implications for faculty development because EI is not thought to be static, but rather a competence that can be enhanced with training and/or therapy (Bar-On, 2006; Mayer & Salovey, 1997). However, it is questionable whether clinical faculty are prepared to teach EI, given that both the current health care system and academia are often not environments that support overall mental health, nor do graduate programs prepare nurses to teach EI (Chan et al., 2014; Rankin, 2013; Renaud et al., 2012). An
investigation of the association between the EI of clinical faculty and CTE could provide a deeper understanding of the roots of CTE and lead to improved clinical faculty development.

Allen et al. (2012) also explored the relationship between faculty’s age, years of clinical nursing, years of clinical teaching, level of education, and employment status, and found no statistically significant relationship between EI and any of these variables, suggesting that EI is independent of demographic and environmental variables. The lack of a relationship with these external variables upholds the notion that intrinsic traits of clinical faculty may be better predictors of CTE (Chruciel, 2008; Lavoie-Tremblay et al., 2009; Schutte et al., 1998). Allen et al. (2012) used an ability measurement of EI: the Bar-On EQ-i: S. However, given that no relationship was found between the extrinsic demographic and environmental variables, a trait model of EI, such as the SSREIT, may be better suited for exploring the intrinsic traits of clinical faculty that could predict CTE.

Allen et al. (2012) also found no relationship between employment status and EI, but it should be noted that the relationship between employment status and CTE was not explored, despite prior research indicating that CTE was associated with employment status (Allison-Jones & Hirt, 2004; DeSantis, 2012). The lack of investigation of the association of employment status and CTE in Allen et al.’s (2012) study warrants mention because DeSantis (2012) and Allison-Jones and Hirt (2004) found contradictory results when comparing the CTE of full-time faculty to part-time faculty. Allison-Jones and Hirt found a statistically significant difference (p < 0.05) in both the student and faculty perceptions of CTE using the NCTEI. However, DeSantis (2012) found a statistically significant difference in CTE using the NCTEI in only the students’ perceptions; faculty perceptions of CTE on the NCTEI were not statistically significant.
Further investigation of the CTE of full-time and part-time faculty is warranted, and this present study controlled for the effect of employment status on CTE.

However, an important component in comparing full-time and part-time faculty is the differences in their roles. Part-time faculty are often novice educators, are not as likely to have a terminal degree, and may not be as invested in the role as full-time faculty (Clark, 2013). Allen et al. (2012) did not explore the association between CTE and employment status, and also found no relationship between EI and employment status. This may indicate the lack of a relationship, but also could indicate that the sample size was not large enough to detect a difference after the sample was divided into full-time (n = 19) and part-time (n = 28) faculty. Given the distinct differences between role expectations, educational preparation, and commitment level of full-time and part-time faculty, the present study sampled larger numbers of both part-time and full-time faculty in an effort to control the effect of employment status when investigating the relationship between EI and CTE.

**Summary and Conclusions**

This literature review closes with a summation of the relevant literature on EI and CTE. Emotional Intelligence has been established in the professional literature as a new theory of intelligence that is integral to the very nature of human adaptation and can be used to describe and predict how emotions influence life outcomes (Salovey & Mayer, 1990). The seminal work of Salovey and Mayer (1990) defined EI as “the ability to monitor emotions, discriminate among them, and use the information to guide thinking and actions” (p. 189). However, as explained earlier in this chapter, there have been some inconsistencies in research controlling for personality constructs in the measurement of EI, creating concern among a few researchers that EI does not measure a unique set of constructs (Andi, 2012; Brackett et al. 2004; Brackett &
Mayer, 2003; Karim & Shah, 2014; Schutte et al., 1998; Van der Linden, Tsaousis, & Petrides, 2012). Nonetheless, there is also a significant body of research indicating that EI does measure different constructs from Personality theory, strongly indicating that EI is independent of Personality (Brackett et al. 2004; Karim & Shah, 2014; Schutte et al., 1998). As EI is a relatively new theory, professional debate and discourse are to be expected (Schutte et al., 2009). This debate may serve to stimulate new inquiry, ultimately adding to the knowledge base of EI theory.

EI theory is based on the following four concepts: perceiving emotions, facilitating thought, understanding emotions, and managing emotions (Salovey & Mayer, 1990). Two models of EI have emerged from the original conceptual basis of EI, trait and ability models (Schutte et al., 1998). Both of these models measure the same concepts, but trait models may be better predictors of intrinsic factors that are associated with improved job performance (LaVoie-Tremblay, 2009). For this reason, a measurement tool based on a trait model of EI (the SSREIT) was chosen to measure the relationship between EI and clinical faculty’s perceived CTE.

It is imperative to measure the effectiveness of clinical teachers, as clinical teaching is one of the most effective pedagogies in nursing education, with clinical faculty bearing much of the responsibility for socializing students into the profession (Benner et al., 2010; Mogan & Knox, 1985, 1987). Knox & Mogan (1985) identified the following five factors as indicative of CTE: teaching ability, nursing competence, evaluation, interpersonal relationships, and personality traits. The NCTEI was developed to reflect these factors and was used in this study to provide a quantitative measurement of the perceived workplace outcomes (CTE) of clinical teachers. Emotional Intelligence has been associated with improved overall workplace outcomes and there may be a similar relationship between EI and CTE (Bar-On, 2006; Goleman, 1995; Schutte & Loi, 2014).
The mechanism of action for the improvement of workplace outcomes in individuals with higher EI may be the ability of EI to modulate the effect of environmental stress, allowing for improved management of emotions and more adaptive responses to stressors in the workplace (Bar-On, 2006; Goleman, 1995; Schutte & Loi, 2014). Clinical teaching of pre-licensure nursing students can be a stressful endeavor, and often elicits unsettling emotional responses in both students and faculty (Benner et al., 2010; Ondrejka, 2013). Although there is currently a call to action by nurse educators to integrate EI into nursing curricula to improve teaching effectiveness and student outcomes, there is a dearth of empirical research on this topic (Anderson, 2016; Beauvais et al., 2014; Codier et al., 2015; Fitzpatrick, 2016; Foster et al., 2015; Gratrix, 2014; Liebrecht, 2016; Parnell & St. Onge, 2015; Ranjbar, 2015; Şenyuva et al., 2014). Emotional Intelligence has been associated with greater teacher self-efficacy and improved student outcomes in other areas of higher education, and it was postulated by this researcher that EI may be similarly related to CTE in nursing education (Jenkins, 2006; Shahid, Jani, Thomas, & Francis, 2015; Singh & Jha, 2012). There is limited research on this phenomenon, and this study was intended to address the gap in research by investigating the relationship between EI and CTE in clinical faculty in pre-licensure nursing programs in New York State.
CHAPTER THREE

Methodology

The purpose of this study was to examine the relationship between Emotional Intelligence (EI) and Clinical Teaching Effectiveness (CTE) of clinical nurse faculty.

Research Design

The null hypotheses were that there would be no statistically significant relationship between EI and CTE of clinical nurse faculty, and there would be no difference between the four factors of the Schutte Self-Report Emotional Intelligence Test (perception of emotions, management of emotions in self, management of others’ emotions, utilization of emotions) and the five factors of the Nursing Clinical Teaching Effectiveness Inventory (nursing competence, personality, evaluation, interpersonal relationships, teaching ability). Demographic variables were: age of faculty, faculty ethnicity, program size, years of teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation.

The Schutte Self-Report Emotional Intelligence Test (SSREIT) was used to measure EI and the Nursing Clinical Teaching Effectiveness Inventory (NCTEI) was used to measure CTE (Knox & Mogan, 1985; Schutte et al., 1998). Copies of both instruments (presented in Appendices A and B) were loaded onto Survey Monkey and sent by email to clinical nurse faculty.

Research Questions

The study was designed to examine the following questions:

1. What is the relationship between the total score of Emotional Intelligence (EI) and the total score of Clinical Teaching Effectiveness (CTE) of clinical nurse faculty teaching in pre-licensure baccalaureate programs?
2. What is the relationship between the factors of EI and the factors of CTE in clinical nurse faculty teaching in pre-licensure baccalaureate programs?

**Instrumentation**

**Schutte Self-Report Emotional Intelligence Test**

The SSREIT, used to measure EI in this study, is a 33-item self-report inventory in which responses are scored on a Likert-type scale of 1 to 5; a score of 1 indicates low EI and a score of 5 indicates high EI. Results of the SSREIT provide a total EI score and evaluate four factors of EI: perception of emotions, managing emotions in self, managing others’ emotions, and utilization of emotions (Schutte et al., 2009). The four factors were identified in a second-order model that is the accepted model today, but the first-order model only identified one factor. The evolution of this model and supporting research are explained below.

The SSREIT was developed by Schutte et al. (1998) from Salovey and Mayer’s (1990) seminal work on EI. Items were designed to represent the original three categories of EI: appraisal and expression of emotions, regulation of emotions, and utilization of emotions in solving problems. The pilot test of the SSREIT by Schutte et al. (1998) consisted of 62 items, and factor analyses revealed four factors loading at .40 or above. Thirty-three of the items on this pilot test loaded at .40 or above on the first factor, and items that loaded on factors two, three, and four were not conceptually different than the items on factor one, demonstrating internal validity. Thus, it was concluded that the 33 items on factor one were representative of the conceptual basis of Salovey and Mayer’s (1990) work (Schutte et al., 1998). Additionally, the proportion of items in each category was roughly comparable to the three categories of EI in the Salovey and Mayer (1990) model: appraisal and expression of emotions, regulation of emotions, and utilization of emotions in solving problems. The results of this first-order model
led to the development of the final 33-item SSREIT, and it was initially recommended that only the total score be used because of the first factor loading (Schutte et al., 1998).

Although the initial recommendation was to use only the total score of the SSREIT to assess EI, the subsequent factor analysis of the original 33-item SSREIT by Petrides and Furnham (2001), Ciarrochi et al. (2001), and Saklofske et al. (2003) recommended a four-factor explanation of the items: perception of emotions, managing emotions in self, managing others’ emotions, and utilization of emotions. Based on these findings, the most widely used application of the SSREIT today is to obtain a total EI score, along with scores in the following four factors: perception of emotions, managing emotions in self, managing others’ emotions, and utilization of emotions (Schutte et al., 2009). This model was used in the study.

