PSYCHOSOCIAL COMPETENCY OF THE ENGLISH AS A SECOND LANGUAGE NURSING STUDENT: A COMPARATIVE STUDY

A DISSERTATION

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To the Dean of the Graduate School:

I am submitting herewith a dissertation written by Eugenia Hammett-Zelanko entitled "Psychosocial Competency of the English as a Second Language Nursing Student: A Comparative Study." I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Health Studies.

Kristin L. Wiginton, PhD, Major Professor

We have read this dissertation and recommend its acceptance:

Chair

Accepted:

Dean of the Graduate School

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ABSTRACT

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PSYCHOSOCIAL COMPETENCY OF THE ENGLISH AS A SECOND LANGUAGE NURSING STUDENT: A COMPARATIVE STUDY

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Nurses must be capable of recognizing the client's psychosocial and physiological needs. The nurse's ability to do so impacts the outcome of the healthcare experience and may impact future health care encounters. English as a second language (ESL) nurses and non-ESL nurses must both be able to identify the client's psychosocial issues. Little information exists on the ESL students' ability to identify the client's psychosocial needs. This study compared the 459 psychosocial needs scores of 25,782 ESL and non-ESL senior nursing students who took the HESI exam between September 1, 2005 and August 31, 2006 to determine if there was a significant difference in the mean scores of the two groups. Analysis of Variance (ANOVA), correlation analysis, and regression analysis were performed using SPSS 13.0.

Mean scores were 62.33 for the native English (non-ESL) examinees and 59.57 for the ESL group ($p<.001$). An ANOVA was conducted to determine if there was a significant difference in the mean psychosocial needs scores of ESL and non-ESL HESI examinees based on age, gender, educational program (Bachelors vs. Associate Degree Program), and ethnicity. All variables were significant at $p<.01$. However the Eta^2 was negligible, thus suggesting that there was a weak, but significant difference in

psychosocial scores based on native language. Pearson's Product Moment Correlation(r) and Spearman's Rho were .058 and .069 respectively suggesting that native language was a weak correlate of psychosocial needs scores. The regression coefficient calculation was $F(8,71)=10.05$ ($p<.001$), but the Beta values of the regression analysis were small and negated the regression analysis. The limited effect size (Eta^2), small partial correlation coefficients, and Beta values were secondary to the large study population.

The data suggests that ESL student's grasp of the client's psychosocial needs requires further study. Although underutilized in nursing education, concept maps have been used to teach psychosocial nursing and could be a possible solution for improving the ESL student's psychosocial needs scores.

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INTRODUCTION

Few would argue with the fact that Florence Nightingale is the mother of professional nursing. Ms. Nightingale's wisdom and scientific curiosity served as the foundation for professional nursing as it is known today. In addition to setting the course for modern nursing, Ms. Nightingale might also be considered as the first international nurse. She took her skills and young protégées to the Crimea to care for the needs of the wounded during the Crimean War. While there, the woman who had earned the nickname *Lady with the Lamp* wrote the following passage in a letter to John Stuart Mills:

> What the horrors of war are, no one can imagine. They are not the wounds and blood and fever spotted and low, or dysentery, chronic and acute, cold and heat, and famine. They are intoxication, drunken brutality, demoralization, and disorder on the part of the inferior…jealousness, meanness, indifference, selfish brutality on the part of the superior (Andrews, Biggs, & Seidel, 1996).

In essence, Florence Nightingale was telling John Stuart Mills that although illness and injury suffered by soldiers of the Crimean War was serious, they represented only a small portion of the problems that plagued soldiers. The psychological and social aspects of the war were equally, and perhaps more devastating. The effects of the illness

are indeed problematic, but the resulting psychological and social issues can be equally, if not more damaging.

It is estimated that by 2030, 150 million Americans will suffer from the debilitating effects of chronic illness (The Institute for Health & Aging, 1996). Furthermore, the incidence of chronic disease increases with age and females are more likely than males to be diagnosed with a chronic illness. Due to the long-term management of these illnesses, patients often experience psychosocial consequences as a result. Health care providers' failure to address these psychosocial needs can be as devastating as the illness.

The psychosocial issues of disease have long been a topic of debate in health care circles. Physicians trained in the medical model generally focus on the physical causes and treatment of disease. Medical model physicians number over 53,000 in Texas (Texas Medical Board, n.d.). Physicians trained at osteopathic medical schools are much more focused on holistic approaches to health care, but these doctors make up less than 7% of the number of physicians practicing in Texas (Texas Medical Board, n.d.). Given these numbers, it stands to reason that most individuals will receive health care from physicians trained in the traditional medical model.

The philosophical division that is present in medical education is absent in nursing education. Nurses are taught to view the individual from a more holistic point of view. The holistic philosophy points to the fact that nurses view the individual as one with a social, emotional, physical, and spiritual being. In addition, the combined total of registered and practical nurses in Texas outnumbers physicians by almost a four to one

ratio. In Texas, over 47,000 nurses (>20%) are of a race/ethnicity other than Caucasian. The diversity of Texas nurses alludes to the fact that many of the nurses in Texas may speak English as a second language (ESL). One is left to contemplate whether ESL nurses are as capable of addressing the psychosocial needs of clients with the same degree of competency as their non-ESL counterparts. Phillips and Hartley (1990), Jalil-Grenier and Mackie (1997), and Mullins, Quintrell, and Hancock (1995) are only a few of the researchers who have described the difficulties of the ESL nursing student. The ESL student's difficulties may lead to a higher rate of attrition when compared to his/her non-ESL counterpart.

Historically, the manner in which the professional nursing examination is given has also heightened the failure to identify students who may have difficulty grasping the concepts related to psychosocial needs. Before 1982, each student was tested on five subjects and received 5 scores. If the student failed one of the five tests, he/she was required to re-take only the section of the exam which was failed. In 1982, the NCNSB changed the scoring methods to an aggregate score. Thus, a student may indeed be able to improve a low score on psychosocial needs questions by scoring high on other areas of the exam. The student's ability (or lack thereof) to manage the client's psychosocial issues is reported to the student as either pass or fail (National Council State Boards of Nursing, n.d.). The student receives notification that he/she has performed above or below the minimally acceptable score on the specific sections of the exam. For the newly licensed nurse, there is no request for remedial education as long as the nurse has obtained the passing score.

Wilson (2007) commented that nurses concern themselves with the ill individual as well as issues related to health promotion and disease prevention. As mentioned previously, nursing education focuses on the individual as a whole. The holistic philosophy points to the fact that nurses view the individual as one with a social, emotional, physical, and spiritual being. The Code of Ethics for the American Nurses Association (ANA) calls for nurses to promote health, improve both the healthcare environment and the workplace environment (ANA, n.d.). The Society for Public Health Education (SOPHE) calls for health educators to promote the health of the community and workplace (SOPHE, n.d.). Furthermore, both organizations call for the advancement of professional education. The common philosophies of nurses and health educators set the stage for these two groups to join together to explore the issue of the ESL student's ability to recognize and intervene in the management of psychosocial issues.

All nurses regardless of their cultural background or clinical specialty must be capable of providing holistic care to the client. Yet, nursing education has no uniform method for meeting the special needs of the ESL nursing student. The lack of data on the ESL student's performance on questions related to psychosocial needs combined with the lack of a tested method for educating these needs places the client with chronic illness at risk for a diminished quality of life.

Standardized nursing examinations such as the NCLEX and Health Education Specialist Incorporated (HESI) exam test the nursing student's ability to identify the psychosocial needs of a client. There is a lack of empirical research to determine if there

is a significant difference in the ESL nursing students' ability to identify psychosocial needs of a client when compared to the non-ESL nursing student. The shortage of nurses in this country combined with the rise in the number of ESL nurses over the last two decades of the 20th century heighten the need to examine this issue more thoroughly. However, before educational strategies can be tailored to the needs of the ESL student, it must first be determined if the educational interventions currently in use are adequate.

Purpose of the Study

It is imperative that nursing education give special consideration to the education of ESL students in the identification of client psychosocial needs. Standardized nursing examinations such as the NCLEX and the Health Education Specialist Incorporated (HESI) exam identify ESL and non-ESL students. Yet, little research has been conducted to determine if existing nursing education programs are successfully teaching psychosocial needs to ESL students at a rate that is comparable to non-ESL students.

The ESL nursing student must be able to identify the client's psychosocial needs as effectively as his/her non-ESL counterpart. One purpose of this study was to determine if there is a significant difference in the ESL nursing students' ability to identify psychosocial needs on the HESI exam when compared to the non-ESL nursing students by comparing the ESL and non-ESL student's psychosocial needs scores on the HESI exam. Comparing the ESL and non-ESL nursing student's ability to correctly answer questions on the HESI exam will serve to answer the question of whether or not

language is a barrier to performance on the HESI exam. The second purpose of the study was to determine if a relationship exists between language classification and scores on the HESI exam. Lastly, this study sought to determine if language classification could significantly predict scores on the psychosocial needs section of the HESI exam.

Null Hypotheses

The following were the null hypotheses for this study:

$H_0$1. There will be no statistically significant difference in the ESL nursing students' scores on the psychosocial section of the HESI exam when compared with non-ESL nursing student scores.

$H_0$2. There will be no statistically significant relationship between language classification (ESL, non-ESL) of nursing students and scores on the psychosocial section of the HESI exam.

$H_0$3. After controlling for race, sex, age, and nursing program, language classification (ESL, non-ESL) of nursing students will not significantly predict scores on the psychosocial section of the HESI exam.

Delimitations

The study had the following delimitations:

1. The study utilized psychosocial needs exam scores of student taking the HESI exam.
2. The psychosocial needs exam scores was limited to a sample of a national data base of senior nursing students in the United States.

Limitations

The study had the following limitations:

1. The sample consisted of only senior nursing students in the United States who took the HESI exam. Thus, the results of this study are only applicable to this particular population.
2. Only scores from the psychosocial needs questions of the HESI exam were utilized.
3. The researcher had no knowledge of the content of the HESI psychosocial needs questions content.

Assumptions

The study had the following assumptions:

1. Nursing programs discuss identification of and interventions for psychosocial needs as part of basic nursing education.
2. Nursing students were honest in their answers to the psychosocial questions on the HESI exam.

Definition of Terms

ESL student: For the purposes of this study, an ESL student is someone who defines themselves as having a primary language other than English in demographic information reported on the HESI exam.

Professional Nursing Student: student who is enrolled in a nursing education program that culminates in the acquisition of the title *registered nurse.*

Graduate Nurse: Nursing student who has graduated from a professional school of nursing and is qualified to take the NCLEX exam.

NCLEX®: Nationally standardized nursing board exam sponsored and controlled by the National Council of State Boards of Nursing (NCSBN). NCSBN prepares the exam and oversees the administration of the exam in all fifty states, the District of Columbia, Guam, The Virgin Islands, American Samoa, and the northern Mariana Islands. NCSBN's mission is to provide oversight of nursing safety and protect the welfare of the public at large.

HESI exam: Health Education Specialist Incorporated (HESI) is a branch of Elsevier Publishing and provides nursing education programs across the United States with an exam written by field experts that predicts student performance on the NCLEX® exam.

Psychosocial Needs: social and psychological issues that impact one's overall sense of social and emotional well-being and functioning.

Psychosocial Test Items: Questions that are designed to assess the graduate nurse's ability to deliver minimally competent care to the individual suffering from psychiatric illness.

Clinician: an individual with specialized education and credentialing/licensing as described by a professional organization and/or governmental agency that has a vested interest in the health and welfare of the public at large.

Psychosocial Test Items: Questions developed by expert nurses that measures the psychosocial competency of the senior nursing student.

Importance of the Study

John Donne (1572-1631) declared "No man is an island, entire of itself; every man is a piece of the continent, a part of the main...and therefore never send to know for whom the bells tolls; it tolls for thee" (Andrews, Biggs, & Seidel, 1996). In considering the clinician's roles in addressing psychosocial issues, this quote seems extremely important. The attitudes, beliefs, and coping style of the clinician often have a significant effect on the client's ability to cope with the psychosocial issues of illness. As previously discussed, health care providers frequently avoid discussing the relationship between the client's illness and social/emotional well-being. The client often develops the sense that the clinician is unable to listen to social or emotional concerns because the clinician often develops an "emotional wall". This breakdown may actually serve to weaken the client's adaptive coping skills and could contribute to clinician burnout. Furthermore, the quality of care is lessened because of the lack of attentiveness to the client's needs.

Volumes have been written about stress and the impact of stress on the individual. The individual's ability to manage stress has a significant impact on both physical and psychosocial well-being. The individual faced with the prospect of managing a chronic illness experiences a significant amount of stress. The stress experience dictates that the individual select some type of coping mechanism based on his/her appraisal of the situation. The selection of a maladaptive coping mechanism

impedes the individual's ability to manage his/her situation. Furthermore, a cycle of destruction may set in because the more maladaptive the coping mechanism, the greater the stress on the individual. The greater the stress on the individual, the more the individual's level of physical well being will deteriorate. The clinician is responsible for interrupting the progression of the disease and improving the client's quality of life. The clinician is responsible for providing both the medical interventions and psychological support that will interrupt the progression of the illness and afford the client with an improved quality of life.

The clinician's failure to address psychosocial needs can lead to diminished quality of life and increased health care spending. Exploring the ESL student's success on the HESI psychosocial needs questions is one step toward developing a data base to help nursing faculty foster the ESL nursing student's academic success. Focusing on the weaknesses of the environmental support system and identification of methods to correct these weaknesses will improve the ESL student's academic success. Nursing educators must learn to accurately identify and correct weaknesses in the instructional methodologies currently utilized in the academic setting. Health educators possess the skills to assist nurse educators in accomplishing this task. Development of these skills is important to the nursing student, nursing faculty and graduate/novice nurses to insure professional success as a licensed professional nurse and ultimately improve the quality of care for all health care consumers.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The first consideration in defining the scope of this literature review involved identification of the stakeholders having a vested interest in the outcome of the study. Those who have a vested interest in the study include ESL nursing students, nursing faculty, and of course health care consumers. Marshall and White (1994) noted that most of the literature related to the ESL nursing student focused on the perceptions of the health care consumer. However, including health care clients in the study would have detracted from the concerns of the primary consumers of the study's outcome: nursing students and educators.

The consumers of the nursing curriculum are nursing students. The nursing school curriculum is the bond that links the student and the instructor. The instructor designs a curriculum that challenges the student's intellectual ability and results in the student obtaining the title "registered nurse". The student is the consumer of the curriculum in an effort to become a "professional nurse". Thus, the second consideration in developing the literature review involved exploring teaching methodologies currently used to teach psychosocial needs to students. Secondary to teaching methodologies utilized to teach psychosocial issues involved exploring the

differences in the methodologies used to teach psychosocial needs to ESL and non-ESL students.

The final consideration in determining the scope of this literature review involved the development of a theoretical framework that would adequately describe the relationship of the nursing student's ability to identify and develop appropriate interventions for the psychosocial needs of clients with chronic illnesses while simultaneously promoting a positive nurse-client relationship. Certain concepts were considered in the selection of the theoretical framework. First of all, the nurse must feel that he/she possesses the skills needed to address the client's psychosocial needs (self-efficacy).

The ESL Student

In considering issues important to the ESL student, one must consider the characteristics of the ESL student/nurse. Secondly, the ESL student's perception of the obstacles inherent in the traditional non-ESL academic setting must be defined. As previously mentioned, ESL and non-ESL nursing students can be considered as consumers of the nursing curriculum. As the curriculum consumer, the educational strategies used to meet the ESL student and non-ESL student needs, as well as the ESL students' perception of the non-ESL curriculum will be explored. Similarly, the graduate nursing student is the consumer of the NCLEX ® exam. Thus, it is appropriate that this literature review include a discussion of the ESL student's performance on the NCLEX ® exam.

Issues important to nursing faculty include the development and implementation of a curriculum that generates a graduate nurse who is capable of passing the NCLEX® exam. Nursing education is charged with the responsibility of developing and implementing educational strategies that encourage the development of critical thinking skills necessary for passing the NCLEX ®. The curriculum dictates that strategies must be utilized to teach nursing students how to identify and intervene in the client's psychosocial needs. The faculty utilizes teaching strategies to provide the nursing student with critical thinking skills necessary for passing the NCLEX ®.

The selection of a theoretical framework for this study focused on consideration of the reasons that the ESL student's ability to identify the health care consumer's psychosocial needs is important. The development of the theoretical framework must explain the dynamics of the nurse-client (healthcare consumer) relationship. The product of the nurse-client relationship is a mutually satisfying exchange that results in identification of the client's needs and the nurse's ability to provide interventions that relieve psychosocial stressors that negatively impact health. If the ESL nurse feels ill-prepared for this task, he/she is less likely to attempt to identify and intervene in these issues. The ESL nurse's self-efficacy and the healthcare consumer's level of satisfaction with the nurse's interventions dictate the degree of satisfaction both the consumer and nurse experience. The healthcare consumer's level of satisfaction with the clinical experience mandates how likely the consumer is to modify behavior and seek health care in the future.

Bandura's work on self-efficacy is relevant to the nurse's ability to identify and meet the client's psychosocial needs. The nurse who feels self-efficacious is likely to address psychosocial issues in a positive and straight-forward manner. An important consideration is whether language poses a potential barrier to the clinician's perceived self-efficacy. Cheryl Cox's (1982) research on the dynamics of interactions between the provider and the healthcare consumer is felt to be relevant for explaining the dynamics of the nurse-client relationship. Cox based her work on the premise that the individual characteristics of the client and clinician within the client-clinician interaction impact the quality, outcome, and ultimately the client's overall sense of well-being.

Adjustment Issues and Attrition

Malu and Figlear (1998) reported that the literature related to ESL students is limited. Much of the literature reviewed for this study focused on the ESL student's adjustment to the American educational system. Leone (1982) described the ESL graduate nursing student as having feelings of ambivalence when they enter the U.S. nursing education system. Furthermore, the researcher reported that the ESL student's educational experiences are often significantly different from the K-12 United States educational system. One such difference relates to student conduct in the classroom. In their study, Jalili-Grenier and Mackie (1997) found that foreign nursing students were uncomfortable with American students' direct questioning of nursing instructors. Additional emotions reported by ESL students ranged from curiosity to confusion as well as eagerness to apprehension. Such a broad range of emotions could distract from

the learning process and impair the ESL students' ability to comprehend the required course content.

Phillips and Hartley (1990) reported that ESL students often had difficulty finding the resources to cope with their educational/personal needs during their academic endeavors. These authors concluded that nurse educators need to assist ESL nursing students in reaching their personal goals. In order to do so, nurse educators must be prepared to provide ESL students with the resources for meeting both educational and personal needs.

Sanner, Watson, and Samson (2002) studied the issues related to ESL student's adjustment to baccalaureate nursing programs and found that the current nursing education system was intimidating to these students. The ESL students reported feelings of intimidation which, if not adequately addressed, could limit their success within the program. Knox (1984) declared that the student's self-perception plays an important role in educational decisions. If ESL students experience emotional distress during their educational experience, it is likely that their perception of self will deteriorate, as well as their perceived self-efficacy in relation to nursing skills.

Upvall (1990) utilized Zwingman and Gunn's Uprooting Model (1983) to describe the emotional experiences of the foreign nursing student in the United States. The researcher discussed the fact that the uprooted student loses the primary reference points/support system they possessed before coming to the United States. Secondary to the loss of the support system are the sudden changes in the culture, language, thinking patterns, and disruption in the pattern of habitual contacts/day-to-day interactions.

