# STUDY TO DETERMINE SIGNIFICANT DIFFERENCES IN ANXIETY LEVELS OF NURSING STUDENTS BASED ON AGE, GENDER, LEVEL OF STUDY, AND PRIMARY LANGUAGE STATUS

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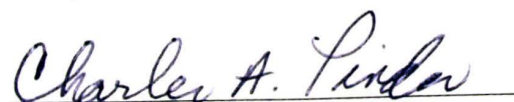
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# A STUDY TO DETERMINE SIGNIFICANT DIFFERENCES IN

# ANXIETY LEVELS OF NURSING STUDENTS BASED ON

# AGE, GENDER, LEVEL OF STUDY, AND PRIMARY LANGUAGE STATUS

A Field Study Presented to

Graduate Study Faculty

Austin Peay State University

Clarksville, Tennessee

In Partial Fulfillment of

The Requirements for the Degree

Of Education Specialist

by

Martha Ann Fiese

# DEDICATION

This study is dedicated to my husband, six children, ten grandchildren, and two great-grandchildren. To my husband, George, for tolerating the mountainous stacks of papers and books, and the endless years that I have been going to school. To my children, Audrea, Cory, Jennifer, Janice, Bruce, and Marty, for all of the support and encouragement they have provided. To my grandchildren, and great-grandchildren for their understanding when I was studying instead of spending time with them. Granny is home now.

# ACKNOWLEDGEMENTS

I would like to express my sincere appreciation and gratitude to Dr. Donald Luck, Chair of my field study committee. I have learned a great deal from his years of experience, his even mood and patient attitude, and his wisdom.

I would also like to thank the other members of my committee, Dr. Carlette Hardin, and Associate Professor Danielle White. Their suggestions and advice were invaluable in the successful completion of my study.

And lastly, I wish to extend a very special thank you to Dr. Doris Davenport, who was always available, supported my efforts, and provided encouragement and guidance during my field study experience. She gave me that extra boost to keep my head above water when it seemed that I was drowning in the process.

Abstract

The purpose of this study was to identify differences in anxiety levels of nursing students based on age, gender, level of study, and primary language status. In an effort to identify groups of students who experienced greater levels of anxiety and who could potentially benefit from participation in support programs, the investigator explored whether Liebowitz Social Anxiety Scale Total Scores of demographically clustered participant groups differed significantly at the $p = .05$ confidence level. A convenience sample of 81 baccalaureate, nursing students completed demographic questionnaires and Liebowitz Social Anxiety Scales. Data was analyzed utilizing Analysis of Variance (ANOVA) and measures of central tendencies. Results of this study indicated that there was no statistically significant difference in the level of anxiety experienced by nursing students based on age, or level of study at the $p = .05$ confidence level.

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CHAPTER I

Introduction

People are living to an older age and medical technology allows for survival of individuals with medical problems who would have, in the past, failed to survive. The population of the United States is becoming increasingly multicultural and diverse. There is a shortage of registered nurses (RNs) to care for the expanding population. The RN population is lagging behind in both numbers of nurses and in the proportions of multicultural professionals. Even though more minority students are entering the schools of nursing, the culture of the current educational system is not consistent with the culture of these diverse students. This and other conflicts can lead to high levels of anxiety.

High levels of anxiety lead to decreased cognitive functioning, lower grades, negative self-image, missed classes, and higher drop out rates. Support programs and services to reduce anxiety levels help improve concentration, grade point averages, self-esteem, and retention rates. In an effort to identify individuals with high anxiety levels, provide assistance to them, and therefore promote the successful completion of nursing programs, this study aspires to determine if there are significant differences in the levels of anxiety of nursing students based on age, gender, level of study in the nursing program, and primary language.

Twenge (2001) found that college students experienced increased anxiety. Studies have indicated that anxiety can interfere with learning (Cheng, 1999; Evans, 2004; Horwitz, 2000; Osborne, 2001; Sullivan, 2002) and student retention (Crawford, 2001; Lockie & Burke, 1999) but psychological and educational counseling can reduce anxiety, increase self-esteem, and improve grade point average over time (Bentz, Williamson, &

Franks, 2004; Evans, 2004; Lockie et al., 1999; Sharif & Armitage, 2004). Identification of significant differences in anxiety levels of nursing students based on age, gender, grade level, and English as a Second Language (ESL) status could provide data to assist counselors and advisors in referring groups of high anxiety students to academic support personnel. Support programs may then be focused on these high anxiety level groups to improve support and retention of students who may be at increased risk of being academically unsuccessful due to anxiety levels.

The demographics of the nursing student population have changed dramatically in the past 30 years. Prior to the 1980's, graduating nurses in the United States were traditionally young, single, white, English speaking females. In 1984 the average age of nursing students at graduation was 23.9 years, since 1995 the average age has risen to 30.9 years. Between 1980 and 2000, there was a 226% increase in the number of men in the nursing profession (Spratley, Johnson, Sochelski, Fritz, & Spencer, 2000). According to the American Association of Colleges of Nursing (2002), while the number of minority nursing students has increased to 22.5%, the working registered nurse population still remains composed of only 12% minorities (Spratley et al., 2000).

Studies indicate levels of anxiety in college students have increased. These high anxiety levels are noted especially in minority students and nontraditional students. Twenge (2001) compared studies done by the Higher Education Research Institute at UCLA in 1985 and 1999 and found that in 1999 30.2% of freshmen indicated they often felt overwhelmed, while only 16% of students gave the same answer in 1985. Female college students scored significantly higher than males on anxiety. First generation

college students scored higher in anxiety than did students who had close relatives who had attended college (Hojat, Glaser, Xu, Veloski & Christian, 1999).

*Statement of Problem*

Anxiety disrupts the learning process (Horwitz, 2000), reduces course grades (Cheng, 1999), promotes feelings of inadequacy and increases stress levels (Sullivan, 2002). Anxiety can lead to poor class attendance, failure to utilize available resources and support systems, depression, and even dropping out (Crawford, 2001). Identifying high risk can lead to interventions. Support programs and interventions to reduce anxiety were noted to reduce anxiety levels, improve both grades and self-esteem (Lockie et al., 1999; Sharif et al., 2004; Yonge, Myrick & Haase, 2002) and reduce pessimistic attitudes of students (Bentz et al., 2004).

*Purpose of the Study*

The purpose of this descriptive study was to identify if significant differences in anxiety levels in nursing students existed based on age, gender, level of study in the nursing program, and primary language status.

*Significance of the Study*

This study is significant to nursing educators as an initial step in employing methods and programs to improve nursing student retention and success. Identification of significant differences in anxiety levels of nursing students based on age, gender, level of study in the nursing program, and primary language status would potentially provide data to assist student advisors in referring groups of high anxiety students to academic support personnel where programs may be focused to improve support and retention of students who may be at increased risk of being academically unsuccessful due to anxiety levels.

This study is of significant value to the public at large as a method to increase the numbers of successful graduates who become registered nurses and provide medical and emotional care to the general population.

*Research Questions*

1. Is there a significant difference between anxiety levels of nursing students and age?

2. Is there a significant difference between anxiety levels of nursing students and gender?

3. Is there a significant difference between anxiety levels of nursing students and level of study in the nursing program?

4. Is there a significant difference between anxiety levels of nursing students and primary language status?

*Hypotheses*

1. There is no significant difference between anxiety levels of nursing students and age.

2. There is no significant difference between anxiety levels of nursing students and gender.

3. There is no significant difference between anxiety levels of nursing student's level of study in the nursing program.

4. There is no significant difference between anxiety levels of nursing students and primary language status.

*Limitations*

Participants of this study were a convenience sample of students attending Austin Peay State University (APSU) at the time of the study and who had identified nursing as their academic major. This was a self-report study. Responses were self-reported and limited to the participant's willingness to answer honestly and accurately. Generalizations were limited to this group.

*Assumptions*

For purposes of study the following assumptions were made

1. The respondent self-reported information accurately.
2. Participants were receiving similar advisement and similar course instruction.

