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Attitudes and Subjective Norm as Predictors of Behavioral  
Intention Toward Choosing Nursing as a Career Among  
Generation Y College Students

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ATTITUDES AND SUBJECTIVE NORM AS PREDICTORS OF BEHAVIORAL  
INTENTION TOWARD CHOOSING NURSING AS A CAREER AMONG  
GENERATION Y COLLEGE STUDENTS

DISSERTATION

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Luciene Mendonça-Cali

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2009

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## Abstract

**Background:** Generation Y college students are the nation's future workforce, yet there is a marked decline of this population's interest in pursuing nursing as a career.

**Purpose:** The purpose of the study was addressed through three phases. The purpose of the first and second phases was to develop and refine a research instrument appropriate to the target population. The purpose of the third phase, the main study, was to test the relationships of the constructs of the theory of reasoned action (TRA) when applied to Generation Y college student's intent to choose nursing as a career.

**Theoretical Framework:** Ajzen and Fishbein's theory of reasoned action served as the theoretical framework.

**Methods:** For the main study, a cross-sectional design was used to survey a sample of Generation Y students enrolled in their first or second college course. Data was collected by means of a research instrument developed by the researcher using guidance from the theorists. Descriptive data provided information on the characteristics of the sample to assure they met the inclusion criteria. The responses to the construct scales were statistically analyzed by means of logistic regression analysis.

**Results:** The theoretical model was supported. Both attitude ( $p = .003$ ) and subjective norm ( $p < .00$ ) were significantly and positively related to the intent to choose nursing as a career.

**Conclusion:** The findings have implications for nursing education, nursing practice, nursing research, and the public. However, the most important implications are for recruitment of Generation Y into nursing. Effective recruitment strategies would involve improving the nursing image to foster young adults' favorable attitude and their



important others support in choosing nursing as a career. Additionally, as Generation Y students have a clear career trajectory early in their educational program, efforts must be made to connect with students prior to entry into college.



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## DEDICATION

To the love of my life, my husband, John Michael Cali, Jr., thanks for your endless support, love, and understanding during the long hours of schoolwork. Although this was not your dream, you have always believed in me.

To my dad, Eurides Mendonça, I wish you could have stayed with me forever and participated with me in this moment that you always wanted one of your children to achieve, but God called you a short while ago and before I could show you that I could do this just for you to be proud of me. Thanks, Dad, for the unconditional love to our family who feels that part of us has gone with you, but the wonderful memories of you and who you are in our lives will be alive in our hearts forever. I love you, Dad, and wherever you are right now, I am sure that you are watching this accomplishment in my life.

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## CHAPTER ONE

### INTRODUCTION

#### Introduction to the Problem

The fastest growing segment of working-age Americans consists of young adults who will very shortly become the nation's professionals (Kroft, 2004; Tapscott, 1998). This rapidly growing labor force, born between 1982 and 2002 and often called "Generation Y," accounts for more than 88 million people in America (Coomes & DeBard, 2004; Strauss & Howe, 1991). The oldest individuals in this group are either entering the workforce or are attending college at this time (Johnson & Romanello, 2005). Since this generational group is in the position to choose or not choose a career in nursing, its decision will impact the future of the nursing profession and practice for years to come (Duchsher & Cowin, 2004; Kupperschmidt, 2001). In addition, certain characteristics portrayed by this generational group could bring a new culture to the existing healthcare system, nursing education, and the nursing profession.

America, like many other countries, anticipates a shortage of skilled nurse professionals. Therefore, it will be crucial to recruit and retain Generation Y individuals since the predicted nursing shortage by 2010 is 1 million (Health & Health Care 2010, 2003; Thacker, 2005; USDHHS, 2004). Nursing schools have a vested interest in young students because they represent the future of the profession. Despite efforts to bring young adults into nursing, there is a marked decline of this population's interest in pursuing nursing as a career (Auerbach, Buerhaus, & Staiger, 2007). Auerbach et al. (2007) reported that the number of adults in their early to mid-20s entering nursing has been consistently low over the past 40 years.



Several researchers have described barriers that have deterred young adults in choosing nursing as a career, including negative attitudes toward nursing and little support from families and friends toward the profession (Al-Kandari & Lew, 2005; Bregman & Killen, 1999; Cohen, Palumbo, Rambur, & Mongeon, 2004; Grossman, Arnold, Sullivan, Cameron, & Munro, 1989; Hoke, 2006; Katz, 2005; Ma & Yeh, 2005; Rossiter & Yam, 1998; Strader & Katz, 1990; Strader, Katz, & Stanton, 1987; Whitehead, Mason, & Ellis, 2007). Despite the significant decrease of young adults choosing nursing as a career, research of the factors that influence college students' decisions toward choosing nursing as a career is scanty and inconsistent.

### *Generation Y*

The United States (U.S.) Census Bureau (2005) reported that, nationwide, the number of individuals between the ages of 15 to 19 was almost 20 million, and approximately 47% of these individuals had already entered the labor workforce. This generation is important to the future of the nursing profession. Their work ethics are beginning to be observed and evaluated by the healthcare industry and nursing schools around the country.

Generation Y has also been referred to as the “dot.com,” “Echo Boomer,” and “Millennial” generation in which this cohort-group shares an age location in history and a common peer personality (Coomes & DeBard, 2004; Strauss & Howe, 1991). In other words, as this generational group takes part of a social moment in history, their influences will connect, shape, and create bonds of identity with all members of a group in the same phase-of-life (Strauss & Howe). The most influential, important others in Generation Y's upbringing were the Boomer parents who wanted and protected their children and who



also emphasized to their children the importance of safety, rules and discipline, and cultural diversity (Coomes & DeBard).

Generation Y individuals have been characterized as being assertive, positive, friendly, and computer savvy. They prefer to multi-task and to engage in teamwork (Duchsher & Cowin, 2004; Johnson & Romanello, 2005; Reynolds, 2005; Skiba, 2005). Duchsher and Cowin and Reynolds noted that Generation Y individuals prefer to maintain a balance between work and home and may seek to have fun at work. However, because of their strong peer relationships, Generation Y individuals might foster a collective, cohesive, and collaborative approach to work (Duchscher & Cowin). Another trait of this generational group that could bring a positive impact into the nursing profession is that they embrace change with excitement and a sense of adventure.

Major occurrences that have influenced this generation include September 11, 2001, the War in Iraq, and terrorism. Consequently, new attitudes related to this generation are found in the workplace, and the influence of this generation in the workplace is still emerging (Reynolds, 2005).

#### *Generation Y Population in Florida*

Florida's figures on Generation Y mirror the national numbers; there were more than 1 million Generation Y young adults of which 46.1% had joined the workforce Census Bureau (2005). Therefore, based merely on size, it is clear that members of the Generation Y will be a powerful influence on the future workforce. Employers and school administrators must understand these individuals to be able to attract and retain members of this generation for the next several years (Reynolds, 2005).



### Background of the Problem

Researchers have documented reasons that young adults do not choose nursing as a career. For example, studies of high school students' perceptions of nursing have shown that young adults view nursing as difficult, unglamorous, and unpleasant (Murray, 2002) as well as underpaid, strenuous, and without privilege (Rognstad & Polit, 2002). Donley (2005), Kowalski (2001), and Roche, Lamoureux, and Teeham (2004) explained that the new millennium brought a broader range of career opportunities for women; for this reason, women have a decreased interest in a career in nursing. Young adult male students tend to perceive nursing as a career for women, which contributes to the small percentage of men in nursing (Muldoon & Reilly, 2003). Additionally, young adults did not choose nursing as a career because their parents and peers may hold a negative image of nursing. Therefore, many young people have been steered toward other professions that were well-supported by their parents and peers, such as medicine, law, computers, and business (Kowalski, 2001).

#### *Traditional Efforts to Recruit Young Adults into Nursing*

Several approaches have been employed in an effort to bolster the recruitment of young adults into nursing. Hoke (2006), Strader et al. (1987), and Strader and Katz (1990) utilized persuasive communication and presentations to middle school and freshman college students about nursing as a career choice. For many years, persuasive communication seemed to be an effective method to recruit prior generations; however, Cohen et al. (2004) emphasized the need for fresh recruitment strategies to recruit Generation Y individuals.