The internal consistency in the original study of the SSREIT with 346 participants yielded a Cronbach’s alpha of 0.90 (Schutte et al., 1998). Schutte et al. (1998) reported a two-week test-retest reliability of 0.78. Further studies have shown similar results with the SSREIT, with Cronbach’s alpha across 48 different studies ranging from 0.76-0.95, with a mean across the samples of 0.87 (Schutte et al., 2009). From these data, Schutte et al. (2009) suggested that the SSREIT is suitable for research purposes and can assist individuals in reflecting on their emotional functioning, but they did not recommend it for employment screening. The SSREIT was suitable for this study because the results will not be used for employment screening, but may be used for faculty development by providing deeper understanding of the role that EI plays in CTE.

Schutte et al. (1998) found evidence of the validity of the SSREIT. Construct validity was established because it correlated highly with other established measurements of expression of emotions, such as the Toronto Alexithymia Scale ($r = -0.065, p < 0.001$) and the Trait Meta
Mood Scale ($r = 0.63$, $p < 0.001$). Additionally, expected between-group differences were noted: psychotherapists scored higher ($M = 134.92$, $SD = 20.25$) on the SSREIT than prisoners ($M = 120.08$, $SD = 17.71$, $p < 0.012$), and higher than individuals in a substance abuse treatment program ($M = 122.23$, $SD = 14.08$, $p < 0.035$) (Schutte et al., 1998). Women in the same sample also scored significantly higher ($M = 130.94$, $SD = 15.09$) than men ($M = 124.78$, $SD = 16.52$, $p < 0.001$), which is congruent with earlier research indicating that women have higher EI scores than men (Goleman, 1995).

As discussed earlier, a frequent criticism of EI theory is that it may share factors with the Big Five Personality Traits, but Schutte et al. (1998) found that scores on the SSREIT were not significantly related to four of the five personality dimensions: neuroticism ($p = -0.28$); extraversion ($p = 0.28$); agreeableness ($p = 0.26$); and conscientiousness ($p = 0.21$). This established the discriminant validity of the SSREIT. The fifth dimension, openness to experience, was statistically significantly related to scores on the SSREIT ($p < 0.009$), but as discussed in Chapter Two, some overlap with this dimension is expected (Schutte et al., 1998).

To assess the predictive validity of whether the scores on the SSREIT correlated with performance, Schutte et al. (1998) examined the relationship between GPA scores and SSREIT scores. A statistically significant relationship was found ($r(63) = 0.32$, $p < 0.01$), supporting earlier research linking EI to improved performance (Goleman, 1995). Although EI affects performance in many realms, a major tenet of the theory is that it is distinct from cognitive intelligence (Mayer & Salovey, 1997). Schutte et al. (1998) examined this to assess discriminant validity and found the SSREIT did not correlate with scores on the Scholastic Achievement Exam (SAT), a commonly accepted measure of cognitive ability ($r(41) = -0.06$, $r = -0.06$). These findings support the validity of the SSREIT.
The reliability and validity of the SSREIT (33 items), as well as the relative brevity of the questionnaire, lend themselves well to the purposes of the present study. The instrument was fairly innocuous for faculty to complete as it was estimated to take only about five minutes and thus have minimal impact on workload (Schutte et al., 2009). The SSREIT is also non-proprietary and free if used in research, in contrast to many other measurements of EI that are proprietary and of significant cost (Schutte et al., 2009). These factors may have contributed to the widespread use of the tool and availability of data. This study will add to the existing database on the validity and reliability of the SSREIT and contribute a unique perspective because the tool has not yet been used to measure the EI of nursing faculty.

**Nursing Clinical Teaching Effectiveness Inventory**

The NCTEI was used to measure CTE and is a self-report tool with 48 items that are scored on a seven-point Likert-type scale, providing a total score as well as evaluating five factors of CTE (teaching ability, nursing competence, personality, evaluation, interpersonal relationships). This is a self-report tool, and measures self-perceptions of CTE. A score of 1 indicates low CTE and a score of 7 indicates high CTE. Knox and Mogan (1985) initially developed the NCTEI from a qualitative study done by Mogan and Knox (1983), in which students identified and rated characteristics of effective clinical faculty based on the following questions:

1. How do you rate the effectiveness of the instructor in this course?
   ___excellent ___above average ___average ___below average ___unacceptable

2. What are the most effective aspects of this individual’s instruction?

3. How can this instructor’s effectiveness be improved in this course? (Knox & Mogan, 1983, p. 6).
Responses to these questions were then divided into five categories: personality traits, interpersonal relationships, nursing competence, teaching ability, and evaluation (Mogan & Knox, 1983). These results were consistent with previous studies exploring CTE (Brown, 1981; Jacobson, 1966; O’Shea & Parsons, 1979). However, prior to Knox and Mogan’s (1985) and Mogan and Knox’s (1987) seminal work, a quantitative measurement of CTE had not yet been developed.

From the results of the initial qualitative study, the quantitative NCTEI was developed (Knox & Mogan, 1985). The NCTEI has two versions: a faculty version and a student version. The questions on both versions are the same, with only slight adjustments to accommodate the audience (see Appendix A). Mogan and Knox (1987) found that both faculty and students had similar perceptions of the following attributes indicative of effective clinical teachers: a good role model, enjoyed nursing, demonstrated clinical skills, and took responsibility for their own action. Consistently, faculty and student responses have been similar on the NCTEI, supporting utilization with both faculty and students. The NCTEI also has established reliability and validity (Kotzabassaki, et al., 1997; Mogan & Knox, 1987; Nehring, 1990; Sieh & Bell, 1994).

Mogan and Knox (1987) established the content and face validity of the NCTEI. The instrument was internally consistent (Cronbach’s alpha = 0.79-0.92) and was stable over time (test-retest scores at 4-week intervals ranged from Cronbach’s alpha 0.76 to 0.93). Face validity was determined by examining the ratings of students, faculty, and graduate nurses on the individual items of the NCTEI (Knox & Mogan, 1985). The mean of the ratings was 6.33/7, with each item receiving a high rating. Content validity of the NCTEI was established after comparing the results of studies using the NCTEI with existing research on clinical teaching effectiveness (Allison-Jones, 2002; Jacobson, 1966; Mims, 1970; Mogan & Knox, 1983; O’Shea
Kotzabassaki et al. (1997) replicated the work of Mogan and Knox (1987) with faculty and students in Greece with the NCTEI and found an internal consistency across the five categories of Cronbach’s alpha 0.99. Benor and Leviyof (1997) in Israel found Cronbach’s alpha ranging from .79 to .89 across the five categories, while Lovric et al. (2014) in Croatia found Cronbach’s alpha ranging from 0.66 to 0.80 for the specific categories and 0.91 overall when the NCTEI was used with nursing students. Wetherbee, Nordrum, and Giles (2008) used the NCTEI with physical therapy students and found the internal reliability ranged from Cronbach’s alpha of 0.89 to 0.95 for all five factors. Although Wetherbee et al. (2008) measured the CTE of physical therapy faculty instead of nursing faculty, the findings are pertinent in that they demonstrated consistent reliability of the tool when used to measure CTE, and may indicate that the NCTEI could apply to other disciplines as well. The demonstrated internal consistency of the NCTEI over a time span ranging from 1987 to 2014, and the use of this tool across different cultures and clinical settings, indicate a high degree of confidence in the reliability of the tool.

Sample

A stratified sample using clinical nurse faculty employed in pre-licensure baccalaureate nursing programs in New York State (NYS) was obtained. To form this sample, the researcher initially uploaded copies of the SSREIT, NCTEI, demographic data sheet, and informed consent forms into Survey Monkey and sent them via email to faculty teaching in 34 New York State baccalaureate pre-licensure programs. Exclusion criteria included a lack of teaching in a clinical setting within the last two academic years. The size of the nursing programs based on 2014 graduates was used as the strata for a stratified sample. This separation helped ensure that the
sample was representative of the greater population of pre-licensure baccalaureate nursing programs across New York State.

The research of Bartlett, Kotrilk, and Higgins (2001) helped the present researcher determine sample size, which specifies the formulas used to calculate adequate sample size in the survey research. According to Bartlett et al., the bare minimum number of regressors to be used in a multiple linear regression is 5:1, but in order to have truly adequate power, it should be 10:1. This represents the ratio of total sample size divided by the total number of regressors (independent variables). For example, using a continuous dependent variable, a sample size of 111 would require a maximum of 11 separate regressors to meet the optimal minimum of a 10:1 ratio (111/11). However, it is important to note that this only reflects different variables if they are all continuous independent variables. For discrete independent variables, each category of the variable counts as a separate “variable” because statistically, the results will be partitioned through that particular value. Therefore, calculations should reflect the minimum sample size necessary to obtain adequate power; in this study, an alpha level of 0.05 was used. For the analysis, there were initially a total of 17 different regressors as follows:

1. Faculty ethnicity (White non-Hispanic, Asian/Pacific Islander, underrepresented groups such as Hispanic, Black, etc.). (3 regressors)
2. Program size (small, medium, large). (3 regressors)
3. Years of teaching experience in the clinical setting. (1 regressor)
4. Years of clinical experience. (1 regressor)
5. Faculty rank (tenured, tenure-track not-yet-tenured, non-tenure track). (3 regressors)
6. Employment status (full-time or part-time). (2 regressors)
7. Educational preparation (bachelor’s, master’s, doctorate). (3 regressors)
8. Total index Emotional Intelligence. (1 regressor)

Each number in parentheses represents the total number of regressor categories for that particular variable. Because the total number added to 17 in accordance with Bartlett et al. (2001), the minimum sample size needed to be 170 in order to attain adequate power for the statistical analysis of survey respondents.

**Analysis of Data**

The researcher entered the data into the Statistical Package for the Social Sciences (SPSS), Version 23. A Pearson correlation was used to answer Research Question #1: What is the relationship between the total score of Emotional Intelligence (EI) and the total score of Clinical Teaching Effectiveness (CTE) of clinical nurse faculty teaching in pre-licensure baccalaureate programs? Multiple regression models were used to answer Research Question #2: What is the relationship between the factors of EI and the factors of CTE in clinical nurse faculty teaching in pre-licensure baccalaureate programs? Originally, an Exploratory Factor Analysis as well as Confirmatory Factor Analysis were planned, but not performed due to sample size, which will be discussed in Chapter Four.

The demographic variables were discussed in the previous section and included the following demographic data: faculty ethnicity, program size, years of teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation. The researcher also analyzed the indirect and direct relationships between the control variables and EI and CTE. The categories in the demographic variables were further defined as the data indicated (i.e., there was a limited number of respondents in a certain category to be statistically significant and that category was eliminated or combined with another category).

