EMOTIONAL INTELLIGENCE AND CLINICAL PERFORMANCE IN SENIOR UNDERGRADUATE NURSING STUDENTS

A Thesis

Presented to the faculty of the School of Nursing

California State University, San Marcos

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF SCIENCE

in

Nursing

Family Nurse Practitioner

by

Andria E. Jones

SPRING
2013
THESS SIGNATURE PAGE

THESIS SUBMITTED IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE IN

NURSING

THESIS TITLE: Emotional Intelligence and Clinical Performance

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DATE OF SUCCESSFUL DEFENSE:

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School of Nursing
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Abstract

of

Emotional Intelligence and Clinical Performance in Senior Undergraduate Nursing Students

by

Andria E. Jones

Statement of Problem
Traditionally nursing schools and universities have been shown to over accentuate academia and leave out emotional intelligence competencies ("Emotional Intelligence," 2007). This may be important in a service based profession such as nursing when the profession relies on the qualities of emotional intelligence, these qualities recognized as self awareness, self regulation, self motivation, empathy, and well developed social skills (Goleman, 2006). No prior published studies have been conducted on nursing students and the relationship that the emotional intelligent score has on clinical performance. However, there have been studies on established nurses that confirm a high emotional intelligence score is associated with better clinical performance and patient outcomes.

Sources of Data
Data will be collected from a convenience sample of traditional and accelerated nursing students currently enrolled at California State University San Marcos. Students will be asked to complete a paper survey of the emotional intelligence test, fill out demographic data to be used to describe the population, and be asked to permit the Principle Investigator access to clinical performance scores.

Conclusions Reached
Emotional Intelligence and Clinical Performance showed no statistically significantly correlation in this study, r(66)=.233, p=.056. Other variables also had no significant interactions.

Jo Ann Daugherty
Committee Chair

4/14/13
Date
ACKNOWLEDGEMENTS

I would like to thank all those involved with the very strenuous task of the production of this thesis. I am grateful to my family, friends, and instructors who supported me through every detailed process. I would like to especially recognize, Dr. Megan Holt, my fiancé Jim Slater, co-chairs Drs. JoAnn Daugherty, Linnea Axman, and committee members Dr. Susan Andera and Dr. Nancy Romig.
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CHAPTER ONE: INTRODUCTION

Background

The term Emotional Intelligence (EI) was originally coined by Payne in 1985 after he published a dissertation. Payne’s premise was that EI had been stifled, leading others down a path of emotional ignorance. His work was intended to serve as a guide to assist in providing a common language, framework, and method for developing emotional intelligence (Boyce, 2001).

In 1990, Mayer and Salovey collaboratively performed two studies exploring EI. Their first study attempted to identify emotion in the faces of subjects as it related to abstract designs and color. It was in this first work that Salovey and Mayer used the term EI, however, it is unclear if the two were aware of Payne’s work. In the late 1990’s, their second publication presented the original EI model. Salovey and Mayer define EI as, “the ability to monitor one’s own feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Boyce, 2001). Goleman (2006), brought the concept EI into widespread use, but, it was not until Salovey and Mayer (1997) had done the initial research. Goleman (2006) was first introduced to the idea and concept of EI after reading an article, and was struck by the concept, “I read the title, of a research article by Mayer and Salovey, and was struck by the phrase, by the power of bringing together two seemingly unconnected and even antithetical concepts” (Boyce, 2001). In the mid 1990’s, Goleman titled his first book *Emotional Intelligence*. Goleman, with permission from Mayer and Salovey, described EI
in a more relatable and understandable way that has been recognized globally, embraced by educators, and instituted in programs worldwide (Goleman, 2006). Goleman’s model of EI consists of five domains: self awareness, self regulation, self motivation, empathy, and social skill (Boyce, 2001).

**Significance/Problem**

The nursing profession and EI share many attributes (McQueen, 2003). The qualities identified in EI are qualities demanded in the nursing profession, these qualities being self awareness, self regulation, self motivation, empathy, and well-developed social skills. EI is desirable and necessary in relationship-intense and service-based profession. Even though nursing requires a high level of EI, the literature suggests that the majority of professionals, including nurses, are unable to demonstrate high levels of empathy (Cadman & Brewer, 2001). Empathy is recognized as a causal attribution of EI and those thought to be emotionally intelligent are compassionate (Goleman, 2006). The lack of empathy has been identified as problematic. One of the suggested causes is believed to be the result of health care education over emphasizing the importance of achieving outcomes (Cadman & Brewer, 2001).

Nursing schools and universities have been shown to over accentuate academia and leave out EI competencies ("Emotional intelligence," 2007). Traditionally, entrance into healthcare professional programs is based primarily on grade point average (GPA) (GPA and Intelligence quotient are synonymous). Focusing on GPA, neglects the aspects of the practical, social, motivational, and emotional aspects of the individual (Boyce, 2001).
Emotional intelligence is shown to far outweigh Intelligence Quotient (IQ). EI may be a more significant factor in career performance because how well one does their job is not based on just cognitive intelligence, but other intelligences as well (Morrison, 2008). Other intelligences like interpersonal skills, understanding emotions of self and others, and adapting to change in the environment.

IQ is a distinct quality that one is born with; it is not flexible or changeable like emotional quotient (EQ) (Jiwan, 2010). EQ and EI are used interchangeably. EI is the term used to describe the quality and EQ refers to EI score. It is comparable to describing one as intelligent and saying that one has a high IQ. EI is flexible and can be trained, thus increasing one’s EQ score. EI has two major components, which are the ability to relate to self and to relate to others (Stichler, 2006). EQ, as Jiwan (2010) reports, “accounts for 80 percent of success and it outperforms intelligence quotient or cognitive intelligence in predicting academic achievement and has an important role in forming successful relationships” (p. 57).

IQ test scores have been correlated with job performance, and IQ accounted for 25 percent variability’s in job performance, but upon careful re-analysis, it could be as low as 4 percent (Morrison, 2008). A higher IQ will not necessarily predict how successful one will be, but may help the individual gain entry into the field without guaranteeing their success (Morrison, 2008). Triola & Barden (2007) support this as well, “EI is twice as important in contributing to excellence as are intellect and expertise in job performance” (p. 246).
Another significant factor identified in the EI research is that many nurses that lack EI have been reported gaining entry into the field of nursing. Employers claim that schools of nursing are graduating students who lack the competencies needed to successfully adapt to the world of work (Bellack, 1999). But nursing programs are praised for educating students for cognitive and technical aspects of their work. Both the formal and informal nursing curricula are implicated as not focusing on building EI competencies. What seems to be missing is the “zeal to prepare cognitively and technically competent practitioners” (Bellack, 1999, p.3). These are the emotional competencies employers want and what the complexity of the current health care system demands.

The results of the purposed study are important because they may inform future entrance requirements for colleges and universities of nursing.

**Purpose of the Research**

The purpose of this research is to explain the relationship of EI, as measured by an EI test, to the School of Nursing (SON) student success in clinical performance (CP) as measured by the Level II Terminal Outcomes.

**Research Question**

Is there a positive relationship between levels of EI and CP, and how much of the variability in CP scores is explained by EI in CSUSM SON senior undergraduate students?
EMOTIONAL INTELLIGENCE AND CLINICAL PERFORMANCE IN SENIOR UNDERGRADUATE NURSING STUDENTS

Research Variables

**emotional intelligence and clinical performance.**

EI and CP are the two main variables in the study. EI is defined as the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought, the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Mayer & Salovey, 1997).

Clinical performance is defined as the professional behavior and task performance that is exhibited during the clinical experience as rated using the Level II Terminal Outcomes, which may be found in Appendix A.

**demographic variables.**

The demographic variables that are purposed to be included in the regression analysis and to describe the sample are age, gender, and race.

Age will be defined as the number of whole years since birth.

Gender will refer to the sex of the individual, male, female or, other.