*Definitions of Terms*

Some terms relating to this study were defined to promote a common understanding for the researcher and participants. Specific concepts identified by Justice and Dornan (2001) and by Dill and Henley (1998) relating to traditional and nontraditional students will be used. The following terms were identified for this study:

1. Nursing Students were identified as students enrolled in the school of nursing at APSU with nursing identified as the major field of study.
2. A self-test anxiety instrument measured level of Anxiety.
3. Age was identified by age reported on a demographic data sheet.
4. Traditional students included all study participants ages 18 to 23 (Justice et al., 2001; Dill et al., 1998).

5. Nontraditional students included all study participants ages 24 to 64 (Justice et al., 2001; Dill et al., 1998).

6. Gender was identified as self-reported male or female on the demographic questionnaire.

7. A sophomore was defined as a student with an identified nursing major who was enrolled in sophomore (2000 level) nursing classes.

8. A junior was defined as a student with an identified nursing major who was enrolled in junior (3000 level) nursing classes.

9. A senior was defined as a student with an identified nursing major who was enrolled in senior (4000 level) nursing classes.

10. ESL status was self-reported status of primary language or secondary language on a demographic questionnaire.

CHAPTER II

Review of Literature

The purpose of this descriptive study was to identify if significant differences in anxiety levels in nursing students existed based on age, gender, level of study in the nursing program, and primary language status. The population of the US is becoming increasingly diverse, individuals are living longer, and health care needs are increasing (Amerson & Burgins, 2005; Davidhizar & Giger, 2001; Spratley et al., 2000). There is a need for increased numbers of registered nurses and increased diversity among registered nurses in order to care for the growing population and its evolving diversity (American Association of Colleges of Nursing (AACN), 2002).

Traditionally, nursing students have been young, white, middle-class females. With the expanding opportunities for these and other individuals in the professional and work force setting, fewer young, white females are choosing to enter the field of nursing (AACN, 2002; National Advisory Council on Nurse Education and Practice, 2000; Pew Health Professions Commission, 1998; Department of Health and Human Services (DHHS), 2000; O'Lynn, 2004). Aiken, Clark, Sloane, Sochalski, Busse, Clarke, Giovannetti, Hunt, Rafferty, & Shamian (2001) reported that as many as 20% of nurses in the United States were planning on leaving their nursing jobs within the next year. To keep up with the demands for numbers and diversity of nurses, nursing schools must expand their student search to include candidates who are older, different genders, and have diverse cultural backgrounds (Beilack, 2005; DHHS, 2000; Harrison, 2004; Lockie et al., 1999; Villarruel, Canales, & Torres, 2001).

Many college students with the characteristics that would allow for increased diversity in the nursing profession also have higher rates of attrition in our current educational systems (Crawford, 2001; Evans, 2004; Keogh & French, 2001; Gwele & Uys, 1998; Osborne, 2001). A high level of anxiety has been identified as one factor that hinders student success (Evans, 2004; Sullivan, 2002; Horwitz, 2000; MacIntyre, Noels, & Clement, 1997). Some college students experience high anxiety levels which can lead to decreased levels of cognitive function, feelings of inadequacy, depression, and higher drop out levels (Puskar, Sereika, & Haller, 2003; Cheng, 1999; Steele, 1997). Studies have been documented that demonstrate support measures can decrease levels of anxiety and improve student retention rates (Bentz et al., 2004; Brady & Sherrod, 2003; Crawford, 2001; Evans, 2004; Gwele et al., 1998; Harrison, 2004; Lockie et al., 1999; Sharif et al., 2004; Ofori & Charlton, 2002; Omigbodon, Onibokun, Yusuf, Odukogbe, & Omigbodun, 2004; Yonge et al., 2002).

With this urgent need for more nurses in the workforce, schools of nursing can ill afford to continue to fail to provide the educational support and opportunities for groups of nursing students to successfully develop into effectively functioning registered nurses. By determining differences in anxiety levels of nursing students based on age, gender, level of study in the nursing program, and primary language status, groups of students who may be experiencing increased levels of anxiety can potentially be identified and support programs put into place to increase the retention and success rates of these nursing students.

Current literature is inconclusive and reveals a paucity of comprehensive research seeking to identify if significant differences in anxiety levels based on age, gender, level

of study in the nursing program, and primary language exists among nursing students. A review of available literature revealed studies on the existence of anxiety in college students (Evans, 2004; Harrison, 2004; Omigbodon et al., 2004; Puskar, et al., 2003), the effects of anxiety on successful functioning of these students (Bentz et al., 2004; Mat Daud, Mat Daud, & Abu Kassim, 2005), and studies that have demonstrated methods to decrease anxiety levels and improve the functioning of college students (Bentz et al., 2004; Evans, 2004; Harrison, 2004; Omigbodon et al., 2004; Sharif et al., 2004).

*Existence of Anxiety in College Students*

Abouserie (1994) explored sources and levels of stress in 675 sophomore students from a university in Wales using self- reported questionnaires. In this study female students indicated higher levels of stress and anxiety than males (Abouserie, 1994).

Andrews, & Wilding (2004) studied relation of depression and anxiety to life-stress and achievement in 351 undergraduates from a university in England. Self-reported questionnaires were administered one month before university entry and then mid-course. Results indicated that on the mid-course questionnaire, 20% of students experienced a clinically significant increase in levels of anxiety over their pre-college levels (Andrews et al., 2004).

In a Ph. D. dissertation Colorado State University, Bachman (1998) sought to identify factors that influence performance of nursing students. Seventy-eight traditional and nontraditional, first year, second-semester nursing students at a community college were surveyed. Self-reported questionnaires measuring anxiety and other factors were completed. Results of this study indicated that nursing students experienced a considerably higher stress level than undergraduate students in general. No significant

relationship between participants self reported anxiety and performance was noted (Bachman, 1998).

Barberia, Fernandez-Frias, Suarez-Xlua, & Saavedra, (2004) explored anxiety variables in 110, first, third, and fifth year dental students. Eight scales of A Inventory of Anxiety Situations and Responses were administered. Results indicated that anxiety levels in women were higher than those in men. Anxiety in the third academic year was higher than in the first year. The lowest levels of anxiety were found in the fifth academic year (Barberia, et al., 2004).

Cook, Bewick, Bakham, Bradley, & Audin (2006) surveyed 4,699 university freshmen students using an open cohort design. Surveys were administered and data was collected on four occasions on psychological well being and use of support services provided by the university (baseline survey in August prior to beginning their university experience, after one month of school, at the end of the first semester, and then again at the end of the second semester). Results indicated that there were no significant differences in psychological well being between any of the demographic variables of age, gender, and ethnicity. Average anxiety levels are significantly elevated for students on all surveys as compared to average anxiety levels in the general population (Cook, et al., 2006).

A study by Dill et al. (1998) of 94 traditional and non-traditional college students utilizing a self-reported questionnaire measurement identified increased levels of anxiety in college students. Data suggested that while both traditional and non-traditional students experienced anxiety, there are significant differences in their perceptions of stressors (Dill et al., 1998).

Dyrbye, Thomas, & Shanafelt (2006) reviewed articles published between January 1980 and May 2005. Overall studies suggested psychological distress including anxiety to be higher in females than males and that there are increased levels of stress and anxiety in college students than in the general public (Dyrbye, et al., 2006).

Evans (2004), in a qualitative semi-structured interview study of seven Hispanic/Latino nursing students indicated they experienced anxiety concerning their ability to succeed, and that the lack of a welcoming, understanding, and supportive demeanor by faculty in schools of nursing was an identified factor for their increased anxiety and troubling experience in nursing school (Evans, 2004).

Gwele et al. (1998), in a comparative descriptive study of 101 nursing students, noted that the large academic workload added to the demands of the clinical experience predispose many nursing students to high levels of stress and anxiety. The more stressed students felt, the more threatening and harmful they felt the educational program was (Gwele et al., 1998).