**Conclusion**
This chapter presented the methodology used to conduct the study. The SSREIT and NCTEI were used to examine the relationship between the total scores of the EI and CTE of clinical nurse faculty. The following research questions were examined in this study:

1. What is the relationship between the total score of Emotional Intelligence (EI) and the total score of Clinical Teaching Effectiveness (CTE) of clinical nurse faculty teaching in pre-licensure baccalaureate programs?

2. What is the relationship between the factors of EI and the factors of CTE in clinical nurse faculty teaching in pre-licensure baccalaureate programs?

The following demographic variables were used: faculty ethnicity, program size, years of teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation. A stratified sample of clinical nursing faculty teaching in pre-licensure baccalaureate nursing programs was obtained for a final sample of 66 nursing faculty. The results of the statistical analysis are presented and discussed in Chapter Four.
CHAPTER FOUR

Results

The purpose of this study was to examine the relationship between the Emotional Intelligence (EI) and Clinical Teaching Effectiveness (CTE) of clinical nurse faculty teaching in baccalaureate nursing programs. This chapter presents the results of the study. All participants were asked to complete the Nursing Clinical Teaching Effectiveness Inventory (NCTEI) to measure clinical teaching effectiveness and the Schutte Self-Report Emotional Intelligence Test (SSREIT) to measure EI. Statistical analyses were performed using SPSS, Version 23.

Sample Population

The sample for this study consisted of faculty teaching in the clinical setting in pre-licensure nursing programs in New York State within the last two years. Sixty-seven respondents answered the survey; of these 67, one was disqualified because of not having taught in the clinical setting for the last two years.

Procedure for Collecting Sample

The researcher obtained the sample by sending informational letters to chairs and deans of all 34 baccalaureate pre-licensure nursing programs in New York State asking for (a) contact information for clinical faculty or (b) distribution of the invitation to clinical faculty. Invitations were not sent directly to participants because contact information for adjunct clinical faculty is generally not available. Unlike full-time faculty, contact information for adjunct faculty is not on college websites or in a central database. However, adjunct faculty are an important component of clinical teaching in many nursing programs, and it was important to access their data for this study (DeSantis, 2012). The researcher determined that contacting the chairs and deans directly was the best option for gathering data from this population.
Three email letters were sent to chairs/deans of programs. Most chairs/deans preferred to forward the information; several provided contact information for clinical faculty so the researcher could contact them directly. If no reply was received after three emails, a phone call was made directly to schools that had not replied, with a final email to follow up. Additionally, a search of schools’ websites revealed that a few schools posted contact information for full-time clinical faculty, and the researcher sent invitations directly to them. Clinical faculty were also recruited by word of mouth at a conference the researcher attended. As noted, a total of 67 participants from 21 schools responded. For a breakdown of responding schools, see Appendix G. One participant was disqualified because of not teaching in the clinical setting in the last two years; thus, the remaining sample size was 66. The statistical significance for this study was set at \( p < .05 \).

**Descriptive data of sample.** Demographic variables included the following data: faculty ethnicity, program size, years of teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation. After analyzing the impact of lower than anticipated response rate, two categories in the control variables were further defined: program size and educational preparation. Program size was adjusted from three categories (0-54 students, 55-128 students, and 128 students and above) to two categories (0-128 students and greater than 128 students). Educational preparation was also adjusted from three categories (bachelor’s, master’s, and doctorate) to two categories (bachelor’s or master’s, and doctorate).

After redefining the demographic variables, the researcher ran descriptive statistics on the sample (\( N = 66 \)). Part-time faculty were a smaller portion of the sample (36.4%, \( N = 24 \)) than full-time faculty (63.6%, \( N = 42 \)). The majority of respondents (68.2%, \( N = 45 \)) were not in a tenure-track or tenured position. Tenure-track faculty were a much smaller portion of the sample
(31.8%, N = 21). Far more faculty held a bachelor’s or master’s degrees (69.7%, N = 46) than faculty held doctoral degrees (30.3%, N = 20). The racial/ethnic status of the sample was predominately White, non-Hispanic (80.3%, N = 53), with a smaller number of non-White respondents (19.7%, N = 13). The average years of clinical teaching in the sample was 11.82 years, and the average years of clinical experience as a registered nurse was 25.95 years. This data are further analyzed later in this chapter in relation to other variables, after the research questions are addressed in the following sections.

Data Assumptions

To assess the normality assumption of the data, the researcher used multiple indicators. The Shapiro-Wilk test was significant for CTE (p = .01), the factors of NCTEI (Teaching Ability, p = .06; Nursing Competence, p = .03; Personality, p = .01; Evaluation, p = .01; Interpersonal Relationships, p = <.001) and one factor of the SSREIT: Management of Others’ Emotions (p = .03). Significance indicates a discrepancy between the data observed and the expected normal distribution for data. Non-significant results were found in total EI (p = .13) and the other three factors on the SSREIT: Perception of Emotions (p = .19); Utilization of Emotions (p = .7); and Management of Emotions in Self (p = .21). This indicates normal distribution of data. There also were violations in linearity and homoscedasticity (see scatter plots in Appendix H). However, the Shapiro-Wilk test is very sensitive, and the slightest deviation from normality could produce a significant test, particularly in a small sample size. It is recommended to combine the Shapiro-Wilk with a visual inspection of the histograms as well as an assessment of skewness and kurtosis criteria (Ghasemi & Zahediasl, 2012). While some of the histograms indicated slight deviations from normality, the assumption of normality applies to the sampling distribution instead of the sample distribution (see Appendix H). It is possible that
a normal sampling distribution can produce a sample distribution that is skewed (Ghasemi & Zahediasl, 2012). Consequently, the analysis proceeds without declaring a violation of this assumption.

**Research Question #1**

The first research question was: What is the relationship between the total score of Emotional Intelligence (EI) and the total score of Clinical Teaching Effectiveness (CTE) of clinical nurse faculty teaching in pre-licensure baccalaureate programs? Thirty-eight respondents completed all questions on the survey and comprised the sample for this question. Statistical significance was set at \( p < .05 \).

A Pearson correlation coefficient was conducted to test the null hypothesis that there was no relationship between clinical nursing faculty’s emotional intelligence and clinical teaching effectiveness (\( N = 38 \)). In this sample of clinical faculty, there was no statistically significant relationship between EI (\( M = 138.39, SD = 13.27 \)) and CTE (\( M = 299.5, SD = 23.89 \)), \( r = -.2, n = 38, p = .22 \)). Overall, these results failed to reject the null hypothesis that there was no statistically significant relationship between the total score of EI and the total score of CTE.

**Research Question #2**

The second research question was: What is the relationship between the factors of EI and the factors of CTE in clinical nurse faculty teaching in pre-licensure baccalaureate programs? EI was measured by the SSREIT and included the following four factors: perception of emotions, managing emotions in self, managing others’ emotions, and utilization of emotions. CTE was measured by the NCTEI and included the following five factors: teaching ability, nursing competence, personality, evaluation, and interpersonal relationships. Bivariate analyses were used to examine the correlations between the total EI score on the SSREIT and the factors of the
NCTEI (p < .05). Multiple regression models were used to examine the correlations between the factors of the SSREIT and the factors of the NCTEI (p < .05). The results of these analyses are detailed below.

**Total EI Score With NCTEI Factor: Teaching Ability**

A Pearson correlation coefficient was used to examination the relationship between the two variables, and revealed no statistically significant relationship between total score of EI (M = 139.07, SD = 8.52) and the factor Teaching Ability on the NCTEI (M = 97.83, SD = 13.2, p = .11, r = .20, N = 41). After multiple regression models were run, the results indicated that EI did not significantly predict Teaching Ability on the NCTEI (β = -.2, t[8.2] = -1.28, p = .21). EI also did not explain a significant proportion of variance in Teaching Ability scores (R² = .04, F[1, 39] = 1.62, p = .21). Overall, these results failed to reject the null hypothesis that there was no statistically significant relationship between the total score of EI and the NCTEI factor of Teaching Ability.

**Total EI Score With NCTEI Factor: Nursing Competence**

An examination of the Pearson correlation coefficient revealed a statistically significant relationship between the total score of EI (M = 138.74, SD = 12.7) and the factor Nursing Competence on the NCTEI (M = 62.93, SD = 5.17, p = .03, r = .28, N = 46). However, when multiple regression models were run, the results indicated that EI did not significantly predict Nursing Competence on the NCTEI (β = -.28, t[9.56] = -1.91, p = .06). EI also did not explain a significant proportion of variance on Nursing Competence on the NCTEI (R² = .06, F[1, 44] = 4.65, p = .06, N = 46). The Pearson correlation coefficient provided evidence to reject the null hypothesis that there is no statistically significant relationship between the total score of EI and Nursing Competence, whereas multiple regression models suggested a trend towards statistical
significance with these two variables (p = .06). To guard against a type 2 error (failing to reject the null hypothesis and stating there is an effect when there is not), effect size was calculated using \( \eta^2 \). As noted above, there was a moderate effect (\( n^2 = .07 \)) (Lakens, 2013). Overall, these results suggested a rejection of the null hypothesis: there was no statistically significant relationship between the total score of EI and the factor Nursing Competence on the NCTEI.

**Total EI Score With NCTEI factor: Personality**

A Pearson correlation coefficient was performed and revealed no statistically significant relationship between the total score of EI (\( M = 138.9, SD = 12.8 \)) and the factor Personality on the NCTEI (\( M = 43.76, SD = 4.05, p = .05, r = .25, N = 46 \)). The results of multiple regression models indicated that EI did not significantly predict Personality on the NCTEI (\( \beta = -.25, t[8.49] = -1.704, p = 0.1 \)). EI also did not explain a significant proportion of variance for Personality scores on the NCTEI (\( R^2 = .04, F[1, 44] = 2.9, p = 0.1, N = 45 \)). Overall, these results failed to reject the null hypothesis that there was no statistically significant relationship between the total score of EI and the factor Personality on the NCTEI.