The major factor influencing young adults in their decision to choose nursing as a career is a well-planned recruitment strategy by nursing schools (Auerbach et al., 2007; Grainger & Bolan, 2006; Rognstad & Polit, 2002). However, many nursing schools lack the personnel to recruit students into nursing (Strader & Katz, 1990). To fill this deficit, some nursing schools have developed partnership programs with hospitals, developed brochures, and marketed their programs online. In addition, many schools offer accelerated degree programs and scholarship opportunities (Donley, 2005).

The public sector has been proactive in assisting nursing schools by providing federal dollars to increase the number of students. In 2003, Congress expanded and revised Title VIII of the Public Health Service Act to encourage hospitals to develop incentive programs and to add loan and scholarship opportunities (Buerhaus, Staiger, & Auerbach, 2003). Despite these efforts, the most recent National Sample Survey of Registered Nurses reported that only 8% of individuals less than 30 years old make up the registered nurse (RN) population (U.S. Department of Health & Human Services [USDHHS], 2004). These concerns have promoted nursing leaders to invoke strategies aimed at improving the image of nursing (Grainger & Bolan, 2006; Murray, 2002; Rognstad & Polit, 2002).

Generation Y students are at the threshold of making lifetime career choices. Nursing desperately needs members of this generation to choose it as their career path. In order to best attract these individuals, it is important to clearly understand the factors that influence their career choices.



### Problem Statement

It is consistently predicted that by the year 2010, the nursing shortage will exceed 1 million RNs (Health & Health Care 2010, 2003; Thacker, 2005; USDHHS, 2004). The only solution to stem this deficit is to recruit and retain the Generation Y population into the nursing profession. Although much attention has been focused on the effects of the nursing shortage and the reasons nurses leave the workforce, little is known regarding career choice predictors for Generation Y individuals. Therefore, it was appropriate, and indeed imperative, to identify and examine the relationship between various predictor variables and the intent to choose nursing as a career since this group represents the future of nursing as a profession.

### Purpose of the Study

The purpose of this study was to develop a research instrument that was appropriate to the population and then to use that instrument to collect data from the population to measure and examine the relationship of selected constructs of the theory of reasoned action (TRA): attitude, subjective norm and behavioral intention of Generation Y college students toward choosing nursing as a career. Knowledge of the relationships of these constructs can be used to develop evidence-based recruitment strategies that may impact Generation Y college students' career choices.

### Definition of the Key Terms

Following are both the theoretical and operational definitions of the terms as they will be used in this study.



## *Attitude*

### *Theoretical Definition*

Attitude is the first determinant of behavioral intention. It is the individual's positive or negative feelings associated with performing a behavior (Ajzen & Fishbein, 1980). If an individual's favorable attitude toward a behavior triggers beliefs of positive outcomes, this, in turn, will cause the individual to perform the behavior. On the other hand, an individual's unfavorable attitude toward the behavior triggers beliefs of a negative outcome, which will cause the individual not to perform the behavior.

### *Operational Definition*

Attitude is defined by a semantic differential of positive and negative terms based on terms provided by members of the target population. Attitude is the sum of the responses with higher scores, which indicate a more favorable attitude toward choosing nursing as a career and lower scores, which indicate a less favorable attitude toward this behavior.

## *Subjective Norm*

### *Theoretical Definition*

Subjective norm is the second determinant of behavioral intention. Subjective norm is determined by an individual's normative beliefs of what important others think that s/he should perform or not perform the behavior coupled with the pressure exerted on the individual to comply. Ajzen and Fishbein (1980) postulated that, independent of personal attitude, the individual may or may not perform the behavior to comply with the wishes of those referents.

### *Operational Definition*



Subjective norm was operationally defined as the measure of the participants' perception of the opinion of significant others, assumed to be a referent, and the participants' desire to comply with those opinions. Subjective norm was the sum of "the products of the estimation of a referent towards the subject performing times the motivation to comply with the referent" (Minnick, 1980, p. 69). Higher scores indicated a higher level of subjective norm whereas lower scores indicated a lower level.

### *Behavioral Intention*

#### *Theoretical Definition*

The intention to perform a behavior is a type of judgment, or probability, rated by the individual, in the decision to perform the particular behavior when the opportunity arises (Ajzen & Fishbein, 1980).

#### *Operational Definition*

Behavioral intention was operationally defined by the participants' self-report of the likelihood they would choose nursing as a career.

### Research Questions and Hypothesis

This research progressed through three phases. Each subsequent phase built on the answers to the research questions that were posed in the preceding phase. Phase 1 and Phase 2 were conducted to develop and refine the research instrument that was used in Phase 3. All of the research questions were directed toward the goal of examining the relationships between the theoretical constructs proposed by the theoretical framework of Ajzen and Fishbein (1980), the theory of reasoned action.



### *Phase 1*

Phase 1 used the qualitative research approach to answer two research questions: What are the terms Generation Y college students use to describe the positive and negative attitudes they have toward choosing nursing as a career? Who are the referent groups Generation Y college students consider to be influential in their career choice decisions?

### *Phase 2*

Information obtained in Phase 1 was incorporated into a research instrument. That instrument was then subjected to statistical tests to assure it was psychometrically appropriate for the population in which it would be used. Phase 2 asked one research question: What are the psychometric properties of the newly developed Nursing Career Assessment Inventory when used to measure attitude, subjective norm, and behavioral intention among Generation Y college students regarding the career choice of becoming a nurse?

### *Phase 3*

In Phase 3, the research instrument developed and refined in Phase 2 was used to collect data from an appropriately sized sample representative of the target population. The data was used to answer one research question and a corresponding hypothesis.

### *Research Question*

Are attitude and subjective norm significantly related, uniquely or as a linear composite, to the outcome variable of behavior intent of Generation Y college students to choose nursing as a career?



### *Hypothesis*

There will be no significant contribution, uniquely or as a linear composite, between the predictor variables of attitude, subjective norm, and the behavioral intent of choosing nursing as a career.

### Theoretical Framework

Psychological theories and research have attempted to understand why people behave the way they do. The TRA has been used by many disciplines, including nursing, education, healthcare, psychology, and business.

The TRA was developed by Ajzen and Fishbein (1980) in the late 1950s and, since then, has been refined, developed, and tested. According to the TRA, it is possible to understand and predict behavior by three general constructs: attitude, subjective norm and behavioral intention. It postulates that “a person’s behavior is determined by his intention to perform the behavior...” (p. 62).

The TRA’s two basic assumptions are that “people are usually quite rational and make systematic use of information available . . . [and] . . . human behavior is not controlled by unconscious motives or desires” (Ajzen & Fishbein, 1980, p. 5). Based on these assumptions, Ajzen and Fishbein suggested that behavioral intention is the predictor of behavior, and they believe that the TRA can be used to “predict, explain, and influence human behavior in applied settings” (p. ix).

According to the TRA, attitudinal and normative factors determine a person’s decision about a behavioral intention. Ajzen and Fishbein (1980) posit that “intention is the immediate determinant of behavior” (p. 41). Besides the intention to perform a behavior, individuals are under volitional control, which, in turn, is under an individual’s cognitive control. The TRA assumes that “attitudes are a function of belief” (p. 7),



meaning that a person may hold a favorable or an unfavorable attitude toward a particular behavior.

The subjective norm toward a behavior is defined as an individual's assessment of whether or not people important to the individual feel the behavior should be performed, combined with the individual's motivation to comply with these external opinions. The schematic application of the TRA is depicted in Figure 1; only the non-shaded parts of the constructs were used in this study.

#### *Behavioral Beliefs and Attitudes toward Behaviors*

The TRA facilitates in the prediction of behavior belief by the assumption that individuals' beliefs produce a favorable or unfavorable attitude toward the behavior. According to this model, people's attitudes are developed from their beliefs about an object or a situation. For example, Ajzen and Fishbein (1980) suggested that a favorable belief toward an object or situation would cause the person to develop a positive attitude toward the behavior. Conversely, an unfavorable belief toward an object or a situation may contribute to a negative perception about the behavior that, in turn, will cause the person not to perform the behavior.