In a qualitative study of ten non-traditional female nursing students Harrison (2004) concluded that reentry women experienced increased levels of anxiety upon returning to college. Stevenson's Margin-in-Life-Scales and phenomenological analysis of interviews were utilized to collect this data (Harrison, 2004).

Haycock, McCarthy, & Skay (1998) surveyed 141 university students from 18-54 years in age from a mid-western university. Completing self-reported questionnaires, students reported high levels of state anxiety ($M = 45.96$, $SD = 12.24$) and moderate levels of trait anxiety ($M=41.61$, $SD = 10.57$). No significant differences were noted in anxiety and demographic variables (Haycock et al., 1998).

In an Ed. D dissertation for the University of Memphis, Hight (1996) described a comparative study of anxiety levels in traditional and non-traditional undergraduate nursing students in Tennessee. Survey participants consisted of 689 undergraduate nursing students who completed self-reported questionnaires (State-Trait Anxiety Inventory). Data results demonstrated statistically significant differences in state/trait anxiety in traditional and non-traditional students (Hight, 1996)

Kim (1997), in a dissertation for Ph. D. at the University of Wisconsin explored perceived sources of anxiety in the clinical setting of 61 senior nursing students using a descriptive correlation design and self-reported questionnaires (STAI). While results indicated that 36% (n = 22) of participants experienced a moderate level of anxiety, no significant relationship between demographic variables and trait anxiety and clinical experiences were identified (Kim, 1997).

Masson, Hoyois, Cadot, Nahama, Petit, & Ansseau, (2004) studied correlation of test anxiety and gender on 616 freshmen students at a university in Belgium using self-reported questionnaires. Results indicated that anxiety and performance value were scored higher in women than in men (Masson, et al., 2004).

In a research study of 249 midwestern college students, Misra, & McKean (2000) found that freshmen and sophomore level students experienced greater levels of anxiety and stress than did junior and senior level students.

Omigbodon et al. (2004) used a self-reported questionnaire to survey 77 college nursing students. Results indicated that nursing students experience high levels of anxiety and stress. Of these participants, 58% of participants indicated that they felt counseling could help (Omigbodon et al., 2004).

Upon analysis of publically available data from the National Center for Educational Statistics, Osborne (2001) found that in a sample of 28,240 students up to 41% variance in achievement scores was attributable to anxiety. Results also indicated that anxiety seemed to explain significant portions of racial and gender differences in academic performance (Osborne, 2001).

Puskar, et al. (2003) published a self-reported survey study of 466 rural adolescents that indicated that females tend to score higher anxiety levels than males.

Rawson, & Bloomer (1994), studied relationship in 184 college undergraduates between stress, anxiety, depression, and physical illness via year in school and gender. A self-reported instrument (STAI) was used to measure anxiety levels. Results indicated that there were differences in stress and anxiety by year of school with the highest mean level of anxiety being experienced by sophomores (M = 45.098, SD = 9.609) followed by seniors (M = 41.111, SD = 9.636), freshmen (M = 39.688, SD = 8.621) and juniors (M = 38.733, SD = 8.145). Significant differences were found between anxiety and illness, stress and illness, and depression and illness. No significant gender difference was found for anxiety (Rawson, et al., 1994).

Rosenthal, & Schreiner (2000) explored levels of anger, anxiety and depression in 595 ethnically diverse, urban, freshmen college students. Results indicated that while women's levels of symptoms were slightly higher than men's, there was no significant difference in gender, age or ethnicity in relation to levels of anxiety (Rosenthal, et al., 2000).

Townsend, Moore, Tuck, & Wilton (1998) explored self-concept and anxiety in 153 university students attending a second-year course in educational psychology.

Participants completed self-report questionnaire to assess anxiety levels. Data indicated that although levels of anxiety among participants were high, there were no significant differences in anxiety levels and gender (Townsend et al., 1998)

*Effects of Anxiety on Successful Functioning of Students*

Studies indicate that anxious students have lower self-esteem, poor self-image, and perceive situations as more stressful and themselves as inadequate. These perceptions lead to higher anxiety, distractibility, decreased cognitive functions and performance, lower evaluations, personal embarrassment and failure, and self-perpetuating confirmation of these low expectations and low self-worth (Cheng, 1999; Crawford, 2001; MacIntyre et al., 1997; Misra et al., 2000; Osborne, 2001; Sullivan, 2002; Steel, 1997).

In a Ph. D. dissertation Colorado State University, Bachman (1998) sought to identify factors that influence performance of nursing students. Seventy-eight traditional and nontraditional, first year, second-semester nursing students at a community college were surveyed. Self-reported questionnaires measuring anxiety and other factors were completed. No significant relationship between participants self reported anxiety and performance was noted.

Cheng (1999) surveyed anxiety levels of 433 Taiwanese English majors (freshmen, sophomores and seniors from 17 to 30 years of age) from four universities in Taiwan using self-reported questionnaires. Results indicated a negative correlation between anxiety levels and performance course grades (Cheng, 1999).

In a dissertation for D. N. Sc for Widener University School of Nursing, Cook (2000) used a descriptive correlational and comparative study with 229 junior and senior

nursing students from a random sampling of 10 BSN programs to evaluate students'
perception of teaching behaviors. Data from this study indicated that students'
perceptions of state anxiety were lower when they perceived teaching behaviors to be
more inviting and student friendly (Cook, 2000).

Cook (2005) published an article describing her study of 229 junior and senior
nursing students. Self-reported questionnaires were utilized to measure state anxiety.
Findings suggested that teachers should be fully aware of how their behaviors are
perceived by and influence the levels of student anxiety (Cook, 2005).

Gerdes, & Mallinckrodt (1994) in an effort to identify factors that could be used
to identify students who were at risk of academic separation, collected data on 232
traditional students at three points in time. Study participants completed self-reported
questionnaires one month prior to initial enrollment, and again at seven weeks into their
first semester. Six years later the investigator evaluated transcripts to determine academic
progress and success Results indicated that freedom from anxiety was one of the best
predictors of student retention (Gerdes, et al., 1994).

Justice et al. (2001) studied 95 undergraduate college students from a psychology
class in a university in Southeastern United States. Participants included male and female,
and traditional and nontraditional age. Self-reported questionnaires were utilized to
collect data. Results indicated that there were no significant differences in age groups or
gender as compared to anxiety levels. Anxiety was negatively correlated with
performance for both female, $r(59)=-.33$, $p< .01$ and male students, $r(34) = - .38$, $p<.05$
and for younger, $r(56) = -.39$, $p<.01$, and older students, $r(35) = -.33$, $p < .05$. (Justice, et
al., 2001).

Keogh et al. (2001) studied the effects of test anxiety on performance. A group of 72 undergraduate college students from England participated. Initially a self-reported questionnaire on state and trait anxiety (STAI) and then a Test Anxiety Scale was administered to participants who were randomly assigned to different anxiety producing and distraction conditions. It was found that students experiencing high anxiety levels demonstrated impaired performance (Keogh et al., 2001).

In a study of 37 Anglophone university students in Canada, MacIntyre et al. (1997) used self-reported questionnaires and proficiency tests to determine if any correlation existed between anxiety and competence in language. Results demonstrated a negative correlation between anxiety and competence. Anxious students also tended to underestimate their level of competence (MacIntyre et al., 1997).

Using a correlational research design, Mat Daud, Mat Daud, & Abu Kassim (2005) studied 186 third year college students to evaluate the relationship between writing apprehension and writing performance. The study utilized a writing apprehension test to measure writing anxiety and these results of this test were compared to the students' proficiency on the final writing exam. Results indicated anxiety was negatively related to performance (Mat Daud et al., 2005)

Upon analysis of publicly available data from the National Center for Educational Statistics, Osborne (2001) found that in a sample of 28,240 students up to 41% variance in achievement scores was attributable to anxiety. Results also indicated that anxiety seemed to explain significant portions of racial and gender differences in academic performance (Osborne, 2001). Participants with high anxiety levels scored lower than less anxious students on evaluative tasks (Osborne, 2001).