Upvall (1990) concluded that the adjustment issues of the ESL student were not limited to the classroom, but also included issues related to the student's social adjustment. The fear of the unknown frequently has a negative impact on the ESL student's perception of the new environment and could lead to disillusionment, diminished academic performance, social maladjustment, and eventual attrition from the American nursing program. The results of these difficulties are reflected in Gardner's (2005) finding that the attrition rate of ESL nursing students was as high as 85% in the mid-1990's.

Leone (1982) discussed the fact that ESL students often leave family and friends to pursue professional goals. Phillips and Hartley (1990) noted that, despite adequate levels of motivation, ESL nursing students still have higher levels of attrition than their native English counterparts. These authors called on nurse educators to assist ESL nursing students in reaching their personal goals. The ESL students often miss the familiarities of their native land. The longing for their native primary support system and the challenges of the professional education system are often overwhelming. Mullins, Quintrell, and Hancock (1995) noted that international students expressed fear of failure, self-doubt and uncertainty about the expectations of faculty regarding academic requirements.

For many ESL students, the process of learning the English language is overwhelming. Phillips and Hartley (1990) found that individuals require between four and eight years to develop adequate language skills. The ESL student who is attempting to learn course content as well as simultaneously adjust to a new culture while learning a new language is at an increased risk of academic failure. Mohan and Lo (1985)

studied the English skills of nursing students from Hong Kong and found that although the students were capable of correct sentence structure, they lacked the ability to successfully develop sentences into paragraphs. Phillips and Hartley (1990) also noted that older students acquired adequate English skills at a slower pace than younger students. Eaton and Lowe (1991) noted that the absence of adequate English skills intensified the ESL student's stress. Samaraj (2002) concluded that the institution and professional discipline were ultimately responsible for insuring that the course work provide the ESL student with the opportunity to improve the use of the English language.

Language Competency

Although competency and methods of instruction may seem unrelated at first, the competency of the novice professional is dependent on teaching strategies that promote competency. Most standardized licensing exams affirm that the examinee has the competence to practice safe care. However, there is a significant difference in the practice of *safe* care and the provision of quality care. Epstein and Hundert (2002) included communication and reasoning skills as part of physician competency during their discussion of medical education. Pender and deLoy (2004) echoed these concerns in their discussion of the training of professional dieticians. The presence of competency in the absence of language proficiency places some doubt on whether or not the examinee is truly competent to practice. The same question of competency applies to the ESL student who passes the nursing licensure exam yet lacks English proficiency.

Nursing School Faculty and the ESL Student

Issues important to nursing faculty include the development and implementation of a curriculum that generates a graduate nurse who is capable of passing the NCLEX® exam. Nursing education is charged with the responsibility of developing and implementing a curriculum that fosters critical thinking skills necessary for passing the NCLEX. Part of the curriculum must utilize strategies to teach nursing students how to identify and intervene in the client's psychosocial needs.

Faculty Training

Sherrod and Harrison (1994) described nursing faculty members as being untrained to meet the educational needs of the ESL nursing student. Jaalili-Grenier and Mackie (1997) surveyed nursing faculty regarding their perceptions of the language and learning activity needs of ESL students. The study found that although faculty subjects were aware of the needs of ESL students, they needed guidance in meeting the needs of the student. Faculty also admitted that their limited knowledge of other cultures impacted the ESL student's ability to grasp the nursing curriculum. Faculty members stated that offering workshops on instructional techniques for ESL students and student-centered programs would improve existing teaching strategies.

Educational Strategies Tailored to Meet ESL Student Needs

The literature on educational strategies tailored to the needs of the ESL nursing student is somewhat limited. Malu and Figlear (1998) and Guhde (2003) suggested that use of a model of language such as the Cummins Model would be helpful in assisting the ESL student in the acquisition of necessary language skills. The Cummins model

divides language into two categories of language attainment: Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). As its name implies, BICS is the type of communication used in daily social interactions. CALP facilitates the process of analysis, evaluation, and interpretation of concepts necessary for academic success. The Cummins model is especially applicable to health care because the skills that CALP fosters are mandatory for the healthcare provider.

Language models such as the Cummins Model might be seen as viable foundations for improved instructional methods for ESL students. While the Cummins Model may seem to be a useful approach for health care professionals, its usefulness would only be served if both categories were fully addressed within the program. Malu and Figlear (1998) expressed concern that the student may appear proficient in BICS and therefore be assumed to be proficient in CALP. Thus, the graduate nurse would be at risk of failing the NCLEX and/or providing unsafe care if the instructor failed to fully assess the ESL student's CALP skills.

Malu and Figlear (1998) suggested, the CALP method does not provide insight into whether or not the ESL student will accurately recall and relay critical information during the day-to-day critical situations that occur during the normal duties of nursing. The use of CALP for writing questions that assess individual competency This is an area of concern because the ESL student is often proficient in BICS, but may also fail to demonstrate limited CALP abilities on examinations that are typical to nursing programs. Furthermore, different words may be used to describe the same nursing

process. Development of assessment strategies that utilize CALP in combination with other methods of assessment would provide a more comprehensive evaluation of the ESL student's competency and facilitate a more learner-friendly educational environment for the ESL student. The inverse relationship between memory and stress also make the CALP model a less than optimal method for assessing ESL student competency. For example, client goals and client outcomes; and nursing procedures and nursing interventions are often used interchangeably. This type of word exchange places the ESL student at risk of failure. CALP does not possess the ability to change these types of professional jargon variations.

Stern (1992) outlined the following basic strategies for learning a language: a) There must be a plan for learning the language; b) The cognitive strategies utilized for learning the language must be compatible with the learner; c) The learner must be provided with situations that allow the opportunity to practice the new language; d) The learner's interpersonal strategies must also be considered when presenting a new language to the identified learner; and e) The learning experience must involve consideration of the learner's emotional qualities. Regardless of the native language of the ESL student nurse, the student is faced with learning a new language throughout the educational experience. More specifically, the student is flooded with a vocabulary of words/jargon specific to healthcare. The ESL learner is often confronted with not only the issues of learning a vocabulary specific to healthcare, but also the English language itself. Nursing faculty need to account for and appreciate this learning difference when planning their curriculums.

The nursing shortage has increased efforts to recruit more foreign nurses to the United States. Thus, several researchers have addressed the ESL student's issues as a result of the increase in foreign-born nursing students. Hartley (1992) noted that ESL students often had difficulty finding the resources to deal with during educational and personal needs during their academic endeavors. Smith (1990) recommended pre-admission as well as ongoing academic advising, easily accessible campus resources, financial support, and individually tailored class/clinical schedules to meet the needs of the ESL student. Memmer and Worth (1991) made similar pre-admission screening recommendations that included writing, math, and in some cases, reading placement tests prior to admission into the nursing program. These researchers recommended increased use of minority guest-lecturers, minority-group based housing options, and workshops for sensitizing nursing faculty to the need for creative strategies to improve the ESL students' nursing education experiences. Sherrod and Harrison (1994) described a successful program that focused on an academic advisement program that was tailored to the needs of the ESL student. This was a comprehensive program that focused on identification of the individual ESL student's educational difficulties and individually-tailored interventions that assisted the ESL student in overcoming the identified problems.

Memmer and Worth (1991) also suggested that conversation labs be provided for students to practice the use of English in relevant healthcare scenarios. Malu and Figlear (1998) suggested English immersion classes to improve the ESL student's comprehension of nursing language. Kurtz (1993) recommended that ESL students be

provided with copies of a professor's lecture notes and presentations. Holmes and Moulton (1997) suggested that ESL students be required to keep journals so the instructor would have an additional method of correcting grammatical form. Yet, any additional assignment might meet with resistance because students and instructors alike complain of the tremendous amount of written assignments common to nursing curriculums. Klisch (1994) recommended that ESL students be offered additional time on test to assist with the language difficulties.

Although study groups are a useful component of a nursing program, Guhlde (2003) reported that study groups present both ESL students and educators with a significant number of challenges. Study groups usually consist of students of similar language or cultural backgrounds. These groups often revert to their native language. As a result, the group members fail to further develop their English proficiency. One possible solution might be to assign ESL student facilitators to the study groups to assist in acquisition of CALP skills. Another strategy might include mandatory tutoring sessions for each core content lecture. This strategy has the potential of increasing student understanding, yet once again, an added "mandatory" course requirement has potential for resistance from the student and perhaps the nurse educator as well.

Wang and Bakken (2004) suggested that ESL graduate nursing students be matched with non-ESL mentors to encourage the student in his/her scholarly endeavors. The same principle can be applied to the needs of the undergraduate nursing student. An additional benefit to this strategy would be to broaden the non-ESL nursing student's knowledge of other cultures and promote intercultural learning (Sandlin & Grahn,

2004). Furthermore, the preceptor concept would encourage nursing students to develop collaboration skills that are important within the nursing profession. Koskinen and Tossavainen (2004) suggested that intercultural learning improves the student's ability to problem solve, especially situational problem solving. One study revealed that the presence of faculty actually detracts from intercultural learning (Lee, 2004). Thus, the use of non-ESL mentors would serve as a win-win situation for all involved. Conversely, non-ESL students benefit from interactions with their ESL counterparts. Kirkpatrick, Brown, and Atkins (1998) recommended that nursing education capitalize on the presence of ESL students and use the ESL student's presence as a means of teaching native English students about other cultures.

Kollar and Ailinger (2002) noted that interpersonal skills improve during international learning experiences. Despite the benefit of this approach, it remains to be seen if international learning experiences will gain acceptance as part of the general nursing curriculum. Financial issues related to such experiences and the amount of time required to complete international experiences are two obstacles that would have to be overcome before the concept would gain acceptance in the nursing education community.

Phillips and Hartley (1990) described more advanced methods of assisting ESL students, involving the use of videos that focused on both language development and critical thinking skills simultaneously. The videos assisted in the development of the ESL student's language, critical thinking skills, and the development of test taking skills. Pender and deLoy (2004) recommended that educators design curricula that both

improve language skills and provide required nursing content concurrently. The authors went on to state that a curriculum design such as this would integrate biomedical and psychosocial issues of illness.

"At-risk" ESL students need to be referred by nursing instructors to the appropriate resource at the beginning of clinical training. Furthermore, assessment of the ESL student's risk of failure should be assessed on an ongoing basis. Jeffrey (1998) recommended that early identification of such students would improve retention rates. Like previously noted researchers, Jeffrey (1998) stated that the social environment had a direct influence on the academic success of nontraditional students such as ESL student. Early intervention in at-risk situations will diminish the potential for ESL student failure. However, as previously discussed, instructors are often unaware of where to refer ESL students who are in need of assistance (Guide, 2003).

Kaiaoka-Yahiro and Ariam-Yago (1997) evaluated strategies for teaching English to Asian nursing students. The researchers considered the student's family-oriented culture in devising strategies for the Asian nursing student. As a result, the researchers called for organizations such as the Philippine Nurse's Association to be involved in meeting the social and academic needs of the Asian student. The researchers also called upon faculty to consider the needs and academic preferences of the ESL student when planning classroom activities and grade determination. The issue of grade determination was listed as a separate issue because Asian students tend to be more passive and demonstrate better understanding in situations that involve demonstration of

skills rather than the written assignments that are common to American nursing education programs.

Nursing Curriculum and Psychosocial Need Education

Nursing programs must provide adequate instruction on the identification of psychosocial needs and interventions as part of the educational experience. Furthermore, if the nursing curriculum provides students with inadequate instruction on this topic, the nursing student is at risk of poor performance when asked to identify and appropriately intervene in the client's psychosocial needs. The literature reviewed in relation to this topic fell into four primary categories: a) Various disease states and principles associated with the treatment of those disease states; b) Discipline Specific Methods of Teaching Psychosocial Issues; c) Clinical subspecialties (i.e. gerontology); and d) Methods of instruction in teaching psychosocial issues to students.

Disease States and Principles of Treatment

One method of teaching psychosocial issues of disease involved utilizing various theories of nursing. Neal (2001) utilized the principles of rehabilitation nursing to help students understand that the care of a patient with a chronic illness was different from the needs of the client with an acute illness. Neal based her argument on the principle that the shift of health care to the community setting has dictated that we become more diligent in our efforts to maximize the client's ability to function independently. Hellbom et al, (2001) focused on developing a course that improved the student's ability to identify psychosocial issues in the oncology patient. Nibert (2000) incorporated both oncology and critical care nursing in an effort to teach nursing

students about the emotional aspects of cancer. Anderson, Michael, Candela, and Mitchell (2002) utilized one of the newer sub-specialties of nursing, case management, as the venue for teaching psychosocial issues of chronic disease.

Discipline Specific Methods of Teaching Psychosocial Issues

Booker, Robinson, King and Dudley (2003) utilized cognitive behavioral theory to identify areas in which patients with chronic mental illness needed interventional assistance. These researchers were quick to point out that a fundamental problem in the use of this theory was the lack of mutuality between the goals of the clinician and the goals of the client. Lower level professional nursing students are taught early on that the goals of treatment must be mutually acceptable to both the client and the clinician. The lack of mutuality in treatment goals only serves to impede the development of a satisfactory client-clinician relationship and successful client adaptation to chronic illness. Despite the lack of mutuality, the clinicians who participated in this study reported that their attitudes changed in part because they had developed a more structured approach to dealing with client issues.

Several articles discussed instructional methodologies for teaching psychosocial issues to nursing students. Dixon, Harden, and Borland (2001) emphasized principles related to coping in developing a program to encourage students to identify psychosocial issues related to breast cancer. Ahlstrom and Hansson (2000) also emphasized the importance of caring and coping in developing a program to teach psychosocial issues of chronic illness.

Several studies utilized principles of communication as the framework for teaching students about psychosocial aspects of illness. Nobile and Drotar (2003) emphasized the use of communication in training resident physicians to identify psychosocial issues of diseases in children. These researchers hypothesized that our current emphasis on technology was only serving to distance the pediatrician's ability to understand the families' perspective of the child's illness. Leaf (2004) called for the provision of more training in the identification of psychosocial issues of chronic disease. Furthermore, Romala, Bucks, Williams, Whitfield, and Routh (1990) noted physicians normally felt that clients deserved an explanation of the illness or procedure in question, but were unsure of the client's ability to understand the information. As a result, physicians were less likely to share this information with clients. Once again, this only serves to emphasize our educational system's failure to teach medical and nursing students how to communicate with their clients.

Clinical Sub-specialties

Several researchers utilized the sub-specialty of gerontology as the foundation for developing courses on psychosocial issues. Grocki (2004) used human development to create a course in gerontology that included discussion of psychosocial issues of chronic disease. Incorporated in this course was the use of Maslow's Hierarchy of Needs as a means to encourage the entry level nursing student to identify basic needs that were lacking in the client's life. Anderson, Lyons, and West (2001) incorporated psychiatric disorders with gerontology and mental health nursing in their effort to assist

students in developing an appreciation for the psychosocial issues of the elderly and those with mental health issues.

Methods of Instruction

Candela, Michael, and Mitchell (2003) adapted critical thinking to an ethics course as a means of teaching students about the psychosocial issues of chronic disease. Coles (1995) proposed that psychosocial issues would be best addressed in a course that involved students from more than one discipline (i.e, nursing and medicine) in a course that teaches psychosocial issues of chronic disease. Haas and Hermnans (2003) combined medical/surgical nursing and psychiatric mental health nursing into one course. These educators based their course on the premise that teaching the two courses separately only served to further separate psychosocial issues from chronic disease. Sanson-Fisher, Rolfe, Jones, Ringland, and Agrez (2002) disembarked from the traditional educational practice of having medical students evaluate clients only when an instructor was present as a means of encouraging students to utilize principles of critical thinking and discussed relevant psychosocial issues of treatment. Happell (1998) encouraged the use of problem-based learning as a means of teaching students to identify psychosocial issues in psychiatric patients.

Helbom, et al (2001) suggested the use of workshops to teach clinicians how to recognize and intervene in the client's psychosocial needs. This concept is interesting from a financial standpoint. Annually, healthcare institutions spend exorbitant amounts of money orienting and providing continuing education for staff. In the Dallas metropolitan area, 2004 entry salaries for nurses ranged from $45,000-$58,000 per year

without benefits, depending on the nurses' specialty. This interprets into a range of $184 to $216 per eight hours of nursing salary. At this salary range, sending a nurse to a four day workshop would cost a minimum of $850. Thus, the current healthcare finance difficulties compounded by the nursing shortage make this training a luxury rather than a necessity.

Obstacles to Discussing Psychosocial Issues of Chronic Illness

From the above discussion, it is obvious that the effort to teach psychosocial issues to professional students and clinicians is ongoing. If the effort to teach clinicians the importance of psychosocial issues is ongoing, one must ask what prevents the clinician from putting this information into clinical practice.

Weissman (2001) proposed several explanations for this phenomenon. Health professional education programs traditionally teach the student to avoid personal feelings and emotional over-involvement when delivering care to clients. The conflict between the student's emotions and the clinical knowledge that the student possesses are often in direct opposition to each other. As a result, the students are easily overwhelmed and more likely to place an 'emotional wall' between themselves and the clients. This may indeed serve to inhibit the clinician's efforts to consider psychosocial issues. This means that students and professionals need to be taught to recognize their own personal feelings and values when confronted with certain client scenarios. Furthermore, it implies that clinicians must be more open to allowing themselves to feel and express their personal feelings. The novice clinician must believe that he/she has developed the self-efficacy necessary to discuss psychosocial issues with the client.

Lastly, clinicians must be encouraged to share their feelings with other clinicians within the same discipline as well as those of other disciplines.

Another potential explanation for the lack of discussion of psychosocial issues may be due in part to the way in which these issues are discussed in textbooks. Ferrell, Viarani, and Grant (1999) found that only 2% of nursing textbooks discussed end of life issues. This lack of written knowledge perpetuates the notion that psychosocial issues are often "taboo" subjects. Following Varani and Grant's design, three terms: identification, psychosocial, and needs were entered into the Cumulative Index of Nursing and Allied Health Professional Data base (CINHAL). The search yielded 115 articles. Of the articles returned, the majority related to issues concerning children and adolescent chronic health needs. Oncology issues were the second most common topic. Articles related to infertility and the puerperium were the third greatest in number. The data from this review is presented in Table 1. From the topics returned in the search, it is obvious that the topic of psychosocial issues as they relate to chronic disease among adults has not received the attention it deserves.

Coles (1995) blamed the lack of emphasis on psychosocial issues on the failure to teach our professional students to provide appropriate care tailored to the needs of the client. The author placed primary focus on the failure to teach the differences in managing acute and chronic illness. The tendency to want to cure the client rather than provide an improved quality of life diminishes any emphasis on psychosocial issues. Furthermore, educational programs teach theoretical concepts of illness and treatment interventions. By doing so, it discourages the student's analysis of the cause and effect

of these two separate but yet closely related entities. Attempting to rectify the disease state prevents the clinician from viewing the client from a holistic standpoint. The author concluded by declaring the need for a separate framework for the purpose of teaching the student how to manage the psychosocial aspects of chronic illness.

Neal (2001) made some valid points regarding the failure to effectively address psychosocial issues. The author remarked that clinicians often fail to recognize the client's self-care limitations. All too often, clinicians focus on returning the client with a chronic illness to the state he/she was before the illness began. In doing so, the clinician predisposes the client to a false sense of hope. This false sense of hope may serve to only worsen the psychosocial issues of the disease itself.

Grocki (2004) also suggested that the educational system is failing to teach students what the psychosocial issues are for a given client/population. If students are not taught to recognize these issues early, they are unlikely to consider the issues when they are independent practitioners. The failure to teach students the benefits of addressing psychosocial issues in a timely manner places the client at risk for developing anxiety/stress related to their illness. As anxiety increases, the client's overall state of health is likely to decline.