**Total EI Score With NCTEI Factor: Evaluation**

A Pearson correlation coefficient was performed and revealed no statistically significant relationship between the total score of EI (\( M = 138.74, SD = 12.7 \)) and the factor Evaluation on the NCTEI (\( M = 56.22, SD = 4.86, p = .25, r = .11, N = 46 \)). The results of multiple regression models indicated that EI did not significantly predict Evaluation on the NCTEI (\( \beta = -.11, t[7.74] = -.71, p = .48 \)). EI also did not explain a significant proportion of variance for Evaluation scores on the NCTEI (\( R^2 = .14, F[1, 44] = .5, p = 0.48, N = 45 \)). Overall, these results failed to reject the null hypothesis that there was no statistically significant relationship between the total score of EI and the factor Evaluation on the NCTEI.
**Total EI Score With NCTEI Factor: Interpersonal Relationships**

A Pearson correlation coefficient was performed and revealed no statistically significant relationship between the total score of EI (M = 138.26, SD = 12.82) and the factor Interpersonal Relationships. The results of multiple regression models indicated that EI did not significantly predict Interpersonal Relationships on the NCTEI (β = -.18, t[7.69] = -.112, p = 0.42). EI also did not explain a significant proportion of variance for Interpersonal Relationships scores on the NCTEI (R² = .03, F[1, 41] = 1.4, p = 0.24, N = 42). These results failed to reject the null hypothesis that there was no statistically significant relationship between the total score of EI and the factor Interpersonal Relationships on the NCTEI.

**The Factors of the NCTEI With the Factors of the SSREIT**

Standard multiple regression analyses were performed to assess whether the factors of the NCTEI (Teaching Ability, Nursing Competence, Evaluation, Personality, Interpersonal Analysis) were influenced by the four factors of EI from the SSREIT (Perception of Emotions, Management of Emotions in Self, Management of Others’ Emotions, Utilization of Emotions). Preliminary analyses were done to ensure there were no violations of linearity, multicollinearity, and normality. Non-significant results were found in the calculation of all the factors, indicating that factors of EI (as measured by the SSREIT) did not predict performance on factors of CTE, (as measured by the NCTEI). There were no statistically significant relationships between the factors of the NCTEI and the factors of the SSREIT.

**Teaching ability and the factors of SSREIT.** Multiple regression analysis was used to predict the effect of the factors on the SSREIT (Perception of Emotions, Management of Emotions in Self, Management of Others’ Emotions, Utilization of Emotions) on the factor Teaching Ability on the NCTEI. A non-significant regression equation was found (F(2, 36) =
1.48, \( p = 0.23, \ R^2 = 0.14 \), indicating that none of the factors of the SSREIT predicted Teaching Ability on the NCTEI (see Table 1).

Table 1

<table>
<thead>
<tr>
<th>Coefficient Variables Resulting From Multiple Regression Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>EI Perception</td>
</tr>
<tr>
<td>EI: Self</td>
</tr>
<tr>
<td>EI: Other</td>
</tr>
<tr>
<td>EI: Utilize</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = Teaching Ability

Nursing competence and the factors of SSREIT. Multiple regression analysis was used to predict the effect of the factors on the SSREIT (Perception of Emotions, Management of Emotions in Self, Management of Others’ Emotions, Utilization of Emotions) on the factor Nursing Competence on the NCTEI. A non-significant regression equation was found \( (F(4, 41) = 1.89, \ p = .13, \ R^2 = .16) \), indicating that none of the factors of the SSREIT predicted Nursing Competence on the NCTEI (see Table 2).
Table 2

**Coefficient Variables Resulting From Multiple Regression Analysis**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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</thead>
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<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>76.02</td>
<td>8.29</td>
</tr>
<tr>
<td>EI Perception</td>
<td>-.51</td>
<td>.23</td>
</tr>
<tr>
<td>EI: Self</td>
<td>.21</td>
<td>.39</td>
</tr>
<tr>
<td>EI: Other</td>
<td>.12</td>
<td>.31</td>
</tr>
<tr>
<td>EI: Utilize</td>
<td>-.17</td>
<td>.33</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = Nursing Competence

**Personality and the factors of SSREIT.** Multiple regression analysis was used to predict the effect of the factors on the SSREIT (Perception of Emotions, Management of Emotions in Self, Management of Others’ Emotions, Utilization of Emotions) on the factor Personality on the NCTEI. A non-significant regression equation was found ($F(4, 41) = 2.0$, $p = .1$, $R^2 = .16$), indicating that none of the factors of the SSREIT predicted Personality on the NCTEI (see Table 3).

**Evaluation and the factors of SSREIT.** Multiple regression analysis was used to predict the effect of the factors on the SSREIT (Perception of Emotions, Management of Emotions in Self, Management of Others’ Emotions, Utilization of Emotions) on the factor Evaluation on the NCTEI. A non-significant regression equation was found ($F(4, 41) = 2.91$, $p = .882$, $R^2 = .028$), indicating that none of the factors of the SSREIT predicted Evaluation on the NCTEI (see Table 4).
Table 3

Coefficient Variables Resulting From Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>52.85</td>
<td>6.4</td>
</tr>
<tr>
<td>EI Perception</td>
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<td>.17</td>
</tr>
<tr>
<td>EI: Self</td>
<td>.01</td>
<td>.30</td>
</tr>
<tr>
<td>EI: Other</td>
<td>.34</td>
<td>.24</td>
</tr>
<tr>
<td>EI: Utilize</td>
<td>-.42</td>
<td>.27</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = Personality

Table 4

Coefficient Variables Resulting From Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>62.14</td>
<td>8.37</td>
</tr>
<tr>
<td>EI Perception</td>
<td>.05</td>
<td>.23</td>
</tr>
<tr>
<td>EI: Self</td>
<td>-.21</td>
<td>.39</td>
</tr>
<tr>
<td>EI: Other</td>
<td>.16</td>
<td>.31</td>
</tr>
<tr>
<td>EI: Utilize</td>
<td>-.21</td>
<td>.34</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = Evaluation
**Interpersonal relationships and the factors of SSREIT.** Multiple regression analysis was used to predict the effect of the factors on the SSREIT (Perception of Emotions, Management of Emotions in Self, Management of Others’ Emotions, Utilization of Emotions) on the factor Evaluation on the NCTEI. A non-significant regression equation was found \( F(4, 38) = .65, \ p = .63, \ R^2 = .06 \), indicating that none of the factors of the SSREIT predicted Interpersonal Relationships on the NCTEI (see Table 5).

Table 5

*Coefficient Variables Resulting From Multiple Regression Analysis*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>45.4</td>
<td>6.20</td>
</tr>
<tr>
<td>EI Perception</td>
<td>-.12</td>
<td>.17</td>
</tr>
<tr>
<td>EI: Self</td>
<td>-.05</td>
<td>.31</td>
</tr>
<tr>
<td>EI: Other</td>
<td>.17</td>
<td>.23</td>
</tr>
<tr>
<td>EI: Utilize</td>
<td>-.20</td>
<td>.28</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = Interpersonal Relationships

**Demographic Variables**

Demographic variables included the following data: faculty ethnicity, program size, years of clinical teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation. Independent samples T-tests were performed to assess the effect of faculty ethnicity, faculty rank, employment status, program size, and educational preparation on CTE and EI. Bivariate analyses were performed to analyze the relationship between years of teaching experience, and years of clinical teaching experience on CTE and EI. Results are
presented in Tables 6-12. Significance for all tests was set at p < .05.

Table 6

**Faculty Ethnicity and CTE and EI**

<table>
<thead>
<tr>
<th></th>
<th>White Faculty</th>
<th>Non-White Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CTE</td>
<td>298.20</td>
<td>22.48</td>
</tr>
<tr>
<td>EI</td>
<td>139.74</td>
<td>13.0</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = CTE, EI

Table 7

**Faculty Employment Status and CTE and EI**

<table>
<thead>
<tr>
<th></th>
<th>Part Time Faculty</th>
<th>Full Time Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CTE</td>
<td>293.29</td>
<td>21.37</td>
</tr>
<tr>
<td>EI</td>
<td>137.79</td>
<td>13.32</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = CTE, EI
### Table 8
*Program Size and CTE and EI*

<table>
<thead>
<tr>
<th></th>
<th>128 or fewer students</th>
<th>128 or greater students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CTE</td>
<td>298.29</td>
<td>22.88</td>
</tr>
<tr>
<td>EI</td>
<td>140.81</td>
<td>12.3</td>
</tr>
</tbody>
</table>

*Note: Dependent Variable = CTE, EI*

### Table 9
*Educational Preparation and CTE and EI*

<table>
<thead>
<tr>
<th></th>
<th>Master’s or Bachelor’s Degree</th>
<th>Doctoral Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CTE</td>
<td>299.26</td>
<td>21.27</td>
</tr>
<tr>
<td>EI</td>
<td>140.81</td>
<td>12.3</td>
</tr>
</tbody>
</table>

*Note: Dependent Variable = CTE, EI*

### Table 10
*Faculty Rank and CTE and EI*

<table>
<thead>
<tr>
<th></th>
<th>Non- Tenure</th>
<th>Tenured or Tenure-Track</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CTE</td>
<td>295.65</td>
<td>20.87</td>
</tr>
<tr>
<td>EI</td>
<td>147.6</td>
<td>12.25</td>
</tr>
</tbody>
</table>

*Note: Dependent Variable = CTE, EI*
Table 11

*Years of Clinical Teaching and CTE and EI*

<table>
<thead>
<tr>
<th>Years of Clinical Teaching (M = 11.81, SD = 10.39)</th>
<th>M</th>
<th>SD</th>
<th>R</th>
<th>Sig</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE</td>
<td>299.88</td>
<td>21.94</td>
<td>.21</td>
<td>.14</td>
<td>52</td>
</tr>
<tr>
<td>EI</td>
<td>140.81</td>
<td>12.3</td>
<td>.72</td>
<td>.48</td>
<td>50</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = CTE, EI

Table 12

*Years of Clinical Experience and CTE and EI*

<table>
<thead>
<tr>
<th>Years of Clinical Experience (M = 25.95, SD = 12.34)</th>
<th>M</th>
<th>SD</th>
<th>R</th>
<th>Sig</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE</td>
<td>299.88</td>
<td>21.94</td>
<td>.16</td>
<td>.26</td>
<td>52</td>
</tr>
<tr>
<td>EI</td>
<td>139.21</td>
<td>12.3</td>
<td>.72</td>
<td>.48</td>
<td>50</td>
</tr>
</tbody>
</table>

Note: Dependent Variable = CTE, EI

No relationship was found between EI and CTE and any of the demographic variables, except faculty rank and CTE. There was a statistically significant difference between non-tenure-track faculty (M = 295.65, SD = 20.87) and tenure-track/tenured faculty (M = 310.33, SD = 21.66) on their levels of CTE (t(50) = -2.27, p = .03, N = 52). A preliminary conclusion may be drawn from this analysis that faculty rank may be related to CTE, with tenure-
track/tenured faculty having higher levels of CTE. However, due to the small sample size a conclusive relationship cannot be made.