Puskar, et al. (2003) published a self-reported survey study of 466 rural adolescents that indicated that females tend to score higher anxiety levels than males. Data indicated that anxiety symptoms strongly correlated with both physical complaints and depression. High levels of anxiety in adolescents tend to be associated with a greater number of occurrences and higher levels of severity of problems related to mood and behaviors and a greater number of somatic complaints leading to possible problems with attendance and performance (Puskar, et al., 2003).

In a dissertation for Ph. D. at the University of Oklahoma, Rambo (1997) recruited 83 female, senior baccalaureate nursing students from two universities. STAI self reported questionnaire. The study sought to determine if there were significant correlations between high levels of self-efficacy and higher perceptions of learning and between high levels of anxiety and lower perceptions of learning. Results concluded that high levels of anxiety and lower perceptions of learning were negatively correlated (Rambo, 1997).

Sullivan (2002) recruited 24 college students for his study on the assessment and ranking of attention and memory skills as a function of their level of test anxiety using a computer database tool called Experimenetrix. Results indicated that participants with high anxiety levels demonstrated some cognitive performance deficits, experienced some false memory, and reported more intrusive thoughts relative to participants with low anxiety levels. Participants who were identified as experiencing anxiety were more likely to perform poorly in evaluated tasks (Sullivan, 2002).

*Methods to Decrease Anxiety and Improve Student Functioning*

Bessett (1997) surveyed 32 nursing students in various schools to investigate strategies used to enhance enrollment, retention, and graduation of minorities in undergraduate and graduate programs of nursing. Lack of support services and mentors was identified as a contributing factor to increased levels of anxiety (Bessett, 1997).

In a repeat measures study by Cook, et al. (2006) (N = 4,699) results indicated that while average anxiety levels were significantly elevated for students on all surveys as compared to average anxiety levels in the general population, only 3% of surveyed students utilized available university support services. Of the support service users, 62% indicated anxiety scores that ranged within the lower 50% of the survey population

Evans (2004), in a qualitative semi-structured interview study of seven Hispanic/Latino nursing students indicated that a caring and connection between teacher and minority student improve nursing student retention.

The study by Lockie et al. (1999) indicated that increased retention rates, increased grade point averages, and increased levels of satisfaction were demonstrated in a study of 210 at risk nursing students who engaged in a comprehensive academic retention program. Programs that increase opportunities to interact with faculty, staff, and peers and to develop connections and support systems early have improved success rates of participating nursing students (Lockie et al., 1999).

Misra, et al. (2000) utilized a study sample of 249 undergraduate students identified by gender and level of study. Participants were randomly selected. Data was collected using four self-reported-questionnaires. Investigators explored anxiety as related to level of study and age. Results indicated that females experienced higher

anxiety levels than males, but this level did not reach significance. No statistically significant difference was noted between age difference and anxiety. Freshmen and sophomore students indicated higher anxiety levels than did juniors and seniors. The study suggested those participants who received organizational and other support tools demonstrated improvement in performance (Misra et al., 2000)

Ofori et al. (2002), in a study of 315 college nursing students, performed a path analysis on data obtained from questionnaires and university records at a university in the Northwest of England. Results indicated that those who received counseling and other supports demonstrated improvement in performance (Ofori, et al., 2002).

Sharif et al. (2004) used a quasi-experimental pre- post-test, follow-up and control group design to study 100 college nursing students. In this study, the introduction of support intervention programs reduced anxiety, improved self-esteem, and increased grade point average (GPA) over time (Sharif et al., 2004).

Sprengel, & Job (2004) explored the use of a peer-mentoring project for nursing students. Both mentored freshmen and the sophomore medical-surgical students who mentored them reported decreased levels of anxiety (Sprengel, et al., 2004).

Wilson and Sanner (2002) reported a qualitative study of eight ESL nursing students. Supportive measures that were provided to enhance the academic experience demonstrated the potential of increasing the National Council Licensure Examination (NCLEX) success of these individuals (Wilson et al., 2002). These measures could provide for an increase in the diversity of the nursing profession and provide for a more competent care in a multicultural population.

Yonge et al. (2002) used a case study to explore stress, anxiety and the student nurse in preceptorship and demonstrated that a quick response to student stress and anxiety decreased burnout and frustration.

*Summary*

A review of current literature revealed that there are high levels of anxiety in college students, that nursing students experience higher levels of stress than other health-related professions, that anxiety can lead to poor performance, poor attendance, and increased attrition rates, and that support programs have proven successful in decreasing anxiety, improving performance, and improving retention rates in anxious students. The purpose of this descriptive study was to identify if significant differences in anxiety levels based on age, gender, level of study in the nursing program, and primary language of the nursing students. By determining if there are significant differences between anxiety levels and these identified variables, groups of students who may be experiencing increased levels of anxiety can potentially be identified and support programs put into place to increase the retention and success rates of those nursing students.

# CHAPTER III

## Methodology

### *Overview*

The purpose of this descriptive study was to identify if significant differences in anxiety levels in nursing students existed based on age, gender, level of study in the nursing program, and primary language status.

Students enrolled at APSU who met the criteria for the study and were willing to participate were asked to complete a packet containing a demographic questionnaire and a Liebowitz Social Anxiety Scale. Demographic data and data related to levels of anxiety obtained were analyzed utilizing Analysis of Variance (ANOVA) and measures of central tendencies.

### *Research Design*

This was a descriptive study involving students enrolled at APSU with nursing identified as the major field of study. Institutional Review Board (IRB) approval was obtained from the APSU IRB.

### *Participants*

A convenience sample of students enrolled in a baccalaureate school of nursing that had identified nursing as the major area of study participated in the study. Levels of study for two hundred fifty-four students were identified as being sophomore level, junior level, or senior level in the APSU nursing program. Thirty-two (12.6%) were male and 222 (87.4%) female.

Techniques identified by Cochran (1977) and Bartlett, Kotrlik, and Higgins (2001) were used to calculate a sample size needed to make valid assumptions based upon the collected data for a return-survey convenience sample drawn from a population of from 200 to 300. Using an alpha of .05, confidence level of 95%, and a margin of error of 3%, the total responses needed were 80. Eighty-one valid responses from this population of 254 nursing students were received.

*Instrument*

Participants were requested to complete and return two questionnaires. The researcher designed the six item demographic questionnaire. All items were based on current significant findings in the extant literature. Demographic data collected included the participants' ages, gender, level of study in the nursing program, and primary language.

Participants completed the Liebowitz Social Anxiety Scale (LSAS). The LSAS is frequently cited in literature, especially in drug trial studies, as a measure of treatment efficacy (Mennin, Heimberg, & Jack, 2000; Dummit, Klein, Tancer, Asche, Martin & Fairbanks, 1997; Simon, Otto, Korbly, Peters, Nicolaou & Pollack, 2002; Kobak, Schaettle, Greist, Jefferson, Katzelnick & Dottl, 1998). The LSAS is a 24 item clinician-rating scale created to assess social phobia. In a study by Mennin, Fresco, Heimberg, Schneier, Davies, and Liebowitz (2002) a cutoff value of the LSAS total score was determined to be 30 points for a diagnosis of social anxiety disorder. A total LSAS score of 50 would indicate moderate social phobia. Convergent validity for measurement of anxiety by LSAS has been indicated by high correlations between the Anxiety Disorders Interview Schedule (ADIS), Clinician Severity Rating and the LSAS. The 24 items are