Psychosocial Issues and the Client with Chronic Illness

DiMatteo and Martin (2002) and the NHCS (2004) offer definitions of chronic illness that give one a general understanding of the term. However, understanding the importance of this issue dictates that one must also have an understanding of the psychosocial issues of chronic disease. Gorman, Raines, and Sultan (2002) described

four characteristics of psychosocial issues in patient care. These clinicians described psychosocial issues as an emotional response to illness that is affected by one's personality, pre-morbid psychiatric disorders, and issues within the family system that serve to exacerbate the psychosocial symptoms of the illness. Loseth (In Kuebler, Berry, & Heidrich, 2002) added that psychosocial issues go past the issues related to physical health and Wennberg, Cooper, and Tolle (In Morrison & Meier, 2002) discussed the geographic variability of geriatric palliative care in the United States. The term 'variability' brings up an interesting point. The psychosocial issues associated with chronic disease will vary significantly with regard to diagnosis, age of the individual patient, the level of primary support system involvement, and the treatment philosophy of the region in which the client lives.

The 2004 National Center for Health Statistics (NHCS) definition expands on DiMatteo and Martin's definition of chronic illness. The NHCS definition goes on to state that chronic illnesses last longer than three months and are incurable (CDC, 2004). Cardiovascular disease, chronic respiratory diseases, disorders of the immune system, metabolic disorders, irreparable birth defects, cancer, and serious mental illness are some of the major categories of chronic illness.

The NHCS statistical data serves to reinforce the severity of chronic illness. In 2001, 12.1% of Americans suffered from some type of chronic illness (National Center for Health Statistics. Chronic Illness Statistics, retrieved June 23, 2004 from http:// www.cdc.gov/nchs). Almost 7% of children and adolescents suffered from a chronic illness. What is more staggering is the fact that 44.7% of Americans over the age of 75

suffered from some type of chronic illness. Females were found to be more likely than males to have a chronic illness. Not surprisingly, approximately 25% of the nation's poor suffered from chronic illnesses.

DiMatteo and Martin (2002) brought up another interesting issue in their discussion of chronic illness. Acute illnesses or injuries precipitate hospital admissions and medical technology offers the ability to limit the mortality associated with these illnesses and injuries. This advanced technology to prolong life has led to a greater number of individuals with chronic illness or disability.

Regardless of the illness, several basic concepts play a key role in the client's response to the psychosocial issues of chronic illness. Gorman, Raines, and Sultan (2002) discussed the role of self-esteem, body image, powerlessness, guilt and coping in their description of factors that affect psychosocial response to illness. Self-esteem is an expression of the individual's perception of him/herself in the world around them. If individuals perceive themselves as worthless as a result of their physical illness, then their self-esteem will be negatively impacted. Loss of physical ability causes feelings of bereavement, but more importantly, it is frequently associated with a sense of powerlessness, hopelessness, guilt, and anxiety. This loss produces anxiety because the client's abilities may be far below the desired level of functioning. The inability to function to the individual's personal level of satisfaction may lead to a strong sense of guilt. Lastly, the individual's coping skills regardless of whether they are adaptive or maladaptive play a significant role in the individual's response to the illness.

Gorman et al. (2002) also discussed role of grief in dealing with chronic illness. The client with a chronic illness often experiences varying degrees of grief throughout the course of the disease. The level of grief frequently fluctuates in direct correlation to the symptoms the client is experiencing. The client is more at risk for anxiety, depression, and substance abuse if the professional fails to assist the client in the development of adaptive coping skills. Furthermore, these symptoms can lead to behaviors such as noncompliance, discord within the primary support system, and decreased income potential.

Literature on palliative care and end of life care have dedicated more time to the discussion of psychosocial issues than most other areas of medicine. End-of-life care emerged as a result of the Medicare Program of the 1960's (Kuebler, Berry & Heidrich, 2002). Jeffrey stated that palliative care involves providing the client with a non-curable ailment control of pain, clinical symptoms of the illness, as well as support of the client's spiritual, psychological, and social needs (In Lloyd-Williams, 2003). End-of-life care and palliative care have numerous similarities, but also have significant differences as well. End-of-life care is associated more with providing the client with quality care during the process of dying. Palliative care includes a broader range of services than End-of-life care. Palliative care is started earlier than end-of-life care and the client generally has longer than six months to live. Palliative care focuses on providing the client and his/her support system with the best quality of life possible for the time remaining. End-of-life and palliative care carry with them a multitude of psychosocial issues. Discounting the importance of the psychosocial issues related to

end-of-life and palliative care would be a serious mistake. However, the fact that chronic illnesses are associated with longer periods of longevity necessitates the consideration of psychosocial issues associated with illnesses outside the realm of end-of-life care.

Theoretical Framework

The theoretical framework utilized in this manuscript is based on the writings of two theorists. Albert Bandura's Social Cognitive Theory is selected because of its discussion of self-efficacy. Self-efficacy is paramount to both the clinician and client's ability to manage the psychosocial issues of any chronic illness. Although the client's ability to manage the psychosocial issues of chronic illness is reflected in the client's motivation and ability to perform self-care, the clinician must be motivated to demonstrate concern for the chronically ill person's psychosocial well-being. The nurse must view himself/herself as possessing the skills required to identify the client's psychosocial needs. Viewing the self as capable of identifying and intervening in meeting the client's psychosocial needs is synonymous with self-efficacy. While the nurse must be efficacious, he/she must also have the skills to interact with the client. Ultimately, this interaction should result in a relationship that produces a satisfactory health outcome for the client.

The nurse's self-efficacy is tempered by the nurse's ability to successfully interact with the client. Ultimately, this interaction should result in a relationship that produces a satisfactory health outcome for the client. Cox's Interaction Model of Client Health Behavior (1982) provides an excellent framework for the client/clinician

interaction because of its comprehensive description of the dynamics of the client-clinician relationship.

Bandura's Social Learning/Cognitive Theory

Albert Bandura's original writings focused on Social Learning Theory (1977). In his initial writings, Bandura focused on the relationship between the individual and his/her social environment. Bandura suggested that the learner's thoughts, emotions, and behaviors are influenced by experiences within the individual's environment. Furthermore, the learner's observations and experiences during social interactions are equally powerful in developing life-skills. Bandura believed that the commonly experienced physiological responses to stress force the learner to perform a cognitive appraisal of the stressor and motivates the learner to take action aimed at alleviating the presenting stressor. More importantly, the learner must realize that his/her initial cognitive appraisal of the stressor dictates the amount of physiological stress that the learner experiences. The stronger the learner's coping skills, the more successful the individual will be in managing the presenting stressor. The learner's successfulness translates into the learner's self-efficacy.

Jerusalem and Mittag (1995) suggested that a higher level of perceived personal self-efficacy allows the individual to conclude that successful outcomes are the result of personal effort while negative outcomes are the result of external circumstances. Providing nursing students with a variety of skills to use for the identification of psychosocial issues will produce more successful client outcomes. Clients that receive

the support necessary to resolve psychosocial issues will feel more efficacious and perceive the interaction with the health care provider as more positive.

Environmental, personal, and social factors enter into the learner's appraisal of the event. Bandura's original text described five concepts that are believed to be relevant to the chronic illness as it applies to this study. The concepts are symbolic learning, interaction, reinforcement, perceived self-efficacy, and emotional arousal. These concepts, as well as their relationship to chronic illness and health professionals are discussed individually in the following paragraphs.

Symbolic Learning. Bandura (1977) proposed that the individual's capacity for learning by observation of others serves to modulate psychological functioning. In other words, the individual learns from the behaviors, thoughts, and moods of those in the environment. The individual's ability to learn from the result of his/her own attempts to satisfactorily manage situations in the environment is central to the individual's well-being. The demeanor presented by the clinician acts as a model of symbolic learning for the healthcare consumer. The clinician who avoids discussion of psychosocial issues models denial to the healthcare consumer. The avoidance of psychosocial issues places the client with chronic illness at risk of further physical difficulties and increased psychosocial distress. The instructor who fails to emphasize the importance of discussing psychosocial issues teaches the nursing student that these issues are unimportant to holistic care. Thus, the holistic emphasis that nursing professes is tarnished.

Interaction. Bandura (1977) defines interaction as the propensity for individual cognitive, psychological, and behavioral reactions to influence the interactions of others. Since the individual is often unable to see this phenomenon in action, it is often difficult for the client and/or those around them to see the benefits of modifying coping behaviors in an effort to benefit the client. If the clinician either verbally or nonverbally responds in a negative manner, the client is affected by the quality of that behavior. Similarly, the nurse educator who fails to discuss disease-related psychosocial issues teaches nursing students that the discussion of these issues is irrelevant.

Reinforcement. The behaviors of those in the client's environment serve to reinforce the client's behavior. Bandura (1977) noted that positive reinforcement serves to motivate the client to change or adapt positively, while negative reinforcement serves to deter one from adapting to the situation. Regardless of whether the reinforcement is positive or negative, the impact of other's behavior is the choice of the individual. It is through the individual's interaction with the environment that human's learn how to regulate behavior and emotions.

The individual re-enforcers within the environment serve to motivate the human to adapt behaviors viewed as positive and/or shy away from behaviors viewed as harmful. Reinforcement of positive behavior encourages the individual to repeat the behavior and extinguish negative behavior, but it does not encourage the individual to learn new coping skills. Future learning experiences are guided by the degree of success or efficacy of past experiences. The clinician who positively supports the client's efforts to successfully manage psychosocial issues will have a positive interaction with the

client. This positive interaction will result in a positive outcome for both the client and the clinician. The same type of result occurs when the nurse educator reinforces the nursing student's efforts to successfully address client psychosocial issues.

Modeling. New coping skills are learned through the process of modeling. By observing the successful attempts of other's to manipulate his/her environment, the learner embraces new coping mechanisms. As a result, he/she develops a larger array of coping skills with which to manage the environment. The ability to adapt and apply new coping skills serves as a means of defining the learner's ability to manage him/herself in a successful manner. When the learner encounters a situation where modeling occurs, the model serves as a stimulus for the individual. Furthermore, the characteristics of the learner influence the manner in which the modeling stimulus is interpreted. Learners determine whether the behaviors modeled by others are acceptable or unacceptable through the process of monitoring and evaluating the outcome behavior.

Bandura (1977) offered further discussion of modeling and its relationship to self-efficacy. He suggested that modeling was essential in strengthening personal self-efficacy. He theorized that modeling removes unrealistic fears by teaching the learner successful methods of managing circumstances that are perceived as threatening in the eyes of the learner. Bandura believed that fear stems from self-perceived deficits. Modeling new and effective ways of managing situations minimizes learner anxiety and enhances coping ability. Similarly, modeling extinguishes the tendency to avoid stressful situations while simultaneously enhancing competency.

Bandura (1997) discussed the power of modeling over development of behavioral characteristics. If the adapted behavior fails to satisfy the individual's expectations, the choice of whether to modify or reject the behavior becomes central to the individual's social environment. The individual improves his/her personal ability to self-regulate stressors in the environment if the skills necessary for successful modification of the coveted behavior are present.

The concept of modeling has several applications in regard to this study. The clinician who models interest in the client's psychosocial needs and encourages the client to develop efficacious coping skills promotes healthy adaptation by the client. The nurse educator who acknowledges the psychosocial issues of chronic illness models the importance of addressing psychosocial issues to the nursing student. Furthermore, tailoring strategies that promote the ESL student's understanding of psychosocial issues serves to model the importance of psychosocial issues to the ESL nursing student.

Goal-Proximity. Modeling and the environment are only small pieces in the larger theory of social cognitive learning. The environment's influence over the learner cannot be underestimated. The development of time-specific goals is critical to achieving self-efficacy. The more proximal the goal, the more likely the individual is to achieving his/her goal. The individual acts as his/her own agent in determining the difficulty of the ultimate objective of the goal and the strategies for achieving that goal. Individuals are more likely to be motivated if large goals are divided into smaller interim goals that are more readily achievable.

Individuals with greater aspirations are more likely to utilize interim goals in the process of conquering their life-desires. Additionally, if individuals are provided with several alternative plans for achieving their goals, they are more likely to succeed and view themselves as efficacious. This is in direct contrast to the individual that is faced with a list of restrictions that impede creativity. The restriction-laden individual will likely abandon his/her goals long before they are achieved because of personal frustration.

Bandura (1978) stressed the importance of setting small, more obtainable objectives as part of an overall plan for the attainment of broader goals. Often, the individual learner focuses on the more distant, seemingly unobtainable, anticipated outcome rather than on the steps to achieve the desired result. As a result, the learner often becomes frustrated and abandons the desire to reach the larger goal. The use of smaller, more obtainable goals/objectives allows the learner to reach the final goal more successfully and thus experience greater self-efficacy and personal satisfaction. Furthermore, by nature, the learner is more attentive to smaller more obtainable objectives that have realistic time-lines. Attentiveness to the task at hand as opposed to the final outcome allows for more individual judgment/decision-making and results in greater self-efficacy and personal satisfaction. Equally important is the fact that the degree to which the individual learner is called upon to utilize a wider variety of skills reduces the probability the learner will overestimate his/her capabilities. This translates into less self-deprecation and ultimately a more realistic perception of one's self.

Goal proximity has several implications for the theoretical framework of this study. The clinician's ability to set goals that are realistic for the client will obtain better client participation and thus achieve better client outcomes. In the educational arena, the nursing student who is challenged to identify the psychosocial issues of chronic diseases as they are presented in the normal course of nursing curriculum will be more likely to recognize and intervene in these issues. Furthermore, the evidence that most nursing students are goal oriented is demonstrated by their academic success prior to entering nursing school. This makes the use of obtainable goals a viable educational strategy for the nurse educator. In the case of the ESL nursing student, the fact that ESL learners are highly goal oriented makes the use of obtainable goals even more important to the motivation of the ESL student.

Reciprocal Determinism. The quality of the modeled behavior is equally important. Bandura called this concept reciprocal determinism. Reciprocal determinism allows the individual to determine his/her own destiny. If the observed behavior is poorly modeled or inadequately explained to the learner, he/she is less likely to adopt the behavior. The enthusiasm of the model for the method of manipulating his/her environment will have significant impact on the learner. The model's enthusiasm also serves to demonstrate personal accountability to the learner. The model's willingness to accept responsibility for the outcome of his/her behaviors will serve as a motivator for the learner. The model who refuses to accept responsibility for his/her actions and the outcome of those actions is less likely to positively influence the learner. The learner then utilizes the acceptable behavior/coping skills to successfully manage his/her own

environment. Simultaneously, the learner's response to the model is going to impact the model's future efforts to utilize the same behavior. Reciprocal determinism allows the individual to determine his/her own destiny.

In today's health care environment, the health care provider who ignores psychosocial issues models indifference to the healthcare consumer. Like denial, indifference sets up a situation that may very well negatively impact the chronic disease process. Healthcare providers often rationalize that time constraints prevent the provider from addressing these issues. Indifference on the part of the provider negates the client's psychosocial needs and sense-of-self. This has the potential for a less than optimal outcome for the client.

Reciprocal determinism can be applied to several areas within the nursing educational experience. First, the nursing instructor who demonstrates concern for the client's psychosocial needs encourages the nursing student to address psychosocial needs. Secondly, the nursing instructor who demonstrates the successfulness of appropriate psychosocial interventions teaches the nursing student that he/she can also successfully address the client's psychosocial issues. When the nursing instructor demonstrates regard for the special needs of the ESL student, the instructor models the importance of addressing the health care consumer's needs as well. The ESL student who is the recipient of this intervention will better understand the importance of addressing the psychosocial needs of the healthcare consumer.

Self-Efficacy. The individual's perception of his/her efficacy serves to determine how diligently the individual will work to modify his/her behavior, thoughts, and

feelings in response to the environment. In addition, the individual's perception of his/her efficacy will dictate the effort that the learner will allocate to seeking out and applying new behaviors to both new and old situations. Furthermore, the motivators either serve to promote change or lead to stagnation in the individual. Bandura (1977) stated that the learner's efficacy relates to the degree to which the learner feels he/she can execute the behavior to produce the desired outcome. The degree of success that the individual has in adopting new behaviors is vital to the individual's psychological well-being and self-worth. Conversely, the individual who is unable to adopt the new behaviors experiences psychological distress. The efficacious individual experiences greater psychological well-being and copes more effectively regardless of the stressor.

As Bandura (1977) pointed out, not only does the self-efficacious individual adapt more successfully, he/she is also less fearful and uninhibited in new or difficult situations. Furthermore, repeated exposure to similar situations offers the learner the opportunity to perfect newly learned skills. These individuals expect more and are willing to expend energy to achieve their personal goals regardless of the obstacles encountered. Ultimately, the repeated performance and opportunities to perfect coping skills strengthens one's personal self-competency. When the learner perceives him/herself as lacking the skills to successfully manage situations in the environment he/she often stops trying to solve the situation and experiences a sense of helplessness. The more often the learner experiences a sense of helplessness, the more ingrained the individual's sense of helplessness becomes. As a result, the individual's ability to cope with his/her environment diminishes.

In 1997, Bandura again elaborated on the importance of self-efficacy in one's ability to succeed in achieving personal goals. He wrote that self-efficacy is dependent on the individual's belief in his/her ability to achieve specific goals. Bandura believed when the individual fails to believe that he/she does not possess the ability to achieve goals, a sense of powerlessness overcomes the ability to reach personal goals. The decision to feel efficacious or incapable is dependent on the individual's assessment of physical stamina, emotional fortitude, cognitive functioning and environmental supports and deterrents. Each time the individual attempts to achieve a goal, he/she goes through the process of assessing these characteristics. Based on the results of that assessment, the individual proceeds to address the issue only if it is perceived he/she possesses the characteristics needed to succeed. Furthermore, environmental events over which the individual has no control have a strong impact on the individual's ability to succeed. Inherent in the drive to achieve personal goals is the individual's ability to choose which internal characteristics and external forces are allowed to influence and drive personal self-efficacy. The ability to choose goals serves as a means of determining the behaviors that the individual adopts and sets the stage for self-evaluation. Self-evaluation is the final step in achieving self-efficacy because the process allows the individual to continue to make use of or discard a specific behavior in future life experiences.

In the presence of cognitive distortions, the process of self-evaluation leads to personal distress. Ultimately, personal distress translates into psychopathology unless the individual modifies cognitive distortions or seeks alternative means of achieving

goals. The intensity of the distress correlates with the use of defense mechanisms. Often these defense mechanisms serve to produce self-doubt, discouragement, powerlessness, and worthlessness. Once the individuals experience these feelings, their level of motivation to change declines and they risk falling deeper into despair. Self-efficacy is often incorrectly considered to be a characteristic of the individual. Although self-efficacy is dependent on the personal motivation, it is not a characteristic of the individual. Self-efficacy is instead a set of acquired skills that propels the individual toward personal goals. As Bandura (1986) declared, self-efficacy is the product of mastering new experiences, interactions with the social system, and the physiological health of the individual.

Self-efficacy has multiple implications for this study. The quality of the clinician-client interaction is a product of the clinician's perceived self-efficacy as it relates to the clinician's self-perceived ability to identify and intervene when addressing the client's psychosocial needs. Through reciprocal determinism, the clinician's ability to demonstrate personal self-efficacy impacts the client's perceived self-efficacy to manage his/her own psychosocial issues. Furthermore, the clinician's ability to guide the client through the process of problem solving as it relates to the specific psychosocial issue, serves as a motivator or distracter for future efforts to successfully manage psychosocial issues. In the arena of nursing education, the nurse educator's ability to demonstrate self-efficacy in addressing psychosocial issues encourages the student to use critical thinking skills for the purpose of addressing the client's psychosocial needs. The nurse educator's perceived self-efficacy for addressing the

needs of ESL student has the potential to positively impact the ESL student's self-efficacy as it relates to personal needs and the nursing educational experience as a whole.