#### *Normative Beliefs and Subjective Norms*

Ajzen and Fishbein (1980) proposed that normative beliefs lead to individuals' perceived social pressure or subjective norm. Individuals value other opinions, and their intention to perform a behavior is very dependent on what people who are important to them approve or disapprove of in performing a given behavior.



### *Behavioral Intention*

Ajzen and Fishbein (1980) suggested that “intention is the immediate determinant of behavior” (p. 41). The aggregate of attitude toward the behavior and the subjective norm leads a person into the decision of a behavioral intention. For example, if the person is given an adequate level of actual control over the behavior, and when there is an opportunity, the person will carry out the intention to perform the behavior. In addition, the intention to perform the behavior is a type of judgment or probability, rated by the individual, in the decision to perform the particular behavior when the opportunity arises.

### *Behavior*

In the TRA model, behavior involves a set of elements termed Target, Action, Context, and Time (TACT) (Ajzen & Fishbein, 1980). Behavior, then, is not difficult to predict because it is the transmission of intention into action. According to Ajzen (2002), these behavior elements can be observed or self reported.



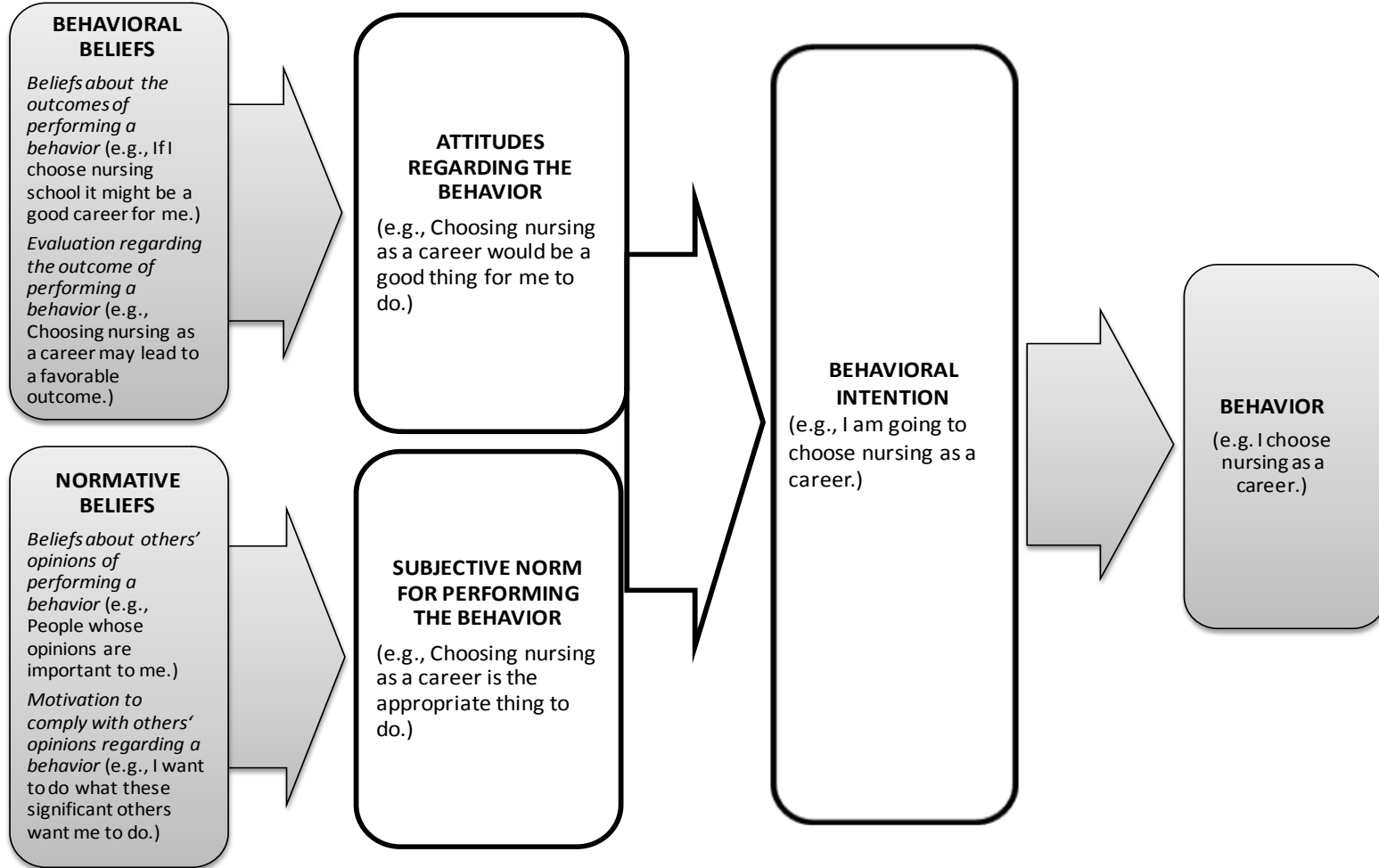


Figure 1. Model of the Theory of Reasoned Action (Ajzen & Fishbein, 1980) adapted by Mendonça-Cali and applied to Generation Y College Students Regarding Choosing Nursing as a Career



### *Relevance of the Theoretical Framework to the Study*

One of the most serious and prevalent sources of the nursing shortage in America is the scarce number of young adults being recruited into the nursing profession (Thacker, 2005). For that reason, nursing schools, healthcare systems, and the nursing profession are eager to understand what influences Generation Y young adults' career choices to facilitate their recruitment and retention into the nursing profession (Redding, Riech, & Prater, 2004).

Volitional control is a "person's intention to perform or not to perform a behavior as the immediate determinant of the action" (Ajzen & Fishbein, 1980, p. 5). Based on the TRA, a person's decision to perform or not to perform a behavior is the volitional behavior that is under an individual's cognitive control. This means that a person controls the decision, and this decision to perform or not to perform is the immediate determinant of the behavior. Therefore, the TRA was the appropriate theoretical framework for this study because it made possible the prediction of the behavioral intention of Generation Y college students' in choosing nursing as a career. That, in turn, can contribute to the recruitment and retention of this generational group into the nursing profession.

### *Relationship of the Theoretical Framework to the Study*

It was recognized that relationships among attitudes, subjective norm, and behavioral intention are directed and possibly bi-directional. This schematic model was used in this study to predict Generation Y college students' behavioral intention to choose nursing as a career. Generation Y college students' beliefs to become a nurse included an estimate of positive and negative perceptions of nursing as a profession before choosing nursing as a career. If these perceptions are negative about choosing



nursing as a career, then Generation Y college students may choose a career in other sciences. On the other hand, if Generation Y college students' perceptions are positive toward nursing, they may choose it as a career.

### Assumptions

#### *Theoretical Assumptions*

The philosophical assumptions of TRA (Ajzen, 1988; Ajzen & Fishbein, 1980; Brown, 1999; Madden, Ellen, & Ajzen, 1992) were accepted:

- People are rational and make decisions based on available information.
- People think about implications and consequences of their actions before they decide to perform or not to perform a behavior.
- The theory is best applied to behaviors under the person's volitional control. Even though a person may be motivated by attitude and subjective norm, the behavior may not be performed if it is not under that person's volitional control.

#### *Research Assumptions*

The following research assumption was accepted:

- The participants provided honest answers when completing the survey.

### Significance of the Study

The results of this study will have significance to nursing education, practice, research, and the public.

#### *Nursing Education*

Although many schools have created nursing programs and existing nursing schools are increasing enrollment, the nursing shortage continues (Sand-Jecklin & Schaffer, 2006). Identification of Generation Y students' intentions toward nursing as a



career will inform the recruitment of young adults into nursing programs. This knowledge may be beneficial to those working to plan, develop, and implement effective recruitment methods to bring and keep Generation Y individuals into the nursing profession.

### *Nursing Practice*

Historically, nursing schools and hospitals have worked together to create America's nursing workforce. Although collaborations between the educational and healthcare sectors give strength and build bridges to improve recruitment and retention of nursing students and practicing nurses, nursing turnover due to job dissatisfaction has been a major financial and safety burden for the acute care settings (Donley, 2005). Therefore, findings from this study may contribute to a clear understanding of this generational group's intention in choosing the nursing career, and that understanding may change hospitals' old methods of recruitment to a fresh one that may help alleviate the current and forecasted nursing shortage. That, in turn, will contribute to an increase in job satisfaction, quality of care, and patient safety.