divided into two subscales that evaluate social and performance situations. LSAS total scores were normally distributed (skewness = 0.17; kurtosis = -0.26) suggesting that it is safe to use parametric statistics to analyze LSAS scores (Heimberg, Horner, Juster, Safren, Brown, Schneier, & Liebowitz, 1999). Alpha coefficients for all LSAS scores were uniformly high ($N = 382$, *alpha* = 0.96), indicating internal consistency for both the total and the specific subscale scores of the LSAS. Heimberg et al. (1999) noted that, "Fear and avoidance measures were highly correlated, whether total ($r = 0.91$), social interaction ($r = 0.92$), or performance scores ($r = 0.88$) were considered" (p. 209). Convergent validity of the LSAS was examined by correlating the LSAS scores with other self-report and clinician-rated measures of social anxiety and avoidance ($N = 178$, $p < 0.001$). Post- treatment correlations between the Anxiety Disorders Interview Schedule (ADIS) Clinician Severity Rating and the LSAS subscales (effect sizes ($r$) ranged from 0.74 to 0.81) indicated evidence for the convergent validity of the LSAS. Discriminant validity of the LSAS was examined by its correlations with the Hamilton Anxiety Scale (HAMA), a measure of general anxiety, and the Beck Depression Inventory (BDI) and Hamilton Rating Scale for Depression (HRSD) (Heimberg et al., 1999). The LSAS demonstrated substantial discriminant validity since post-treatment correlations with other measures of social anxiety and avoidance ($N= 83$, $p < 0.0083$) were higher than correlations with the HRSD (correlation was 0.52) and BDI (correlation was 0.56). To determine treatment sensitivity for the LASA, within-treatment (effect sizes ranged from 1.15 – 1.40) and between-treatment (subscales ranged from 0.65 to 0.67) effect sizes were calculated. There were no significant differences in within-treatment effect sizes

and the range of effect sizes for the other measures of social anxiety and avoidance (0.92-1.76).

*Procedure*

Invitation to participate memos with requests for subjects who met the criteria and were willing to participate in this study were posted on bulletin boards throughout the APSU School of Nursing. Packets containing an invitation to participate cover letter, personal data questionnaire, and a Liebowitz Social Anxiety Scale were placed in the lobby, the computer lab, the student lounge, and other locations in the building housing the nursing program where the students were permitted free and unmonitored access. Participants were instructed to return the completed packets by placing them in sealed boxes made available for that purpose, by depositing them in the return mail box of the principle investigator in the lobby of the school of nursing, or via campus mail to APSU School of Nursing, Attention Martha Ann Fiese.

Electronic mail was distributed to individuals who received APSU e-mail with an invitation for individuals who met the criteria to participate in the study. A Microsoft word attachment of the packet containing an invitation-to-participate cover letter, personal data questionnaire, and the Liebowitz Social Anxiety Scale were included with the e-mail. Individuals who met the criteria for the study and who were willing to participate were requested to print out the packet, complete it, and return the completed survey by placing them in any of the sealed boxes located in the nursing building and made available for that purpose, by depositing them in the return mail box of the principal investigator in the lobby of the school of nursing, or via campus mail to APSU

School of Nursing, 'Attention Martha Ann Fiese'. No identifying information was included with the completed packet.

Participation in the study was entirely voluntary. Participant consent was implied by completion of forms that required approximately 15 minutes to complete. No codes or names were solicited to insure confidentiality for the participants, and they were assured that all information gathered would be reported only as group data. Participants were informed that no identified risks were associated with participation and a report of findings was offered to participants as a benefit of the study. Packets were to be completed and returned to the principle investigator or designee.

*Data Analysis Plan*

Data was analyzed using Microsoft Excel Data Analysis Tools. Descriptive statistics were used for all measures of central tendency. Each questionnaire was assigned a numerical code for identification purposes. A one-way ANOVA was utilized to determine if statistically significant differences existed in anxiety levels between identified variables.

*Summary*

The purpose of this descriptive study was to identify if significant differences in anxiety levels in nursing students existed based on age, gender, level of study in the nursing program, and primary language status. A convenience sample of students enrolled in a baccalaureate school of nursing who had identified nursing as the major area of study were asked to participate in the study. Demographic data and data indicating levels of anxiety identified by the participants were collected by means of self-reported questionnaires. Completion and return of the questionnaires were utilized to denote

consent to participate in this study. There was minimal risk associated with the time requirement and discomfort of answering the questionnaires. Efforts to control for external factors consisted of utilizing a consistent process of data collection. Efforts to control for intrinsic factors included providing for homogeneity of the criteria for the sample population.

# CHAPTER IV

## Results

*Introduction*

The purpose of this descriptive study was to identify if significant differences in anxiety levels in nursing students existed based on age, gender, level of study in the nursing program, and primary language status. Research has demonstrated that high levels of anxiety lead to decreased cognitive functioning, lower grades, negative self-image, missed classes and higher drop out rates and that support programs and services to reduce anxiety help improve concentration, grade point averages, self-esteem, and retention rates. This study is significant to nursing educators as an initial step in employing methods and programs to improve nursing student retention and success. It is significant to the public at large as a method to increase the numbers of successful graduates who become registered nurses and provide medical and emotional care to the general population.

*Procedure*

The study sample consisted of a convenience sample of 81 students enrolled at APSU. Criteria for inclusion in this sample included being enrolled in the APSU nursing program and being willing to participate in this study by completing and returning the provided survey packet. Collection of data was completed through return of questionnaires. Data was then analyzed using Microsoft Excel Data Analysis Tools using ANOVA to determine if significant differences exist between the variables.

## Description of Demographic Data

The sample percentages of female and male participants were similar to the percentages of female and males in the student population. The fact that the sample percentages of subjects in the various levels of study was less reflective of the population sample may be related to the assignments of students in higher levels of study to distant clinical sites which restricted accessibility to the questionnaires and limited their participation in the survey. Table 1 describes the demographics of the total population.

Table 1

*Population Numbers and Percentages*

N = 254

| Variable | N | Percent sample |
|---|---|---|
| Age | | |
| Traditional | 71 | (27.950%) |
| Non-Traditional | 183 | (72.050%) |
| Gender | | |
| Male | 32 | (12.60%) |
| Female | 222 | (87.40%) |
| Level of Study | | |
| Sophomore | 46 | (18.11%) |
| Junior | 121 | (47.64%) |
| Senior | 87 | (34.25%) |

Table 2 lists the numbers and percentages of the sample participants as related to the independent variables. Because of low rate of questionnaire return for male gender

and for English as secondary language, statistics for these data were described but data were not included in data analysis.

Table 2

*Sample Numbers and Percentages*

N = 81

| Variable | N | Percent sample |
|---|---|---|
| Age | | |
| Traditional | 27 | (33.30%) |
| Non-Traditional | 54 | (66.70%) |
| Gender | | |
| Male | 9 | (11.11%) |
| Female | 72 | (88.90%) |
| Level of Study | | |
| Sophomore | 36 | (44.44%) |
| Junior | 27 | (33.33%) |
| Senior | 18 | (22.22%) |
| Primary Language | | |
| English primary | 78 | (96.30%) |
| English secondary | 3 | (3.70%) |

The mean LSAS for the sample population was 44.65 (*SD* 23.06). Table 3 describes the LSAS score and standard deviation as related to the independent variables.

Table 3

*LSAS Total Scores*

N = 81

| Variable | Mean LSAS | SD |
| --- | --- | --- |
| Age | | |
| Traditional | 46.37 | 17.68 |
| Non-Traditional | 43.96 | 25.29 |
| Gender | | |
| Male | 32.22 | 23.67 |
| Female | 46.32 | 22.54 |
| Level | | |
| Sophomore | 42.22 | 21.25 |
| Junior | 46.19 | 28.34 |
| Senior | 47.72 | 17.12 |
| Language | | |
| English primary | 44.46 | 22.79 |
| English secondary | 52.67 | 30.92 |

The ages of the respondents ranged from 19 to 53 years with a mean age of 28.6 years (*SD*=8.11). Average LSAS Total Scores were described in descending order from greatest levels to least level of anxiety. ESL students (n = 3) identified the greatest mean score at 52.67 (*SD*, 30.92) points and males (n = 9) identified the least with a mean total score of 32.33 (*SD*, 23.67) (see Table 4). While the mean LSAS Total Scores ranged from a high of 52.67 (*SD*, 22.67) to a low of 32.33 (*SD*, 23.67), ±1 *SD* ranges of all categories overlapped at the 30.6 to 56 Total Score level (see Table 4).