Self-System. Bandura (1978) introduced the concept of the self-system as part of the theory of social learning. Bandura was referring to the individual's system of assessing situations, planning one's behavioral response, and evaluating the outcome of the behavior. This implies that the self-system serves as a means of self-regulation. Through self-regulation, the learner sets objectives for reaching personal goals. The more successful the individual learner is in achievement of personal objectives and goals, the greater the individual's perceived self-worth. The greater the individual's perceived self-worth, the greater the individual's personal satisfaction.

Bandura (1977) proposed that the degree of emotional arousal one experiences can influence self-efficacy. In 1978, Bandura further proposed that even though the individual learner may or may not maintain his/her interest in an endeavor, the experience serves to widen the learner's repertoire of skills for future life-experiences. Furthermore, the individual's perception of herself/himself and the environment influence each other. For example, if the individual does not perceive himself/herself as having the skills necessary to address the task at hand, he/she will be less likely to directly address the situation/problem at hand. If the learner has an inaccurate perception of his/her abilities to successfully manage the situation, he/she may resort to the use of avoidance. Avoidance often serves to re-enforce false-beliefs and results in an over-inflated self-esteem and self-worth. The individual with an over-inflated sense of

self-esteem and self-worth is at significant risk for emotional distress. Bandura (1977) proposed that the degree of emotional arousal one experiences can influence self-efficacy and went on to suggest that human behavior is maintained by the consequences one expects rather than by what happens immediately. Furthermore, he suggested that coercive strategies instigate oppositional behavior.

Self-Efficacy and Chronic Illness. Clark and Dodge (1999) explored the relationship between self-efficacy and self-management of cardiovascular disease. These researchers suggested that intrapersonal resources (information and core beliefs from external resources) serve as the driving force in the individual's self-regulation. The individual's ability to use intrapersonal resources to successfully adapt to the changes often dictated by chronic illness, the greater the individual's self-efficacy. The researchers found that females with cardiovascular disease were more successful in following diet, exercise, and stress management instructions when they believed they had sufficient skills to manage their illness before enrolling in the study. This study's results are relevant to the current study, because the chronically ill client's ability to manage the psychosocial issues of his/her illness depends on the degree of perceived self-efficacy that the individual possesses. Similarly, the nurse clinician's ability to successfully address psychosocial illness is directly proportional to his/her perceived self-efficacy as it relates to addressing psychosocial issues of chronic illness.

Jerusalem and Mittag (1995) discussed the role of social support as a proactive influence in strengthening personal self-efficacy and eventually diminishing the impact of stressors. These authors proposed that the partnership afforded by strong social

networks improves individual self-efficacy because the skills possessed by each individual in the social system serve to increase the overall effectiveness of the social network. This is true regardless of whether the social system consists of two individuals or the larger community. In addition, the stability of the social network instills confidence and trust. The authors suggested that the degree of trust the client has in his/her social support system will lead to an increase in assistance received from the support system. In considering the client-clinician relationship, the client's perception of the efficacy of the clinician improves the confidence/trust of the client in the clinician. Similarly, the clinician's attitude toward the client and his/her illness will impact the client's psychological and behavioral response to the illness. With respect to professional health education, the professional educator's attitude toward psychosocial issues will impact the professional student's perception of the relevance of psychosocial issues of chronic illness to the quality of the client's life. If the professional student doesn't experience the educator as supportive of psychosocial issues, he/she is unlikely to see those issues as relevant to the client's care. As a result, the student will likely become a practicing clinician who ignores the role of psychosocial issues in chronic illness.

Bandura (1978) suggested that human behavior is maintained by the consequences one expects rather than by what happens immediately. The diagnosis of chronic illness is associated with the connotation of a slow and painful deterioration or death opposed to a positive health outcome. Bandura observed that individuals often become oppositional when faced with a list of instructions that *must be followed.* One is

left to consider whether or not giving the individual a list of rules that must be followed transforms the client from a member of the health care team to an oppositional individual who feels victimized by his/her illness. Kralik, Koch, Price, and Howard (2004) eluded to this in their study of the health professional's definition of self-management in contrast to the client's view of self-management as a way making the sense of the chaos often associated with chronic illness. Compounding this is the fact that society expects the individual with chronic illness to adopt a "sick role" that forces the individual to retreat from being self-efficacious. The result of this retreat from self-efficacious behavior contributes to maladaptive behavior and low self-worth.

Self-Efficacy and Health Education. Green (2004) discussed Albert Bandura's contribution to the field of health education during his introduction of Bandura at the 2004 Healthtrac Lecture during the 2004 Society for Public Health Education Annual Conference. Green noted that Bandura's concepts of reciprocal determinism, social modeling, and self-efficacy have provided health educators with a foundation for delivering health education. Green went on to state that Bandura's work has provided the impetus for insuring that individual's emerge from their educational experiences with a greater sense of self-efficacy.

This discussion is relevant for both the chronically ill individual and the health care practitioner. For the chronically ill client, his/her perception of his ability to successfully mange the psychosocial issues of the illness will impact the degree to which the illness controls the individual's life. The client who feels he/she possesses the skills to manage the psychosocial issues of the illness will possess a higher degree of

self-efficacy and improved quality of life. The emotional reactions of the chronically ill client's support system have the potential for impacting the psyche of the identified client. Providing the client with the skills necessary for coping with the reactions of those in his/her environment will further improve the client's self-efficacy. The clinician who believes he/she is unable to teach the skills for managing these issues to the client is less likely to successfully manage these issues.

Failure to recognize these issues will result in a professional who is likely to discount the importance of psychosocial issues in practice. Prieto, Loreto, and Myers (2002) study of psychology graduate teaching assistants echoed this assumption when they found that effective teaching skills were dependent on the clinical supervisor's support. Thus, it is safe to conclude that if health care providers are uncomfortable with the discussion of psychosocial issues of chronic illness, those under their tutelage are unlikely to develop effective skills for assisting clients with psychosocial needs and social support.

Gallant (2003) approached the issue of chronic illness and self-efficacy from the perspective of self-management issues. She completed a literature review on the relationship between chronic illness self-management and social support in diabetics. Her literature review yielded a total of 29 studies. Of those articles, only seven were qualitative studies. This is somewhat ironic given the fact that successful self-management of psychological and physical issues related to diabetes results in a more robust quality of life. The client who possesses and utilizes an adequate set of self-

management techniques will lessen the impact of the chronic illness regardless of its physiological nature.

Cognitive theory emphasizes the role of the individual in managing his/her life successfully. Aalto, Uutelo, and Aro (1997) suggested that health education related to self-management must be disease specific. The lack of consistency in the professional health education system may only serve to diminish the novice clinician's ability to address disease-specific psychosocial illnesses of chronic illness. If novice clinicians' ability to recognize and address psychosocial issues is lacking in the early days of their career, one must ponder whether or not the seasoned professional seriously considers the psychosocial issues of the client with a chronic illness.

Demange et al. (2004) studied Bandura's concept of social support among rheumatoid arthritis sufferers. In this study, the researchers looked at the relationship between the size of the social network and the amount of social support (love and approval) that individuals with rheumatoid arthritis possess. The researchers found that as time passed, the size of the social network decreased. This is of significance because whatever the stage of disease progression, health care providers will be a part of the individual's social network. As such, clinicians often become a source of social support as well.

Clinicians must undergo early training in how to provide adequate social support while simultaneously maintaining appropriate professional boundaries. Consequently, clinicians must possess the skills for identifying the psychosocial issues related to the disease, and the skills for communicating with clients with chronic illness. Haas (2000)

studied the relationship between self-efficacy and health promotion in individuals with cancer. Haas concluded that in addition to being valuable for managing the symptoms of cancer, self-efficacy was also valuable in planning health promotion activities for individuals with cancer.

Carr (1996) suggested another point that has relevance to the topic of social support provided by clinicians. Quite often, clinicians see themselves as the ultimate authority in how the client should adapt to his/her illness. Novice clinicians frequently see themselves as "all knowing". Clinicians must learn to treat the issues of the illness that are important to the client. The novice clinician's sense of omnipotence often results in a rise in the client's dependency on others. The quality of life suffers as the client becomes more dependent on others. Furthermore, the greater the disparity between what the client and clinician perceive as important to the client's well-being, the greater the probability of treatment noncompliance and more rapid progression of the chronic illness.

Student Self-Efficacy. Dunlap (2005) noted that Student self-efficacy is a key factor in the development of cognitive competencies. Self-efficacy does not always equate with intellectual performance. Instead self-efficacy nurtures cognitive skills and allows the student to adapt to a changing environment. Self-efficacy also is dependent on cognitive ability, previous educational experience, and gender. Interestingly, students who demonstrate sustained involvement in activities that foster the development of new cognitive competencies adapt more easily than those who's level of participation waxes and wanes. Students must have standards against which to

compare their performance. Without such models, the student is less likely to master the academic skill. For this reason, the student who masters smaller, more obtainable objectives is more likely to achieve a higher degree of skill mastery when compared to the student who focuses on the final content mastery goal.

The individual who is focused solely on the mastery of the ultimate goal may indeed fail to develop skills critical to the ultimate goal. In the end, these students are less successful. The current educational system focuses on the attainment of the "perfect grade" as opposed to the development of the skills necessary to attain the goal. The efficacy that the student attains while in pursuit of the perfect grade may produce a false-sense of self-efficacy. Rather than measuring personal significance by the attainment of the perfect grade, educational institutions may need to focus on the rationale for the achievement of the objectives necessary for goal attainment. The skills necessary for attainment of the perfect grade need to rely on organization, self-monitoring, self-evaluation, and self-regulation of personal thinking patterns.

Dunlap (2005) related the need for self-efficacy in problem-based learning. The author believed this was critical for professionals working in a rapidly changing environment such as the health care environment. Dunlap encouraged professional educators to direct students in developing skills that simultaneously promotes both skill development and critical thinking. Traditional educational venues have attempted to encourage professional development by identifying the problem and defining the preferred outcome. This is in direct opposition to the process of developing the critical thinking skills necessary for assessing the individual's situation and tailoring an

intervention that best meets the need of the situation. It is the process of achieving objectives rather than focusing on the desired outcome that nurtures self-efficacy. The professional student needs to nurture personal self-efficacy through the achievement of learning objectives as he/she progresses through the educational experience. The process of self-efficacy development encourages professional enculturation as well as the development of self-efficacy.

Self-efficacy and Healthcare Providers. The purpose of this study necessitates a review of the literature regarding self-efficacy related to the nurse's ability to identify the psychosocial issues of clients. Bernal and Froman (1987) measured the nurse's perceived efficacy in issues related to culturally-appropriate care. Coffman, Shellman, and Bernal (2004) found that nurses and nursing students perceived that their ability to deliver culturally competent care was less than adequate. It is also interesting to reflect on a second concept that these authors put forth during their study. They noted that individuals with high perceptions of personal self-efficacy were energized by their self-efficacy. Obviously, this is the same for the identification of the client's psychosocial issues. The nurse who feels competent to address psychosocial issues is more likely to feel motivated to inquire about these issues. Grandell-Niemia, Hulpli, Leino-Kilpi, and Puukka (2005) studied the perceived self-efficacy of Finnish nursing students and practicing nurses ability to administer medications. Both groups reported that the felt they possessed adequate skills for medication administration.

Shortridge-Baggett (2002) called for the use of Bandura's concept of self-efficacy as a basis for theory-guided nursing practice. Prieto, Loreto, and Myers (2000)

looked at the relationship between the instructor's sense of self-efficacy and the psychology graduate teaching assistants' ability to instruct other students. Unfortunately, the teaching assistants described themselves as having had minimal consistent training. This study has implications for both nursing and medical education. If instructors are not skilled in addressing issues related to psychosocial issues in chronic health, successful modeling of these behaviors to students is unlikely. Zimmerman (1995) described this phenomenon while discussing academic self-efficacy. The self-efficacious student must develop the ability to organize data and execute behaviors that are directed toward specific academic goals.

Mastering behavioral goals related to the identification of psychosocial issues involves a strong behavioral model. This type of learning is in direct opposition to that utilized during the process of memorizing factual information. In addition, the student's perception of his/her self-efficacy serves to motivate the student to persevere during situations in which he/she is less skilled in demonstrating certain behaviors. As Bandura (1997) suggested, self-efficacy encourages the student to work harder to achieve the skills in which he/she is less proficient. Given the demands of nursing, this is an extremely important concept. If the nurse perceives that his/her efficacy is less than adequate and lacks self-efficacy in other areas, the risk of abandoning the profession is increased. Adding to this potential, psychosocial issues are often abstract and therefore difficult to understand. This suggests that professional health educators must develop more effective methods of teaching these important skills.

Researchers (Merluzzi, Narin, Hedge, Martinez-Sanchez, & Dunn, 2001) utilized self-efficacy to study oncology clients in the management of their illness. The study concluded that perceived self-efficacy was an important factor in coping with cancer. Haas (2000) studied the relationship between self-efficacy and oncology nursing practice. The researcher concluded that the nurse's self-efficacy correlated with the degree to which the nurse encouraged client health promotion.

Revenson, Schiaffino, Majerovitz, and Gibofsky (1991) explored the impact of positive and negative social support on depression in rheumatoid arthritis clients. As the researchers pointed out, chronic illness predisposes individuals to depression. Furthermore, individuals with certain chronic illnesses tend to have similar psychological characteristics. Thus teaching people with similar belief systems how to cope more successfully becomes an issue of concern for rheumatoid arthritis clients. In addition, if the arthritis client's support system consists of others with similar characteristics, then the emotional health and quality of life of these individuals becomes of greater concern. Despite these facts, individuals with depressed mood and inadequate social support systems were protected from more negative emotions when a helpful source of social support was involved in their care. The health care provider is positioned to serve as this source of positive support in an otherwise negative social system. Thus, the more prepared the clinician is to offer a positive source of social support, the more positive the client's support system and the less debilitating the illness.

Clark, et al. (1997) called for health care providers and clients to form active partnerships as a means of controlling illness. This means that professionals must view themselves as excellent communicators while clients must view themselves as being expert managers of their chronic illness. Furthermore, clinicians must be particularly adept at guiding the client through the course of his or her chronic illness. The professional's perceived self-efficacy of his/her counseling and communication skills influences the client's self-management skills and perception of health status. In order for this to occur, the provider and client must have a working partnership, not the traditional paternalistic role that the health care provider routinely assumes. Communication skills are essential to the formation of these partnerships. Most health professional education programs integrate communication into other courses as opposed to dedicating specific coursework to communication. Thus, the professional student may fail to appreciate the significance of communication skills. As a result, the novice health care provider may have less than adequate communication skills. In addition, the active role models that serve to model good communication skills are no longer present. The failure of professional education programs to dedicate time to communication skills combined with the lack of availability of communication role models diminishes the novice's perception of his/her communication efficacy. One particular communication skill the student must acquire is the ability to identify each client's uniqueness. This uniqueness is not limited to the disease process itself, but also includes the qualities that make up the client's individuality.

Self-Efficacy and ESL learners. Wong (2005) utilized self-efficacy to study language learning strategies and language self-efficacy in graduate teachers. Wong pointed out that individual learning styles, personality, and the learning objectives/goals dictate the strategies that should be used in learning a second language. Furthermore, the learner's perception of his/her ability to execute specific types of learning is dependent on the perception of his/her capacity to learn the material in question. Learners who view themselves as lacking the skills necessary for learning the language can be expected to have a less than satisfactory learning experience. As a result, Wong questioned the role of culture in language acquisition and concluded that high self-efficacy correlated with greater English proficiency. This is not an unexpected conclusion; however, it is interesting to note that cognitive and social strategies were the strategies most often used for language acquisition. Compensation (guessing), memory strategies, and affective strategies were used less often. This would suggest that efforts to assist the ESL nursing student in identifying client psychosocial needs would best be accomplished through instruction in group situations that focus on psychosocial needs that relate to a specific chronic illness.

A second study that involved ESL learners and self-efficacy was conducted by Chularut and DeBacker (2004). These investigators used concept mapping as a learning strategy for ESL learners. The study compared the variables of interaction time, instructional methodologies and level of English proficiency for self-monitoring, self-efficacy, and achievement. Those students who were in the concept mapping group

showed greater improvement in self-efficacy and ESL skills when compared to students involved in other methods of instruction.

Cox's Interaction Model of Client Health Behavior

As pointed out in the beginning of the discussion of the theoretical framework, the nurse must view himself/herself as possessing the skills required to identify the client's psychosocial needs. Viewing one's self as capable of identifying and intervening to meet the client's psychosocial needs is synonymous with self-efficacy. While the nurse must be efficacious, he/she must also have the skills to interact with the client. Ultimately, this interaction should result in a relationship that produces a satisfactory health outcome for the client. Cox's Interaction Model of Client Health Behavior (1982) provides an excellent framework to describe the client/clinician interaction.

As Cox (1982) pointed out, there are many models that explain client health behavior, but most are not from disciplines that provide direct, physical care to clients. The Interaction Model of Client Health Behavior (IMCHB) looks at the personal characteristics of the client, the elements of the interaction between the client and the clinician, and the healthcare outcomes resulting from that interaction (Figure 1). The model makes predictions about health behavior based upon the client's physical, social, emotional, and environmental characteristics interacting with the clinician's clinical competencies, affective qualities, health teaching skills, and decisional making abilities. The characteristics that both the clinician and client possess include motivation, ability to make accurate cognitive appraisals of the health care needs, and the appropriate

emotional response to the situation. Cox concluded that the degree to which the characteristics of the client successfully interact with the skills of the health care provider correlate with the success of the outcome of the client-provider interaction. The key concepts of the Cox Model include: a) Client Singularity, b) Elements of the Client-Professional Interaction, and c) Elements of the Health Outcome.

Client Singularity. Client singularity can be described as elements that are unique to the individual. Cox declared that client singularity is based upon four sets of characteristics. The first set of characteristics consist of the individual's demographic and background characteristics. The background characteristics include the client's social and cultural group, prior health care experiences, environmental factors such as one's financial resources and available health care resources. These characteristics change according to the individual's life circumstances and experiences. Social-cultural variables and personal resources include such things as religious beliefs that may impact health care decisions and available social supports. Positive and negative health care experiences impact the client's perception of health care needs and health care decisions. Environmental resources such as available health care facilities and financial means to acquire health care services contribute to health care decisions. The elements of singularity define the individual. Furthermore, the client's singularity is a driving force in the health care interaction.

As individuals, the health care provider and the consumer both possess intrinsic motivation, cognitive appraisal, and affective response qualities. For the consumer, these characteristics prompt the consumer to seek care, determine how the individual

will evaluate the health care issue in question, and dictate the client's emotional response to the health care need and prescribed intervention. The healthcare provider also possesses the characteristics of intrinsic motivation, cognitive appraisal, and affective response. The quality and uniqueness of these traits is exclusive to each individual. As a result, the consumer and clinician exhibit a unique set of cognitions, behaviors, and emotions specific to each member of the health care consumer-clinician dyad.