### *Nursing Research*

Donley (2005) encouraged nursing professionals to understand that "the qualitative as well as quantitative differences between generations is vital in shaping nursing's workforce policy and attracting new members into the field" (p. 313). The TRA has been used extensively to explore the antecedents of various behaviors. However, with the exception of two earlier studies (Strader & Katz, 1990; Strader et al., 1987), very little has been done to explore the influence of the theoretical constructs



and their relationship to the outcome of the behavioral intention to choose nursing as a career.

### *The Public*

The image of nursing has greatly influenced recruitment of young adults into the nursing profession (Grainger & Bolan, 2006). The public image of the nurse has caused the public difficulties in understanding the exact nature of nursing responsibilities (Goodin, 2003). Nursing is perceived as a career choice mainly for women. This perception impedes recruitment of men into nursing (Muldoon & Reilly, 2003; Seago, Spetz, Alvarado, Keane, & Grumbach, 2006). It is also evident that significant others may have very strong influences on their career choices (Bregman & Killen, 1999; Ma & Yeh, 2005); children tend to choose careers that are well accepted, or even planned, by their parents. The results of this study may provide insight into how to promote a fresh nursing image to the American public, to educate parents and peers, and to attract young adults into the profession.

### *Scope and Limitations of the Study*

This study was limited to individuals who were students at a community college located in south Florida. It is acknowledged that the exclusive use of students from one institution and the use of self-report measures could limit the generalizability of the findings of this study.

### *Threat to External Validity*

Participation in all phases was voluntary; therefore, the sample was self selected. Self-selection bias could limit the ability to generalize the findings from the sample to the population from which the sample was drawn or to any other population.



### *Threat to Internal Validity*

Participants were asked to respond to questions regarding their personal attitudes and motivations. No behavior was directly observed or measured. While self-report measures were widely used for data collection, there were concerns regarding the understanding of the participant, the accuracy of recall, and the veracity of the respondent. Safeguards were incorporated into this study to improve the reliability and validity of the self-report measure used. Attempts were made to avoid ambiguous or vague wording. The effectiveness of these attempts was determined through feedback obtained in Phase 2 of the instrument development.

### Chapter Summary

The current shortage of nurses is expected to worsen as fewer individuals choose nursing as a career and the general population ages. The future workforce will be drawn from those individuals currently in a position to make career choices that will guide their educational preparation and their occupational path for years to come. These individuals are currently in the age group identified as Generation Y. Generation Y has been found to have unique attributes and characteristics that challenge the education system. For nursing faculty and school leaders, the recruitment of members of Generation Y into nursing is a concern because there is a marked decline of this population's interest in pursuing nursing as a career. A pressing concern for nursing is how best to use resources to attract members of Generation Y to choose nursing as a career. The traditional approaches must be examined and improved.

The TRA postulates that behavioral decisions, including career decisions, are predicated on a combination of a person's attitude toward that behavior, the person's



perception of what referent groups think of that behavior, and the individual's motivation to comply with what s/he perceives as the referent group's opinion. The TRA provided the theoretical foundation that guided this inquiry. Progressive research questions were answered through three phases. The ultimate goal of this research was to examine the theoretical constructs and test their relationships in a sample of Generation Y individuals regarding choosing nursing as a career. It was anticipated that the results would be useful in the areas of nursing education, practice, and research and in improving the public image of nursing.



## CHAPTER TWO

### REVIEW OF THE LITERATURE

#### Introduction to the Literature Review

A search of the relevant literature across disciplines was conducted to explore the phenomenon of attitudes and subjective norm as predictors of behavioral intention toward choosing nursing as a career among Generation Y college students. Using First Search, Lilinet Online, and ProQuest Direct search engines, the following computerized databases were accessed for this search: ABI Inform (Index of Business and Management), ArticleFirst, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Dissertation Abstracts, Educational Resource Information Center (ERIC), Health Reference Center-Academic, Medicine, Modern Language Association (MLA), and Periodical Abstracts (PerAbs: Covering business, economics, literature, religion, psychology, and women's studies).

The key words used in the search were Generation Y, young adults, high school students, college students, nursing students, nursing as a career, career expectations, career decision-making, career choice, and recruitment. Citations were limited by language to English and by subject to exploration of the concepts. A limitation was imposed to find literature published from 1998 to 2008 with classics sought by reviewing citations in the published works. A random selection process delimited the profusion of theoretical references that were found. Additionally, research studies were reviewed in which the experience of change or transition was explored.

The literature review will be reported in four sections: 1) research on the application of the theory of reasoned action; 2) research on young adults' career choices;



3) research on the theory of reasoned action constructs and young adults' career choices; and 4) an analysis and critique of the research and the potential contributions that this research study will make to nursing. Synthesis of the literature reveals what is known about the attitudes and subjective norm as predictors of behavioral intention toward choosing nursing as a career among Generation Y college students.

#### Research on the Application of the Theory of Reasoned Action

The TRA has been applied in education, business, psychology, and healthcare. Researchers have used the TRA in efforts to explain the relationships between attitudinal and normative factors as determinants of behavioral intention, which, in turn, predict behavior. The TRA has been applied in the field of nursing to determine behavior of nurse practitioners regarding teaching testicular self-examination (TSE) (Kleier, 2004) and tobacco education (Heath & Crowell, 2007). In the area of education, TRA has been used to assess students' intentions to participate in inclusive physical education (Verderber, Rizzo, & Sherrill, 2003). TRA has been applied to compare motivational determinants of students at risk of having reading difficulties (Sideridis & Padelidiadu, 2001) and to measure college students' attraction to organizations in which they wish to be employed (Highhouse, Lievens, & Sinar, 2003).

The available studies related to nursing education and other disciplines that have utilized the TRA constructs to predict behavioral intention of young adults' career choices are very limited. The two studies found and reviewed in this section used the TRA to formulate persuasive communication in an attempt to recruit young adults into nursing (Strader & Katz, 1990; Strader et al., 1987). The study by Strader et al. (1987) was used in this section because this research was conducted twice, first in 1987 and then



again in 1990. Although these studies are more than 10 years old, they are important to include because using TRA to predict young adults' career choices is scarce in all sciences.

The TRA provided a foundation for the work conducted by Strader et al. (1987) that examined the effects of a systematically developed, persuasive communication on students' beliefs, attitudes, intentions, and behavioral changes toward choosing a career as a RN. Participants, freshman college students ( $N = 90$ ), ages 18-20 years, were randomly selected by the use of a two-stage cluster sampling plan. The control group included 46 students, 19 males and 27 females. The experimental group had 44 students, which consisted of 21 males and 23 females.

Researchers developed the questionnaire from a pilot study in accordance with the TRA framework. The questionnaire contained 44 closed-ended items with a bipolar scale ranging from -3 (unlikely, bad, opposed) to +3 (likely, good, in favor) to score behavioral or normative beliefs, attitude, subject norm, and behavioral intention. Motivation to comply was scored on a scale from 1 (not at all) to 7 (very much). Behavioral beliefs were calculated by totaling 11 products of each pair of beliefs and outcome evaluation items. Normative beliefs were computed by totaling eight products of each specific referent and related motivation to comply item.

The experimental and control groups completed the questionnaire and demographic data form. The experimental group received the 10-minute persuasive communication, and the control group heard a 10-minute message on how to avoid test anxiety. The persuasive communication message covered arguments constructed around salient beliefs and a positive appeal approach, which connected the choice of a nursing



career with positive consequences. The message ended with a specific recommendation to sign up for a career as an RN. Then, both groups again completed the questionnaire and were given a request form to sign up for the nursing program and complete the application process.

Results showed a significant treatment main effect of  $F(1, 86) = 31.16$ ,  $p < .001$  for belief change data. A significant treatment main effect of  $F(1, 86) = 31.38$ ,  $p < .001$  was noted regarding attitude change data. The behavioral intention analysis showed a significant treatment main effect of  $F(1, 86) = 7.45$ ,  $p < .01$ . In the experimental group, eight out of 46 students, which represented a success rate of 17.4%, signed up to receive an application form to the nursing program. For the control group, zero of 44 students signed up to receive an application form to the nursing program. Researchers also reported that changes in attitude and changes in behavioral intention were correlated with a score of  $r = -0.36$  and  $r = -0.70$ . Researchers concluded that persuasive communication can influence change in students' career decisions to enter the nursing profession.