Race will refer to a population of people that can be divided on the basis of physical characteristics such as skin or hair color. Also, Hispanic or Latino along with not Hispanic or Latino will be recorded. The races that will be used are, American Indian/Alaska Native, Asian, Black/African American, Hawaiian Native/Pacific Islander, White, other (specify), and prefer to not answer. Currently, there is insufficient evidence to support that clinical performance increases with age. Gender has not been shown to affect clinical performance however; it has shown to have an effect on EI (Petrides &
Furnham, 2000). Women score higher in EI in the category of interpersonal relationships than men, but men believe their level of EI is higher than that of women (Petrides & Furnham, 2000). Referring to a Dutch nurse study, discussed in the literature review section of this thesis, also supports the above. The study reported that female nurses did score significantly higher in both the interpersonal composite scale and the interpersonal relationships subscale. Also the female nurses scored significantly higher than their male colleagues on the emotional self awareness subscales (Loes, Berno, & Derksen, 2010).

Studies that have examined EI have only used the normative sample of North America, which did not reveal significant differences between EI and various ethnic groups ("EI and ethnicity," 2006)

**Conceptual Model**

The conceptual model of EI came from the “Four Branch Model of Emotional Intelligence” (see Appendix E) (Mayer & Salovey, 1997) and has become the “Ability Model of Emotional Intelligence”. No nursing research has adopted or adapted this model. Historically, there have been difficulties separating EI from social intelligence. The concept of EI focuses on the complexities of emotional reasoning in everyday life and the recognition that these emotions require some form of intelligence. According to Mayer and Salovey (1997), the EI definition was revised because it lacked the “thinking about feelings”. The revision was done to incorporate the following:

*Emotional intelligence involves the ability to perceive accurately, appraise, and express emotion; the ability to access and or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge,*
and the ability to regulate emotions to promote emotional and intellectual growth (p. 10).

ability model of EI.

The ability model divides EI into four main categories of individual capacities and skills: managing emotions, understanding emotions, facilitating thought, and perceiving emotions ("Ability model of EI," 2011) (see Appendix C).

Assumptions

This study has seven assumptions:

1. EI and CP can be reliably measured by self report
2. The effect of EI on CP can be measured
3. There is a distinct difference between social intelligence and EI
4. Human adults are able to understand and analyze emotions and then employ emotional knowledge
5. Emotions facilitate thought
6. Human adults are able to perceive emotion, appraise it, and express it
7. All human adults have some degree of EI
CHAPTER TWO: LITERATURE REVIEW

Introduction

definition of EI.

The three top researchers in the field of EI are Mayer, Salovey, and Goleman. Mayer and Salovey have defined EI as such, “the ability to perceive accurately, appraise and express emotion; the ability to access and or generate feelings when they facilitate thought, the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth” (Mayer & Salovey, 1997, p. 10). Goleman further described EI as the ability to the following four things, “control impulses, delay gratification, regulate one’s moods and motivate oneself in the face of frustrations, and empathize with others” (Goleman, 2006, p. 423).

Goleman (2006), later in the late 1990’s, expanded upon Mayer and Salovey’s meaning of EI from the original four components into five: self awareness, self regulation, motivation, empathy, and social skills.

components of EI.

self awareness.

Self awareness is the ability to understand one’s emotions and their effect on others (Jiwan, 2010). If one is clear about one’s emotions then one is able to offer an appropriate emotional response to the situation (Lewis, 2004). Those that are self aware identify and know their strengths and weaknesses. By knowing these strengths and weaknesses, individuals are able to receive feedback without taking it personally or being
offended. Goleman identified self awareness as the attribute, being the most important cornerstone of EI (Lewis, 2004).

**self regulation.**

Self regulation is the ability to handle difficult and powerful emotions and redirect them in a positive manner (Reeves, 2005). Individuals who self regulate can work in a stressful environment while being calm and professional. Another component of self regulation offered is one’s ability to admit fault and confront inappropriate work behavior. These behaviors are thought to show trustworthiness and integrity (Reeves, 2005).

**self motivation.**

Self motivation involves the desire to go beyond and pursue goals with passion and energy (Jiwan, 2010). People that possess EI are very self motivated for the greater good of the profession of nursing. These individuals love to learn and are always setting the performance bar high. Emotionally intelligent nurses look for new ways to get the job done. Influential and successful nurse leaders are said to have this quality that is so necessary for success (Stichler, 2006).

**empathy.**

Empathic individuals are able to understand the emotional make-up of others (Jiwan, 2010). Being empathic has been linked to increased success in work environments. It strengthens relationships between co-workers and supervisors. Leaders with empathy are able to develop and retain employees. They act as mentors or coaches that are able to decipher if an individual can be pushed or not (Lewis, 2004).
social skills.

Developed social skills are integral to EI. Social skills are demanded as a nursing skill as the nurse empathizes with patients, tries to understand their perspectives, and engages in counseling behaviors. Interpersonal skills are the specific social skills needed to establish good rapport and connected relationships with patients. Those that have developed social skills are said to have the “ability to organize groups, negotiate solutions, make personal connections, and engage in social analysis” (McQueen, 2003, p. 102). These skills demonstrate interpersonal polish and facilitate success.

implications of EI in the workplace.

The ability to have EI has been implicated as a key to success in the work environment (McQueen, 2003). Extensive research has taken place outside nursing and has demonstrated correlations between measured EI and important workplace and workforce outcomes. These areas studied are performance, leadership effectiveness, job retention, stress management, job satisfaction, burnout prevention, and positive conflict styles (Winship, 2010). One can definitely see how this can translate into corporate American success and achievement.

In a cross sectional research study (N=94) at the company MetLife, Seligman and his colleagues found that new salesmen who were optimists (causal attribution associated with the concept EI) sold 37 percent more insurance in their first 2 years then those considered to be pessimists. Using this information, the company hired a group of individuals who scored high on optimism, but failed the normal screening. They outsold
the pessimists by 21 percent in their first year and 57 percent in the second. First year sales correlated -1.9 (p<0.7) and -3.9 (p<.01) with second year sales (Schulman, 1995).

In another corporate example of the benefit of having EI, a cross-sectional correlation study was conducted of store managers in a retail chain. The sample consisted of 305 participants from 35 retail stores that were given questionnaires about managing feelings and handling stress. The study found that the ability to handle stress significantly predicted net profits (net revenue increase of 2,558,360), sales per square foot, sales per employee (sold 91,370 more than other salespeople did), and per dollar inventory investment (p<.05) (Lusch & Serpkeneci, 1990).

A two-by-two between subjects design was conducted at Yale University where 94 randomly selected participants were assigned to one of four of the experimental conditions. A group of actors were asked to play the roles of managers who were given the task of allocating bonuses to their subordinates. In some groups the managers portrayed cheerful enthusiasm and relaxed warmth, and others portrayed depressed sluggishness and hostile irritability. The results indicated, the actors who were able to influence their subordinates with good feelings led to improved cooperation, fairness, and overall group performance (p<.05) (Barsade & Gibson, 1998).

Researchers have known for years that empathy contributes to occupational success and is an important component of EI. Rosenthal (2011), a researcher at Harvard, discovered that people who were best at identifying other’s emotions were more successful in their work as well as in their social environment. In a two-by-two between group factorial design, research was conducted by Pilling and Eroglu (1994) using a
sampling frame from a national apparel organization mailing list. Four hundred eighty-four surveys were completed (N=1328) results indicated that apparel sales representatives were primarily valued for their empathy. The buyers reported that they wanted representatives who could listen well and really understand what they wanted and what their concerns were (p<0.01 and F=83.6) as predicted by the researchers (Pilling & Eroglu, 1994).