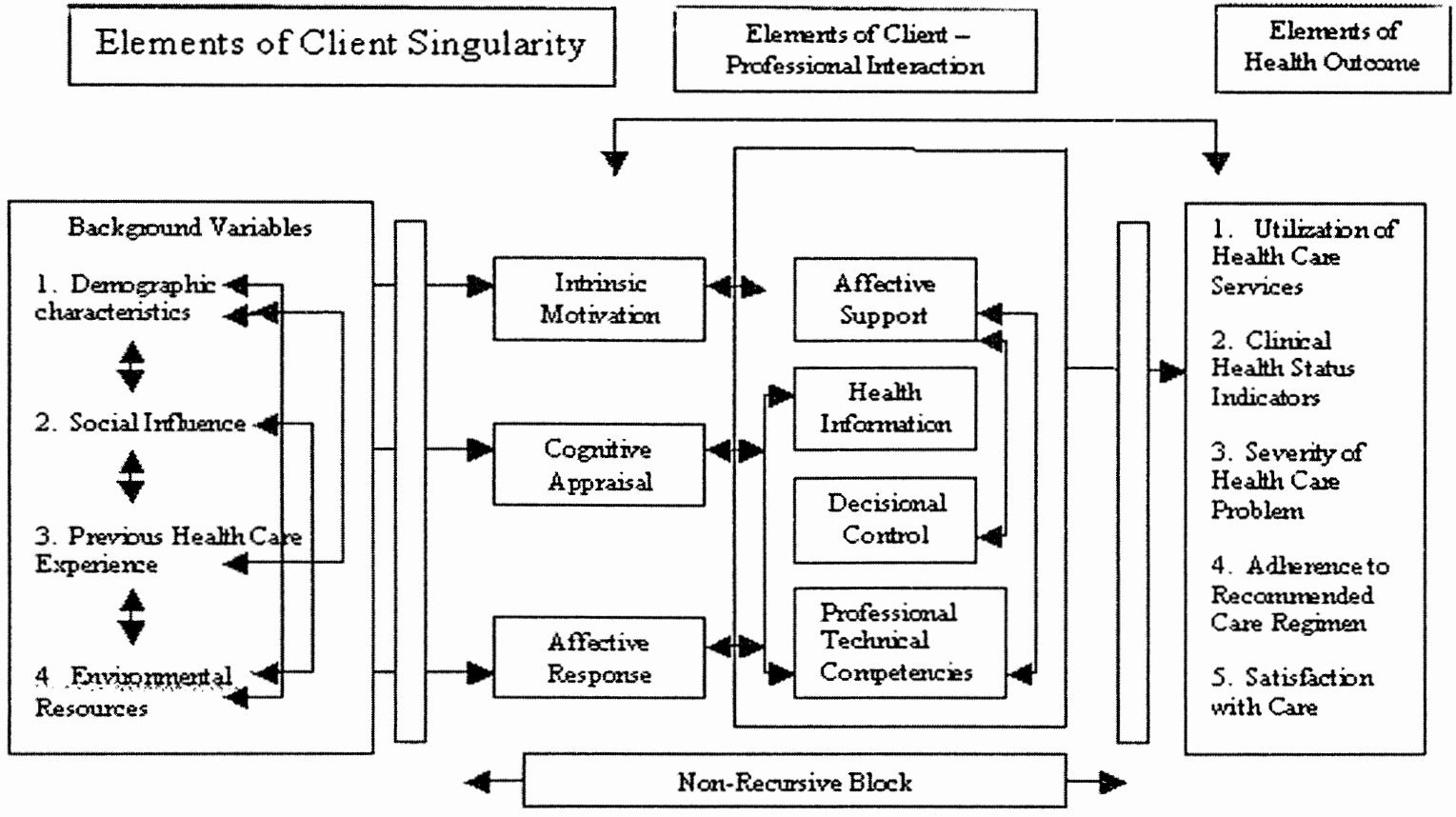

Figure 1. An Interaction Model of Client Health Behavior. From: Cox, C.L. (1982). An Interaction Model of Client Health Behavior: Formulation and Test, Ann Arbor, Michigan: University Microfilms International, p. 72.

The ESL nurse's ability to understand the client's psychosocial needs is especially important to the exchange of information and determination of health care interventions. If the nurse does not possess the ability to identify the psychosocial needs that impact the consumer's health care decisions, the outcome of care will be less than optimal. Cox proposes the affective, cognitive, and intrinsic motivation of the clinician is closely related to the clinician's professional competencies, ability to relay health information, capacity to provide emotional support as being crucial to the outcome of the healthcare experience. Furthermore, this is a dynamic process. The clinician modifies the information and skills provided at each clinician-client encounter according to the client's response. Cox describes information and skills utilized by the clinician as being nonrecursive because the information will not be repeated in the same affective manner or utilized in the same way in future health care encounters.

In Cox's model, the success of the health care interaction dictates the health outcome. Cox believes that the client's current and future utilization of health care, healthcare status, compliance with prescribed health care regimens and overall satisfaction with care is dependent on the quality of the clinician-client interaction. The IMCHB blends well with Bandura's Social Cognitive Theory, because like Bandura's theory, the model focuses on the interaction between the client, the clinician, and the environment. Bandura focuses on the relationship between the individual, the environment, and the psychological composition of the client. The IMCHB focuses on these qualities in both the clinician-client dyad and the resulting healthcare experience.

Pender, Murdaugh, and Parsons (2006) provided an in-depth review of Cox's IMCHB in their text on health promotion. As the authors point out, the IMCHB takes both the client's uniqueness and factors external to the client into consideration when considering interventions that promote client health. The decision to incorporate this model was based on the fact that the ESL nurse's ability to identify and assist the client in coping with psychosocial issues plays a significant role in the client's use of healthcare services, compliance of treatment recommendations, and overall satisfaction with care. More importantly, the client's compliance and satisfaction with care will determine the progression of the chronic illness for which the client is being treated.

The most significant weakness of the IMCHB lies in the fact that it lacks a specific component for planning actual healthcare intervention. However, regardless of their level of experience, nurses are expected to have the ability to plan and intervene in meeting the client's healthcare needs in a safe manner. The literature reviewed for this study clearly indicates that nursing students do not receive adequate instruction in the identification of client psychosocial needs. This fact combined with the lack of a standardized method of instruction to meet the special needs of the ESL nursing student set up circumstances that are likely to result in a less than optimal health care experience and could contribute to the early demise of a client with a chronic illness.

IMCHB Research. The IMCHB has been applied to two distinct areas of research. Most studies using the IMCHB relate to client outcomes. Lawson (1995) utilized the IMCHB to study the relationship of interpersonal communication and client outcomes. The study found that clients with higher levels of autonomy were less

satisfied with the client-clinician interaction. Cox, Spiro, and Sullivan (2002) utilized components of the IMCHB to evaluate health risks factors in the elderly. The researchers found that income adequacy and its relationship to education and loneliness were predictors of perceived health status. Reed (2002) utilized the framework to describe the phenomena occurring when parents of children with metabolic disorders make reproductive decisions. The IMCHB was found to be useful when there were a number of variables that impacted parental decisions regarding future pregnancies. Bear and Holcomb (1999) utilized the IMCHB to develop and validate a tool for measuring the quality of the client-advanced practice nurse interaction. The results of the study were interesting, because the researchers found that the purpose of the visit correlated with the amount of health promotion information provided during the visit. Preventative visits had higher levels of health promotion information than visits for acute care. Finnegan, Marion, and Cox (2005) suggested that the IMCHB was a viable model for appropriate interventions for a group of middle-aged adults with chronic illnesses. One interesting fact about this study was the fact that the researchers noted the IMCHB could be used with an individual or group. This has significant implications for group psychoeducational endeavors.

The second area where the IMCHB has been utilized is for measuring client satisfaction. Bryant and Graham (2002) utilized the IMCHB to measure client satisfaction with the care provided by advanced practice nurses. The researchers found that the model was a viable tool for client satisfaction assessment. DiNapoli (2003) utilized the IMCHB to guide the evaluation of aggressive adolescents and tailoring of

interventions to lower the frequency of aggressive episodes in this difficult population. The researcher concluded that the IMCHB served to guide the clinician in tailoring interventions to diminish the frequency of aggressive episodes. The researcher also noted that the model assisted the nurse in understanding the complexity of issues related to adolescent aggression. Understanding the complexity of a psychosocial need is the first step in determining an appropriate intervention. The client with a chronic illness generally presents with a complex system of needs.

Theoretical Framework for this Study

Bandura's Social Cognitive Theory and Cox's IMCHB combine to make an excellent framework for describing the relationship between the ESL nurse's communication skills and outcomes of care. The following statements explain the correlation between communication skills, self-efficacy, and outcomes of care:

1. Health care consumers and clinicians possess a specific set of personal characteristics that inherently interact thus impacting the outcome of the healthcare experience.
2. The clinician's level of motivation, cognitive skill, and emotional response to the client's needs determine the outcome of the client-clinician interaction.
3. The ESL nurse who views himself/herself as less efficacious in addressing the psychosocial issues of the client with a chronic illness is likely to be less motivated to evaluate and address the client's needs in this area.

4. The client who perceives the clinician's response to psychosocial issues as less than adequate is less likely to comprehend and follow through with prescribed health care recommendations.
5. Diminished compliance with prescribed treatment regimens translates into poorer disease prognosis and diminished quality of life.

Summary

This chapter has provided an extensive review related to the ESL nursing student and nursing curriculum strategies to address the needs of the ESL learner. The review suggests that ESL students have a specific set of educational needs. Nursing education has yet to develop a standardized and proven method for meeting these needs. The lack of individualized methods of instruction for the ESL nursing student combined with the lack of attention to the psychosocial needs of individuals with chronic illness leave the ESL student at risk for suboptimal performance on psychosocial needs questions on standardized nursing examinations such as the HESI exam and NCLEX exam. Yet, the data that supports this premise is lacking in the literature.

This study will provide the data that supports or refutes this proposition. If this proposition is validated, it has the potential for increasing the number of ESL nursing students who complete their education and continue on to practice nursing on a full-time basis. In today's multi-cultural society, an increase in the number of multicultural nurses has the potential to improve the quality of life for individuals with chronic illness. Health educators in higher education are crucial consultants for nursing

educators who are attempting to tailor educational strategies to the needs of the ESL nursing student.

CHAPTER III

METHODOLOGY

Bordens and Allen (2005) proclaimed that the purpose of scientific research is to explain a phenomenon/behavior. Scientific research provides a viable explanation and contributes to our understanding of our universe. These explanations involve a rigorous series of actions that have long been heralded as the scientific process. These actions guide the scientific community through the process of proving or disproving a supposition about the phenomenon in question. The scientific method mandates that a study must be replicable in order to be accepted into the scientific community. This requires that the researcher outline the specific steps involved in conducting the study. This chapter will describe the methodology that was utilized in achieving the outcomes of this study, including selection of the population, protection of human participants, instrumentation, data collection, and data analysis.

This was an observational cross-sectional study that compared ESL and non-ESL nursing student scores related to the identification and use of appropriate interventions to meet the client's psychosocial needs. This study utilized data from a national nursing school exit exam that has been proven to be a reliable and valid measure of the student's performance on the national nursing licensure exam (Niebert, Young, & Britt, 2003).

Population

The population used for this study consisted of 38,021 senior nursing students who responded to 475 psychosocial needs questions on the Health Education Specialist Incorporated (HESI) exam between September 1, 2005 and August 31, 2006. The data was then stratified by ethnic origin, primary language, age, sex, and educational program (B.S.N. vs. A.D.N. vs. Diploma graduate).

Protection of Human Participants

The Texas Woman's University (TWU) Institutional Review Board (IRB) served as the administrative reviewer for the study. Polit and Hungler (1995) defined secondary data as that which comes from something other than the original source. This data was obtained from computer generated files maintained on senior nursing students who took the HESI exam. As such, the study met the criteria for exempt status and was granted approval. No informed consent or recruitment was required because the study utilized secondary data from HESI's data base. The only written agreement was a contractual agreement between HESI and the primary investigator (see Appendix A).

Instrumentation

Nursing students take the HESI exam prior to their matriculation from nursing school. The HESI exam provides a measure of the nursing student's critical thinking skills and offers students the opportunity to participate in an exam much like the NCLEX exam. The NCLEX exam is the exam that tests the graduate professional nurse's knowledge and ability to provide minimally safe and effective nursing care.

To determine the test's overall reliability, HESI staff calculate reliability coefficients prior to administration of the exam via a Kuder Richardson Formula 20 (KR-20) analysis. As each test is scored, the reliability estimates are automatically recalculated. KR-20 correlation coefficients for the HESI have ranged from 0.94-0.96 (Morrison, Adamson, Nibert, & Hsia, 2004). Analysis of criterion-related validity revealed the HESI exam to be highly predictive of scores on the NCLEX exam (0.96-0.98) (Nibert, Young, & Adamson, 2006).

Data Collection

After collaboration with HESI's director of research and informational technology staff, reports containing the information requested by the investigator were compiled by HESI. Data regarding the number of correct responses, ethnicity, primary language, age, sex, and educational program were captured for each of the 475 psychosocial needs questions given during the 2005-2006 academic year. The aggregate data was then forwarded to the primary investigator for data analysis.

Data Analysis

Before data could be analyzed, careful consideration was given to the control of extraneous data. The technique utilized most involved matching similar participant variables. Age, sex, and ethnicity were compared by matching those of similar age, sex, and ethnicity. Threats to internal validity were controlled by selecting a widely used instrument (HESI exam) with proven validity. The large sample size and the number of test items analyzed also serve as methods of internal control.

The dependent variable for this study is defined as the HESI exam scores for the psychosocial needs questions on the HESI exam. The independent variable is the examinee's primary language classification as either ESL or non-ESL. Data analysis was conducted using SPSS 10.0 for Windows. Descriptive data analysis characterized respondents by age, sex, ethnicity, and educational program.

Three statistical tests were selected to determine the outcome for each of the null hypotheses. Non-paired independent samples *t*-tests were used to test H_o1 because there was no relationship between the ESL and non-ESL students other than being enrolled in the same nursing education program. Point biserial correlation coefficient (r_{pb}) analysis was utilized to test H_o2 as a means of exploring if a relationship existed between language classification and psychosocial need scores on the HESI exam. Multiple regression (*F*, adjusted R^2) was utilized to determine if language classification was a significant predictor of psychosocial needs scores (H_o3). The level of significance for the statistical analysis was set at .05.

CHAPTER IV

RESULTS

The primary objective of this study was to compare the psychosocial needs scores of ESL and non-ESL nursing students. The HESI exam was selected because of its ability to predict success on the NCLEX exam. This chapter presents the results obtained utilizing SPSS 12.0 to analyze the psychosocial needs question scores for the 25,782 senior nursing students who took the HESI exam between September 1, 2005 and August 31, 2006.

Demographics

The population for this study was geographically dispersed across the United States. Female examinees accounted for 58% of the population and examinees who reported a language other than English as their primary language accounted for 41% of the sample. Of the females in the sample, 25% reported that their primary language was a language other than English while 16% of the males reported native languages other than English.. Students in an associate degree nursing program accounted for 75% of the examinees. Ethnicity and language classification of the examinees are reported in Table 1.

Table 1

Frequencies and Percentages of Race/Ethnicity for ESL and non-ESL Examinees

Race/Ethnicity	N	%	ESL	%	Non-ESL	%
African American	5,039	20	1,950	8	3,089	12
Asian	5,108	20	2,545	10	2,563	10
Caucasian	5,357	21	1,735	7	3,622	14
Hispanic	5,111	20	2,181	8	2,930	11
Other	4,854	19	2,153	9	2,701	11

The ages of the examinees were categorized by group to facilitate analysis and take advantage of the large number of examinees in the database. The size and distribution of the age groups allowed more meaningful interpretation of the group mean scores by sex and race/ethnicity. Table 2 provides the age distributions of the population by sex and the number of ESL and non-ESL examinees in each age group.

Table 2

Frequencies of Age Groupings by Sex and ESL/Non-ESL

Age Grouping	Total	Female	Male	ESL	non-ESL
20 – 24	280	188	92	128	152
25 – 29	5,596	4,362	1,264	1,426	4,170
30 – 34	15,335	8,968	6,367	5, 993	9,342
35 – 39	2,705	1,468	2,738	4,116	1,411
40 - 44	108	347	455	312	143

Although the outcome of both A.D. and Bachelor's nursing programs is to produce nurses who meet the minimal standards to provide safe care, there are differences in the philosophies and curriculum in the two types of programs. The philosophical differences of the two programs may explain some ofthe psychosocial needs scores. For this reason, it is believed that the breakdown of examinees by educational program and primary language may be relevant. Table 3 provides a summary of educational program demographics.

Table 3

Frequencies of Males and Females by Degree Program and Primary Language

Sex	Educational Program	ESL	Non-ESL
Male	Associate Degree	3143	4959
Female	Associate Degree	4771	6441
Male	Bachelors Program	1048	1658
Female	Bachelors Program	1602	2160

In summary, this population consisted primarily of female nursing students from associate's degree nursing programs who were primarily between the ages of 30 and 34. The majority of the examinees reported that their primary language was English (59%). Asian, African American, and Hispanic minorities were equally represented within the study.

Hypothesis I

Hypothesis I for the study was: *there will be no statistically significant difference in the ESL nursing students' scores on the psychosocial section of the HESI exam when compared with non-ESL nursing student scores.* Independent Samples t tests were conducted to test for differences on HESI psychosocial score between ESL and non-ESL examinees. As shown in Table 4, examinees whose primary language was English ($M = 62.33$, $SD = 27.63$) had significantly greater psychosocial scores than

examinees whose primary language was not English ($M = 59.57$, $SD = 31.64$), CI = 2.30 – 3.20, $t = 11.93$, $p < .0001$.

Table 4

Mean Psychosocial Scores by ESL/Non-ESL

	n	Mean	SD	*t*	*p*
				11.93	.000
English Primary	38430	62.33	27.63		
English Not Primary	29967	59.57	31.64		

Note: Equal variances not assumed.

A 2 (ESL/NonESL) X 2 (Gender) X 5 (Race/Ethnicity) 3 (Age: Younger than 30; 30 and Older) Analysis of Variance (ANOVA) was conducted to test for mean differences between male and female ESL/NonESL students of different races/ethnicities and ages (See Table 5). Due to the relatively low cell sizes, age was collapsed into two categories, younger than 30 and 30 and older. As shown in Table 6, all possible main effects and interactions were significant at .01, however effect sizes (Partial Eta^2) were almost zero suggesting these interactions and main effects were meaningless results driven by the large sample size.