Strader and Katz (1990) used the TRA as the theoretical framework to examine the effects of a persuasive communication on beliefs, attitudes, and career choices. This study was a duplication of the earlier research work by Strader et al. (1987). This quasi experimental study used a two-stage cluster sample to assign ( $N = 90$ ) college students, male and female, to experimental and control groups. Participants, ages 18 to 21 years, were recruited from a large, midwestern junior college while they were enrolled in an English Composition I course. A target population of 38 students from a different junior college participated in the pilot test procedure. The experimental group included 19 male



students and 27 female students, and the control group consisted of 21 male students and 23 female students.

Like the previous research study in 1987, Strader and Katz (1990) used the same method and the TRA to develop the questionnaire of 44 closed-ended items with a seven-point bipolar scale. On behavior or normative beliefs, attitude, subjective norm, and behavioral intention, participants' response scale was scored from -7 (unlikely, bad, foolish, harmful, unfavorable, and opposed) to +7 (likely, good, wise, beneficial, favorable, in favor). Motivation to comply was scored on a scale from 1 (not at all) to 7 (very much). Behavioral beliefs were calculated by summing 11 products of each pair of belief and outcome evaluation items. Normative beliefs were computed by summing products of each specific referent and related motivation to comply item. The data collection procedure was identical to the previous study that also took four weeks to complete.

Findings were somewhat similar to the previous study. Researchers reported that a treatment effect for belief-change data was significant,  $F(1, 86) = 31.55, p < .001$ . The mean change for the experimental group was 13.46 and for the control group -5.25. Regarding attitude change data, a significant main effect for treatment was noted as  $F(1, 86) = 11.65, p < .001$ . It was also found that the mean change for the experimental group was 2.07 and for the control group -0.75. For behavioral intention data, there was a significant main effect for treatment,  $F(1, 86) = 7.73, p < .001$ . In addition, mean change for the experimental participants was .76, compared with that for the control participants of .07. These were change in attitude and change in behavioral intention,  $r = -.36, p < .05$  and  $r = -.70, p < .001$ , respectively. Change in behavioral intention accounted for



49% of the variation in sign-up behavior. In the experimental group, eight of 46 students signed up to receive an application form to the nursing program after the treatment, representing a success rate of 17%. For the control group, none of the 44 students signed up for an application form. With a one-tailed  $z$ -test for equality of proportions, the difference between 17% and 0% was found to be statistically significant,  $z = 2.11$ ,  $p < .05$ .

These two research studies showed that the use of TRA is effective in predicting freshman college students' career choices in nursing. However, both studies had limitations of sample representation and unreported reliability of the research instrument. In addition, these research studies were conducted in the late 1980s and then again in 1990, and the generational group under investigation was Generation X cohorts. It may be possible that Generation Y college students have attitudes, subjective norm influences, and intentions toward choosing nursing as a career that may be different from the prior generational group.

#### Research on Young Adults' Career Choices

Young adults' career choices have been well researched in many sciences that include nursing, counseling, and psychology. Researchers have attempted to understand factors, such as gender (Larson, Butler, Wilson, Medora, & Allgood, 1994; Zysberg & Berry, 2005), personal approach (Bubany, Krieschok, Black, & McKay, 2008), and personality type (Adib-Hajbahery & Dianati, 2005) that affect and contribute to young adults' career choices. These factors have played an important role in the decision of a career choice and require attention in the recruitment of young adults into nursing. A



study in the field of counseling by Larson et al. (1994) is reviewed in this section because of its large sample of young adults and its generational implications of choosing a career.

Zysberg and Berry (2005) studied gender and students' vocational choices in entering the field of nursing. Research participants were recruited from three colleges and universities in the northwestern and midwestern United States. Students who agreed to participate ( $N = 160$ ) were freshman nursing students, including 24 men and 136 women, whose ages averaged 21 years. The majority of the students were White females, accounting for 75% of participants. Other students, male and female, who participated, were 13.4% Asian, 5.7% African-American, 3.8% Hispanic-Latino, and 1.7% from other ethnic origin.

The instrument used was developed by the investigators and contained 20 closed-ended questions. Participants' responses were recorded on a Likert-style scale. The questionnaire items were based on the model of vocational choice and represented two motivations, vocational congruency and survival. The internal consistency coefficients for each item, including congruency and survival, were .86 and .78, respectively. Researchers utilized one-way analysis of variance (ANOVA),  $t$ -tests, and Bonferroni's test to statistically analyze the data.

Findings showed that men and women had similar motivations for entering into the profession, which were related to their own perceived fit into nursing  $t(158) = .64$ ;  $p < .42$ . However, results revealed that gender differences were apparent in survival and need motivations for entering nursing. For the women, survival and need considerations were de-emphasized, while men placed a greater emphasis on salary, job security, and the social image of the profession  $t(158) = 6.89$ ;  $p < .01$ . Zysberg and Berry (2005)



concluded that these findings suggest that understanding individuals' motivations and interests in entering a profession may serve an important role in areas of student and staff selection, recruitment, training, performance, and long-term retention.

A study in the field of counseling by Larson et al. (1994) investigated the effects of gender on career decision problems in young adults. In this descriptive study ( $N = 1,006$ ), college students, ages 17 to 23 years, from four major universities in Utah completed a questionnaire. The instrument utilized was the Career Decision Diagnostic Assessment (CDDA). This self-report instrument, consisting of 37 items that included demographic data and career decision problems, measures decision anxiety, life-goal awareness, luck-fate orientation, authority orientation, and secondary gain motivation. Questions directed participants to indicate their degree of agreement or disagreement on a 6-point Likert scale ranging from strongly agree to strongly disagree. An internal consistency reliability of  $r = .94$  was reported for the total test score. Results reported as ( $p = .003$ ) indicated no gender difference in global levels of problems in career decision making (CDM). However, women reported more problems with life-goal awareness and authority orientation than did men ( $p = .005$ ). Men reported more problems with secondary gain motivations than did women ( $p = .001$ ). The results were discussed in terms of implications for gender-differentiated career counseling.

From the field of psychology, an investigation by Bubany et al. (2008) explored how college students discussed their personal approach to making career decisions using various models of career decision making. Participants were ( $N = 20$ ) college students, ages 18 to 21 years, who were attending a large university in the midwestern United States. The research team designed the interview questions with semi-structured open-



ended questions. In addition, an instrument was used by two individuals who served as auditors of the qualitative findings and as independent raters. The study involved a 10-15 minute telephone interview. The qualitative analysis allowed themes to emerge from the data.

Researchers reported that the Personal Model theme, which asked how participants thought decisions should be made, showed that students perceived intuition, experience, and heart to be important elements in their career choice. The engagement theme, which asked about activities the participants engaged in to inform their decision making, showed that talking to family and friends, taking a variety of classes, gathering work experience, and participating in internships played a vital role in their career decisions.

Adib-Hajbahery and Dianati (2005) researched undergraduate nursing students' personality characteristics and their compatibility with the demands of the profession. This descriptive study conducted in Tehran at Kashan Medical University used a convenience sample of ( $N= 52$ ) freshman nursing students, ages 18 to 25 years. Participants completed two questionnaires on demographic information and Holland's Vocational Interest Inventory. Out of 75 questionnaires delivered, 52 were completed and returned. The study's results showed that 45% of the participants lacked realistic or investigative personality types, which are the right match for the nursing profession. In addition, many participants reported choosing nursing as a career because they wanted to enter the university (21.2%), intended to continue studies in medicine (21.2%), and needed to find a job (19.2%). Some participants reported that they were not paying



attention when choosing a program (15.4%); they chose nursing because it is a service to help people (13.4%); and others influenced their career choices (9.6%).

Overall, the studies pointed out important aspects that affect young adults' career decisions. Although gender, personal approach, and personality type are important components of young adults' career decisions, other factors may also influence their decisions. In this case, the TRA model offers a different lens to explore Generation Y college students' attitude and subjective norm toward nursing, which, in turn, can predict their behavioral intention in choosing nursing as a career.