Table 4

*Summary Table Mean Total Score Ranges*

| Variable | Mean LSAS | *SD* | -1 *SD* | +1 *SD* |
|---|---|---|---|---|
| ESL | 52.67 | 30.92 | 21.75 | 83.89 |
| Seniors | 47.72 | 17.12 | 30.6 | 64.84 |
| Traditional | 46.37 | 17.68 | 28.69 | 64.05 |
| Female | 46.34 | 22.54 | 23.58 | 68.88 |
| Juniors | 46.19 | 28.34 | 17.85 | 74.53 |
| Total Sample | 44.65 | 23.06 | 21.59 | 67.71 |
| English | 44.46 | 22.79 | 21.67 | 67.25 |
| Non-Traditional | 43.96 | 25.28 | 18.68 | 69.24 |
| Sophomores | 42.22 | 21.25 | 20.97 | 63.75 |
| Male | 32.33 | 23.67 | 8.66 | 56 |

*Analysis*

*Students' t or t test* was utilized in this study to detect significant differences between sample means related to independent variables, and LSAS Total Scores. The *t test* is statistically robust and guards against Type I errors. The power of a *t test* is influenced by: the selected significance level, variability within the sample data, size of the sample, and magnitude of the difference between means. To calculate the *t test*, the value of between group variation attributable to the independent variable (age) was divided by within-group variable (error term, or behavioral similarity noted in each group) to generate a *t* value which was then compared to a standardized table of *t* values to determine the *t* critical value.

*Hypothesis 1*

Hypothesis 1 stated there is no significant difference between anxiety levels of nursing students and age. Data analysis is found in Table 5.

Table 5

*Summary Data of T-Tests for Traditional vs. Non-Traditional LSAS Scores*

| Variable | N | Score | SD |
|---|---|---|---|
| Traditional | 27 | 46.37 | 17.68 |
| Non-Traditional | 54 | 43.96 | 25.29 |

T calculated (79) = 0.62036713< t critical (79) = 1.994; p>.05

Since the analysis failed to reject the hypotheses at the .05 confidence level, no significant difference between the mean LSAS Total Scores of the traditional and non-traditional nursing student population surveyed was found to exist.

*Hypothesis 2*

Hypothesis 2 stated there is no significant difference in anxiety levels of nursing students based on gender. Because of low rate of questionnaire return for male gender (n = 9), statistics for these data were not included in data analysis. The small sample size of male subjects must be taken into consideration as possible sources of Type II inferential error (failure to find an error when one exists) when considering the results of this study.

*Hypothesis 3*

Hypothesis 3 stated there is no significant difference in anxiety levels of nursing students based on level of study. The mean LSAS Total Score for sophomores (n = 36) was 42.22 (*SD*, 21.25). The mean LSAS Total Score for juniors (n = 27) was 46.19 (*SD*, 28.34), and for seniors (n = 18), mean LSAS Total Score was 47.72 (*SD*, 17.12). A one-way ANOVA was calculated to compare the means of the levels of study (sophomore, junior, and senior) and their LSAS Total Scores with one another in order to determine if any significant differences existed between or among them. The Mean Square between groups was divided by the Mean Square within groups, which yielded a calculated *F* ratio. The calculated *F ratio* was then compared to the table of critical values of *F* identifying the appropriate degrees of freedom and the $p = .05$ confidence level. The calculated *F* value (0.416) was less than the critical *F* value (3.11) indicating that there was no statistically significant difference between or among the variables as identified by data from this survey (F calculated $(2, 78) = 0.416 <$ Fcrit $(2, 78) = 3.11$: Fail to Reject

*H0)*. There was no statistically significant difference between grade levels and LSAS Total scores (see Table 6). The data analysis failed to reject the hypotheses.

Table 6

*ANOVA for Variable of Levels of Study and Anxiety*

| Source of Variation | Sum of sq | df | Mean sq | F |
|---|---|---|---|---|
| Between Groups | 444.64 | 2 | 222.32 | 0.4162 |
| Within Groups | 41663.91 | 78 | 534.15 | |
| Total | 42108.54 | 80 | | |

F calculated (2, 78) = 0.416 < Fcrit (2, 78) = 3.11: Fail to Reject H0

*Hypothesis 4*

Hypothesis 4 stated there is no significant difference in anxiety levels of nursing students based on primary language status. The mean LSAS Score for English primary language subjects ($n = 78$) was 44.46 (*SD*, 22.79). The mean LSAS Score for ESL subjects ($n = 3$) was 52.67 (*SD*, 30.92). There were insufficient numbers of responses in the identified groups of primary language to provide adequate numbers for data analysis; therefore the data on primary language status was not analyzed. The small sample size of participants must be taken into consideration as possible sources of Type II inferential error (failure to find an error when one exists) when considering the results of this study.

# CHAPTER V

## Discussion, Conclusions and Recommendations

*Discussion and Conclusions*

The purpose of this study was to identify differences in anxiety levels of nursing students based on age, gender, level of study, and primary language status. In an effort to identify groups of students who experienced greater levels of anxiety and who might benefit from participation in a support program, the investigator explored whether LSAS Total Scores of demographically clustered participant groups differed significantly at the $p = .05$ confidence level. The results of this study indicated that there was no statistically significant difference in the level of anxiety experienced by nursing students based on age, or level of study at the $p = .05$ confidence level.

Demographic data indicated traditional students, identified as those who were 23 years old or younger, composed 33.33% ($n = 27$) of the sample and non-traditional students who were identified as 24 years old or greater made up 66.67% ($n = 54$) of the sample. Males composed 11.11% ($n = 9$) of the participants while females composed 88.89% ($n = 72$) of the sample (see Table 2). When the data was organized according to level of study 44.44% ($n = 36$) were identified as sophomores, 33.33% ($n = 27$) were identified as juniors, and 22.22% ($n = 18$) were identified as seniors. Refer back to Table 2 for more definitive information.

LSAS Total Scores were described in descending order from greatest levels to least levels of anxiety identified. Students who identified themselves as ESL students reported the greatest average total score. Male participants reported the smallest average total score (see Table 4). The mean LSAS Total Scores ranged from a high of 52.67 (SD,

30.92) to a low of 32.33 (SD, 23.67), and $\pm 1$ *SD* ranges of all categories overlapped at the 30.6 to 56 Total Score level (see Table 4), therefore there were no statistically significant differences noted in LSAS Total Scores in this study. The small sample size of ESL, and male subjects was taken into consideration as possible sources of Type II inferential error (failure to find an error when one exists) when considering the results of this study. Because of this low rate of questionnaire return for male gender and for English as secondary language, statistics for these data were described but were not included in data analysis.

T-test or *Student's t,* which is statistically robust and guards against Type I errors, was utilized in this study to detect significant differences between sample means related to age and LSAS Total Scores. There was a failure of the *t*-calculated value to exceed the *t* critical value at the $p = .05$ confidence level in every incidence of data calculation in this survey. All hypotheses failed to be rejected. No significant differences were found among any of the identified groups.

*Recommendations*

The findings from this study have numerous implications for the health care field. It has provided information that holds the potential to promote the successful educational process of increased numbers and diversity of the future nursing population. Further study utilizing both quantitative and qualitative strategies are recommended. Application of the information from this study could lead to an improved RN educational process and professionals who are more prepared to deal with increased levels of anxiety in the workplace.

*Implications for Nursing Practice*

This study was of significant value for nursing practice and to the public at large as a method to increase the numbers of successful graduates who become registered nurses and who are better prepared to provide medical and emotional care to the general population. Although no significant differences were noted in the levels of anxiety, the participants who experienced the highest levels of anxiety were identified in descending order for potential inclusion in support programs. Inclusion in these support programs hold the potential to increase the numbers of successful graduates and future licensed RNs to meet public healthcare needs and to provide problem solving skills to these individuals that would help them to function more effectively in their profession.