**Implications of EI in nursing.**

There are many implications of EI in the field of nursing. A study was conducted with 380 Dutch nurses that has revealed the importance of EI in reducing burnout (Gertis & Derksen, 2004). Data was collected using the Bar-On Emotional Quotient Inventory (Gertis & Derksen, 2004). Absence of illness was measured across a two-year period. The study found that there was a clear relationship between EI and adaptive success (p<0.1). Cronbach’s Alpha coefficients for the Bar-On Emotional Quotient Inventory subscales found to range from 0.69 to 0.75 and test re-test reliability from 0.75 to 0.85. The results indicated a negative correlation between EI and burnout (Gertis & Derksen, 2004).

Nurse leaders with high levels of EI affect the job satisfaction of their employees, leading to higher rates of retention (Feather, 2008). Feather (2008) reports, “the nurse manager’s leadership behavior has been implicated as the interaction most likely to improve retention of hospital staff nurses because of the manager’s ability to improve job satisfaction” (p. 377). Managers that use leadership skills guided by EI have employees who report higher levels of job satisfaction (Feather, 2008). Leaders with EI create a
more suitable work environment in an already very stressful arena. This is significant, as hospitals are driven by satisfaction scores and a foreseeable nursing shortage. EI leaders are said to “encourage organizations and individuals to thrive and transform over time” (Triola & Barden, 2007, p. 246). Emotionally intelligent leaders who attend to the key elements of EI are said to grow and learn from life experiences. Leaders with higher EI are able to guide their staff to higher levels of become more emotionally intelligence, which can directly increase patient and family satisfaction.

**implications of EI in nursing clinical performance.**

Even though EI is in its infancy, there are and have been studies that report that the higher the level of EI the better the clinical performance and improved patient outcomes.

In 2006, a pilot study provided the first evidence of correlation between EI and performance in clinical staff nurses. A follow up study was completed; the purpose was to explore EI, performance level, organizational commitment, and retention. A convenience sample of 350 nurses, in a large urban area medical center in Hawaii participated in the study. A total of 193 clinical nurses completed the study. Results of the study found that, emotional intelligence scores in clinical staff nurses correlated positively with both performance level and retention variables. The study also found that that the higher the EI scores correlated with higher performance, had longer careers, and greater job retention (Codier, Kamikawa, Kooker, & Schoultz, 2009). Subscale scores of the MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence Test) was the instrument used in this study to measure the emotional intelligence of the clinical staff nurses. Based
on the four areas that this tests measures, the ability to accurately indentify emotions in self and others, the ability to use emotions to facilitate emotional reasoning, the ability to understand emotions in self and others, and the ability to manage emotions in self and in emotional interactions with others, emotional intelligence subscale scores were correlated with clinical performance. The following subscale scores correlated significantly with performance: managing emotion (p<0.1), experiencing emotional intelligence (p<.05), and using emotions to facilitate reasoning (negative correlation, P<.05) (Codier et al., 2009).

Individuals that have EI are aware of the effect one has on others and can bring the morale of the group up or down (Reeves, 2005). Co-worker mood states tend to synchronize with each other over time. Moods also can be transmitted to one’s patients and influence their health outcomes. Research has shown that with cardiac clients, those that were cared for by a nurse who was depressed and had low EI, were four times more likely to die than those cared for by nurses without depressed moods in similar units (Reeves, 2005).

admission requirements into nursing school.

Nursing colleges and universities have used a variety of measures in an attempt to find the most suitable candidates for their programs. Schools, set forth certain standards for applicants to successfully meet in order to determine who fits the best for their program. The purpose of the application process is to identify those that will achieve success academically and as practicing providers. The admission process is primarily focused on cognitive aspects of intelligence, such as grade point average (GPA). Most
undergraduate programs do not have an interview process like most graduate level nursing programs have. Cumulative GPA predicts future professional academic performance (Lewis, 2004). Undergraduate nursing schools typically require a minimum GPA of 3.0 to be considered for admission. Unfortunately, in a career such as nursing, GPA is not enough in the clinical environment.

Employers claim that nursing schools are graduating students who lack the competencies of EI that are needed for them to successfully adapt to the rigors of the clinical setting (Bellack, 1999). Both cognitive and baseline nursing competencies are required for beginning nursing practice. According to Goleman (2006), a third required competency is EI, it is emphasized to be fundamental and essential to effective job performance regardless of the type of work or work setting (Bellack, 1999).

The qualities that undergraduate novice nurses require to be successful, but are said to not have, are “common sense, work ethic, organizational skills, knowing when to call on another team member, and interest in continued learning” (Bellack, 1999, p. 3). Lacking the above qualities makes it very difficult to be emotionally intelligent according to Goleman (2006) as he equates some qualities as attributes to EI. Clearly, EI is both advantageous and necessary in such a relationship-intense and service-based profession (Bellack, 1999).

**clinical performance tool.**

The clinical performance tool used at CSUSM undergraduate nursing school for senior level nurses clinical performance evaluation is the Level II Terminal Outcomes (see Appendix A). It is an assessment tool for clinical instructors to use as a guide in
assessing the clinical performance of students. The assessment tool has five categories, provider of care, teacher, advocate, coordinator, and mentor. Student achievement in these areas is evaluated using a likert scale ranging from not applicable=NA, unsafe=1, needs improvement=2, adequate=3, very good=4, excellent=5.

**EI tool.**

The Emotional Intelligence Appraisal Test (Me Edition) test is proposed to measure EI in this study. This questionnaire consists of 28-items questions and utilizes a six point likert scale. The EI questionnaire evaluates and measures the “ability of EI and shows patterns of correlation that are similar to those of known intelligences” (Feather, 2008, p. 378). This test has demonstrated good reliability along with face and construct validity and is used in major corporations for screening potential applicants.

Two hundred and seventy three individuals provided multi-rater feedback ratings for 36 senior leaders in three organizations, telecommunications, construction, and manufacturing. Scores on the emotional intelligence appraisal were compared to job performance ratings for each individual via a self score and a score from others. For all the scores, the emotional intelligence test, the Me edition (the emotional intelligence test proposed to measure EI in this study) explained 13.2% of the variance in job performance and the multi-rater edition (explained 58.5% of the variance in job performance. Study findings for self, R=.363, R square=.132, p=0.047, and others, R=.765, R square=.585, and p=.003(Bradberry & Greaves, 2010).

Another representative study conducted using 12,483 individuals took the Emotional Intelligence Appraisal-Me Edition and compared the scores with their last
performance evaluation. Scores on the Me edition had a strong connection to job performance, with self-ratings explaining nearly 20% of the variance in performance across positions. Study findings as followed, R=.42, R square=.176, and p<.01 (Bradberry & Greaves, 2010).

An exploratory factor analysis was done on all of the 28 item questions. Using the Principal Component Analysis with Varimax Rotation and Kaiser Normalization, the Kaiser-Meyer-Olkin value was .944 (Bradberry & Greaves, 2010).

Cronbach’s alpha for the four subscales were as follows, self awareness α=.895, self management α=.950, social awareness α=.934, and lastly relationship management α=.957 (Bradberry & Greaves, 2010).

**Major Variables Defined**

The major variables are defined as follows. EI is defined as the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought, the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Mayer & Salovey, 1997).

CP is defined as, professional behavior that is exhibited during clinical experience as rated using the Level II Terminal Outcomes.

**Theoretical Framework and Conceptual Model**

The original Four Branch Model of EI consisted of four branches arranged from most basic psychological processes to higher more psychologically integrated processes (Mayer & Salovey, 1997). Within these branches are listed abilities that the individual
must accomplish and master as they move up to other levels. The lowest psychological
branch describes the perception, appraisal, and expression of emotion. The second level,
as one works one’s way up the model is the emotional facilitation of thinking. The next
level is understanding and analyzing emotions, and employing emotional knowledge.
Lastly, the highest level branch concerns the conscious and reflective regulation of
emotion, it is labeled as the reflective regulation of emotions to promote emotional and
intellectual growth (Mayer & Salovey, 1997) (see Appendix E).