**Factor Analysis**

The initial research proposal included a plan to run an exploratory and confirmatory factor analysis to further explore the data and confirm or reject the underlying theory supporting the measurement tools. However, for a factor analysis to produce reliable results, there must be at least 10 subjects for each variable, or at least 100 participants in the sample size (Beavers et al., 2013; Plichta, Kelvin, & Munro, 2013). In this study of 66 participants and nine variables between the factors of the SSREIT and the NCTEI, a factor analysis would not have produced reliable results; therefore, a factor analysis was not run.

**Conclusion**

A variety of statistical tests were used to analyze the data in this study. Pearson correlation coefficients were run to answer Research Question #1: What is the relationship between the total score of Emotional Intelligence (EI) and the total score of Clinical Teaching Effectiveness (CTE) of clinical nurse faculty teaching in pre-licensure baccalaureate programs? Multiple regression models were used to answer Research Question #2: What is the relationship between the factors of EI and the factors of CTE in clinical nurse faculty teaching in pre-licensure baccalaureate programs? Depending on whether the variables were continuous or discrete, Pearson correlation coefficients and independent samples T-tests were used to explore the relationships between (a) the total score of CTE and the following demographic variables: faculty ethnicity, program size, years of teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation years of clinical teaching of faculty; and (b) the total score of EI and the following demographic variables: faculty ethnicity, program size,
years of teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation.

Non-statistically significant relationships were found in all relationships except CTE and faculty rank, with non-tenure faculty having lower levels of CTE than tenure-track or tenured faculty ($t(50) = -2.27, p = .03, N = 52$). A trend toward statistical significance was found in the relationship between the total EI score and the factor Nursing Competence from the NCTEI in Research Question #2. Results of the Pearson correlation coefficient were significant ($M = 138.74, SD = 12.7$) and the factor Nursing Competence on the NCTEI ($M = 62.93, SD = 5.17$), ($p = .03, r = .28, N = 46$). However, when multiple regression models were run, the results indicated that EI did not significantly predict Nursing Competence on the NCTEI ($\beta = -.28, t[9.56] = -1.91, p = .06$). EI also did not explain a significant proportion of variance on Nursing Competence on the NCTEI ($R^2 = .06, F[1, 44] = 4.65, p = .06, N = 46$). These results are contradictory and may suggest a relationship between the two variables, but this is a tenuous conclusion. Chapter Five next summarizes the results of this study and discusses implications for future research.
CHAPTER FIVE

Clinical instructors and their effectiveness as clinical teachers are essential components of nursing education (Benner et al., 2010). They lay the roots of future nursing practice, socialize students into the profession, and model professional behaviors. Measuring the Clinical Teaching Effectiveness (CTE) of faculty is vital, as clinical teaching is one of the most effective pedagogies in nursing education (Ondrejka, 2013). Allen et al. (2012) found a relationship between CTE and emotional intelligence (EI), but to date no other study has investigated this topic.

Based on this gap in knowledge, this study was formulated to examine the relationship between the EI and CTE of clinical nursing faculty in pre-licensure baccalaureate programs in New York State. The relationship of several demographic variables to faculty self-perceptions of EI and CTE was also explored; these included: program size, faculty ethnicity, years of teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation. This chapter discusses the results and conclusions of the study and recommends directions for future research.

Research Question #1

Research Question #1 examined the relationship between the total score of EI, as measured by the Schutte Self-Report Emotional Intelligence Test (SSREIT), and the total score of CTE, as measured by the Nursing Clinical Teaching Effectiveness Inventory (NCTEI). As reported in Chapter Four, no significant relationship was found between these variables. This finding conflicts with the findings of Allen et al. (2012) who found a significant relationship between the EI and CTE of nursing faculty. However, there were distinct differences between Allen et al. and this study. The differences were: use of a different EI tool and different
demographics of the sample, sample size, and diversity of sample.

Allen et al. used an ability measurement for EI, the Bar-On EQ-i:S. This study used a trait measurement for EI, as it is thought that trait measurements of EI capture intrinsic traits tied to motivational factors that improve job performance (Johnson et al., 2009; Lavoie-Tremblay et al., 2009; Petrides, 2011). Allen et al. (2012) also sampled faculty at only one institution, limiting generalizability, while the present study collected data from 20 nursing programs. The demographic distribution was also different. In this sample, 36.4% of faculty were part-time faculty and 30.3% held doctoral degrees, whereas in Allen et al.’s study, 59.6% of faculty were part-time and 10.6% held doctoral degrees. This could be due to the fact that Allen et al. studied faculty at one institution and may have had easier access to part-time faculty. The variables for years of clinical teaching and years of clinical experience were categorical, whereas in the present study they were continuous variables; thus, comparisons could not be made. Allen et al.’s sample (N = 47) was also smaller than this sample (N = 66). However, in this study, as noted previously, data were missing, lowering the sample size for Research Question #1 (N = 38). Allen et al. also did not collect data on faculty ethnicity either. This study sampled a diverse population of faculty in New York State, and ethnicity corresponded roughly to the ethnicity in the larger faculty population. In New York State, 16.3% of faculty in pre-licensure baccalaureate nursing programs are non-White, and 19.7% of respondents in this study were non-White (Brewer, Wolff, & Welch, 2012). Considering the contradictory results and different approaches to each study, further examination of teaching effectiveness in other disciplines and other samples is presented below.
EI and Teaching Effectiveness in Other Disciplines

Since the implementation of this study, there has been no further research on the relationship between the EI and CTE of nursing faculty. However, the nursing literature is replete with recent recommendations to integrate EI into nursing curricula (Anderson, 2016; Beauvais, Stewart, & DeNisco, 2014; Codier, Kofoe, & Peters, 2015; Fitzpatrick, 2016; Foster, McCloughen, Delgado, Kefalas, & Harkness, 2015; Gratrix, 2014; Liebrecht, 2016; Parnell & St. Onge, 2015; Ranjbar, 2015; Şenyuva, Kaya, Işık, & Bodur, 2014). Despite this call to action, there is a lack of empirical evidence on the role EI plays in the teaching effectiveness of clinical nursing faculty. Even with little research on this topic, some research supports the relationship between EI and effective teaching as a whole, although some of the results are contradictory. The research on EI and teaching effectiveness in general is relevant to the study of EI in clinical nursing education because the constructs of the NCTEI (teaching ability, nursing competence, personality, evaluation, and interpersonal relationships) appear similar to tools that measure effective teaching in other disciplines.

In their study, Corcoran and Tormey (2013) found no relationship between three constructs of EI (p > .05) and teaching effectiveness in secondary school teachers. However, a negative correlation was found with the construct Perception of Emotions (β = -.214, OR = .81, p = .036), indicating that teachers with higher scores in Perception of Emotions were more likely to score lower in teaching effectiveness. These results are similar to the findings of this study, except that a negative correlation was found with the construct Perception of Emotions, indicating that not only is there no relationship between EI and teaching effectiveness in three of the four branches of EI, but the fourth branch actually predicts a lower EI score. Despite the different disciplinary focus, different faculty sample, and focus on classroom teaching, Corcoran
and Tormey (2013) measured similar constructs of teaching effectiveness, indicating that the conceptual basis of the measurement tools may be related.

The constructs in the evaluations of teaching effectiveness that Corcoran and Tormey (2013) used are similar to constructs on the NCTEI. Corcoran and Tormey’s measured constructs are as follows, with the construct in italics and the similar NCTEI factor in parentheses: Planning (Teaching Ability), The appropriateness and relevance of material taught to the curriculum (Teaching Ability), Pedagogic content knowledge (Nursing Competence), Use of appropriate pedagogic strategies (Teaching Ability), Relationship with pupils (Interpersonal Relationships and Personality), and Reflection/self-evaluation (Evaluation). Additionally, the MSCEIT was used to measure EI. Although this is an ability model of EI, like the SSREIT, it was derived from the original conceptual framework formulated by Salovey and Mayer (1990).

Unlike Corcoran and Tormey (2013), Shahid, Jani, Thomas, and Francis (2015) found a relationship between university faculty’s EI and their perceptions of teaching effectiveness (p < 0.01, N = 275). EI was measured using the Emotional Skills Assessment Process (ESAP), which most closely mirrors ability models of EI (Basu & Mermillod, 2011). The Self-evaluation of Teaching Effectiveness (SETE) was used to measure teaching effectiveness and was comprised of the following six constructs: analytical approach, clarity of teaching, lecturer-group interaction, lecturer-individual, student interaction, and enthusiasm of lecturer. Similar to Corcoran and Tormey (2015), parallels were found with the constructs of the NCTEI.

In comparing the constructs of the NCTEI to the SETE, analytic approach appeared to be closely related to Nursing Competence because it included discussing recent developments in the field (Shahid et al., 2015). Clarity of teaching and enthusiasm of instructor were very similar to Teaching Ability and Personality from the NCTEI, respectively. Lecturer-group interaction was
described as a concern with the quality of teaching, which was very similar to Evaluation on the NCTEI, and *lecturer-individual* and *student interaction* from the SETE were similar to interpersonal relationships from the NCTEI. Unfortunately, Shahid et al. did not identify which disciplines were included in the sample, but the similarity of the constructs in the NCTEI and SETE suggests a universality of constructs that measure teaching effectiveness across disciplines.

In the discipline of medicine, as previously discussed, Singh and Ja (2012) found a statistically significant relationship between EI and self-report ratings of the teaching effectiveness of medical and engineering faculty in a classroom setting (*r* = .649, *p* < .01). More recently, Omid, Haghani, and Adibi (2016) discussed EI and effective clinical education for medical students. This was not an empirical study, but the competencies identified as indicative of effective clinical teachers in medical education were again markedly similar to the constructs in the NCTEI. The competencies were as follows: *Pay attention to survival needs, Design a motivational environment, Increase rapport, Be transparent, Manage the social environment, Create a supportive environment, Give interactive feedback, Evaluate your teaching, and Be available* (p. 27). Many of these strategies echo constructs on the NCTEI. For example, the factor Interpersonal Relationships on the NCTEI is similar to the competencies of *Increase rapport, Manage the social environment, and Create a supportive environment*. The factor Evaluation could encompass *Evaluate your teaching*, the factor Personality could include *Be transparent*, and the factor Teaching Ability is similar to *Give interactive feedback*. *Pay attention to survival needs* was described by Omid et al. (2016) as the instructor accurately assessing the patient’s and student’s physiological needs and managing the environment accordingly. This is very similar to the factor Nursing Competence and certainly describes
elements of holistic nursing practice. Overall, the concepts associated with clinical teaching effectiveness in medicine and nursing appear to have striking similarities, despite their different disciplinary origins. Examining similar studies in other disciplines may not be a direct parallel to nursing inquiry on EI and teaching effectiveness. Considering the scarcity of research on this topic, however, an interdisciplinary focus may provide a body of knowledge that could inform further research.