### Research on the Theory of Reasoned Action Constructs

#### Related to Young Adults' Career Choice

The studies reviewed in this section were examined for factors that are philosophically linked to the TRA constructs of attitude, subjective norm, behavioral intent, and behavior. However, these research studies were not based on the theoretical foundations of the TRA.

#### *Attitude*

According to the TRA model, attitude is the first determinant of behavioral intention (Ajzen & Fishbein, 1980). It is the individual's positive or negative feelings associated with performing a behavior. Nursing researchers have investigated middle school (Cohen et al., 2004; Hoke, 2006) and high school (Al-Kandari & Lew, 2005; Grossman et al., 1989; Katz, 2005; Rossiter & Yam, 1998; Whitehead et al., 2007) students' attitudes toward nursing as a career. A study conducted by Grossman et al. (1989) was included because the study was conducted in America and intentions in choosing nursing as a career could be compared to the prior generation.



An exploratory study about middle school students' perceptions of an ideal career versus a career in nursing was conducted by Cohen et al. (2004). A convenience sample of ( $N = 301$ ) male and female middle school students, ages 9 to 15 years, participated in the study by answering a questionnaire. All students were enrolled in grades 4 through 9 in urban and rural counties in Vermont. The research instrument was modified by the researchers to collect data. The changes in the instrument included adding questions about demographic data, having a family member who is a nurse, and being recently hospitalized.

The questionnaire was divided into two sections and contained 17 items with 5-point Likert scale responses. The reliability of the instrument reported was coefficient  $\alpha$  of .84 for ideal career section and  $\alpha$  of .81 for nursing. Data were analyzed descriptively and inferentially by using *t*-tests and Bonferroni statistical calculations. Results showed that 96% of the respondents had intentions to attend college, 74% had close relatives or a friend who was a nurse, and 66% indicated that they or a family member had been hospitalized in the past year. Participants reported the top four qualities of an ideal career to be having a college degree, being respected, getting good grades, and having the ability to make their decisions. Students perceived the negative aspects of nursing to be having less decision making, being busier and more hands on, and making less money than the ideal career. Researchers suggested that it is necessary to develop effective recruitment campaigns to reach students at a younger age to bring them into the nursing profession.

Hoke (2006) promoted nursing as a career of choice to middle school students in grades 6 to 8 at a public middle school located in an urban city on the west coast.



Participants were selected by the school's social studies teachers. The sample was comprised of male and female students of which ( $n = 30$ ) students were in sixth grade, ( $n = 44$ ) in seventh grade, and ( $n = 97$ ) in eighth grade. The researcher applied the theory of planned behavior (TPB) to develop a questionnaire. The instrument's Cronbach's alpha coefficients ranged from 0.70 to 0.93. After a brief introduction, the researcher asked participants to complete the first questionnaire. Then, an action-packed, 10-minute video titled "Nursing" was presented to students and followed by a speech about work opportunities in nursing. Afterward, students were asked to complete the second questionnaire.

Findings showed that results of the paired  $t$ -tests were statistically significant at ( $p < 0.001$ ). Prior to the presentation, the means of all student responses in all the classes was 7.4 for places of employment for nurses and 2.6 for types of work nurses perform. After the presentation, the means of all student responses had increased to 16.7 for places of employment and 11.6 for types of work. Results of students' interest in becoming a nurse showed that from all classes, 41% of the students indicated that they were more interested in being a nurse than they were before the presentation. Overall, 48% of students reported a greater interest in nursing after the presentation.

Katz (2005) conducted a pilot study to determine changes in Native American high school students' knowledge and opinions about nursing after attending a six-day residential summer nursing institute. The institute was located in the inland northwestern United States. Seventeen high school students, ( $n = 1$ ) male and ( $n = 16$ ) female, ages 15 to 18 years, affiliated with nine northwest tribes, participated in this study. Institute attendance was free for students who volunteered to participate. Two pre- and post-test



surveys were developed by the researcher and contained 66 items with a reliability of 0.72 and 0.85 for each pre- and post-test, respectively. The institute's curriculum included experiential and didactic content about nursing and the cultural dimensions of health. The institute's staff was composed of 95% Native American nurses, nursing students, and camp counselors. The survey was administered to students when they arrived and then again on their last day at the institute.

The researcher used *t*-tests to calculate the statistical analysis. Report of findings showed that two items, becoming a professional was ( $M = 2.94$ ,  $SD = 0.747$ ), and you can be powerful was ( $M = 2.94$ ,  $SD = 0.747$ ), which was a significant change from pre-test to post-test with ( $M = 3.53$ ,  $SD = 0.624$ ,  $t = 4.78$ ,  $p = 0.000$ ,  $df = 16$ ; and  $M = 3.41$ ,  $SD = 0.712$ ,  $t = 3.11$ ,  $p = 0.007$ ,  $df = 16$ ), respectively. Results also showed that the item achieve goals like buying a house and a car also showed change on the post-test ( $p = 0.029$ ,  $0.037$ , and  $0.04$ ), respectively. In addition, a salient and culturally related reason for choosing nursing observed after the institute was to be important to the tribe ( $p = 0.016$ ). For some students, becoming a nurse meant becoming a professional ( $t = -3.162$ ,  $p = 0.025$ ), working as a nurse, you can be powerful ( $t = -2.712$ ,  $p = 0.042$ ), and working as a nurse is similar to being a lawyer ( $t = -3.162$ ,  $p = 0.025$ ).

Al-Kandari and Lew (2005) investigated Kuwaiti high school students' perceptions of nursing as a profession, their source of information about nursing, and factors that affected their choice of nursing as a future career. This descriptive study surveyed ( $N = 289$ ) high school students whose ages ranged from 14 to 20 years. Participants were attending one of the seven all-female high schools within five educational regions in Kuwait. A self-administered questionnaire containing 41 questions



was developed by one of the researchers, Al-Kandari. The questionnaire covered three sections; the first section contained questions about demographic data, student's field of study, and school's location. In the second section, questions were a list of statements about nursing and the profession, and responses were answered using a 3-point Likert scale (strongly agree, moderately agree, do not agree). The third section consisted of open-ended questions that were based on the literature review. The development of the questionnaire took place in Kuwait as a pilot study, and three nursing lecturers reviewed the instrument. The test-retest coefficient was  $r = 0.9$ ; the  $t$ -test was used for statistical data analysis.

Major results of this study showed that 90% of the students thought that nursing was important to society, and 75% reported that nursing work requires advanced technology. Negative responses showed that 91% of the students thought that nursing was a physically exhausting profession, and 55% of respondents did not agree that nurses can choose their working hours and vacations. From the sources of information of the nursing profession item, results showed that students' primary source of information was 35% from hospital visits, 27% from television, and 18% from journals. The item students' reasons for considering or not considering nursing as a future career showed that 90% of respondents might consider nursing as a career because it is a nice profession. However, 60% of the respondents would not consider nursing as a future career because they do not like nursing, 30% thought nursing was physically exhausting, and 23% reported that nursing required contact with men. Researchers expressed concern about students' source of information about the nursing profession because it was not sufficient to motivate students into the field. In fact, enrollment into nursing programs in Kuwait was predicted



to be very low for the next few years. The researchers recommended that the nursing image should be changed to appeal more to younger generations.

A pilot study conducted by Grossman et al. (1989) investigated high school students' perceptions of nursing as a career. A convenience sample of male and female ( $N = 300$ ) junior high school students, ages 15 to 19 years, was surveyed from one southeastern and five mid-Atlantic high schools. The majority of the students were White; however, a small percentage of the students, ranging from 3% to 5%, were Hispanic, Black, Asian, and from other ethnic groups. The instrument was developed by the researchers who reported that all 24 items in the questionnaire had a validity of ( $p < .05$ ) and internal consistency reliability of 0.76. The survey was administered by a high school teacher during a scheduled class. Data collected were statistically analyzed using  $t$ -tests, Chi-square, and ANOVA calculations.