**perception appraisal, and expression of emotion.**

This branch is concerned with the accuracy with which the individual can identify
emotions and emotional concept (Mayer & Salovey, 1997). During this stage the
individual can identify emotion in self, others, and express the emotions accurately.
Lastly, the individual can discriminate between accurate and inaccurate expressions of
feelings (Mayer & Salovey, 1997).

**emotional facilitation of thinking.**

This branch is concerned with emotions acting on intelligence (Mayer & Salovey,
1997). This branch specifically describes how emotions assist in intellectual processing.
The individual is able to prioritize thinking by directing attention to important
information. Also, the individual’s emotions aide in judgment and memory concerning
feelings and the individual experiences emotions that may affect one’s mood encouraging
consideration of multiple points of view. The last aspect of this branch involves
emotional states influencing specific problem solving approaches (Mayer & Salovey,
1997).
understanding and analyzing emotions, and employing emotional knowledge.

The third branch concerns the ability to understand emotions and to use emotional knowledge. This branch describes the ability to label and understand an emotion and recognize its meaning, interpret the meaning of an emotion, understand complex emotions and feelings, and recognize transitions among emotions (Mayer & Salovey, 1997).

reflective regulation of emotions to promote emotional and intellectual growth.

The highest branch is concerned with the conscious regulation of emotions to enhance emotional and intellectual growth. The abilities outlined are: being open to pleasant and unpleasant feelings, engage or disengage from an emotion, reflect on one’s emotions, and to manage one’s own emotions (Mayer & Salovey, 1997).

Ability Model of Emotional Intelligence

In 1997, Mayer and Salovey revised the original Four Branch Model of Emotional Intelligence as described above to what today has become The Ability Model of Emotional Intelligence (see Appendix C). The Ability Model of Emotional Intelligence has four branches: perceiving emotions, using emotions to facilitate thought, understanding emotions, and lastly managing emotions.

perceiving emotion.

This branch is described as the most basic and primitive abilities that one must be able to accomplish. This involves non-verbal reception and expression of emotion. One has to be able to accurately perceive the emotions in another’s face (Mayer, 2012).
facilitating thought.

The second area focuses on emotions and the thoughts they provoke and how they guide one’s thinking. Mayer (2012) says that it is “the capacity of the emotions to enter into and guide the cognitive system and promote thinking” (para. 4).

understanding emotions.

This branch depicts understanding the emotion, then comprehending the meaning of the emotion, coupled with the capacity to reason about those meanings (Mayer, 2012).

managing emotions.

Finally, the last branch discusses the individual’s ability to understand the emotion and manage it. When managing emotions, it becomes possible to regulate and manage one’s own and others’ emotions, in order to promote one’s and others’ personal and social goals (Mayer, 2012).

Summary

The purpose of this chapter is to present the literature on EI, implications of EI in Corporate America, nursing, clinical performance, and a brief overview of the admission requirements for undergraduate nursing student. After reviewing the literature on EI, it becomes apparent how important it is to have EI in such a relationship-intense and service-based profession. Chapter III describes the research design and methodology used in this purposed study on EI and senior undergraduate nursing student CP.
CHAPTER THREE: METHODOLOGY

Introduction

Emotional intelligence has been found to be an integral element for the practicing profession of nursing. Nursing is a relationship-intense and service-based profession. Research has shown that new nurses entering the field of nursing lack the competencies needed to achieve success in the working world. These competencies are associated with some of the same competencies that have been equated with EI. New nurses entering the field of nursing may not be emotionally intelligent prepared and this may negatively affect clinical performance.

If a positive association exists between EI and CP, then the potential significance of the proposed study will inform nursing school admission requirements. EI evaluation may be incorporated into the candidacy screening processes. If research findings support the hypothesis that higher levels of EI improve clinical performance, EI may be seriously considered an essential element of nursing school curriculum; however, few studies have examined the relationship between EI and CP in nursing students.

The primary aim of this thesis was first to examine the relationship between EI and CP, as measured by the Emotional Quotient Inventory (EQ-I), and explain undergraduate nursing student success in CP as measured by the Level II Clinical Performance Terminal Outcomes. The aim will be accomplished by addressing the following research question.
Research Question

Is there a positive association between level of EI and CP, and how much of the variability in clinical performance is explained by EI in CSUSM School of Nursing (SON) senior undergraduates?

Identification of Setting

The setting for the study is at a four year university. This school was first established in 2006. In the fall of 2007, the school of nursing partnered up with the universities extended learning department to allow for expansion of the program. With the expansion, the school of nursing offers an array of program options to accommodate part-time and full-time, generic BSN, traditional BSN, and masters of nursing classes. The school of nursing graduated its first students in 2009 ("CSUSM SON," 2012).

Research Design

The study used a cross-sectional survey design with the intent to examine the relationship between EI and CP. A paper survey approach was given to collect demographic data, and administer the Me edition Emotional Intelligence Test (Bradberry & Greaves, 2011).

Population and Sample

The participants were recruited using non-probability convenience sampling methodology. The target population in this study was accelerated school of nursing senior undergraduate student body. Accelerated nursing students take a larger academic load and have already a bachelor degree in a field other than nursing. Sample size was calculated using G Power 3.13 (Faul & Erdfelder, 2010). Using an effect size of 0.3,
significance level of 0.05, and power of 0.80, the calculated sample size is 64
participants. However, after adding a 20% loss factor, the proposed sample size was 76.

Measurement Methods

The instruments used to measure the data EI and CP are, the Emotional
Intelligence Me edition test and Level II Terminal Outcomes (see Appendix A for the
Level II Terminal Clinical Performance Outcomes). Although both tests are likert survey
the data was used as continuous. Permission was obtained to use both instruments.

instruments.

The Level II Terminal Clinical Performance Outcome is a tool used by clinical
instructors. The clinical instructors use this five point likert scale with each clinical
experience. A score of 1-5 is given per each ordinal variable. A three is required to pass
the CSUSM SON clinical performance portion, as set forth by CSUSM SON.

The Emotional Intelligence Me edition test, also known as the Emotional
Intelligence Appraisal test (EIAT) provides a cumulative EI test score that generally takes
research participants from 10-20 minutes to complete. The skills measured by this test
include overall EI and the four skills of self awareness, self management, social
awareness, and relationship management. This tool to measure EI is held to the strictest
standards in the design and validation (*EI fact sheet*, 2012).

scales of EI.

The subscales identified in the purposed instrument for measuring EI are, self
awareness, self management, social awareness, and lastly relationship management.
Self awareness is the individual’s ability to accurately perceive one’s own emotions and stay aware of them as they happen (Bradberry & Greaves, 2011).

Self management emphasizes one’s ability to use awareness of emotions to stay flexible and positively direct behavior (Bradberry & Greaves, 2011).

Social awareness is one’s ability to pick up social cues and others emotions to synthesize what is really going on (Bradberry & Greaves, 2011).

Relationship management describes the ability of one to use one’s awareness of emotions and the emotions of others to manage interactions successfully (Bradberry & Greaves, 2011).

**reliability and validity for purposed instruments.**

The Level II Terminal Outcome variables are ordinal. The decision was made to evaluate the likert type variables as both ordinal and continuous and both results were reported as often is done in survey research. Also, another important aspect of this tool, currently there is no validity or reliability, but content validity is assumed. Reliability has not been determined but is reported in this study (“SPSS,” 2002).

The tool to measure EI also uses a likert type scale and is measured at the ordinal level but continuous variables are assigned for the same reason as the above. The test identifies this when scoring for the participants responses. This is seen in the section of coding and scoring portion of the proposal. The Cronbach’s alpha has been previously reported with alphas ranging from 0.79 to 0.92 (EI fact sheet, 2012).
The demographic variables (i.e., age, race, and gender) were collected on a separate data collection sheet (see Appendix B for purposed Demographic Data Collection Sheet). Age was collected in whole years and was written by the participant. Age is considered a discrete variable, it will be considered continuous for the statistical analysis. Races were listed and the participant chose, Hispanic, Non-Hispanic, American Indian/Alaska Native, Asian, Black/African American, Hawaiian Native/Pacific Islander, White, Other, and Prefer not to answer. Race was a categorical variable at the nominal level. Gender was measured using nominal level data. Participants had the option of choosing, male, female, or transgender.