**EI and Nursing Students**

In 2015, three studies examined the relationship between EI and the clinical effectiveness of nursing students (Farshi, Vahidi, & Jabraelli, 2015; Rice, 2015; Stenhouse et al., 2015). Once again, these studies were not directly parallel to the investigation of EI and CTE in nurse faculty, but they do reflect the burgeoning literature on the importance of integrating EI into nursing curricula. Also, unlike Omid et al. (2015), they are empirical studies. Although the samples were nursing students and not nursing faculty, the results may be relevant to the purpose of this study because they measured students’ clinical performance. It is not unrealistic to assume that the CTE of faculty may impact students’ clinical performance. Indeed, if this were not an underlying assumption of nursing education, there would be little reason to investigate this relationship. The most significant aspect of these three studies is that they also had contradictory results, with Stenhouse et al. (2015) finding no significance between EI and clinical performance, and Rice (2015) and Farshi et al. (2015) finding significance. These results are discussed below.

In their study, Stenhouse et al. (2015) measured the relationship between EI and overall performance in nursing students. Evaluations of clinical performance were combined with academic performance as an overall evaluation of student performance. Unfortunately, clinical
performance was not evaluated separately but was an integral component of evaluations of performance. Two tests of EI were used: the SSREIT (used in this study as well) and the short form of the Trait Emotional Intelligence Questionnaire (TEIQue-SF). Both of these are considered trait measurements of EI (Petrides, 2011; Schutte et al., 2009). Interestingly, Stenhouse et al. (2015) described the SSREIT as an ability measure in the study, but Nicola Schutte, one of the authors of the SSREIT, very clearly defined it as a trait measurement of EI (Schutte et al., 2009). This confusion may stem from the fact that the SSREIT was developed from an ability definition of EI, as explained in Chapter Two. Regardless, the pertinent information from the study is that Stenhouse et al. (2015) found no relationship between EI and student performance using the SSREIT \( r(423) = .037, p = 0.44, N = 538 \) or the TEIQue-SF \( r_s(435) = .005, p = 0.91, N = 538 \).

In contrast to Stenhouse et al.’s (2015) findings, Rice (2015) and Farshi et al. (2015) found a statistically significant relationship between EI and clinical performance, but used a different measurement tool for EI than Stenhouse et al. did. In her study, Rice found significance between EI and clinical competence \( r[54] = 0.412, P < .007, N = 55 \). EI was measured using the MSCEIT and clinical competence was evaluated using the Clinical Performance Scale (SCPS), both of which are self-report surveys.

In their study, Farshi et al. (2015) found similar significance examining the relationship between EI and students’ clinical self-efficacy using the Emotional Intelligence Questionnaire Sharing and a short questionnaire for nursing competence (SNCQ) \( r = 0.22, P = 0.02, N = 132 \). The researchers did not stipulate whether the SNCQ was a trait or an ability measure. A search of ProQuest, Academic One File, Google Scholar, and Mental Measurements Index did not turn up any results for this test; thus, it cannot be determined if it is a trait or an ability measure from
the literature. These results were different from Stenhouse et al. (2015), but the measurement tools in the studies of both Rice (22015) and Farshi et al. (2015) were also very different. Due to the scarcity of research on this topic, these results are worthy of discussion, but caution must be taken in drawing any conclusions because the methods were different.

Also, the samples of Stenhouse et al. (2015), Rice (2015), and Farshi et al. (2015) were different than the sample for this study. However, they all examined the relationship between EI and performance in the clinical setting. The results of these studies were inconsistent and thus limited in their predictive ability. This could be due to a lack of consistency in measurement tools.

Stenhouse et al. (2015), Fashi et al. (2015), and Rice (2015) all used different measurement tools for EI. It is particularly noteworthy that Stenhouse et al. used the same tool as was used in this study (SSREIT) and another trait measure of EI (TEIQue-SF), and found similar results to this study on the relationship between EI and performance in the clinical setting. However, in the past, Por et al. (2011) found significance ($r_s = 0.32, p < 0.01$) between EI and students’ perceived nursing competence using the SSREIT. More research is needed using consistent tools of measurement on the relationship between EI and clinical performance in both nursing students and nursing faculty. A greater body of research may help explain the conflicting results.

**Research Question #2**

Research Question #2 examined the relationship between the factors of EI as measured by the SSREIT (Perception of Emotions, Managing Emotions in Self, Managing Others’ Emotions, and Utilization of Emotions) and the factors of CTE as measured by the NCTEI (Teaching Ability, Nursing Competence, Personality, Evaluation, and Interpersonal
Relationships). No statistically significant relationship was found between any of the factors, except total SSREIT score and Nursing Competence. The relationship between EI and Nursing Competence showed a trend towards significance, as explained in Chapter Four. Although trending significance values are commonly reported in the literature, there are divergent opinions on this practice. Wood, Freemantle, King, and Nazareth (2014) cautioned against reporting trends and contended that P values may actually become less significant with a bigger sample. Consequently, the relationship between EI and Nursing Competence may be considered somewhat tenuous. However, to place these results in a larger context, EI has been associated in numerous studies with improved job performance in staff nurses and nurse administrators (Codier et al., 2009; Cummings et al., 2005; Sharif et al., 2013). EI is also one of the strongest predictors of overall success in a job (Goleman, 1995; Joseph, Jin, Newman, & O’Boyle, 2015). Considering prior research, it stands to reason that nursing faculty with higher EI would perceive themselves as more competent nurses.

In contrast to the results of this study, Allen et al. (2012) found strong correlations with EI and all NCTEI factors (p < .01). The consistency in measurement tools once again comes into question when comparing results, as Allen et al. used the Bar-On EQ-i:S), which is an ability measure of EI, while this study used the SSREIT, a trait measurement of EI. Although both tools measured the same conceptual basis of EI, trait measurements of EI may be better at detecting intrinsic traits that are tied to motivational factors affecting performance in the workplace (Johnson et al., 2009; Petrides, 2011). Further research is needed to explore the relationship between EI and Nursing Competence in more detail with larger sample sizes and consistent measurement tools that will determine the validity of the relationship between the factors on the SSREIT and the NCTEI.
Demographic Variables

No statistically significant relationships were found between EI and any of the demographic variables (faculty ethnicity, program size, years of clinical teaching experience, years of clinical experience, faculty rank, employment status, and educational preparation). There was a statistically significant relationship between CTE and faculty rank, with faculty in a tenure-track/tenure line having higher perceived levels of CTE. A search of the databases Cumulative Index to Nursing and Allied Health Literature (CINAHL), Education Resource Information Center (ERIC), and Academic OneFile using the terms tenure-track and teaching effectiveness yielded no pertinent results. Exploring the effect of tenure track on teaching effectiveness of faculty may be a direction for future research.

Support for Theoretical Rationale

Although no relationship was found between the EI and CTE in this study, prior research supported the relationship between EI, CTE, and teaching effectiveness in other disciplines, although there is a paucity of empirical research on this relationship and contradictory findings in the available literature. However, considering the strong correlation between EI and overall job performance, the theory has validity as a framework for further research on CTE of nursing faculty (Goleman, 1995; Joseph et al., 2015).

The four branches of EI (perceiving emotions, integrating emotions in thought, understanding emotions, and managing emotions to promote personal growth) support the caring ethics of nursing practice by acknowledging the importance of the reciprocal emotional work nurses do with patients (Mayer & Salovey, 1997; Rankin, 2013). Empathy, self-awareness, and the ability to cope with rapidly changing, ambiguous situations are traits that are linked to EI, but are also central to nursing practice (Anderson, 2016; Goleman, 1995; Mayer & Salovey, 1997).
EI Theory provides a framework for nurses to understand the patient’s and their own emotional responses to patient care (Foster et al., 2015; Ondrejka, 2013; Rankin, 2013). EI Theory is well-suited for examining the CTE of nursing faculty because EI supports the affective domain of the teaching-learning process and provides a conceptual basis for teaching the emotional aspects of patient care (Freshwater & Stickley, 2004; Ondrejka, 2013). Faculty with high EI may be better clinical instructors because they can model EI in practice and facilitate the development of EI in students (Allen et al., 2012).

It is important, however, to consider the historical context in this discussion. The trend in nursing education has been toward a caring curriculum that values emotional responses and the relational aspects of nursing care. However, this trend is relatively new, and in the past, students were not taught how to manage their emotions; in fact, they were often told to conceal their emotions (McQueen, 2004). The skills of EI have become more relevant for nurses and nurse educators in the 21st century (Foster et al., 2015; McQueen, 2004). There is an expectation now that nurses will be full partners in patient care and the skills of EI will be needed to manage both the patient’s and the nurse’s emotions (Foster et al., 2015; IOM, 2010; McQueen, 2004). A plethora of research has demonstrated the predictive ability of EI on overall performance in the workplace, but EI is still not an integral part of most nursing curricula and the relationship between EI and teaching effectiveness is not yet clear. However, there is a general acceptance by the profession that the skills of EI are valuable in nursing education, demonstrating a gap between the theoretical rationale and the evidence to support it (Anderson, 2016; Beauvais et al., 2014; Codier et al., 2015; Fitzpatrick, 2016; Foster et al., 2015; Gratrix, 2014; Liebrecht, 2016; Parnell & St. Onge, 2015; Ranjbar, 2015; Şenyuva et al., 2014). The theory of EI can be used in
future nursing research to guide the development of scientific studies that investigate the effect of EI on CTE that provide empirical evidence for the value it holds in the nursing curricula.

Limitations

The limitations of this study included the use of self-report questionnaires, the lack of a financial incentive, and the small sample size. The biggest limitation by far was the small sample size. Even though two of the demographic variables were redefined, bringing the total number of demographic variables down to 15, the minimum sample (using a power of .08) should have been 150 participants (Bartlett et al., 2001). Multiple mailings, phone and personal contacts were used to recruit faculty, with the end result of 66 usable responses. Additionally, not all faculty answered all questions, driving the sample down to 38 participants for Research Question #1. The sample was also not large enough to run a factor analysis, so further data on the reliability and validity of the SSREIT and NCTEI could not be ascertained. In retrospect, the transient nature of adjunct faculty and the fact that adjunct faculty do a large portion of clinical teaching in many baccalaureate programs was probably underestimated in the collection of data for this study (Caruth & Caruth, 2013; DeSantis, 2012).