Researchers reported significant results in high school students' opinions according to their gender ( $F = 17.03, p < .0001$ ) and motivation to consider nursing as a career ( $F = 10.00, p < .002$ ). Results also showed a significant relationship between having a nurse as a role model and intention in pursuing nursing as a career ( $X^2 = 8.23, p = < .004$ ). Results of the study also showed that 75.8% of the students reported that nursing involved caring for individuals, families, and communities in times of need. Findings indicated that 61.8% of the students reported that nursing was about helping people live a healthy life. Among the participants, 17% reported that they had intentions to consider nursing as a career, while 81% of the students reported no intention to consider nursing as a career. In addition, students who planned to further their education stated that they would not work in the hospital setting for more than two years.



Researchers concluded that recruitment programs need to be developed to motivate young male students toward nursing as a career option. Promoting a mentoring relationship between high school students and nurses was an example of motivators to attract young people into the profession.

An ethnographic study conducted by Rossiter and Yam (1998) in Sydney, Australia, investigated the perceptions of non-English-speaking high school students. Four groups of high school students ( $N = 31$ ) whose parents were from Lebanon, Vietnam, Korea, and China participated in the study. Researchers carried out in-depth focus group interviews, and 10 concepts from three major themes emerged. The three major themes described the students' career of choice and their influencing factors, their perceptions of the image of nursing, and their suggestions on how nursing could be promoted to their communities.

The study's findings from the first theme of students' career of choice and their influencing factors showed that when choosing a career, students would follow personal interests and assess social and financial rewards of a chosen career. From the second theme of students' perceptions of the image of nursing, participants reported that nursing was about helping and caring for people and possessing interpersonal and technical skills. Students reported negative aspects of the profession as handling unpleasant tasks and also lacking positive attitudes, status, power, and control. For the third theme, students were asked to give suggestions on how nursing could be promoted in their communities. Participants' suggestions included that nursing should be introduced in schools and to ethnic parents as a career option. In addition, students believed that the image of nursing should be geared toward changing the public's perceptions of nursing as a career. The



findings from this study indicated that the non-English-speaking student population lacks motivation in pursuing nursing as a career. Results showed that students perceived nursing as a less intellectual occupation and that they showed a preference for prestigious careers that offer higher status and greater social and financial rewards.

Whitehead et al. (2007) studied the reasons multiracial and multicultural students choose or do not choose nursing as a career. Participants were men and women, ages 16 and over, from three high schools in the areas of Liverpool and London, United Kingdom. The questionnaire was developed by researchers and distributed to ( $N = 297$ ) students; 106 (35.7%) questionnaires came back completed. The questionnaire contained closed and open-ended questions about participants' demographics, perceptions of nurse's role, personal qualities needed for nursing, qualifications needed to study nursing, nursing as a career choice, individuals known with nursing or midwifery qualifications, reasons for being interested or not interested in nursing, influences on career choice, and factors that might encourage participants to consider nursing as a career. Interpretations of qualitative and statistical analysis of the quantitative data were reported.

Results showed that 56.6% of the students perceived nursing as caring for people and making them well, and 18.9% of the students perceived nursing as helping people. In addition, 13.2% of participants thought that nurses assisted doctors. The top three personal qualities for nursing perceived by participants were being caring, having good communication skills, and being helpful. The lowest rated personal qualities for nursing perceived by participants were altruism, responsibility, ability to cope with death, and open-mindedness. Results also showed that 58.5% of the students were aware of qualifications required to become a nurse, 4.7% thought that no qualifications were



necessary, and 30.2% were not sure about required qualifications to study nursing.

Results further showed that 21% of all the female students considered nursing as a career.

On the other hand, 41.3% of male and female students did not consider nursing, and

16.1% did not know if they would consider nursing as a career of choice.

Some students reported that they knew a person or had a relative who was a nurse, 45.5% knew a nurse with midwifery qualifications, and 45.5% did not know a nurse.

Participants who considered nursing as a career reported that they liked working with people and helping them, and they thought that nursing was challenging and interesting.

Participants who had no interest in nursing as a career reported that nursing did not appeal to them, they did not like blood, it paid low salary, and it was a girl's job.

Factors that would influence students to choose nursing as a career were reported as an increase in salary and receiving more information about nursing as a career choice.

The studies reviewed above reported factors that promote and inhibit young adults' attitudes toward decisions to pursue or not to pursue nursing as a career. Overall, the studies reported that positive perceptions toward nursing would cause students to choose nursing as a career choice. On the contrary, studies showed that negative perceptions and no familiarity with nursing as a career trigger students' disinterest in choosing nursing as their profession. The researchers also discussed the importance of further research on young adults' attitudes toward nursing because their perceptions turn into the reality of choosing or not choosing nursing as a career. The researchers concluded that, with this knowledge, hospital and nursing school recruiters could find new recruitment strategies and promote updated mentoring programs that could emphasize nursing as a career that can achieve professional success.



### *Subjective Norm*

According to Ajzen and Fishbein (1980), subjective norm is the second determinant of behavioral intention. The subjective norm is the pressure exerted on an individual's motivation to comply. It is independent of personal attitude, which means that individuals may or may not perform the behavior to comply with the wishes of those referents. Nursing researchers have investigated young adults' career choices, and in some cases, survey questions are related to factors or people that had influenced students' career choices. However, not one study was found in the nursing literature specific to peers and significant others playing an important role in students' career decision making. Therefore, one study from the field of counseling and clinical psychology (Ma & Yeh, 2005) and another from human development (Bregman & Killen, 1999) were reviewed in this section because of their philosophical link to the TRA's subjective norm construct.

A study in the field of counseling and clinical psychology was conducted by Ma and Yeh (2005), who examined factors influencing the career decision status of Chinese American youths. Participants were ( $N = 129$ ) Chinese Americans, ages 14 to 21 years, from New York City. Young adults were approached by researchers and asked to participate in the study while they were waiting in line to register at a community-based youth employment program. Participants who agreed were directed to a designated area where bilingual research assistants were available to distribute and collect questionnaires. The research instrument contained demographic information, such as gender, age, birthplace, ethnic background, generational link, time living in the United States, first language, and language used. Questionnaires were available in Chinese and English, and



participants were asked to complete three questionnaires. The questionnaire's Career Decision Scale (CDS) internal reliability coefficient was reported as  $\alpha = .80$ , the Asian American Family Conflicts Scale (FCS) internal reliability coefficient was reported as  $\alpha = .83$ , and the Relational-Interdependent Self-Construct Scale (RISC) internal reliability coefficient was reported as  $\alpha = .84$ . Statistical data analyses were obtained from *t*-tests and Pearson *r* calculations.

Results indicated that participants born in the United States exhibited a higher likelihood of intergenerational family conflict ( $M = 30.51$  and  $25.45$ , respectively,  $t = 3.49$ ,  $df = 121$ ,  $p = .001$ ) than did the overseas-born participants. Findings showed that the variable relational-interdependent self-construal was significantly correlated with career certainty ( $r = .24$ ,  $p < .01$ ), and family conflict was significantly correlated with career indecision ( $r = .28$ ,  $p < .01$ ). In addition, career certainty was negatively correlated with career indecision ( $r = -.32$ ,  $p < .01$ ). As hypothesized, family conflict was significant in predicting career indecision,  $F(2, 103) = 5.55$ ,  $p < .01$  and accounted for 10% of the variance in career indecision scores (adjusted  $R^2 = .08$ ). As hypothesized, relational-interdependent self-construal was significant in predicting career certainty,  $F(2, 119) = 5.63$ ,  $p < .01$  and accounted for 9% of the variance in career certainty (adjusted  $R^2 = .07$ ). Researchers discussed that the U.S.-born participants reported having high levels of intergenerational family conflict because they tended to be more vocal, assertive, and independent, traits that conflict with traditional Chinese norms.

From the field of human development, a research study was conducted by Bregman and Killen (1999), who conducted quantitative research about adolescents' and young adults' reasoning about career choice and the role of parental influence. The



sample consisted of ( $N = 72$ ) adolescents; young adults were evenly divided into three age groups: 10<sup>th</sup> graders ( $M = 15.17$ ,  $SD = .25$ ), younger college students ( $M = 18.79$ ,  $SD = .67$ ), and older college students ( $M = 21.75$ ,  $SD = .84$ ). High school students were recruited from a public school in a suburb of Washington, DC. The younger and older college students were from a university located outside of Washington, DC. There were an equal number of male and female participants in each age group. Participants were 69% European American, 18% African American, and 13% Asian American.