Table 5

Average HESI Percent Correct score between ESL and Non-ESL, Male and Female, Race, and Age Group

	English as Primary Language						English as Second Language					
Race	Female			Male			Female			Male		
Age Group	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Asians												
20 - 29	2016	63.11	24.99	987	55.01	34.45	714	53.28	32.77	2016	63.11	24.99
30 +	1197	57.69	26.64	1897	61.45	28.10	2289	58.60	24.69	1197	57.69	26.64
Other												
20 - 29	924	58.70	28.63	504	60.20	36.09	658	55.58	35.88	924	58.70	28.63
30 +	2275	63.17	23.07	2219	60.39	29.37	2289	61.19	26.57	2275	63.17	23.07
African American												
20 - 29	749	55.39	25.98	434	57.15	37.17	364	52.70	37.75	749	55.39	25.98
30 +	2478	63.52	21.35	2590	60.40	26.91	2415	59.53	28.71	2478	63.52	21.35

Table 5, continued

Average HESI Percent Correct score between ESL and Non- ESL, Male and Female, Race, and Age Group

	English as Primary Language						English as Second Language					
Race	Female			Male			Female			Male		
Age Group	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Hispanic												
20 - 29	1225	61.77	25.32	504	58.64	32.42	973	56.27	33.86	469	52.35	40.98
30 +	1960	62.07	23.37	2275	63.29	26.19	2002	62.12	26.61	1785	61.45	28.59
Caucasian												
20 - 29	1526	65.39	20.87	245	59.97	22.21	553	61.88	34.57	476	57.13	40.89
30 +	1722	62.49	23.04	2996	62.94	23.04	2268	60.35	29.45	1365	63.98	32.65
Total												
20 - 29	6440	61.87	25.02	2674	57.48	33.97	3262	56.03	34.72	1841	55.47	40.02
30 +	9632	62.23	23.24	11977	61.75	26.57	11263	60.30	27.31	9471	60.69	30.77

Table 6

ANOVA Results for HESI Percent Correct score between ESL and Non-ESL, Male and Female, Race, and Age Group

Source	Sum of Squares	df	Mean Square	*F*	*p*	Partial Eta^2
ESL	46442.14	1	46442.14	58.572	.000	.001
Sex	2834.94	1	2834.94	3.575	.059	.000
RaceEthnicity	61981.36	4	15495.34	19.542	.000	.001
AgeCat	100976.07	1	100976.07	127.348	.000	.002
ESL * Sex	5187.12	1	5187.12	6.542	.011	.000
ESL * RaceEthnicity	3286.71	4	821.68	1.036	.387	.000
Sex * RaceEthnicity	6024.50	4	1506.12	1.899	.107	.000
ESL * Sex * RaceEthnicity	6410.42	4	1602.60	2.021	.089	.000
ESL * AgeCat	13979.39	1	13979.39	17.630	.000	.000
Sex * AgeCat	5878.66	1	5878.66	7.414	.006	.000
ESL * Sex * AgeCat	1605.01	1	1605.01	2.024	.155	.000
RaceEthnicity * AgeCat	20645.84	4	5161.46	6.510	.000	.000
ESL * RaceEthnicity * AgeCat	6015.76	4	1503.94	1.897	.108	.000
Sex * RaceEthnicity * AgeCat	39203.61	4	9800.90	12.361	.000	.001
ESL * Sex * RaceEthnicity * AgeCat	22558.26	4	5639.56	7.112	.000	.001

Hypothesis II

Hypothesis II explored the relationship between language classification (ESL vs. non-ESL) of nursing students and scores on the psychosocial section of the HESI exam. Correlation between native language and psychosocial needs question scores was accomplished by calculating both Pearson's r and Spearman's rho correlation coefficients. Pearson's r and Spearman's rho demonstrate the significance of a linear relationship between two variables. In this study, the variables in question are scores on the psychosocial needs questions of the HESI exams and language classification (Green & Salkind, 2003). Native English was coded as Yes = 1 and No = 0. Spearman's rho differs from Pearson's r because it ranks the scores prior to calculating the correlation coefficient (Lane, 2007). Both statistical calculations were positively correlated with Pearson's r of .058 and Spearman's rho of .069. Due to the number of cases involved (45,227) minimal agreement in variation will exhibit significant correlations. Although the significance of Pearson's r indicate that Native English approached 1 and scores lowered as Native English approached 0 the size of the correlations are almost zero and are significant only due to the large sample size, thus these correlations are meaningless results. Table 7 provides a summary of both correlation coefficients.

Table 7

Pearson's Product Moment Correlation and Spearman's rho Correlation Between ESL Status and Psychosocial HESI Score

	Percent Correct
Pearson Correlation	.058**
Spearman's rho	.069**

Note: ** $p < .01$ level (2-tailed) (N = 45227)

Hypothesis III

A multiple regression was conducted to predict psychosocial needs score (percent correct scores) from ethnicity, gender, age, program type (associate degree vs. bachelors), and English as primary language. Overall, these variables were significant in predicting the psychosocial needs score, $F(8, 32315) = 11.38$, $p < .001$, but accounted for only 3% of the variance. As shown in Table 8, ethnicity and English as a primary language were significant predictors of psychosocial needs, all *t*s, $p < .001$. Gender, age, and program type were not significant individual contributors. Being African American (compared to being Caucasian), predicted a decrease on the psychosocial needs score (*Beta* = -.032, $p < .001$). Similarly, being Asian (*Beta* = -.047, $p < .001$), Hispanic (*Beta* = -.018, $p < .05$), or other ethnicity (*Beta* = -.024, $p < .01$) (compared to being Caucasian), predicted a decrease on the psychosocial needs score. English as a second language (compared to

English as a primary language), also predicted a decrease on the psychosocial needs score (*Beta* = -.033, $p < .001$). Again, these *Betas* are close to zero suggesting meaningless results driven by the large sample size.

Table 8

Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on Percent Correct Scores for HESI

	Unstandardized					95% CI	
	B	*SE*	*Beta*	*t*	*p*	Lower	Upper
African American	-2.272	.502	-.032	-4.52	.000	-3.256	-1.287
Asian	-3.279	.496	-.047	-6.61	.000	-4.251	-2.306
Hispanic	-1.251	.502	-.018	-2.49	.013	-2.235	-.267
Other Ethnicity	-1.701	.500	-.024	-3.40	.001	-2.681	-.721
Male	-.296	.327	-.005	-.90	.366	-.938	.346
Age	-.026	.038	-.004	-.68	.497	-.101	.049
Associate Program	-.174	.362	-.003	-.48	.630	-.884	.535
English Not Primary	-1.900	.325	-.033	-5.84	.000	-2.538	-1.262

Note: $F(8, 71) = 10.05$, $p = 0.000$, $R^2 = 0.531$, Tolerance stats range from 0.369 – 1.000

The psychosocial needs score was made up of 459 items, each with percent correct scores from approximately 80 – 120 individuals. Thus, the final data file of over 32000 responses revealed significant results for very small betas. Therefore, multiple regressions were conducted for each of the 459 items to determine if the significant predictors from the overall regression (described above) were found for a majority of the items, as well to determine the average strength of each predictor. Table 9 shows the summary of the significance and direction of the predictors on the percent correct score for each HESI item. The researcher may be contacted for review of the regression analysis data for each psychosocial needs question analyzed.

For almost half of the items (47%), being African American (compared to being Caucasian) was not a significant predictor. Being African American was a significant negative predictor for 35% of the items, while it was a significant positive predictor for 18% of the items. The average beta for items was -.082 with a range of -.95 to .98. Similarly, for almost half of the items (49%), being Asian (compared to being Caucasian) was not a significant predictor. Being Asian was a significant negative predictor for 35% of the items, while it was a significant positive predictor for 16% of the items. The average beta for items was -.083 with a range of -.95 to .81. For a little more than half of the items (52%), being Hispanic (compared to being Caucasian) was not a significant predictor. Being Hispanic was a significant negative predictor for 28% of the items, while it was a significant positive predictor for 20% of the items. The average beta for items was -.056 with a range of -.96 to .99. Again, for half of the items (50%), being an "Other" ethnicity (compared to being Caucasian) was not a significant predictor. Being

an "Other" ethnicity was a significant negative predictor for 30% of the items, while it was a significant positive predictor for 20% of the items. The average beta for items was -.049 with a range of -.94 to .89.

For half of the items (50%), being male (compared to being female) was not a significant predictor. Being male was a significant negative predictor for 27% of the items, while it was a significant positive predictor for 23% of the items. The average beta for items was -.006 with a range of -.87 to .94. Age was not a significant predictor for 42% of the items. Age was a significant negative predictor 30% of the items, and a significant positive predictor for 28% of the items. The average beta for items was -.035 with a range of -.98 to .95. Being in an Associate degree program (compared to a mixed program) was not a significant predictor for 99% of the items. The average beta for items was -.003 with a range of -.41 to .24. English as a second language (compared to primary) was not a significant predictor for 44% of the items. It was a significant negative predictor for 34% of the items, and a significant positive predictor for 22% of the items. The average beta for items was -.073 with a range of -.89 to .91.

Table 9

Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on Percent Correct Scores for HESI

	Unstandardized					95% CI	
	B	*SE*	*Beta*	*t*	*p*	Lower	Upper
African American	-2.272	.502	-.032	-4.52	.000	-3.256	-1.287
Asian	-3.279	.496	-.047	-6.61	.000	-4.251	-2.306
Hispanic	-1.251	.502	-.018	-2.49	.013	-2.235	-.267
Other Ethnicity	-1.701	.500	-.024	-3.40	.001	-2.681	-.721
Male	-.296	.327	-.005	-.90	.366	-.938	.346
Age	-.026	.038	-.004	-.68	.497	-.101	.049
Associate Program	-.174	.362	-.003	-.48	.630	-.884	.535
English Not Primary	-1.900	.325	-.033	-5.84	.000	-2.538	-1.262

Note: $F(8, 71) = 10.05$, $p = 0.000$, $R^2 = 0.531$, Tolerance stats range from 0.369 – 1.000

Table 10

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
20054	x	x	x	x	-**	+**	x	-**
20059	x	-*	+**	x	x	x	x	x
20072	x	x	x	+**	-**	x	x	-**
20814	+**	x	+**	+**	+**	-**	x	x
20815	x	x	+**	+**	-**	x	x	x
20852	x	x	+*	x	x	x	-**	+*
20859	x	+**	-*	+**	x	+**	x	-**
20860	x	x	x	x	x	x	x	-**
20867	-**	x	x	x	+*	x	x	x
20869	x	x	-**	x	x	x	x	x
21017	-**	-**	x	-**	+**	-**	x	x
21019	x	x	x	x	x	x	x	x
21020	-*	x	x	-*	x	x	x	x
21021	x	+**	x	x	-**	+**	x	x
21022	-**	-**	-**	-**	+**	-**	x	x
21023	-*	x	-**	x	x	+**	x	+**
21025	x	-**	x	x	+*	x	x	x
21026	x	-**	x	-*	-**	+**	x	x
21030	x	x	x	+*	x	+**	x	+**
21031	x	x	x	x	-**	+**	x	-**
21635	x	-**	x	-**	-*	+**	x	-*
21636	x	x	+*	+*	x	+**	x	+**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

		Ethnicity			Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
21853	x	-**	-**	-**	-**	x	x	+**
21914	-**	x	x	x	x	-**	x	+**
21981	+**	x	x	x	x	-**	x	+**
21986	x	x	x	x	x	x	x	x
22062	+**	+**	+**	+**	+**	-**	x	x
22063	x	x	x	+**	-**	x	x	x
22109	x	x	-*	-*	-**	x	x	-**
22110	x	+**	+*	x	-**	x	x	x
22111	x	-*	x	-*	-*	x	x	x
22112	-**	-**	-**	-**	x	+**	x	x
22114	-*	-*	-**	-**	x	-**	x	x
22155	+**	+**	+**	+*	+**	x	x	x
22167	x	x	-**	-**	-**	x	x	x
22206	x	x	x	x	x	x	x	+*
22216	x	x	x	x	-*	x	x	-**
22252	x	x	x	+**	x	+**	x	-**
22271	x	x	x	x	x	x	x	x
22272	-**	-**	-**	-**	+**	-*	x	-**
22273	x	-**	-**	x	+*	-**	x	+**
22274	x	x	+**	x	x	-*	x	x
22277	x	x	-*	x	x	x	x	-**
22280	-**	-**	-**	-**	-**	x	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 2

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

		Ethnicity			Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
22281	x	x	+*	x	-**	+*	x	-**
22282	-*	x	x	-**	x	+*	x	x
22284	-**	x	x	+*	-**	+**	x	x
22285	+*	+**	x	x	-**	+**	x	-**
22458	-**	x	x	x	-*	+**	x	-**
22478	-**	-**	-**	x	x	-**	x	-**
22489	x	-**	x	x	+*	-**	x	+**
22524	x	x	x	+**	-**	+**	x	+*
22527	x	-*	x	x	x	x	x	x
22569	x	x	x	+*	x	x	x	-**
22570	x	-**	-**	-**	x	-**	x	x
22644	+**	-*	x	-**	+**	-**	x	x
22646	-**	-**	x	-**	x	+**	x	x
22802	x	x	+*	+*	-**	+**	x	-**
22803	+**	-**	-**	+**	x	x	x	x
22804	-**	-**	x	-**	+*	-*	x	x
23005	-**	x	x	x	x	-**	x	-*
23037	-**	-**	-**	-**	+*	-*	x	x
23162	-**	-**	-**	x	+**	-**	x	x
23332	x	+**	x	+**	-*	+**	x	-**
23333	x	+**	x	+**	-*	+**	x	-**
23335	+*	x	x	x	x	+**	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 3

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
23336	x	x	x	x	x	-**	x	-**
23338	-**	-**	x	+*	-**	+**	x	-**
23358	+*	-**	-**	-*	x	x	x	-**
23361	-**	-**	-**	-**	+**	-**	x	x
23366	-**	x	+**	-**	-*	+**	x	-**
23534	x	x	+*	+**	x	x	x	+*
23637	-**	x	x	-**	x	+**	x	x
23639	x	x	x	-**	x	-**	x	x
23644	x	x	x	x	+**	-**	x	+**
23646	x	+**	x	x	x	+**	x	+**
23648	-**	-**	-*	-**	+**	-**	x	x
23904	-**	x	+*	-**	x	+**	x	-**
24881	+**	+**	+*	+**	x	-**	x	+**
24883	-*	-**	-**	x	+**	x	x	-**
24884	-*	-**	-*	-**	x	x	x	+*
25102	x	x	x	x	x	x	x	-**
25287	-**	x	x	x	x	+**	x	x
25362	x	x	-**	-**	+**	-**	x	-**
25442	x	+*	x	x	-**	x	x	-**
25444	x	x	x	x	x	x	x	x
25445	-**	x	x	x	-*	x	x	-**
25451	x	+**	+**	+**	+**	-*	x	-**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant

Table 10, continued 4

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

		Ethnicity			Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
25452	x	x	x	x	x	-**	x	+**
25453	x	-*	-**	-**	-**	x	x	+**
25454	-**	x	-*	-*	-**	x	x	x
25455	x	-*	-**	-**	x	x	x	x
25456	-*	x	x	x	+**	+**	x	-**
25457	-**	-**	x	-**	-*	x	x	x
25458	x	x	-**	x	-**	x	x	x
25460	+*	+**	x	x	x	x	x	x
25461	-**	x	x	x	+**	-**	x	-**
25464	x	x	x	x	+**	-**	x	+**
25467	x	+*	x	x	x	x	x	x
25468	x	x	-**	x	x	x	x	-**
25469	x	+*	+**	x	x	+**	x	+**
25470	x	x	+**	+**	x	+**	x	-**
25471	x	x	x	-**	x	x	x	x
25474	x	+*	+**	+**	x	+*	x	x
25475	x	-**	x	-*	x	x	x	x
25482	+**	+**	x	+**	x	+*	x	-**
25483	+**	+*	-**	+**	x	x	x	+**
25515	x	-**	x	x	-*	-**	x	-**
25516	x	x	x	x	x	x	x	x
25517	x	-**	x	x	-**	+*	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant

Table 10, continued 5

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
25538	x	x	x	+**	x	x	x	x
25543	x	-**	x	x	-*	+**	x	x
25544	+**	x	x	+*	x	-**	x	x
25545	-*	x	x	x	x	x	x	+**
25546	+**	x	x	x	+**	x	x	+**
25547	+*	x	+*	x	x	+**	x	x
25548	-**	x	+*	+**	x	-**	x	-**
25556	+**	+**	x	+**	-**	x	x	-**
25586	x	-**	-**	x	x	-**	x	x
25587	-**	-**	-*	-**	+*	-**	x	+*
25589	-**	-**	-**	-**	x	x	x	x
25590	x	+**	+**	+**	-**	+**	x	-**
25591	+**	x	x	x	x	-**	x	+**
25592	x	x	+**	x	x	x	x	x
25593	x	x	x	x	x	x	x	x
25594	+**	x	x	+**	+**	x	x	x
25595	x	-**	x	x	-**	-**	x	-*
25596	+**	x	x	+*	+**	-*	x	x
25606	+**	x	x	+**	x	-**	x	-**
25609	x	-**	+*	x	x	-**	x	-**
25619	-**	x	x	x	x	x	x	x
25620	x	x	x	x	x	-*	+*	+*

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 6

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
25793	x	+*	+**	+**	+**	-**	x	+**
25794	x	x	x	x	+**	x	x	x
25795	-*	x	x	x	x	x	x	x
25796	x	x	x	x	x	-**	x	x
25798	x	x	+**	x	x	x	x	x
25799	-**	x	x	+*	+*	x	x	-**
25800	x	x	x	x	x	x	x	-**
25801	x	x	x	-*	-**	+*	x	x
25802	x	-**	-**	x	+**	-**	x	-**
25806	+*	x	x	+*	x	-**	x	x
25807	x	x	x	x	x	+**	x	-**
25808	-**	x	x	-**	x	+**	x	-**
25813	x	+*	x	x	x	+*	x	x
25832	+**	+**	+**	+**	+*	-**	x	x
25833	-**	-*	x	x	x	x	x	x
25834	-**	-**	-**			-**	x	
25836	x	x	x	x	-**	+**	x	-**
25838	+**	+**	x	x	x	+**	x	x
25895	-**	x	x	-**	x	+**	x	x
25897	-**	x	-**	-**	-**	+**	x	+**
25898	+*	+**	+**	+**	-**	-**	x	-**
25899	+**	x	x	x	x	-**	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 7

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
25900	-*	x	-*	-**	-**	+**	x	x
25901	-**	+**	+*	+**	x	+**	x	-**
25902	+*	+**	-**	+**	x	+**	x	-**
25903	-**	-**	-**	-**	+**	-**	x	-**
25904	-**	-**	-**		-**	+**	x	+**
25906	x	x	x	x	-*	+**	x	-**
25907	+*	x	x	+*	x	-**	x	x
25927	+**	x	+*	+**	x	x	x	+**
25929	x	x	x	x	x	+*	x	-**
25931	x	x	-**	-**	-**	x	x	-**
25947	+*	x	x	x	+**	-**	x	+**
25948	x	x	x	x	-**	+**	x	-**
25949	x	x	x	x	x	x	-*	x
25950	-*	-**	x	-**	-**	x	x	x
25951	x	x	x	-**	-**	x	x	+**
25952	x	x	-*	x	x	x	x	+**
25953	+*	-*	x	x	x	x	x	x
25954	-**	x	x	x	-*	+**	x	-**
26031	x	-**	x	-**	x	-**	-*	x
26098	-**	-**	-**	+**	x	x	x	x
26101	-**	x	-**	x	x	x	x	+*
26104	-*	-**	x	x	x	x	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 8

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
26105	x	+*	x	x	x	x	x	+**
26106	x	-**	x	x	x	-**	x	-**
26107	+**	-**		+**	-**	x	x	-**
26109	x	-*	+**	+**	x	+**	x	+**
26113	-*	-**	x	x	+**	-**	x	x
26138	-**	-**	-**	-**	x	-**	x	x
26208	+**	+**	x	+**	x	-**	x	x
26215	+**	+**	x	+**	+**	-**	x	+**
26218	+**	+**	+**	+**	x	+**	x	x
26220	x	x	x	+**	+**	x	x	x
26221	x	x	x	x	x	x	x	x
26222	x	x	-*	-**	+**	-**	x	+**
26223	x	x	x	x	x	+**	x	x
26224	x	+*	x	x	x	x	x	-**
26225	x	x	+**	x	+**	x	x	x
26226	+**	x	-**	-**	+**	-**	x	+**
26227	-**	-**	-**	-*	x	-*	x	+**
26228	-**	+**	-**	+**	x	-**	x	x
26320	-**	x	x	x	x	x	x	x
26417	x	+*	-**	-**	-*	x	x	+**
26547	-**	-**	x	x	x	-**	x	x
26548	x	x	x	x	+**	x	x	-**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 9