Much of the literature acknowledges that adjunct faculty perform a large part of the clinical teaching in most programs (DeSantis, 2012). However, it was difficult to determine how large the population actually was of part-time clinical faculty in New York State. The New York State Nursing Workforce Center estimated that the number of both full-time and part-time faculty in the state’s nursing schools ranges from 3,012 to 3,019, with 943 faculty teaching in pre-licensure programs (Brewer et al., 2012). This database was incomplete, however, as only 33 out of 104 pre-licensure programs responded to the survey and the type of program (diploma, associate, baccalaureate) was not identified. Additionally, no data were collected on clinical
faculty in particular (Brewer et al., 2012). The American Association of Colleges of Nursing (AACN) only collects data on part-time faculty at the school level, not at the program level, and there is no way to determine the number of part-time faculty in pre-licensure baccalaureate programs in New York State (D. Fang, personal communication, September 11, 2016). The National League for Nursing (NLN) only has faculty data on member schools, and many baccalaureate programs are not accredited by the NLN (D. Hoover, personal communication, September 12, 2016). Consequently, it is impossible to know, or even estimate, the number of clinical faculty teaching in pre-licensure baccalaureate programs. The data simply do not exist.

Despite the lack of data on the total population of pre-licensure baccalaureate clinical nursing faculty, the large number of faculty in New York State made it seem reasonable that a sample of 170 clinical faculty could be obtained. Three email letters, spaced approximately two weeks apart, were sent to chairs/deans of programs inviting faculty to participate. Most chairs/deans preferred to forward the information directly to faculty; several provided contact information for clinical faculty so the researcher could contact them directly. If no reply was received after three emails, a phone call was made directly to schools that had not replied, with a final email to follow up. The researcher’s communication from chairs and deans when recruiting participants was positive and encouraging, with many remarking that the topic was valuable and they were happy to share the survey with their faculty. Additionally, a search of schools’ websites revealed that a few schools posted contact information for full-time clinical faculty, and the researcher sent invitations directly to these individuals. Clinical faculty were also recruited in person at The Bassett Hospital Research Conference. The researcher attended a faculty meeting at The Sage Colleges and at the invitation of The Chair of Nursing, attempted to recruit more participants. Many attempts were made to recruit clinical faculty for this study.
However, despite multiple attempts to recruit participants, and encouraging responses from chairs and deans, only 67 participants responded to requests for study participation and only 66 participants had usable data. Additionally, not all respondents answered all questions, which limited the size of the sample to as low as 38. Possible reasons for the low response rate may have been the length of the survey, the anonymity of an internet survey, and the lack of a financial incentive.

The length of the survey may have affected the return rate. Between the NCTEI, SSREIT, and demographic questions, the survey included a total of 88 questions. The entire survey was estimated to take approximately 15-20 minutes, and the time commitment may have prevented faculty from participating and decreased the return rate. The anonymity of a random internet survey can be perceived as a low stakes activity, and may not have stimulated enough interest in participants to warrant the time investment (Curran, 2016). Given the positive response of deans and chairs to the topic of study, there may have been a higher completion rate if it were administered in person at a nursing department meeting, rather than sent anonymously in an email.

In addition, no financial incentive to complete the survey was offered. Some statisticians recommend financial incentives for participants because they can increase return rate and sample size (Lesser et al., 2001). A financial incentive was not offered in this study, which may have contributed to the low return rate. However, although incentives increase return rate, they also introduce the possibility of bias and coercion (Lesser et al., 2001; Singer & Cong, 2013). Principles of ethical research may be at risk when financial incentives are used and the Institutional Review Board for Human Subjects at Lehman College advised against the use of incentives. The researcher thought it was prudent to comply with this recommendation.
Another limitation of this study that may have affected the results is that both the SSREIT and NCTEI are self-report mechanisms. Self-report surveys are used extensively in many research studies because they are quick, cost-effective, and typically psychometrically sound (Froman, 2014). However, one disadvantage of self-report surveys is the tendency to inflate answers to cast a positive light on the self (Donkin et al., 2012; Gaurav et al., 2013). Respondents can also be careless and provide insufficient responses, increasing the risk of a type one error, i.e., stating there is an effect when there is none (Curran, 2016). Several items were reverse-coded for both the SSREIT and NCTEI; if respondents were rushed, they may have been careless in responding to reverse-coded questions. This trend may also be reflected in the large number of incomplete answers. Thus, the self-report nature of both the SSREIT and NCTEI was a limitation of this study.

Now including this study, two studies to date have examined the relationship between the EI and CTE of clinical nurse faculty (Allen et al., 2012). Both studies had small sample sizes, and the samples had different characteristics. Thus, there remains a need for future research that encompasses larger sample sizes and examines the longitudinal development of EI in nursing faculty. However, EI has been shown to have a linear U-curve when correlated with age, with high scores peaking in middle age (Cabello, Sorrel, Fernández-Pinto, Extremera, & Fernández-Berrocal, 2016). The average age of a nursing faculty currently (depending on rank) ranges from 51.4 to 61.6 years for doctorally prepared faculty and 51.2 to 57.1 years for master's degree-prepared faculty (AACN, 2014). This places most nursing faculty firmly in middle age. The effect of age would need to be controlled for in longitudinal studies.

The difficulties of recruiting clinical faculty were also discussed and need to be considered carefully. One strategy to surmount this obstacle might be for the researcher to visit
individual sites and collect a series of smaller data sets that would eventually comprise a larger data set that is representative of the population. This strategy may stimulate more interest in the topic and lead to an increase in faculty’s perception of the value in completing the survey. Although the goals of associate and baccalaureate degree programs are somewhat different, including associate degree faculty may also increase the sample size. Utilizing these strategies may provide a more robust sample in the future.

**Implications for Nursing Education**

There is general consensus in the nursing literature that EI should be part of every nursing curriculum. However, very few empirical studies can be used to guide responsible integration of the theory into curricula (Fitzpatrick, 2016). The call to integrate EI into nursing curricula necessitates the development of EI in faculty, particularly in the clinical setting, where students are socialized into the behaviors of the profession (Benner et al., 2010; Ondrejka, 2013). Nursing faculty need to be able to model and teach EI to students, but faculty may not possess the skills to do this (Parnell & St. Onge, 2015). Currently, there is a dearth of research on the relationship between EI and the teaching effectiveness of nursing clinical faculty. This identifies a need for stronger empirical research on the relationship between EI and CTE (Allen et al., 2012; Parnell & St. Onge, 2015).

Recognizing and managing emotions in oneself and others is crucial to delivering safe, compassionate nursing care, yet EI is not considered an integral part of nursing curricula or clinical education (Ranjbar, 2015; Rankin, 2013). It is known that EI is related to more effective nursing practice and safer patient care (Beauvais et al., 2011; Codier et al., 2009, 2015), but there is far less literature on EI in nursing students and nursing faculty than there is in other aspects of nursing, such as leadership and clinical practice (Fitzpatrick, 2016). EI should be an essential
component of faculty development, but more research needs to be done to understand exactly what faculty need to increase teaching effectiveness and develop EI skills in nursing students. Programs can be created to facilitate the development of EI in nursing faculty, but there first must be an understanding of the need for these programs. Research identifying the relationship between EI and CTE can pave the way for programs to foster the development of EI in clinical nurse faculty.

However, the current state of research on EI in clinical nursing education is paltry and confusing at best. Some of this is to be expected because EI is a relatively new theory, and research applying it to nursing education is also very new. However, as discussed earlier, there are inconsistencies in many of the results of recent research studies. In this particular study, the researcher had difficulties obtaining an adequate sample and recommendations were made to alleviate that problem in the future. Additionally, there was little consistency in the use of measurement tools across studies, and it is difficult to make predictions based on the results of studies that use different methods of measurement. However, as more research is done, the different measurement tools may not matter if they are measuring similar conceptual bases. Perhaps as more research is conducted, these issues will become less problematic because a volume of research can identify trends and define best practices.

The relationship between EI and CTE remains an important topic in nursing education, with implications for improved patient care by graduate nurses who may receive better clinical instruction from an instructor with enhanced EI. The inconsistencies in research results only serve to demonstrate the need for further research on this topic. The dissemination of multiple research studies may uncover the reason for inconsistent results and ultimately reveal the true nature of the relationship between EI and CTE.
Recommendations

Several recommendations for future research can be derived from this study:

1. inclusion of the need for research on EI and CTE at a national nursing conference;
2. employing strategies to increase sample size in future studies, such as using a series of small, intensive data collections done one institution at a time, with the goal of getting a large sample that represents the population; and
3. a study that investigates the effectiveness of faculty development for EI and measures EI and CTE prior to the intervention and after the intervention.

Conclusions

This study examined the relationship between emotional intelligence and clinical teaching effectiveness and found no significant correlation, despite prior research that demonstrated a relationship between the two variables (Allen et al., 2012). There was a relationship between tenure-track faculty and CTE, with faculty in a tenure track having higher CTE than non-tenured faculty; that relationship should be explored in future research. This points to a need for further research on EI in clinical nursing education, with an examination of demographic variables.

Clinical instruction sets the stage for a student’s future practice, and the EI of faculty may influence the effectiveness of instruction. It has been established that there is a general consensus in the nursing literature that EI should be integrated in nursing curricula, but there is little research available that will help guide this integration. The theory of Emotional Intelligence can be used as framework for formulating future research studies, as it aligns well with the ethics of the nursing profession. Recommendations were made for future research studies on the relationship between EI and CTE. A multi-disciplinary approach may help illuminate trends.
that are not readily apparent in the current nursing research. Additionally, it was recommended that the need for these studies be highlighted at national nursing forums/conferences.

Emotional Intelligence remains a promising new theory that is well suited to guide research in the nursing profession. Inclusion of this topic into the national agenda will bring awareness to the need for further research. More research will help build a robust body of knowledge on the value of EI in clinical nursing education and establish a scientific rationale for the inclusion of emotional intelligence in clinical teaching.
### APPENDIX A

**Nursing Clinical Teaching Effectiveness Inventory—Faculty Form**

Directions: Please grade your performance as a nursing clinical instructor using the form scale provided. Regard the scale as a continuum where 1 equals NEVER and 7 equals ALWAYS.