Data Collection Process

After IRB approval was obtained, instructors were contacted via email asking permission to recruit participants. Once instructors gave their approval, potential participants were approached by the principle investigator either at the beginning of class or at the end as per instructor request. The elements of informed consent were explained to possible participants along with the potential risks and benefits. The data collection process included administration of the Me edition Emotional Intelligence Test. The EI test took 10 minutes to complete. All students in the class received an EI test and also a consent form separately allowing the researcher access to CP scores. The paper tests for EI were collect by the PI. The demographic questionnaires (see Appendix B) and consent for access to clinical performance scores were also collected and kept in another dedicated labeled locked box kept in the chairs locked office in a locked cabinet. CP
scores were collected after permission from the student through academic file via CSUSM SON office. Pencils were provided to participants if they needed to complete the forms.

**inclusion/exclusion criteria.**

The inclusion criteria for this study was as follows: participants must be enrolled in CSUSM SON as a senior level undergraduate. It is assumed that students read and comprehend English at least at an 8th grade level.

**Coding and Scoring**

**emotional intelligence test.**

The EI test (Emotional Intelligence Appraisal) has four branch scores that are determined by the categorization of specific questions related to EI. The four branches are self-awareness, self management, social awareness, and relationship management (Bradberry & Greaves, 2011)

Four area scores are generated from tallying up scores and multiplying by a specific number per the instructions of the test booklet *Emotional Intelligence Appraisal.* (see Appendix B) Each skill score for the four branches is a six item likert scale. These items and subscales are coded and scored following detailed instructions. The full copy of the instrument along with how to code and score was not provided due to the 1976 copyright act. The sum of skill scores are listed in tables with an overall EQ score directly next to the right of it, which is the overall EI score. The EQ-I provides qualitative descriptors for EI score ranges. For example, a score of 90-100 is a score that is higher than average and indicates a noteworthy strength. “A Strength to build on”
describes scores ranging from 80-89. A score of 70-79 describes “with little improvement, this could be strength”. A score 60-69 is “something you should work on”. And a score of 59 or below is a “concern you must address” (Bradberry & Greaves, 2011).

**level II terminal outcomes.**

The Level II Terminal Outcomes as earlier described is the clinical assessment tool used to assess CP for the undergraduate CSUSM SON students. This tool is based on five point likert scale that awards scores from 1-5 for five different ordinal categories of clinical performance. Clinical performance categories are, provider of care, teacher, advocate, coordinator, and member of the profession. A score of 1-5 is given per category. A score of 1 is less than the expected level of performance. A score of 2 needs improvement. A score of 3 indicates adequacy. A score of 4 is very good, better than most at this level of preparation. And a score of 5 is excellent and exceeds expectations at the level of preparation. Minimum accepted score for each category is a 3 and highest score is a 5. Once evaluation is complete the scores are totaled. A total score of a 30 is the minimal score total to pass and a fifty describes superior performance, which exceeds the expectations of the level of preparation.

**Data Analysis**

IBM SPSS Statistics 20 software (2011) performed the data analysis for the EI scores and CP scores. The analysis consisted of descriptive statistics, frequency distributions, bivariate correlation, and multiple regression analysis using the F-test.
Psychometric analysis included Cronbach’s alpha (α) of the emotional intelligence Me edition test. The level of significance for all statistical analysis was set at p<=.05.

**types of data.**

Despite the controversy about level of measurement of the data (ordinal or interval) when performing analysis from data obtained by using likert type scales, the analysis used the likert type scales for both EI and CP. These scale scores were treated as interval level data. The nominal and ordinal data (primarily from the demographic data requested) was converted into dummy variables and entered into the regression equation. Regression analysis was used to determine if the variability in clinical performance is explained by EI.

**test statistics.**

Descriptive statistics mean, median, range, and standard deviation, was used to quantitatively describe demographic variables, check for outliers, and be used in the regression analysis. Demographics obtained from the survey were compared to the target population to evaluate for the representativeness of the sample described as well. Frequency distribution was performed to determine if the data was normally distributed or if the data was skewed, j-shaped or bimodal.

Correlation analysis was used to evaluate the strength of the association between levels of EI and CP. Pearson’s r was the test statistic used. Pearson’s r is a correlation coefficient that was used because the variables in this study, EI test score and CP are both continuous variables obtained by naturalistic sampling. Pearson’s r was also used to find the degree of correlation between EI and CP and potential confounding variables.
Regression analysis was used to demonstrate the amount of variability in CP measured by EI. The results from regression analysis use the F-test. The F-test is used to evaluate the statistical significance of the multiple regression omnibus null hypothesis. So, if in this research, one finds a statistically significant F, then that implies that if we know the individuals EI level for a particular student, then we can do better than chance in estimating the value of the student’s clinical performance level.

Limitations/Bias

design.

Performance bias could of been considered a limitation but, because the PI does not know the students, will not be in the room with them when taking the test, and test response is private, this bias/limitation is minimized and not considered to be a great concern. Selection bias is discussed below as it relates mainly to the sample. A diffusion bias was a possible concern if participants were to take the test home and look up EI and CP. Participants were asked to complete the EI test while still in the school of nursing. Lastly, attrition bias might of been a problem even though the data collection was collected at one time, which limited the potential threat.

sample.

The limits of the proposed samples generalizability are that the sample was non-randomized; therefore, it was subject to sampling bias, also known as selection bias, which may have skewed statistical analysis. In addition, only participants that were interested in the study would participate, as study participation was voluntary. This bias is described as volunteer bias that comes from the fact that a particular sample,
undergraduate nursing students, contains only those participants who are actually willing to participate in the study.

**Ethical Considerations**

Participation in this study was completely voluntary. The researcher endeavored to maintain the strictest of confidentiality during the proposed study. All participants were required to be 18 years of age to participate in the study. No participants were considered part of an at risk population, such as prisoners or mentally disabled, where full, and freely given consent could be problematic. No incentives were offered for participation in the study. Each participant did receive a recruitment flyer with the studies information. Participants were asked to complete the survey at school to limit diffusion bias.

**Summary**

The purpose of this chapter was to present an overview of the methods used in the research study. A cross-sectional survey design best fit the research question at hand due to the time and financial constraints. The type of data in the research was best-analyzed using correlation/regression. Limitations and biases were discussed along with the ethical considerations. Participant’s confidentiality and protection was preserved at all levels of the research.
CHAPTER FOUR: RESULTS

Introduction

Chapter four provides the results for the research questions: (1) “Is there a positive association between level of Emotional Intelligence (EI) and Clinical Performance (CP), and a different but related question (2), how much of the variability in CP is explained by EI in a sample of CSUSM School of Nursing (SON) senior undergraduates?”

The data were examined using IBM SPSS Statistics 20 software (2011) for shape, dispersion, correlation, and regression.

Sample

The sample size for this study was 68 participants. Descriptive statistics was used to describe the sample population. Most participants in the study were: female (87%), Non-Hispanic (88%), and Caucasian (53%). The average age for those that participated was thirty years, total Clinical Performance (CP) score average ($M= 44/50, SD=6.18$), and lastly, Emotional Intelligence (EI) score ($M=78, SD=7.05$). See Tables 1 and 2 for descriptive statistics.