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
26549	x	+**	x	x	x	x	x	x
26591	x	x	-**	x	x	-**	x	x
26632	+**	x	x	+**	+**	x	x	+**
26676		x		+**	x	x	x	-**
26711	x	x	x	x	-*	x	x	x
26744	+*	-**	x	x	+*	-*	x	x
26891	x	x	+*	+*	x	-*	x	x
26892	+**	+*	+**	x	-**	+**	x	x
26918	-*	-**	x	x	x	-**	x	x
26920	-*	x	-**	x	-**	+**	x	x
26927	x	x	x	x	x	x	x	x
26937	x	-**	-*	x	x	x	x	+**
26970	-**	-**	-**	+*	-**	-**	x	-**
27034	x	x	+**	x	x	-*	x	-**
27035	+**	x	x	x	x	-**	x	x
27036	x	-*	+**	x	x	-**	x	x
27037	x	x	x	x	-**	+*	x	x
27038	-**	-**	-**	-**	-**	x	x	x
27039	x	-*	x	x	x	x	x	-*
27041	-**			+**	-*	+*	x	-*
27043	x	-**	x	x	+**	-*	x	x
27044	-*	-*	-**	x	x	-**	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 10

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
27067	-**	x	x	x	+**	-*	x	x
27127	+*	-*	x	x	+**	-**	x	x
27139	x	x	+*	x	-*	x	x	-*
27156	+*	-*	+**	+**	x	-**	x	+**
27170	x	x	+**	+**	-**	x	x	-**
27315	x	x	+**	+**	-**	x	x	-**
28314	-*	x	-*	x	+**	+**	x	-**
28590	x	-**	+**	x	x	x	x	x
28625	x	x	x	x	x	x	x	+**
28646	x	-**	x	+*	+**	x	x	x
28657	x	x	x	+**	-**	x	x	-**
28789	x	x	x	+**	+*	+**	x	+**
28795	x	x	-*	x	x	x	x	+**
28877	-**	x	x	x	x	+**	x	-**
29052	+**	x	+*	+**	+**	x	x	x
29200	x	x	x	x	x	x	x	x
3230	-**	-**	-**	x	+**	-**	x	x
3253	-**	x	x	-**	-**	+*	x	-**
3298	+*	+*	+*	x	+**	-**	x	+**
3393	-**	-**	-**	-**	-**	+**	x	-**
3416	x	+*	-**	x	x	+**	x	x
35514	-**	x	-**	+**	+**	-**	x	+**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 11

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
35566	+*	x	x	x	x	x	x	+**
35570	x	x	+**	+**	-**	+**	x	-**
35571	x	x	x	x	x	x	x	-**
35572	x	x	x	x	-*	x	x	-*
35573	+*	x	+*	x	+**	-**	x	x
35579	-*	-*	x	-*	x	x	x	-**
35601	x	x	x	+**	+**	-**	x	-**
35604	x	-*	x	x	x	x	x	x
35605	x	+**	x	x	+**	-**	x	x
35610	x	x	x	-**	x	x	x	x
35622	x	x	x	x	x	x	x	x
35623	x	x	x	-**	+**	+*	x	+**
35638	x	+**	x	x	x	-*	x	-**
35653	+**	-**	x	x		x-**	x	+**
35655	+**	x	x	-**	x	+*	x	-*
35658	x	x	x	-**	x	+*	x	+*
35659	+*	+*	x	+**	+**	+*	x	-**
35663	-*	+**	-*	-*	x	x	x	+**
35673	x	x	x	x	x	-**	x	x
35704	-**	+*	x	x	x	x	x	+**
35706	-**	-**	-**	-**	+**	x	x	-**
35707	-*	x	x	-*	x	x	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 12

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
35709	-**	x	-**	-*	x	x	x	x
35710	+**	x	+**	x	+**	-**	x	-**
35711	-**	x	x	-*	-**	+**	x	x
35722	+**	x	+**	x	+**	-**	x	x
35726	-*	x	x	x	x	x	x	+**
35728	+**	x	x	-**	+**	+**	x	+**
35729	x	x	+*	x	-*	x	x	x
35773	-**	-**	-**	-**	x	-*	x	-**
35775	x	-**	+*	-**	x	x	x	-**
35777	+**	x	x	+*	-*	x	x	x
35779	-**	-**	-**	-**	+**	-**	x	+**
35782	+**	+**	x	x	x	+**	x	-**
35783	+**	x	-**	x	x	+**	x	-**
35844	+**	x	+**	x	+**	x	x	+**
35845	x	x	x	x	+**	-**	x	+*
35846	x	-**	x	-**	x	-*	x	+**
35848	x	+**	+*	+**	+*	+**	x	+**
35851	+**	+**	-**	-**	+**	-**	x	+**
35853	-**	-**		+**	+**	+**	x	+**
35856	-**	-**	-**	-**	-**	-**	x	-**
35860	-**	x	x	x	-**	+**	x	+*
36046	x	-**	-**	+**	-**	-**	x	-**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 13

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
36054	x	x	+**	-**	-**	x	x	-**
36056	x	x	+**	x	+**	x	x	-**
36059	x	x	x	x	x	x	x	-**
36060	+**	x	+**	+**	x	x	x	x
36061	-**	+**	x	-**	-**	+**	x	x
36062	x	+*	x	x	x	x	x	-**
36063	x	x	x	+**	+*	x	x	x
36065	x	+*	+**	-*	+**	-*	x	-**
36066	x	+**	+**	-**	x	+**	x	+**
36075	-**	+**	+**		-**	-**	x	-**
36079	-**	-**		x	-**	x	x	x
36080	+**	-*	+**	+*	+**	x	x	+**
36097	-*	-*	x	+**	x	+**	x	-**
36098		x	x	x	+*	-*		x
36099	-*	+**	x	x	x	+*	x	x
36100	x	+**	x	-*	x	+*	x	-**
36101	+*	+*	x	x	-**	x	x	x
36106	-**	+**	+**	-**	+**	+**	x	+**
36115	x	x	x	x	-**	+**	x	x
36116	x	x	+*	+**	+**	+**	x	+*
36590	-*	x	x	x	x	x	x	-**
36603	-*	-**	-**	+**	-**	-**	x	+**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 14

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
36705	x	x	-*	x	x	-*	x	-**
36714	x	x	+**	x	x	+**	x	x
36715	-**	x	-**	x	x	+*	x	+*
36722	-**	x	x	x	x	x	x	+**
36726	+**	+**	x	-**	x	+**	x	-**
3772	-**	-**	-**	-**	-**	x	x	-**
3860	x	x	x	x	-*	+**	x	-**
3920	x	+**	-**	+**	x	x	x	-*
3943	+**	+*	x	+**	+**	-**	x	+**
3958	x	x	x	x	x	+**	x	-**
4040	x	-**	-**	-*	+**	-**	x	+**
4125	-**	-**	+**	-**	-**	x	x	-**
4258	+**	x	x	x	x	-**	x	+**
4273	-**	-**	-**	-**	x	x	x	x
4280	x	x	x	+**	x	-**	x	x
4284	x	+**	+**	+**	x	+**	x	-**
4299	-**	-**	+*	-**	x	x	x	-**
4300	x	-**	x	x	+**	-**	x	+**
4301	-**	-**	-**	x	x	-**	x	x
4303	x	x	x	x	x	x	x	x
4307	-**	-**	-**	-**	-**	+**	x	-**
4343	-**	-**	x	-**	-**	x	x	-**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x nonsignificant.

Table 10, continued 15

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
4385	-*	-**	-*	-**	-**	x	x	x
4419	x	x	x	x	x	x	x	x
4526	-**	-**	-*	x	x	-**	x	+*
4527	x	-**	-**	+**	x	+**	x	-**
4540	-**	-**	x	-**	-*	x	x	x
4542	-*	-**	x	x	-**	x	x	x
4543	x	x	+*	x	-**	+*	x	x
4544	-**	-*	x	-**	-*	+**	x	x
4545	-**	-**	x	-*	-**	+**	x	-**
4547	x	-**	x	-**	+*	x	x	x
4553	x	+**	+**	+**	x	+**	x	-**
4554	+**	x	+**	x	x	x	x	x
4555	-**	-**	x	-**	+**	-**	x	x
4558	x	-**	x	x	+**	-**	x	+*
4559	x	x	x	-**	+*	-**	x	+**
4560	x	-**	-*	+**	+**	x	x	x
4562	x	-**	x	-*	-**	x	x	-**
4565	x	-**	x	+*	-**	x	x	-**
4566	-**	-**	x	-**	-*	x	x	-**
4569	+**	x	x	+**	x	-**	x	x
4572	+**	x	x	x	x	x	x	x
4581	+**	+**	+*	x	-**	x	x	-**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 15

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
4584	-**	+**	+**	-*	x	x	x	-**
4585	-**	-**	x	-**	-**	x	x	-**
4586	-**	-**	-*	-**	x	+**	x	x
4588	x	+**	+**	+**	x	x	x	x
4591	x	+**	+**	+**	x	x	x	x
4594	+**	x	+*	+*	x	-**	x	-*
4597	+**	x	x	x	-**	x	x	-**
4600	x	x	x	x	x	x	x	x
4601	-**	-**	x	-**	x	-**	x	x
4603	-**	-**	-**	x	+**	x	x	x
4610	x	x	x	x	-*	x	x	x
4611	x	x	x	-**	x	+**	x	x
4612	-**	-**	x	x	x	x	x	x
4618	x	-*	x	x	x	+**	x	x
4620	-**	-**	-**	-**	+**	x	x	x
4623	-**	x	+**	-*	-**	+**	x	-**
4626	-**	x	-**	-**	-**	+**	x	-**
4627	x	-**	-*	x	-*	x	x	+**
4629	x	x	x	x	x	x	x	-*
4631	-**	-*	-*	-**	x	x	x	x
4632	x	-**	x	x	x	+**	x	-**
4633	-*	-*	-**	-**	x	x	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 16

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
4634	-**	x	x	-**	x	x	x	x
4637	-**	x	-**	-**	x	+**	x	-**
4644	x	x	x	x	-**	x	x	x
4646	x	x	+*	-**	x	x	x	-**
4650	x	x	-**	-**	+**	-**	x	+**
4656	x	-*	+**	x	x	-*	x	x
4661	x	x	x	x	-**	+**	x	-**
4689	+*	x	x	x	x	+**	x	-**
4690	+**	+*	x	x	x	-**	x	+**
4691	+**	+**	+**	+**	x	-*	x	x
4692	-**	-**	-**	-**	+**	-**	x	x
4693	-*	-**	-**	x	x	-**	x	-**
4694	-*	-*	x	-*	+**	x	x	-**
4695	-**	-**	-**	x	x	-**	x	-**
4696	+**	-**	x	x	+*	-**	x	x
4697	x	-**	-*	x	x	x	x	x
4704	-**	-**	x	-**	-*	x	x	x
4706	x	x	+**	x	x	+**	x	x
4710	-**	-**	-**	-**	x	x	x	-**
4711	x	x	x	x	-*	+**	x	-*
4712	x	x	x	-**	x	x	x	x
4713	-**	-**	-**	x	+**	-**	x	+**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 17

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
4720	-**	-*	x	x	+*	x	x	+**
4739	x	x	+*	-**	x	-**	x	x
4749	+*	+**	+**	-**	+**	-*	x	+**
4750	-*	x	-**	-**	-*	x	x	+**
4753	-**	-*	x	x	x	x	x	-**
4811	x	x	+**	x	x	-**	x	+**
4846	-**	-**	-**	-**	+**	x	x	x
5222	-**	-*	-**	-**	-**	+*	x	-**
5227	-**	x	-*	x	-**	+**	x	-**
5757	x	x	-*	-**	x	+*	x	-**
5861	-**	x	-**	-*	x	+*	x	x
6141	-**	x	x	x	x	-**	x	x
6142	x	x	x	+**	+*	x	x	x
6193	x	-**	-**	-**	x	+**	x	+**
6197	-**	x	-*	x	-**	x	x	x
6198	-**	-**	-**	-**	+**	-**	x	x
6208	x	x	x	x	x	x	-**	x
6420	+**	-**	x	x	-**	+**	x	-**
6485	+*	+*	+**	+**	+*	x	x	-**
6486	+**	x	+**	+**	+**	-**	x	+**
6490	x	-*	x	x	x	x	x	x
6492	-**	x	x	x	x	x	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 18

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
6494	x	-**	x	x	+*	+**	x	x
6495	-*	-**	-*	-**	-**	+**	x	-**
6510	x	x	+**	x	-**	+**	x	-**
6524	-**	-**	x	-*	-**	-**	x	x
6526	+**	+**	+**	+**	x	+**	x	x
6752	x	-**	-**	x	+**	x	x	-**
6756	+**	-*	-**	x	+**	-**	x	x
6757	-**	-**	-**	-**	x	x	x	-**
6759	x	x	x	-**	x	x	x	x
6792	x	x	+**	-**	x	x	x	-*
6793	-**	-*	-*	x	x	+**	x	-**
6930	x	+*	+*	x	x	-*	x	x
7405	+**	+**	x	x	-**	x	x	-**
7412	-**	-**	-**	-**	-*	x	x	x
7466	-**	x	-**	x	x	-**	x	-**
7490	+*	+*	+**	x	x	x	x	x
7491	+**	-**	x	x	x	+**	x	x
7574	-**	-**	-**	-**	+**	x	x	x
7582	-*	x	-**	x	+**	x	x	+**
7613	-*	-**	x	-**	+*	+**	x	-*
7646	+*	+**	x	x	x	-**	x	+**
8183	x	-*	x	x	-**	+**	x	-**

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Table 10, continued 19

Summary of Regression Coefficients of Age, Gender, Program, Ethnicity, English as a Secondary Language on HESI Items

	Ethnicity				Gender		Program	English
Item	AA	AS	H	O	Male	Age	Associate	Not Primary
8212	-**	x	+*	x	-*	+**	x	-**
8213	x	-**	-**	-**	-**	-**	x	+**
8220	x	x	-*	+**	x	x	x	-*
8234	x	x	-*	-**	x	-**	x	+**
8238	x	-**	-**	-*	x	-**	x	+*
8239	x	x	+**	x	-**	x	x	-**
8243	-**	-**	-**	x	-**	x	x	x
8246	-**	-**	-**	-**	x	-**	x	x
8289	+**	x	x	x	x	x	x	+**
8290	x	+**	-*	x	x	-**	x	+**
8300	+**	x	x	x	+**	-**	x	+**
8304	-**	-**	x	-**	-**	+**	x	-**
8385	x	x	-**	x	-**	+**	x	x
8435	x	-**	x	-**	x	x	x	-**
8495	+*	-**	+**	x	+**	-**	x	+**
8496	x	x	x	x	x	+**	x	-*
8498	-*	-**	-*	x	x	x	x	x
8500	-**	-*	-*	-*	x	-**	x	x
8501	-**	-**	x	x	x	x	x	x

Note: *, $p < .05$; ** $p < .01$; +, positive coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to increase in percentage correct; -, negative coefficient, increase in predictor or being in reference group (i.e. male vs. female) was related to decrease in percentage correct; x = nonsignificant.

Summary

From the data obtained in this study, there is evidence of a weak relationship between native language and psychosocial needs question performance for certain groups of nursing students who take the HESI exam. The exact significance of the relationship between native language and psychosocial needs scores is somewhat vague. Analysis of Variance (ANOVA) was performed to determine if the mean scores for each group was significantly different. All main effects and interactions for the ANOVA were significant, as a result Partial eta^2 was examined and the effect sizes were weak. Thus the ANOVA suggested that while there is a difference between native languages on mean on psychosocial needs HESI scores, the results are not strong. The large number of examinees in the study produced significant results that were weak. The lack of evidence of a strong correlation as evidenced by the ANOVA and Pearson's correlation indicate the need to further explore the possibility as to whether or not the weak correlations would be strengthened with smaller samples.

Multiple linear regression was performed to determine if examinees' native language, age, ethnicity, gender, and program type could predict performance on the psychosocial needs scores of the HESI exam. While the regression model suggested that the model was weakly predictive for certain ethnic groups, it should be noted that the model's ability to predict scores was not consistent when predicting the individual psychosocial items. There are several reasons for this inconsistency. One potential explanation for the lack of consistency in the regression results could be related to the lack of consistent test authorship for the test question items. Furthermore the direction

of the phrasing of questions (positive vs. negative) could explain the reason lack of consistent predictive patterns in the model. The mechanism by which the test is given does not insure that all examinees answered the same questions. Thus, another factor that could have impacted the regression outcomes may have related to the small *n* of the sub-groups within the individual items of the study when broken down by gender, age, ethnicity, native language, and educational program. In addition, given the fact that successful scores on the HESI exam is not an absolute requirement for graduation for many nursing programs, some students' motivation and attentiveness while taking the exam may be diminished.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Summary

This study was conducted in an effort to describe the ESL nursing student's ability to correctly respond to the psychosocial needs question on the HESI exam. The HESI exam has several purposes. In addition to measuring the student's overall grasp of nursing knowledge, the HESI exam serves as an outcome measure of the school's success in teaching the curricula described by course syllabi while simultaneously determining the senior nursing students' abilities when compared to the performance of senior nursing students nationwide (Morrison, Nibert, & Flick, 2006). The HESI exam has also been tested and found to be a reliable and valid indicator of a student's performance on the NCLEX exam (Nibert & Young, 2005).

This study involved collection of the scores on 459 psychosocial needs questions answered by 25,469 senior nursing students between September 1, 2005 and August 31, 2006. The number of examinees who identified themselves as having a native language other than English comprised 41% of the sample with 58% of the overall sample being female. Univariate and multivariate statistical analyses were utilized to determine potential significance related to language classification and certain descriptive factors of examinees.

Findings

Hypothesis I. There will be no statistically significant difference in the ESL nursing students' scores on the psychosocial section of the HESI exam when compared with non-ESL nursing student scores. The mean score for all ESL examinees was 59.2 and the mean score for non-ESL was 62.33. This was significant ($p < .01$) at the 99% confidence interval (t=11.93). T-tests for Equality of Means were conducted for each age group by gender, degree program, and ethnicity. An Analysis of Variance (ANOVA) was performed to test of significance of the mean psychosocial needs scores according to gender, native language, age, and ethnicity. All were significant at .01. However the Partial Eta^2 was negligible. This is most likely due to the large size of the study population. Thus it is concluded that there was a weakly significant difference in performance on the psychosocial needs questions of the HESI exam based on language classification (ESL, non-ESL). Therefore, the null hypothesis is rejected and it is concluded that there was a statistically significant difference in the mean scores of ESL and non-ESL senior nursing students who took the HESI exam between September 1, 2005 and August 31, 2006.

Hypothesis II. There will be no statistically significant relationship between language classification (ESL, non-ESL) of nursing students and scores on the psychosocial section of the HESI exam. The data was analyzed by calculating both Pearson's R and Spearman's rho correlation coefficients. The Pearson R and Spearman's rho were both significant ($p < .01$) but weak at .058 and .069 respectively, suggesting a weakly positive correlation between native language being English and the ability to correctly answer psychosocial needs questions.

Hypothesis III. After controlling for race, sex, age, and nursing program, language classification (ESL, non-ESL) of nursing students will not significantly predict scores on the psychosocial section of the HESI exam. The regression statistics indicated the general linear regression model successfully predicted the mean scores for native language and ethnicity for students who took the HESI exam between September 1, 2005 and August 31, 2006. However, the beta calculation for the correlations was extremely small. This suggests that the results were relatively inconsequential. While the data suggests that that native language is a significant predictor of scores on the psychosocial needs questions of the HESI exam the size of the study population prevents one from reaching a strong conclusion about the ability of the examinees' native language to predict the outcome of answers to psychosocial needs questions on the HESI exam.

Multiple regressions were conducted for each of the 459 psychosocial items. When compared to Caucasians, the test items varied as to whether or not there was a positive or negative correlation between native language and psychosocial needs scores. Several issues may have contributed to this finding including test item authorship, testing mechanics, and student motivation.