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<th>11. Geared instruction to students’ level of readiness</th>
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<th>12. Understood what students are asking or telling</th>
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<td>16. Promoted student dependence</td>
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<td>18. Demonstrated communication skills</td>
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<td>19. Revealed little reading in his/her area of interest</td>
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<td>20. Discussed current developments in his/her field.</td>
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<td>21. Directed students to useful literature in nursing</td>
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<td>22. Demonstrated a breadth of knowledge in nursing</td>
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<td>23. Recognized own limitations</td>
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<td>24. Took responsibility for own actions</td>
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<td>25. Was a good Role Model</td>
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<td>26. Enjoyed Nursing</td>
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<td>27. Made specific suggestions for improvement</td>
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<td>28. Provided constructive feedback on students’ performance</td>
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<td>29. Identified students’ strengths and limitations objectively</td>
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<td>30. Observed students’ performance</td>
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<td>31. Communicated expectations of students poorly</td>
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<td>32. Had unrealistic expectations of students</td>
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<td>33. Gave students positive reinforcement for good contributions, observations, and performance</td>
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<td>34. Corrected students’ mistakes without belittling them</td>
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<td>36. Provided support and encouragement to students</td>
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<td>37. Was unapproachable</td>
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<td>38. Encouraged a climate of mutual respect</td>
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<td>39. Listened attentively</td>
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<td>40. Showed a personal interest in students</td>
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<td>41. Demonstrated empathy</td>
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<td>42. Demonstrated enthusiasm</td>
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<td>43. Was a dynamic energetic person</td>
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<td>44. Was self- confident</td>
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<td><strong>46. Was open-minded and non-judgmental</strong></td>
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<td><strong>47. Had a good sense of humor</strong></td>
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<td><strong>48. Was disorganized</strong></td>
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APPENDIX B

Schutte Self-Report Emotional Intelligence Test

Directions: Each of the following items asks you about your emotions or reactions associated with emotions. After deciding whether a statement is generally true for you, use the 5-point scale to respond to the statement. Please circle the “1” if you strongly disagree that this is like you, the “2” if you somewhat disagree that this is like you, “3” if you neither agree nor disagree that this is like you, the “4” if you somewhat agree that this is like you, and the “5” if you strongly agree that this is like you. There are no right or wrong answers. Please give the response that best describes you.

1 = strongly disagree
2 = somewhat disagree
3 = neither agree nor disagree
4 = somewhat agree
5 = strongly agree

1. I know when to speak about my personal problems to others
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.
3. I expect that I will do well on most things I try.
4. Other people find it easy to confide in me.
5. I find it hard to understand the non-verbal messages of other people.
6. Some of the major events of my life have led me to re-evaluate what is important and not important
7. When my mood changes, I see new possibilities.
8. Emotions are one of the things that make my life worth living.
9. I am aware of my emotions as I experience them.
10. I expect good things to happen.
11. I like to share my emotions with others.
12. When I experience a positive emotion, I know how to make it last.
13. I arrange events others enjoy.
14. I seek out activities that make me happy.
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<th>Description</th>
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<td>15.</td>
<td>I am aware of the non-verbal messages I send to others.</td>
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<tr>
<td>16.</td>
<td>I present myself in a way that makes a good impression on others.</td>
<td>1 2 3 4 5</td>
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<td>17.</td>
<td>When I am in a positive mood, solving problems is easy for me.</td>
<td>1 2 3 4 5</td>
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<td>18.</td>
<td>By looking at their facial expressions, I recognize the emotions people are experiencing.</td>
<td>1 2 3 4 5</td>
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<td>19.</td>
<td>I know why my emotions change.</td>
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<td>20.</td>
<td>When I am in a positive mood, I am able to come up with new ideas.</td>
<td>1 2 3 4 5</td>
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<td>21.</td>
<td>I have control over my emotions.</td>
<td>1 2 3 4 5</td>
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<td>22.</td>
<td>I easily recognize my emotions as I experience them.</td>
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<td>23.</td>
<td>I motivate myself by imagining a good outcome to tasks I take on.</td>
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<td>24.</td>
<td>I compliment others when they have done something well.</td>
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<td>25.</td>
<td>I am aware of the non-verbal messages other people send.</td>
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<td>26.</td>
<td>When another person tells me about an important event in his or her life, I almost feel as though I experienced this event myself.</td>
<td>1 2 3 4 5</td>
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<td>27.</td>
<td>When I feel a change in emotions, I tend to come up with new ideas.</td>
<td>1 2 3 4 5</td>
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<td>28.</td>
<td>When I am faced with a challenge, I give up because I believe I will fail.</td>
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<td>29.</td>
<td>I know what other people are feeling just by looking at them.</td>
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<td>30.</td>
<td>I help other people feel better when they are down.</td>
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<td>31.</td>
<td>I use good moods to help myself keep trying in the face of obstacles.</td>
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<td>32.</td>
<td>I can tell how people are feeling by listening to the tone of their voice.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>33.</td>
<td>It is difficult for me to understand why people feel the way they do.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
Appendix C

Consent for Use of NCTEI

Dear Caroline,

Thank you for your email.

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Best Wishes

Emma

Emma Willcox
Permissions Coordinator

--------- Original Message ---------

From: cs-journals@wiley.com [cs-journals@wiley.com]
Appendix D

Consent for Use of SSREIT

Nicola Schutte <nschutte@une.edu.au>
Sun, Feb 01, 2015 08:39 PM EST
To: Caroline Mosca <moscac2@sage.edu>
Attachments: • Assessing_Emotions_Scale_Chapter_published_manuscript_version.pdf

Thank you for your message. You are welcome to use the scale in your research. Please find attached a manuscript version of a published chapter that contains the scale and background information. There is not cost.

Kind regards, Nicola Schutte
Appendix E

Demographic Questions

Dear Research Participant,

Please answer the following questions prior to completing the surveys. Choose only ONE answer per question. Thank you for your time and participation.

1. What ethnic group do you belong to?
   a. White, non-Hispanic
   b. Asian/Pacific Islander
   c. Hispanic, Black, other group not listed

2. How many students are enrolled in your pre-licensure baccalaureate program?
   a. 0-56 students
   b. 57-128 students
   c. Greater than 128 students

3. How many years of teaching experience do you have in the clinical setting?
   ______________

4. How many years of clinical experience do you have?
   ______________

5. What is your faculty rank?
   a. Tenured
   b. Tenure-track, not yet tenured
   c. Non-tenured

6. What is your employment status?
   a. Full-time
   b. Part-time

7. What is the highest degree you have attained?
   a. Bachelor’s
   b. Master’s
   c. Doctorate
Appendix F

Invitation to Programs

Dear

I am conducting a study investigating the relationship between Clinical Teaching Effectiveness and Emotional Intelligence. I would like to distribute two surveys to all faculty that teach in the clinical setting in your pre-licensure program, inclusive of adjunct, part-time, and full-time faculty. I will be using Survey Monkey and answers will be confidential. Could you please supply me with a list of email addresses for these individuals, or direct me to a source for this information?

Thank you very much for your time and assistance. I am happy to answer any questions you may have. My contact information is listed below.

Regards,

Caroline Mosca PhD-c, RN
cmosca@gradcenter.cuny.edu
518-225-9184
## Appendix G

### Number of Respondents by School

<table>
<thead>
<tr>
<th>Name of School</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pace University</td>
<td>2</td>
</tr>
<tr>
<td>Lehman College</td>
<td>4</td>
</tr>
<tr>
<td>Hunter-Bellevue School of Nursing</td>
<td>2</td>
</tr>
<tr>
<td>State University of New York at Delhi</td>
<td>1</td>
</tr>
<tr>
<td>Nazareth College</td>
<td>3</td>
</tr>
<tr>
<td>New York University</td>
<td>1</td>
</tr>
<tr>
<td>York College</td>
<td>1</td>
</tr>
<tr>
<td>College of New Rochelle</td>
<td>1</td>
</tr>
<tr>
<td>Adelphi University</td>
<td>1</td>
</tr>
<tr>
<td>State University of New York at Plattsburgh</td>
<td>3</td>
</tr>
<tr>
<td>The Sage Colleges</td>
<td>19</td>
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<td>Roberts Wesleyan College</td>
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<tr>
<td>Molloy College</td>
<td>1</td>
</tr>
<tr>
<td>Farmingdale College</td>
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</tr>
<tr>
<td>State University of New York at Brockport</td>
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</tr>
<tr>
<td>State University of New York at Buffalo</td>
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</tr>
<tr>
<td>State University of New York Downstate</td>
<td>1</td>
</tr>
<tr>
<td>Concordia College</td>
<td>1</td>
</tr>
<tr>
<td>St. John Fisher College</td>
<td>3</td>
</tr>
<tr>
<td>Niagara University</td>
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</tr>
<tr>
<td>Did not identify a school</td>
<td>9</td>
</tr>
</tbody>
</table>
Appendix H

Scatter Plots

Total EI

![Normal Q-Q Plot of Total EI](image)

Total CTE

![Normal Q-Q Plot of Total CTE](image)
CTE: Teaching Ability

Normal Q-Q Plot of CTETA

Expected Normal

Observed Value

CTE: Nursing Competence

Normal Q-Q Plot of CTENC

Expected Normal

Observed Value
CTE: Evaluation

Normal Q-Q Plot of CTEE

CTE: Interpersonal Relationships

Normal Q-Q Plot of CTEIP
CTE: Personality

Normal Q–Q Plot of CTEPER

EI: Perception of Emotions

Normal Q–Q Plot of EIPER
EI: Managing Emotions in Self

Normal Q–Q Plot of EIOWN

EI: Managing Others’ Emotions

Normal Q–Q Plot of EIOTHER
EI: Utilization of Emotions

Normal Q–Q Plot of EIUTILIZE

Expected Normal

Observed Value
Appendix I

Histograms

Total EI

Histogram

Mean = 138.19
Std. Dev. = 13.468
N = 38

Total CTE

Histogram

Mean = 299.50
Std. Dev. = 23.887
N = 38
CTE: Teaching Ability

Histogram
Dependent Variable: CTETA

Mean = 7.29E-16
Std. Dev. = 0.987
N = 41

CTE: Nursing Competence

Histogram
Dependent Variable: CTENC

Mean = -5.3E-16
Std. Dev. = 0.989
N = 46
CTE: Personality

Histogram
Dependent Variable: CTEPER

CTE: Evaluation

Histogram
Dependent Variable: CTEE
CTE: Interpersonal Relationships

EI: Perception of Emotions
EI: Managing Emotions in Self

EI: Managing Others’ Emotions
EI: Utilization of Emotions

Mean = 24.30
Std. Dev. = 2.899
N = 42
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