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Descriptive Statistics for Interval/Ratio Data</th>
<th>N</th>
<th>Mean (SD)</th>
<th>Median</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>68</td>
<td>29.7 (6.60)</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Total Clinical Performance</td>
<td>68</td>
<td>44.0 (6.20)</td>
<td>45.5</td>
<td>50</td>
</tr>
<tr>
<td>Emotional Intelligence Score</td>
<td>68</td>
<td>78.00 (7.10)</td>
<td>78</td>
<td>78</td>
</tr>
</tbody>
</table>
Table 2. Descriptive Statistics for Nominal Variables

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>13.2</td>
</tr>
<tr>
<td>Female</td>
<td>59</td>
<td>86.8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8</td>
<td>11.8</td>
</tr>
<tr>
<td>Non Hispanic</td>
<td>60</td>
<td>88.2</td>
</tr>
<tr>
<td>Asian</td>
<td>21</td>
<td>30.9</td>
</tr>
<tr>
<td>Black/African American</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Hawaiian Native/Pacific Islander</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>White</td>
<td>35</td>
<td>51.5</td>
</tr>
<tr>
<td>Some other race not specified</td>
<td>10</td>
<td>14.7</td>
</tr>
</tbody>
</table>

All variables were examined for normality. Age was the only variable that was slightly skewed (skewness = 2.070 and kurtosis = 4.693) so the decision to use log square transformation was made. Figure 1 shows the distribution of age before the transformation and Figure 2 shows age normalized by the log square transformation function. Figure 3 shows the distribution of total CP scores and figure 4 shows EI distribution. All other variables were normally distributed.
Figure 1. Age Distribution

![Age Distribution](image1.png)

Figure 2. Age Distribution Normalized

![Age Distribution Normalized](image2.png)
Figure 3. Clinical Performance Score

Mean = 43.85
Std Dev. = 6.184
N = 69
Figure 4. Emotional Intelligence

Data Collection and Preparation

Institutional Review Board (IRB) approval was obtained prior to approaching instructors or potential participants. Once IRB approval was obtained, instructors were queried by email as to whether or not the study could be introduced in their class. Once approval was obtained from instructors, the PI approached the class. All students were accelerated senior undergraduate nursing students. They all received informed consents and EI paper tests. The PI approached participants at the beginning of the class. The participation in the study was voluntary and the PI left the room immediately after giving instructions. The PI waited for the full duration of the class to commence before leaving in case participants had any questions. The original desired sample size was 76 but only 68 participants gave informed consent to participate.
With regard to clinical performance; students that consented to being in the research study had their CP scores accessed by the PI after signing the informed consent. The chair for this research study was given a list of participant names with request from the PI to obtain these CP scores. CSUSM SON administrative staff accessed student files and produced the CP scores. Students were given identification numbers to protect confidentiality and data was stored in a locked cabinet in the faculty chair office. The participants were self selected to be included in the study.

After data collection, data were exported into an excel spreadsheet, where all data were converted to numerical values for analysis in SPSS. The data were imported into SPSS 20, double checked for accuracy; and data analysis performed; this was accomplished by examining the frequency distribution for each variable. Data from any participant who failed to complete the survey was excluded from the data analyses. Data analyses to answer the research questions were then performed.

**Instruments**

**emotional intelligence.**

Emotional intelligence was measured using the Emotional Intelligence Me Edition. The Cronbach’s alpha has been previously reported with alphas ranging from 0.79 to 0.92 (*EI fact sheet*, 2012). In this research study, the Cronbach’s alpha was determined to be of .87.

**clinical performance.**

Clinical Performance was measured using The Level II Terminal Outcomes evaluation tool. This instrument had not been previously examined for reliability. It was
assumed to have content validity. In this study, the Cronbach’s alpha was determined to be at .964.

**Results by Research Questions**

The research questions for this study were:

1. “Is there a positive association between level of EI and CP, and a different but related question was

2. How much of the variability in clinical performance is explained by EI in CSUSM School of Nursing (SON) senior undergraduates?”

In bivariate correlation EI and CP were not statically significant $r(66) = .233$, $p = .056$. The variables, gender, age, CP, and EI were also found to not be significantly correlated with EI or CP in bivariate correlation. Regression analysis was then performed.

EI scores were centered (took the total EI score and subtracted it from the mean). This was done to provide a more meaningful interpretation for the results. Table 3 shows the regression analysis between EI and CP, results revealed no significance ($F(1, 66) = 3.773$, $p = .056$). Lastly, Figure 5 shows a depiction of EI and total CP.

**Table 3. Emotional Intelligence on Clinical Performance**

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>B</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>1</td>
<td>.20</td>
<td>3.77</td>
<td>.056*</td>
</tr>
<tr>
<td>Total CP</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ .05
Follow up analysis was done to see if there were any interactions. Three interactions were tested between, EI and gender, EI and age, and age and gender. Interaction terms were created by multiplying the variables together (ie. EI x gender). Regression analysis was conducted with the main effects of age, EI, and gender, and their
interaction terms. EI was not significantly related to CP ($F(1,61)=2.5, p=.62$). Age was not related to CP either ($F(1,61)=.49, p=.49$). Gender by EI was not significantly related to CP ($F(1,61)=.20, p=.66$). The interaction between age and EI was not significant ($F(1,61)=.16, p=.69$). EI and gender was also not significant ($F(1,61)=2.32, p=.13$). Lastly, gender by age had no significant interaction ($F(1,61)=.31, p=.58$). The above interaction findings are consistent with what available research has determined.

**Summary**

Emotional Intelligence and Clinical Performance were not found to be statistically significantly correlated in this study. The covariates, gender and, age were not found to statistically significantly with either, CP, or EI. Chapter five will provide a discussion of the results of the research and will provide recommendations for future research.
CHAPTER 5: DISCUSSION

Introduction

Both clinical performance and emotional intelligence were found to have no significant correlation in this research study. Other variables, also supported by the research, showed no interactions between EI and gender, EI and age, and age and gender. Also, regression analysis was conducted with the main effects of age, EI, and gender, which furthermore showed no significant interaction. The lack of a statistically significant relationship between EI and CP is contrary to the literature that was presented in chapter two but further discussion will be address this concern in limitations and recommendations for future research.

Major Findings by Research Question

The research questions were “Is there a positive association between level of EI and CP, and how much of the variability in clinical performance is explained by EI in CSUSM School of Nursing (SON) senior undergraduates?”

As previously stated, EI and CP, in this study were not significantly correlated ($p=.056$). Other studies, specifically, the follow-up study conducted with 350 nurses in a Hawaii medical facility, showed that EI scores in clinical staff nurses correlated positively with both performance level and retention variables. Clinical staff nurses with higher EI scores demonstrated higher performance had longer careers, and greater job retention (Codier, Kamikawa, Kooker, & Schoultz, 2009). Important to note is that this study administered the Mayer-Salovey-Caruso Emotional Intelligence Test, which consists of 141 questions, requires about 1 hour from start to finish but, demonstrates
high validity and reliability. Also, the Hawaii study administered different clinical performance evaluations than this study. In addition, no research studies have been conducted on EI and CP in nursing students.

Limitations

One of the limitations of this study was the sample size. The original sample size was projected to be 76 subjects but only 68 students participated. Being that the sample size did not achieve the target number estimated this may have affected the significance of the research results. The study may not have had enough power to measure the effect. Having a larger sample size may allow for statistical significance as the p value for the f test was close to demonstrating significance. In retrospect, it may have been beneficial to define this as a pilot study. When performing pilot studies with small sample sizes, it is common for the researcher to set the significance level higher than usual to compensate for the smaller sample size (Windsor, Baranowski, Clark, & Cutter, 1994). Traditionally, the significance level is set at p<0.05, but a pilot study may use a p-level of 0.10 or even 0.20. So, in this research study the p value being set at 0.05, could’ve been set at p=0.10 as little is known about the phenomenon of EI and CP. If the p value was set higher it could have increased for a type 1 error.

Another limitation was found in the sampling techniques. The study was also non-randomized and a cross-section of individuals at CSUSM SON. Being that the participants were not randomized, this may not be representative of the larger population.