*Implications for Nursing Education*

This study has generated data that provides instructors of RN programs with information that promotes theory-based practice. When nurses fail to overcome barriers within their own profession, they allow individuals outside of the nursing profession to dictate nursing practice and subsequently forfeit the responsibility and opportunity of defining their own nursing practice.

Nursing education and nurse educators, as well as current and future students can benefit from the identification of students who experience higher levels of anxiety and who are therefore less likely to succeed in their schooling and in their profession. Identification of significant differences in anxiety levels of nursing students based on age, gender, level of study, and primary language status potentially provides data to assist student advisors in referring groups of high anxiety students to academic support personnel for inclusion in programs focused to improve support and retention of students

who may be at increased risk of academic failure. Incorporation and integration of skills and techniques to decrease the effects of high anxiety levels could potentially increase the effectiveness of the educational process, improve student success and retention rates, improve nursing coping and problem-solving skills, elevate the individual's level of understanding, and increase the self-confidence of the practitioner.

Successful completion of courses by students avoids wasted financial resources, time, effort, and replication for both students and the university system. The students would benefit by achieving education that could provide for a career that was both finically and professionally beneficial to the individual, their families, and the community as a whole. Students would further benefit from inclusion in support programs that helped them to develop problem solving skills that may be utilized and shared in their career and their family lives throughout their lifetimes.

*Implications for Nursing Research*

While many nurses embrace the concept of holistic care, adult learning methods, and inclusion of multicultural diversity in their practice, these concepts are not always applied to nursing students in the educational system (Evans, 2004). For the profession of Nurse Educator to gain credibility, clear objective evidence to support application of evidence based and best practice teaching techniques must be provided. Today the cost of education for health care professionals is increasing dramatically. The monies available to cover these costs are limited. Studies have demonstrated that nursing students experienced higher levels of anxiety than other college students and that high levels of anxiety led to decreased cognitive functioning, lower grades, negative self-image, missed classes and higher drop out rates. Current literature identified that support programs and

services to reduce anxiety helped improve concentration, grade point averages, self-esteem, and retention rates (Evans, 2004). The fact that programs are available that are documented to reduce anxiety and therefore increase the success rate of nursing students leading to an increased presence of successful licensed RNs in the workforce has not been more widely utilized demonstrates that a problem exists. Identification of student groups at need and application of these support processes are urgently needed to help meet the increasing need for a diverse pool of well-educated professional RNs in the healthcare workforce.

*Recommendations for Further Study*

Additional studies exploring the perceived anxiety in nursing students are needed to provide continuing efforts directed at building a body of knowledge about anxiety and its' effect on nursing students. This body of knowledge can be used to guide practice and generate further study. Recommendations for ongoing research include replication with samples that include subjects other than the BSN nursing population. Implementation of a longitudinal approach would be valuable in examining the effect of application of student support programs over time on the nursing student, the effect of the application of these student support programs on the teaching styles of the Nurse Educator, and on the success rate of the nursing program. Future research in nursing student anxiety should include at least some qualitative measures in quantitative designs. Additionally, utilizing qualitative approaches should be considered. A formal interview was not included in the protocol for this non-experimental study. Use of qualitative strategies, including an interview process, holds the potential of providing a wealth of information about the experience of nursing student anxiety and its effect in future studies. Moreover, new questions may emerge

from such data that may further direct theory development. The limited information regarding anxiety in nursing students and its' effects on the nursing profession denotes a need for further investigation in this area. The limited sample numbers of some groups in this study may not reflect an accurate representation of the targeted population. Replication of this study with a larger sample of the targeted population that includes a more diverse demographic and expanded geographic base is recommended. These approaches will allow the development of a much-needed baseline of data regarding nursing student anxiety.

Effects of anxiety on nursing students in regard to lost human, cultural, and economic resources, along with consideration and application of techniques to reduce the detrimental effects of excess anxiety in nursing students have recently begun to be understood from a scientific point of view. The need for research-generated evidence regarding the study of nursing student anxiety is great. Continuing efforts directed at building a body of knowledge about the study of nursing student anxiety, which can be used to guide practice, is essential.

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# APPENDIX A
# APPROVAL FORMS

March 17, 2006

TO:     Dr. Joe Ann Burgess Ed.D.
        Director of School of Nursing,
        Austin Peay State University

RE:     Agreement to Allow Voluntary Participation of Nursing Students in Confidential
        Field Study

I am planning to do a field study research project entitled "A Study to Determine
Significant Differences in Anxiety levels of Nursing Students Based on Age, Gender,
Grade Level and English as Second Language (ESL) Status" for my APSU Education
6990 Field Study Course to complete my Ed.S. degree requirement. The purpose of this
study is to determine differences in anxiety levels of nursing students based on age,
gender, grade level, and ESL status.

To carry out this study, I am required by the Institutional Review Board to obtain a letter
of agreement from the APSU School of Nursing. Please review this information to
determine if you will be agreeable to allow me to utilize students who are willing to
participate in this study.

    Research questions include:
    ➢ Are there significant differences in anxiety levels of nursing students based on
      age?
    ➢ Are there significant differences in anxiety levels of nursing students based on
      gender?
    ➢ Are there significant differences in anxiety levels of nursing students based on
      grade level?
    ➢ Are there significant differences in anxiety levels of nursing students based on
      ESL status?

Procedures for this study would be such that survey packets containing an invitation-to-
participate cover letter, personal data questionnaire, and the Liebowitz Social Anxiety
Scale are to be distributed to individuals or groups of individuals who meet the criteria
for this study (APSU students who have identified nursing as their major). These
individuals may have received an invitation to participate in this study in one of two
manners
    Invitation to participate memos with requests for subjects who meet the criteria and
    are willing to participate in this study will be posted on bulletin boards throughout the
    APSU School of Nursing. Packets containing an invitation-to-participate cover letter,
    personal data questionnaire, and a Liebowitz Social Anxiety Scale will be placed in
    the lobby, the computer lab, the student lounge, and other locations of the nursing
    building where the students will have free and unmonitored access. The completed
    packets may be returned by placing them in sealed boxes made available for that
    purpose, by depositing them in the return mail box of the principal investigator in the

lobby of the school of nursing, or via campus mail to APSU School of Nursing, Attention Martha Ann Fiese.

Electronic mail will be sent to individuals who receive APSU e-mail with an invitation for individuals who meet the criteria to participate in the study. A Microsoft word attachment of the packet containing an invitation-to-participate cover letter, personal data questionnaire, and the Liebowitz Social Anxiety Scale will be included with the e-mail. Individuals who meet the criteria for the study and who are willing to participate will be asked to print out the packet, complete it, and return the completed survey by placing in any of the sealed boxes located in the nursing (McReynolds) building and made available for that purpose, by depositing them in the return mail box of the principal investigator in the lobby of the school of nursing, or via campus mail to APSU School of Nursing, Attention Martha Ann Fiese.

No identifying information is to be included with the completed packet. Participation in the study will be voluntary for students. Participant consent will be implied by completion of forms, which will require approximately 15 minutes to complete. No codes or names will be solicited which will insure confidentiality for the participants, and they will be assured that all information gathered will be reported only as group data. Participants will be informed that no identified risks are associated with participation and a report of findings will be offered to participants as a benefit of the study. Packets are to be completed and returned to the principle investigator or designee as described above.

Arrangement has been made for storage of the completed questionnaires in the office of the Chair (Dr. Donald Luck) for three years.


Please reconsider this field study for approval.

Thank you.

Martha Ann Fiese
5780 Butler Road
Elkton, Ky 42220
e-mail: fiesem@apsu.edu
CC: Dr. Donald Luck

**ΛP**
**Austin Peay**
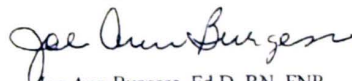State University

School of Nursing

March 20, 2006

Dr. Charles A. Pinder
Chair APSU IRB and Dean,
College of Graduate Studies
P. O. Box 4458
Clarksville, TN 37044

Dear Dr. Pinder:

Please accept this letter as approval for Martha Ann Fiese to conduct the field study research project entitled "A Study to Determine Significant Differences in Anxiety levels of Nursing Students Based on Age, Gender, Grade Level and English as Second Language (ESL) Status" as outlined in the attached correspondence. It is my understanding that student participation is voluntary, anonymous, and requires a minimal amount of time.