Discussion

The literature presented in this study emphasized the importance of ESL nurses to the United States nursing workforce. Buerhaus, Staiger, and Auerbach (2000) and The U.S. Census Bureau (2000) predict that the aging nursing workforce combined with the decreasing number of candidates who take the NCLEX exam each year will lead to

a serious nursing shortage that is unlikely to diminish before the year 2020 (Niebert & Young, 2005). The ESL nurse has been viewed as a possible resource for rectifying the predicted nursing shortage (Grossman, et al, 2000). The ESL nurse is also an important resource for the culturally diverse needs of the population of the United States.

The graduating nurse must view himself/herself as being self-efficacious in the identification of psychosocial needs of clients. If the nurse perceives himself/herself as less than efficacious, he or she may neglect the client's psychosocial needs and as a result the client's psychosocial needs will not be addressed. Lower scores on exams such as the HESI and NCLEX are likely to be associated with less attention to the client's psychosocial needs. Multiple studies have related the client's satisfaction with the health care provider and outcomes of care (Dieckhaus & Odesina, 2007; Lawson, Reelina, & Owen , 2006; McCauley, Bixby, & Naylor, 2006). A lack of self-efficacy on the part of the nurse provider could negatively influence the healthcare outcome.

The ESL nurse's ability to identify psychosocial issues and provide the appropriate interventions is related to the nurse's competency and self-efficacy. However, several issues point to the fact that nursing education must use external resources to address this problem. Traditionally, most nurses who pursue degrees beyond the baccalaureate degree choose a focal area such as a clinical specialty, administration, or education for their advanced degree. Many programs that focus on clinical specialty areas or administration do not include courses in curriculum development. Only half of nurse educators in baccalaureate programs and less than 6% of those who teach in associate degree programs hold doctoral degrees (National

League of Nursing, 2007). Some nurses do hold doctoral degrees in education, but many pursue education in other areas such as public health, or the social sciences. The recent interest in the Doctorate of Science in Nursing may only serve to continue this trend. Since two of the three major tracks for advanced degrees are in areas other than nursing education, it is plausible that many doctoral-prepared nurses are not equipped to develop curricula and instructional methods best suited to the needs of ESL nursing students. Nursing education can benefit from the expertise of health educators trained in the academic or clinical setting.

The literature reviewed in preparation for this study support the notion that ESL students experience significant difficulties in nursing school. There were no specific studies that addressed student performance on psychosocial needs questions. This study adds to the body of nursing education literature on ESL nursing students by suggesting that there are specific groups of ESL nursing students that are at risk for lowered performance on the HESI exam, specifically the psychosocial needs questions.

The HESI psychosocial needs questions relate to the student nurse's ability to appropriately respond to the requirements of those with emotional/psychosocial disorders/needs. Nurses, regardless, of clinical specialty must be capable of identifying and appropriately responding to the client's psychosocial needs. The identification of psychosocial issues is important to the welfare of the general population because as the population ages, the number of individuals with chronic illness will rise as well. Chronic illnesses are frequently associated with psychosocial issues that the nurse must be capable of addressing. In 1996, Hoffman, Rice, and Sung estimated that 88% of the

elderly suffered from at least one chronic illness. In 2001, 12.1% of Americans were reported to have at least one chronic illness (CDC, 2004). Almost 7% of children and adolescents have been diagnosed with a chronic illness. Not surprisingly, approximately 25% of the nation's poor suffer from chronic illnesses.

While clinicians agree on the importance of psychosocial needs, the literature indicates failure in achieving this goal. Grocki (2004) suggested that nursing programs are failing to teach students the psychosocial needs faced by clients. Failure of the nurse to address psychosocial issues in a timely manner places the client at risk for developing anxiety/stress related to the illness. As anxiety increases, the client's overall state of health is likely to decline. Weissman (2001) suggested that the traditional method of teaching students to avoid personal feelings and utilize emotional detachment prevents identification of relevant psychosocial needs.

Neal (2001) stated that a focus on returning the client to his/her pre-morbid level of functioning reinforces the failure to address psychosocial needs. The clinician's focus on restoring clients to pre-morbid level of function carries with it the risk of clients' expectations to function as they did prior to the onset of illness or injury. Loseth (In Kuebler, Berry, & Heidrich, 2002) added that psychosocial issues vary according to diagnosis, client age, primary support system involvement, and regional treatment philosophy and/or practices. Self-esteem, body image, and feelings of powerlessness and guilt impact one's psychosocial response to illness and overall ability to cope. Loss of physical endurance results in feelings of sadness, helplessness, hopelessness, and guilt. Ultimately, anxiety takes over as the client's coping abilities diminish and result

in maladaptive behaviors such as noncompliance, conflict with the primary support system, and decreased income. These changes, if not adequately addressed, may result in a diminished quality of life and disease prognosis.

Additionally, textbooks fail to teach psychosocial needs of chronic illness. Ferrell, Viarani, and Grant (1999) found that only 2% of nursing textbooks discuss end of life issues. Coles (1995) related the lack of emphasis on psychosocial needs to the failure to successfully teach students to individualize client care. The author goes on to suggest that use of a separate framework for chronic disease management education would resolve this issue. Following Varani and Grant's design, three terms: identification, psychosocial, and needs were entered into the Cumulative Index of Nursing and Allied Health Professional Data base (CINHAL). The search yielded 115 articles. Of the articles returned, the majority related to issues concerning children and adolescent chronic health needs. Oncology issues were the second most common topic. Articles related to infertility and the pueperium were the third greatest in number. From the topics returned in the search, it is reasonable to conclude that psychosocial issues related to chronic illness have not received adequate attention.

Issues within nursing school curriculums and on standardized exams such as the HESI and NCLEX also impact ESL student performance. Klisch (2000) reported that many ESL students feel that they need additional time on examinations. Additional exam time is a plausible accommodation for the nursing curriculum. However, one must question if it is a reasonable request for students when they take their licensure exam. Klisch went on to state that ESL students surveyed did not feel welcomed by

faculty. This suggests that nursing education's overall system of working with ESL students is still in need of modification. The failure to adequately prepare the nursing student to identify the psychosocial issues of chronic illness places the ESL nursing student at risk of failing that section of the HESI and NCLEX exams. Furthermore, the ESL students' performance is a product of their understanding of the question being asked. Morrison, Nibert, and Flick (2006) made mention of this in their discussion of HESI and NCLEX test question development.

Limitations

Data Limitations

One limitation of the data analyzed for this study relates to the fact that there is not an in depth analysis of each HESI examinee. The data presented is aggregate data. It is therefore assumed that the mean scores of each examinee vary independently. Furthermore the study assumes that there is a normal distribution of the data and that all data varies in a similar manner. The use of ANOVA calculations does not allow for the testing of individual scores. The Bonferroni post hoc test was used to test for a Type I error. The post hoc test determined that the data was found to be significant at the 95% confidence interval. This suggests and assumes that there was no significant difference among the individual scores that were aggregated from data harvesting and random sampling purposes. Furthermore, analysis of individual scores rather than an aggregate score would have produced more robust results. In addition, the data is limited because of the fact that there was no analysis of the items that were included in the HESI exam.

The presence or absence of cultural bias within the HESI questions themselves will impact the examinee's response to the question under scrutiny.

Population Limitations

Although the sample utilized for this study was large, it was not representative of the population of nurses within the United States. Forty-one percent of the study population reported their primary language as a language other than English. O'Neil, Marks, and Liu (2006) reported that approximately 6% of NCLEX candidates who took the exam between 2002 and 2004 reported a language other than English as their primary language. Approximately 42% of the sample population was male. Thus, the population is not representative of the general population with regard to gender. Asian examinees accounted for approximately 10% of the sample population, while HRSA (2004) reported that Asians comprise approximately 3% of the nursing workforce. Lastly, the largest age group from the study ranged between 30-34 years of age. HRSA (2004) reported that 45-49 year olds currently make up the largest portion of the nursing workforce. The HRSA (2004) data suggests that the population of nurses in the U.S. in 2004 indicates that the study sample is not representative of the study population.

A final area of consideration related to the outcome of this study is related to the differences in the definition of psychosocial issues from the eyes of the nurse and that of the health educator. The HESI exam focuses on the issues more related to the medical model of health care. Although professional nurses do not diagnose the client's illness, they frequently tailor their interventions in such a way that the management of the client's symptoms as they relate to the medical diagnosis. Since the medical model

focuses on the treatment of the ill individual, nurses will most likely focus on issues related to the client while he/she is receiving health care. Furthermore, this may in part explain why psychosocial needs fundamental to chronic medical conditions are often overlooked during the treatment of these conditions.

Following the medical model, it would be unlikely that the nurse or physician would address psychosocial issues of chronic medical conditions before the client actually has symptoms of mood or anxiety disorders such as Major Depressive Disorders or Generalized Anxiety Disorder. This is the point at which health educators' philosophy differs from that of the medical model. Although the medical model focuses on treatment of the condition and the management of psychological distress if, and when it occurs; the health educator elects to focus on tertiary care. This means that the health educator focuses on preventing the psychosocial issues before they occur. Within the realm of the client's care, health educators focus on assessment of the client's beliefs about his/her illness. This is a fundamental premise of the Health Belief Model. Health Educators insure that clients have the ability to care for their own needs as much as possible, a premise fundamental to Social Cognitive Theory. Health Educators focus on stress management. Psychological stress is inherent to chronic illness. Taking this premise into the arena of professional education, the health educators' knowledge of how these issues relate to chronic illness provide the health educator with a different perspective from the medical model, and one that nursing and medical students as well as students and clinicians of other ancillary specialties such as rehabilitation therapists, nutritionists, social workers, and pharmacists may benefit from

because these can be considered part of the health care team that interacts with clients on a personal level.

From the data and discussion presented in this study, it can be concluded that ESL students appear to perform less efficiently than non-ESL students on the psychosocial needs questions of the HESI exam. At the least, the data suggests that the issue needs further exploration and may indeed identify native language as a risk factor for failure to fully comprehend issues related to psychosocial nursing. Edwards and Davis (2006) declared that cultural and language differences often compound adaptation to the clinical setting and called for an extended period of orientation for the ESL nurse. Although this is a reasonable recommendation, the costs of doing so make this a less than optimal solution. Thus, professional nursing education programs must be challenged to develop creative ways to overcome the language competency issues in the nursing curriculum. The value of ESL nurses to the multicultural society in which we live must be recognized and nurtured before the student matriculates into the nursing profession. By doing so, the retention rate for ESL nurses will rise, the size of the nursing workforce will grow, and the health care consumer will experience a greater level of satisfaction.

Recommendations for Future Study

The identification of and intervention in addressing psychosocial issues of chronic illness must adhere to the time-honored traditions of the nursing process. Nurses utilize the nursing process to assess, diagnose, plan, intervene, and evaluate care in much the same way that health educators plan, implement, and evaluate health

promotion programs. This common language sets the stage for collaboration between the two disciplines for new instructional methods to meet the needs of the ESL nurses who are attempting to grasp concepts related to the identification of psychosocial needs. As stated earlier in this chapter, the fact that there is a lack of focus on psychosocial issues of chronic illness in nursing text books suggest that the ESL nursing student's difficulty with psychosocial issues may also be a problem for non-ESL nurses. Health educators can be beneficial to nurse educators because of their expertise in health-related curriculum development.

One issue that may impede the identification of psychosocial issues is the goal of care. Nurse educators tend to focus on techniques to return the client to the pre-morbid level of functioning. The nursing assessment leads to the development of a nursing diagnosis. The student is then expected to plan care that will return the client to his/her pre-morbid level of function and yet stay within the realm of the nursing scope of practice.

The focus on returning the client to a pre-morbid level of functioning fails to consider the fact that returning to a pre-morbid level of functioning is often not the norm for clients with psychosocial issues. The focus of the nursing diagnosis needs to rest on the alleviation of psychological distortions that have lead to a deficit in the client's social skills. The focus is not on returning the individual to his/her pre-morbid level of function. Instead the focus is on alleviating the social deficits brought on by the client's psychological misinterpretations. The goal of the clinician-client interaction is

to alter the individual's pattern of initiating and maintaining social relationships, not healing the individual's physical infirmity.

Nursing programs are concentrated and students are expected to synthesize a large volume of information in a relatively short period of time. As scientific knowledge changes, new standards of care are put into practice. Nursing faculty must incorporate these changes into an already concentrated curriculum. Nursing faculty must develop an instructional method that simultaneously teaches changes in scientific knowledge, standards of care, and psychosocial issues. One method of meeting this deficit might be through the use of a concept map.

Carpenito-Moyet (2007) utilizes concept maps for the purpose of teaching the nursing process to nursing students. Providing the nursing student with the framework for a concept map that identifies psychosocial issues and expecting the student to use that tool as part of the nursing assessment and plan of care will mandate that the student routinely use the tool. Through repetition, the learner gradually incorporates the task into his/her repertoire of learned behaviors. Requiring the student to complete a psychosocial map for each client fulfills Bandura's premise that learning must be re-enforced before it can become a naturally occurring behavior. Furthermore, the student will gain a greater appreciation for the value of holistic care when required to include psychosocial issues in concept mapping.

The concept map serves as a tool for the modeling behavior that Bandura described in his discussion of Social Learning Theory. While the tool serves as a model for the student, the student's demonstrated interest in the client's psychosocial needs

will serve to reassure the client that psychosocial stability is important to overall health. The nursing instructor sets goals for the student. The student in turn, sets goals with the client for the purpose of improving the client's quality of life. The student grows to appreciate the value of obtainable goals. This results in student, client, and instructor satisfaction. Ultimately, both the student and client will become more efficacious and perceive themselves as capable of accomplishing the task at hand because of their success in solving the problem in question.

Inclusion of the student's feelings, beliefs, and behaviors in the concept map will serve as a tool for clarifying the student's values (Carpenito-Moyet, 2007). The concept map will also encourage the student to identify cultural factors that impact both the client and student's style of interaction and more accurately reflect on these differences. Requiring the student to complete a concept map related to the client's psychosocial issues may also serve to eliminate the student's distress regarding the nurse-client interaction. The alleviation of even a small amount of student stress will improve the student's learning experience and the client's outcome of care.

The health educator is interested in what the client identifies as his/her needs. For nursing, this is classified as subjective data. Concept maps can be useful in helping the student identify subjective cues and more accurately document objective interpretations of the client's data. Carpenito-Moyet (2006) declared that differentiating the student's perception of client from the client's perception of his/her self will improve the outcome of the interaction. This is extremely important in the

identification of psychosocial issues because the decisions regarding the client's care are more dependent on what the client feels as opposed to what the nurse views.

Once the client's perception of his/her needs is identified, the student can then develop and implement strategies that alleviate the client's problem (Carpenito-Moyet, 2006). Inclusion of each problem within the concept map would encourage the student to prioritize the client's psychosocial needs more efficiently. The process of prioritizing the problems will provide the student with a visual representation that encourages the planning care that is related to the most urgent client need.

The literature related to the use of concept maps in nursing education is somewhat limited. Kinchin & Hay (2005) declared that concept mapping is a meaningful, but rarely used tool in nursing education. The researchers used concept maps in a collaborative learning experience and found that the method was useful. All and Havens (1997) stated that concept maps allow students to identify disease-related concepts before the student encounters the concept in the practicum setting. Hawks (1991) noted that concept analysis empowers the nursing student to think critically and independently. Cravener (1997) applied concept mapping within a large class on psychosocial concepts of nursing and concluded that the concept mapping method was a viable strategy for converting learners from passive to active classroom participants. This falls in line with constructivism which is an integral teaching philosophy utilized in health education.

Health educators have also embraced the use of concept maps in health education. Wiginton (1997) suggested that concept maps allowed the health educator to

assess the student's understanding of the client's illness. The author went on to suggest that the use of a concept map holds the potential of encouraging the student to work collaboratively with the client. This is in direct opposition notion of performing a *task* on a client. In 1999, Wiginton discussed the importance of incorporate instructional methods that allow the health educator to better understand the student's psychosocial needs. This same premise is valid for helping the student nurse to better understand the client's psychosocial issues. Furthermore, as Wiginton (1999) suggested individuals with chronic illnesses such as lupus will all have a personal concept of the psychosocial impact of the illness. A fourth point supporting the use of concept maps can be drawn from Wiginton's 2004 article on shame and interpersonal communication skills. Given the fact that the ESL nursing student is already at risk for less that adequate communication skills; the development of a concept map would encourage the student nurse to practice therapeutic communication skills.

Other health educators have also discussed the value of concept mapping. Rohwer and Wanderberg (2005) discussed the value of using concept maps for ESL learners in health education classes. The researchers concluded that concept mapping improved the ESL learner's academic performance in health education classes. Kools, van de Wiel, Ruiter, Cruts, & Kok (2006) suggested that the graphic representations utilized in the development of concept maps would improve the learner's comprehension of health education textbooks. Linnan, Sterba, Lee, Bontempi, Yang, and Crump (2005) discussed the concept of planning and professional preparation of health educators. The researchers concluded their study by stating that the PRECEDE-

PROCEED and PATCH model were the models most often used to teach both graduate and undergraduate health education majors about program planning. Although the study did not directly discuss the use of a concept map, both of these methods entail the use of a variation of concept mapping for the purpose of program planning.

Conclusion

The results of this study indicate that there is a statistically significant difference in the HESI psychosocial scores of ESL and non-ESL examinees. It can be concluded that ethnic background may be a predictor of student groups at risk for psychosocial needs scores that are not truly reflective of the student's capabilities. There are many reasons that this may be true. Differences in cultural beliefs may be rectified by the adaptation of a uniform method for teaching psychosocial needs to both ESL and non-ESL learners.

The use of a concept map to help students identify and intervene in the identification of psychosocial issues is a potential instructional method for alleviating this language based disparity. The concept map is a viable instructional method because it can integrate the nursing process and the student's personal belief system into the development of a plan of care that is based on the client's perceived needs. Furthermore, the use of the concept map can assist the student in understanding the relationship between the student's personal belief/value system and the client. In addition, the nursing process can be easily incorporated into the concept mapping process. It can be concluded that a concept map would allow the student to recognize the student's personal values/beliefs, and clinical information important to the delivery

of nursing care while simultaneously recognizing the client's needs and values/belief system and guide the student through the process of addressing client psychosocial needs. As pointed out by Cox, this would produce a more satisfactory outcome of the healthcare experience. Health educators have also embraced the use of concept maps in health education. Wiginton (1997) suggested that concept maps allowed the health educator to assess the student's understanding of the client's illness. The author went on to suggest that the use of a concept map holds the potential of encouraging the student to work collaboratively with the client. This is in direct opposition notion of performing a *task* on a client and promotes a more holistic mutually satisfying experience for both the client and the nurse.

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APPENDIX A

HESI CONTRACTUAL AGREEMENT

November 15, 2006

Kristin Wiginton, Ph.D.
Texas Woman's University (TWU)
304 Administration Drive
P. O. Box 425589
Denton, TX 76204

Re: Approval for Dissertation Data Collection for Eugenia H.Zelanko

Dear Dr. Wiginton:

This letter indicates my unconditional approval for Eugenia H. Zelanko, doctoral candidate enrolled in your program in the Health Studies Program at TWU, to collect data for her dissertation study stored within the Elsevier Review & Testing (HESI) computerized database. Ms. Zelanko will be using test scores obtained from administrations of the HESI Exit Exam (E^2) during academic year 2006 and responses from the HESI Annual Survey of nursing program administrators obtained in 2006 regarding the NCLEX outcomes of their graduates that have been entered in the HESI database. No identifying information, such as student names, will be required for the data analysis. I am pleased that Ms. Zelanko has chosen to conduct this study of the HESI E^2 to meet her dissertation requirements, and I look forward to reading the final version of the dissertation. Please do not hesitate to contact me at 713-346-6913, or via e-mail, m.yoho@elsevier.com, if you have any questions regarding this approval.

Sincerely,

Mary J. Yoho, PhD, RN
Director of Research, Nursing

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