A limitation with the research design was that it was cross-sectional. This design limited the ability to assess shifts in EI and CP overtime. Also, the data was self reported,
which may have produced socially desirable responses, even though individuals took
their own EI test. Social desirability is the tendency of respondents to answer questions in
a manner that will be viewed as favorable by others. This tendency can pose a problem
when conducting research with self reports (Fisher, 1993). According to Fisher (1993),
this bias can interfere with the interpretation of average tendencies. So, the mere presence
of the PI standing up in front of the class and handing out the EI test to participants, could
possibly influence the participants to respond in a more pleasing manner especially, as
some may look up to a graduate level colleague.

**Generalizability**

If statistical significance had been achieved, the research generalizability would
be limited to senior undergraduate nursing students.

**Implications for Nursing Research**

As of this writing, no other studies exist that have reported results of EI and CP in
nursing students. Because there are no other studies, this research is a platform to try and
identify the relationship between EI and CP so, that we may add to the body of
knowledge in an untapped arena that has proven to be correlated and significant in other
health professions and corporate America.

**Recommendations for Future Research**

Although EI and CP did not show a significant relationship in this research study
it should be further explored in service based professions because, most EI attributes,
self-awareness, self management, social awareness, and the ability to manage one’s
relationships are keys to having a successful career and most importantly patient satisfaction.

Recommendations for future research include conducting the study with a larger sample size in order to achieve statistical power to measure the possible effect. Having a smaller sample size can affect power by having too little power to detect meaningful differences when in fact it could be very useful (Beebe, 1999). This current study could be viewed as a pilot study, since so little is known about EI and CP. According to Windsor, Baranowski, Clark, & Cutter (1994), in pilot studies as previously pointed out, they can select p values at 0.10 or 0.20 which could increase the potential for a type I error; however it might have allowed the study to achieve a statistically significant p value.

To address concerns about social desirability, administration of the Marlowe Crowne Social Desirability Index with EI tests is suggested as supplementary data collection because data was self reported. The Marlowe Crowne Social Desirability Index test evaluates the participant’s tendency of respondents to provide biased answers based on perceived expectations or prevailing social values. This tool has reliability and validity data to support it.

If EI can be documented to impact CP, education research using EI teaching strategies could be incorporated into undergraduate curriculum development for service based professions such as nursing. EI is a skill that is supported in research as something that can be taught and individuals with lower levels of EI can improve their overall EI score. Also, possibly incorporating EI into the admission screening process along with
further screening near the end of the program could be useful as employers have identified new graduate nurses as lacking EI qualities.

**Summary**

Although this study failed to show a significant relationship between the two variables, EI and CP, dismissing the potential for there to be a relationship would be premature. Other research provided in the literature section provides enough of an intrigue into the insight of the role of EI and CP in a service based profession such as nursing. Knowing that the relationship exists in other service based professions and corporate America, universities and other professional institutes may consider incorporating EI into undergraduate curriculum and/or candidacy screening processes. Further research is recommended as EI is a relatively new term/concept to the profession of nursing.
## Appendix A

### Level II Terminal Outcomes

<table>
<thead>
<tr>
<th>Level II Terminal Outcomes</th>
<th>Student Achievement*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Unsafe = 1</td>
</tr>
<tr>
<td></td>
<td>Needs Improvement = 2</td>
</tr>
<tr>
<td></td>
<td>Adequate = 3</td>
</tr>
<tr>
<td></td>
<td>Very Good = 4</td>
</tr>
<tr>
<td></td>
<td>Excellent = 5</td>
</tr>
</tbody>
</table>

### As a Provider of Care, the student:
1. Demonstrates knowledge and skills in critical thinking to holistically assess client needs and capabilities for self-care and provides culturally competent comprehensive care.
2. Develops, implements, and evaluates a plan of care in which collaboration with client(s) and other health care providers promotes maximum health and well being.

### As a Teacher, the student:
1. Demonstrates the necessary knowledge and skills related to the teaching-learning process.
2. Develops, implements, and evaluates a comprehensive health education plan for diverse clients.

### As an Advocate, the student:
1. Informs clients of their rights and responsibilities as health care consumers, continuously monitoring their ability to exercise their rights and make decisions and acts as their spokesperson as needed.
2. Assumes a leadership role by working with other health care professionals by brokering and negotiating for client needs and preferences for the provision and delivery of the plan of care.

### As a Coordinator of Care, the student:
1. Utilizes healthcare providers and community resources for providing cost-effective services to individual clients, families and aggregates within the constraints of the health care delivery system.
2. Plans, implements, analyzes and evaluates outcomes of coordination of clients’ care.

### As a Member of the Profession, the student:
1. Accepts accountability within the legal and ethical standards of the profession of nursing.
2. Maintains currency in professional nursing practice by analyzing trends in professional practice, health care, and incorporates research and theory into practice.

* **Key to evaluation terminology:**

<table>
<thead>
<tr>
<th>Evaluation Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsafe</td>
<td>Less than the expected level of performance. Does not have basic knowledge. Unsafe, unaware, inaccurate or incomplete performance. Does not benefit from guidance.</td>
</tr>
<tr>
<td>Needs Improvement</td>
<td>Inconsistent performance. Basic knowledge and skills need strengthening.</td>
</tr>
<tr>
<td>Adequate</td>
<td>That which is expected at this level of preparation. Safe.</td>
</tr>
<tr>
<td>Very Good</td>
<td>That which is better than most at this level of preparation</td>
</tr>
<tr>
<td>Excellent</td>
<td>Superior performance; consistently exceed expectations at this level of preparation.</td>
</tr>
</tbody>
</table>

**Pass/Fail:**

**Comments:**

---
Appendix B

Emotional Intelligence Me Edition Categories with Sample Questions

<table>
<thead>
<tr>
<th>Categories</th>
<th>Sample Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Awareness</td>
<td>• Are you confident in your abilities?</td>
</tr>
<tr>
<td></td>
<td>• Realize when others influence your emotional state?</td>
</tr>
<tr>
<td>Self-Management</td>
<td>• Can be counted on?</td>
</tr>
<tr>
<td></td>
<td>• Tolerate frustration?</td>
</tr>
<tr>
<td>Social Awareness</td>
<td>• Are open to feedback?</td>
</tr>
<tr>
<td></td>
<td>• Here what the other person is “really” saying?</td>
</tr>
<tr>
<td>Relationship Management</td>
<td>• Directly address people in difficult situations?</td>
</tr>
</tbody>
</table>
Appendix C

IRB Approval Letter

Human Subjects Research Approval Form

IRB #: 2012-191

To: JoAnn Daugherty
   Andria Jones

Project Title: Emotional Intelligence and Clinical Performance in Senior Undergraduate Nursing Students

This letter certifies that the above referenced project was reviewed and approved by the University’s Institutional Review Board in accordance with the requirements of the Code of Federal Regulations on Protection of Human Subjects (45 CFR 46), including its relevant subparts.

Continuing Review
This approval is valid through the expiration date shown below. If this research project will extend beyond that date, a continuing review application must be submitted at least 30 days before this expiration using the Continuing Review form available on the IRB website. (www.csusm.edu/irb)

Modifications to Research Protocol
Changes to this protocol (procedures, populations, locations, personnel, etc.) must be submitted and approved by the IRB prior to implementation using the Minor Modification Form available on the IRB website.

Unanticipated Outcomes/Events
The CSU San Marcos IRB must be notified immediately of any injuries or adverse conditions.

Approved Information Sheet or Consent Form(s) are attached. Only approved consent forms may be used to obtain participant consent.