The School of Nursing commends and supports Mrs. Fiese in her pursuit of an Ed.S. degree. If you need additional information, feel free to contact me.

Sincerely,

Joe Ann Burgess, Ed.D, RN, FNP,
Interim Director

mg

Attachment

www.apsu.edu

P.O. Box 4658 • Clarksville, TN 37044 • P: (931) 221-7737 • F: (931) 221-7595

**ΛP**
**Austin Peay**
State University

**College of Graduate Studies**

March 24, 2006

Martha Ann Fiese
5780 Butler Road
Elkton, KY 42220

RE: Your application regarding study number 06-004: A Study To Determine Significant Differences In Anxiety Levels Of Nursing Students Based On Age, Gender Level and ESL Status

Dear Ms. Fiese:

You are granted permission to conduct your study as described in your application effective immediately. The study is subject to continuing review on or before March 24, 2007, unless closed before that date. Enclosed please find the forms to report when your study has been completed and the form to request an annual review of a continuing study. Please submit the appropriate form prior to March 24, 2007.

Please note that any changes to the study as approved must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. If you have any questions or require further information, contact me at (221-7415; fax 221-7641; email pinderc@apsu.edu).
Again, thank you for your cooperation with the APSU IRB and the human research review process. Best wishes for a successful study!

Sincerely,

Charles A. Pinder, Ph.D.
Chair, Austin Peay Institutional Review Board
Cc: Dr. Donald Luck

# APPENDIX B
# SURVEY INSTRUMENTS

TO: APSU STUDENTS

I am Martha Ann Fiese. I am seeking your participation in a research survey that I am conducting for my graduate studies. This survey will take approximately <u>15 minutes or less</u> to complete. Consent to participate will be implied by completion and return of the questionnaire.

This study is anticipated to include 250 or less adult university students who voluntarily participate by completing and returning a survey questionnaire. Participation in this study is strictly voluntary, and there are no foreseeable consequences for your participation or nonparticipation in this survey.

Survey packets containing an invitation-to-participate cover letter, personal data questionnaire, and the Liebowitz Social Anxiety Scale are being distributed to individuals or groups of individuals who meet the criteria for this study (APSU students who have identified nursing as their major). You may have received an invitation to participate in this study in one of two manners

1) Invitation to participate memos with requests for subjects who meet the criteria and are willing to participate in this study will be posted on bulletin boards throughout the APSU School of Nursing. Packets containing an invitation-to-participate cover letter, personal data questionnaire, and a Liebowitz Social Anxiety Scale will be placed in the lobby, the computer lab, the student lounge, and other locations of the nursing building where the students will have free and unmonitored access. The completed packets may be returned by placing them in sealed boxes made available for that purpose, by depositing them in the return mail box of the principal investigator in the lobby of the school of nursing, or via campus mail to APSU School of Nursing, Attention Martha Ann Fiese.

2) **Electronic mail** will be sent to individuals who receive APSU e-mail with an invitation for individuals who meet the criteria to participate in the study. **A Microsoft word attachment** of the packet containing an invitation-to-participate cover letter, personal data questionnaire, and the Liebowitz Social Anxiety Scale will be included with the e-mail. Individuals who meet the criteria for the study and who are willing to participate will be asked to **print out the packet, complete it, and return the completed survey** by placing in any of the sealed boxes located in the nursing (McReynolds) building and made available for that purpose, by depositing them in the return mail box of the principal investigator in the lobby of the school of nursing, or via campus mail to APSU School of Nursing, Attention Martha Ann Fiese. No identifying information is to be included with the completed packet.

Completed questionnaires will be kept in a locked file cabinet in the office of the Chair of the principal investigator for 3 years. There are no identified risks associated with participation and a report of findings will be offered to participants as a benefit of the study.

For further information or pertinent questions about this study please contact;
 Martha Ann Fiese (principal investigator) at fiesem@apsu.edu
 Dr. Donald Luck (faculty sponsor) at luckd@apsu.edu or
 Austin Peay Institutional Review Board

To request a report of findings, contact Martha Ann Fiese at fiesem@apsu.edu .

*(Note: should include APIRB, PI and if applicable, students' faculty sponsor)*

# Survey Section I; Demographic Data

1. **List your age in years as of your last birthday**
   a. _____

2. **Indicate your gender**
   a. Male _____          b. Female _____

3. **English is my**
   a. _____ Primary language          b. _____ Secondary language

4. **Identify the category that most closely describes your status:**

   a. _____ a student with an identified nursing major who is

   enrolled in undergraduate classes, but has not yet

   progressed to nursing courses.

   b. _____ a student with an identified nursing major who is

   enrolled in sophomore (2000 level) nursing classes.

   c. _____ a student with an identified nursing major who is

   enrolled in junior (3000 level) nursing classes.

   d. _____ a student with an identified nursing major who is

   enrolled in senior (4000 level) nursing classes.

**Optional Information:**
5. **Ethnicity**

   a. _____ African American origin

   b. _____ Asian/Pacific Islands origin

   c. _____ Caucasian/ Western European origin

   d. _____ Hispanic origin

   e. _____ Native American origin

   f. _____ Other: Please Identify _____

6. **Self Reported GPA** _____

**Please complete Section II**

# Liebowitz Social Anxiety Scale (LSAS-SR)

Name _____ Date _____

Fill out the following questionnaire with the most suitable answer listed below. Base your answers on your experience in the past week and, if you have completed the scale previously, be as consistent as possible in your perception of the situation described. Be sure to answer all items.

| Fear or Anxiety | Avoidance |
|---|---|
| 0 = None | 0 = Never (0%) |
| 1 = Mild | 1 = Occasionally (1%-33% of the time) |
| 2 = Moderate | 2 = Often (33%-67% of the time) |
| 3 = Severe | 3 = Usually (67%-100% of the time) |

| Understanding the situations: | FEAR OR ANXIETY | AVOIDANCE |
|---|---|---|
| 1. **Telephoning in public** - speaking on the telephone in a public place | | |
| 2. **Participating in small groups** - having a discussion with a few others | | |
| 3. **Eating in public places** - do you tremble or feel awkward handling food | | |
| 4. **Drinking with others in public places** - refers to any beverage including alcohol | | |
| 5. **Talking to people in authority** - for example, a boss or teacher | | |
| 6. **Acting, performing or giving a talk in front of an audience** - refers to a large audience | | |
| 7. **Going to a party** - an average party to which you may be invited; assume you know some but not all people at the party | | |
| 8. **Working while being observed** - any type of work you might do including school work or housework | | |
| 9. **Writing while being observed** - for example, signing a check in a bank | | |
| 10. **Calling someone you don't know very well** | | |
| 11. **Talking with people you don't know very well** | | |
| 12. **Meeting strangers** - assume others are of average importance to you | | |
| 13. **Urinating in a public bathroom** - assume that others are sometimes present, as might normally be expected | | |
| 14. **Entering a room when others are already seated** - refers to a small group, and nobody has to move seats for you | | |
| 15. **Being the center of attention** - telling a story to a group of people | | |
| 16. **Speaking up at a meeting** - speaking from your seat in a small meeting or standing up in place in a large meeting | | |
| 17. **Taking a written test** | | |
| 18. **Expressing appropriate disagreement or disapproval to people you don't know very well** | | |
| 19. **Looking at people you don't know very well in the eyes** - refers to appropriate eye contact | | |
| 20. **Giving a report to a group** - refers to an oral report to a small group | | |
| 21. **Trying to pick up someone** - refers to a single person attempting to initiate a relationship with a stranger | | |
| 22. **Returning goods to a store where returns are normally accepted** | | |
| 23. **Giving an average party** | | |
| 24. **Resisting a high pressure salesperson** - avoidance refers to listening to the salesperson for too long | | |