Approval Date: 11/29/2012

Expiration Date: 11/28/2013

Susan Thompson
IRB Chair

California State University
San Marcos
Tel: 760-750-4029 irb@csusm.edu www.csusm.edu/irb
Appendix D

Informed Consent

California State University
SAN MARCOS

Consent to Participate in Research

Invitation to Participate

Under the direction and supervision of Dr. Joanne Daugherty, California State University San Marcos (CSUSM) School of Nursing, Andria Jones BSN, RN is conducting a research study entitled, “Emotional Intelligence and Clinical Performance in Senior Undergraduate Nursing Students.” You are invited to participate in this study because you are currently enrolled in CSUSM as a senior undergraduate nursing student.

Purpose

The objectives of this study are to:

1. Understand the relationship between emotional intelligence and clinical performance among a cohort of senior undergraduate nursing students.

2. Investigate if an individual’s level of emotional intelligence can predict or explain how well that individual may perform clinically.

Description of Procedures

As a participant in this study, you will be asked to take the Emotional Intelligence Appraisal Test in order to calculate your level of emotional intelligence. You will also be asked to fill out a demographic questionnaire that will be used to describe your personal characteristics. Additionally, you will be asked to allow the principal investigator to assess your Level II Terminal Outcome score that has been completed by your clinical professors.

The study will take place at CSUSM in a school or nursing classroom either at the beginning or at the end of your class time per the discretion of your professor. Your professor will not be present while you are filling out the questionnaires. The principal investigator will stay and assist those who have chosen to participate in the study with the scoring of their emotional intelligence tests. The entire process is expected to take approximately 30 minutes including scoring.
Risks and Inconveniences

There are minimal risks attached to participation in this study. The risks include: (1) Confidentiality- There is a very small risk that someone other than the research team might see your emotional intelligence or clinical performance score. To minimize this risk the principal investigator will sign a confidentiality pledge. Confidentiality will be maintained by coding all data collection surveys and demographic sheets once clinical performance scores are assessed in order to protect the identity of all participants. All data pertinent to the study will be kept in a locked file cabinet in the faculty chairperson’s locked office. Only the principal investigator will have a key to the filing cabinet along with the thesis chair. A year after the project has concluded, the data will be shredded.( 2) Emotional discomfort or stress- There is a very small chance that if you decide to participate in the study you might experience emotional distress. If you do decide to participate in the research study and experience distress, a mental health professional will be made available to you at no charge.( 3) Time- The potential participants will be informed that the entire study will require approximately 30 minutes of their time. As much as possible, the principal investigator will attempt to keep to this time commitment and minimize any time inconveniences to the participants.

Confidentiality

Your survey responses and demographic information will be kept confidential and will only be used by the principal investigator for analysis purposes. You should also know that the Institutional Review Board (IRB) of CSUSM may inspect study records as part of its auditing program, but these reviews only focus on the researcher and the study, not on your responses. The IRB is a committee that reviews research studies to make sure that they are safe and that the rights of the participants are protected.

The questionnaires and demographic forms will be coded so that no identifying information will be linked with your name after it is collected. All survey materials will be kept in a locked filing cabinet in the faculty chairperson’s locked office. All data pertaining to the study will be shredded one year from completion of the project.

Voluntary Participation

Participation is voluntary. You do not have to participate in this study if you do not want to. If you agree to be in this study, but later change your mind, you may drop out at any time. If the time necessary to take the survey is inconvenient for you, you may stop without consequence to you. There are no penalties or consequences of any kind if you
decide you do not want to participate. You may choose to withdraw from the study at any
time and for any reason without any consequence to you.

**Benefits**

There may be no direct benefit to you as a result of participating in this study; however,
you may benefit from knowing your emotional intelligence score. Your participation will
likely benefit future nursing student candidates, nursing schools, and the nursing
profession by providing information on emotional intelligence and its relationship to
clinical nursing performance.

**Questions**

If you any questions about the study, you may direct those to the principal investigator,
Andria Jones, who may be reached at jones261@cougars.csusm.edu. You may also call
her at 760-805-1334 and she will be happy to answer your questions. You may also
contact the faculty chairperson, Dr. Joann Daugherty at jdaugher@csusm.edu, or call her
at 760-750-7550. If you have questions about your rights as a research participant, you
may contact the IRB at 760-750-4029.

- I agree to participate in this research study.

__________________________
Participant’s Name (First and Last) Date

__________________________
Participant’s signature

__________________________
Researcher’s Signature

This document has been approved by
the Institutional Review Board at
California State University San Marcos
Expiration Date: November 28, 2013
Appendix E

Demographic Data Collection Sheet

Basic Demographic Questionnaire

Please answer the following questions by checking a response or writing the answer in the space provided.

1. Are you male or female?
   - Male
   - Female
   - Transgender

2. Which of the following best describes you?
   - Hispanic or Latino
   - Not Hispanic or Latino

3. Which of the following best describes you? Choose all that apply?
   - American Indian/Alaska Native
   - Asian
   - Black/African American
   - Hawaiian Native/Pacific Islander
   - White
   - Other________________
   - Prefer not to answer

4. How old are you? (please respond in whole years)
   ______ Years old
Appendix F

Ability Model of Emotional Intelligence
(Revised Four Branch Model)
Appendix G
Original Four Branch Model

EMOTIONAL REGULATION
- Managing the emotions of others
- Managing one’s own emotions
- Engaging or detaching from emotional states
- Monitoring & reflecting on emotions
- Being open to emotions

UNDERSTANDING EMOTIONS & EMPLOYING EMOTIONAL KNOWLEDGE
- Understanding transitions between emotions
- Interpreting complex feelings
- Understanding causes and consequences of emotions
- Understanding how different emotions are related

EMOTIONAL FACILITATION OF THINKING
- Using emotional states to facilitate problem solving and creativity
- Using emotions to consider alternative perspectives
- Using emotions to facilitate judgment
- Redirecting and prioritizing thinking based on feelings

PERCEPTION, APPRAISAL, & EXPRESSION OF EMOTION
- Discriminating between feelings, between honest and dishonest expressions of feelings
- Expressing emotions accurately
- Identifying emotions in other people
- Identifying emotions in one’s own subjective states
Appendix H

Permission to use Ability Model of Emotional Intelligence

John D Mayer jack.mayer@unh.edu Apr 9
to me

Hi Andria Jones,

You have my permission to reproduce the figure and any text from that web page as needed for your thesis and for any peer-reviewed articles or academic book chapters.

Sincerely,

Jack

* Andria Jones <jones261@cougars.csusm.edu> [Mon 09 Apr 2012 06:25:20 PM EDT]
Appendix I

Sample Instructor Email Request

Dear (Name of the instructor),

I am conducting research on undergraduate senior student nurses emotional intelligence levels and clinical performance. I would like to request 10 minutes at either the beginning or the end of your class on (day and date) at (time) in (location). If you agree to allow me a few minutes, I will be presenting the project and explaining and distributing the consent along with the emotional intelligence test form during that time. The survey would be requested to be completed after class but not brought home. The total time required would be less than 10 minutes. Please let me know if this is acceptable and if I have the correct time and room number.

Thank you,

Andria Jones RN. BSN.
Appendix J

Receipt for Emotional Intelligence Tests

From: TalentSmart | Purchase Receipt [mailto:orders@talentsmart.com]

Sent: None

To: jonesandria80@gmail.com

Subject: TalentSmart | Purchase Receipt. - Ref #: VSJFA43C74E9

Dear Andria,

Thank you for your purchase from TalentSmart! We are delighted to have you as a customer. All orders placed by 3 p.m. Pacific Standard Time (M-F) ship the same day. Please keep this receipt for your records.

February 19, 2013, 8:22 am

Reference #: VSJFA43C74E9

Payment Type: American Express | xxxxx1024

Created By mjo
EMOTIONAL INTELLIGENCE AND CLINICAL PERFORMANCE
IN SENIOR UNDERGRADUATE NURSING STUDENTS

References


Bradberry, T., & Greaves, J. (2011). . In Emotional intelligence appraisal: there is more than IQ. Talentsmart: Talent Smart, Inc. (pp. 2-5).