Although this study was quantitative, 45-minute interviews were conducted by the researchers' assistant. Three scenarios, entitled sports, business, and college, were described and then evaluated by each participant. Interviews were based on two assessments; the reported reliability for the first assessment was  $k = .94$ , and the reported reliability for the second assessment was  $k = .82$ . Data analysis was conducted using ANOVA, and comparisons using Bonferroni  $t$ - tests were performed to test for significant differences. The results showed that adolescents and young adults were motivated toward a career for their personal growth. In addition, participants rated the legitimacy of career choice reason differently in each scenario: sports,  $F(3,284) = 18.04$ ; business,  $F(3,284) = 13.14$ ; and college,  $F(3,284) = 34.28$ , all  $p < .0001$ . Furthermore, career decisions were judged to be distinct from moral, social-conventional, and prudential issues.

Parental influence was judged by students to be most important when the adolescents' decisions had negative moral consequences or focused on short-term goals. Types of reasons were found to have a significant effect on the ratings made for the sports scenario,  $F(3, 284) = 34.88$ ; business scenario,  $F(3, 284) = 54.07$ ; and college scenario,  $F(3, 284) = 45.42$ , all  $p < .0001$ . However, the use of bribery and threat of



punishment were rejected as appropriate methods of parental influence across all types of decisions, with the exception of prudential concerns. The use of bribery was viewed as more wrong for the career choice scenarios ( $M = 1.64$ ) than for the non-career scenarios ( $M = 1.44, p < .0001$ ). Furthermore, threats of punishment were evaluated more negatively for the career choice scenarios ( $M = 1.87$ ) than for the other scenarios ( $M = 1.67, p < .0001$ ). Researchers pointed out that parents have a very strong influence on their children's career choice. Since parents tend to see their child's career accomplishment as a reflection of them, many parents employ persuasion techniques of bribery and punishment because they possess resources and power. Therefore, children tend to choose careers that are well accepted or even planned by their parents.

The research studies above explained parental, ethnic, and generational influences in young adults' career decisions. Ma and Yeh (2005) pointed out that generational conflict between parents and children could influence career choices in that children could create family conflict if they decided not to follow cultural traditions. Therefore, young adults' intentions may be dependent on their family tradition, generational group, and parental approval. That, in turn, could prevent or motivate Generation Y college students to choose nursing as a career.

#### *Behavioral Intent and Behavior*

Ajzen and Fishbein (1980) suggested that "intention is the immediate determinant of behavior" (p. 41). In that, the behavior is the transmission of intention into action. Three studies related to young students' intention and engagement in pursuing nursing as a career were reviewed by Prater and McEwen (2006), Rognstand and Polit (2002), and While and Blackman (1998).



Prater and McEwen (2006) conducted a research study on the perception of student nurses about being called to nursing. A convenience sample of ( $N= 205$ ) nursing students was asked to complete a survey. Students were enrolled in their final two years of study in a private, faith-based university, in the south-central part of the United States. Most students were White females, accounting for 83.2% of the participants whose ages were between 20 to 24 years. Other ethnic groups that participated in the study were 8.4% Black, 4.6% Hispanic, and 3.1% Asian.

The questionnaire was developed by the researchers and contained six open-ended questions that measured participants' motivations, beliefs, and feelings about choosing nursing as a career. From the 205 questionnaires distributed, 63.9% were completed. Statistical analysis using Chi-square was utilized to determine correlation between the question "Were you called by God to become a nurse" and demographic data. Results from the study showed that the difference between men and women on their perceptions of being called to nursing was not statistically significant ( $p = .430$ ,  $df = 1$ ). In addition, being called to nursing was more common among ethnic minority groups; however, this finding was not statically significant ( $p = .258$ ,  $df = 3$ ). Other important findings were that 50% of the students felt that the primary reason to become a nurse was to help people, and 75% of the students reported being caring, compassionate, and empathetic. In addition, some students felt that the nursing profession offered job security and required less time commitment to complete their education as compared to medical school.

While and Blackman (1998) explored nursing students' reflections on nursing as a career choice. This qualitative study conducted semi-structured survey interviews of nursing students in one university in London, United Kingdom. Participants were



( $N = 40$ ) nursing students who were enrolled in their first or final year of a nursing program. The data collection procedure was a conversational-style interview that was tape recorded and transcribed immediately after each interview. The factors that motivated students' career choices in nursing emerged from the data analysis, including caring for people together with the desire to nurse, working in a caring team, and having a satisfying career.

Rognstand and Polit (2002) conducted a research study on recruitment to and motivation for nursing education and the nursing profession. This quantitative research study used a questionnaire to collect data from nursing students in three colleges in Oslo, Norway. A total of ( $N = 397$ ) students who started the nursing program six months earlier participated in the data collection procedure. Eighty-eight percent of participants were female nursing students. The average age of participants was 23 years old; 86% of the students completed the questionnaire.

The questionnaire included 20 closed-ended and two open-ended questions to identify students who chose nursing and the motives for their choice of occupation. Statistical analyses were frequency distributions, mean, variance analysis (ANOVA), and factor analysis. Results showed that most nursing students reported that nursing was the only discipline they wanted to study. In addition, the highest scores of the mean value on the students' motives for vocational choice of wanting human contact and helping others was ( $M = 8.91$ ), wanting to do something useful ( $M = 8.72$ ), wanting knowledge of the subject ( $M = 8.32$ ), and wanting job security ( $M = 8.00$ ). Researchers also reported that 92% of the students had already considered further education after graduation, and 46% were interested in midwifery and community health practices.



These studies showed that the behavioral intention to become a nurse was the determinant to engage in a nursing program. All of the studies showed that students who engaged in nursing as a career had positive attitudes toward nursing. Prater and McEwen's (2006) investigation showed that religious beliefs were another possible influence in young adults' career choices. The researchers explained that students' perceptions of being called by God to be nurses played an important part in their decision to become nurses. Since behavioral intention is a strong indicator of behavior, the need for further research in this area is necessary to explore what will influence Generation Y college students in their behavioral intention of becoming nurses. It is believed that with this knowledge, the nursing shortage can be concretely measured and preventive methods can be implemented before a more severe nursing shortage strikes America.

#### Literature Critique

The information reported in the literature about young adults' career choice in nursing and in other professions is sporadic and inconsistent. Most of the studies were extracted from the nursing literature, and four of these studies were literature from counseling and psychology (Bubany et al., 2008; Larson et al., 1994; Ma & Yeh, 2005), and human development (Bregman & Killen, 1999). Eighteen research studies were reviewed for the application of the research method, design, setting, sample, ethics, and data analysis procedure. From the research studies reviewed, 14 were quantitative (Adib-Hajbahery & Dianati, 2005; Al-Kandari & Lew, 2005; Cohen et al., 2004; Grossman et al., 1989; Hoke, 2006; Katz, 2005; Larson et al., 1994; Ma & Yeh, 2005; Prater & McEwen, 2006; Rognstand & Polit, 2002; Strader & Katz, 1990; Strader et al., 1987; Whitehead et al., 2007; Zysberg & Berry, 2005). In addition, one of these was a mixed



method study (Bregman & Killen, 1999), three were qualitative studies (Bubany et al., 2008; Rossiter & Yam, 1998; While & Blackman, 1998), and only two used the TRA as a theoretical framework (Strader et al., 1987; Strader & Katz, 1990). Many studies on young adults' career choices did not have a specific theoretical foundation. The research designs varied from descriptive, quasi-experimental, exploratory and correlational to phenomenologic and ethnographic studies.

Most studies included students from one college, university, middle school, or high school. Some researchers included students from more than one institution (Al-Kandari & Lew, 2005; Cohen et al., 2004; Grossman et al., 1989; Larson et al., 1994; Rognstand & Polit, 2002; Whitehead et al., 2007; Zysberg & Berry, 2005), and one of the researchers used a public area to collect data (Ma & Yeh, 2005).

In general, most of the research studies had more female than male participants; however, in some studies, a more equal number of men and women participated. A larger sample of female participants was used by Al-Kandari and Lew (2005). These researchers conducted their study in Kuwait where females from seven all-female high schools were recruited. Nonetheless, a consideration has to be given to the fact that Kuwait is a male-dominated society, and nursing, in general, is a female dominated profession. As a whole, all of the research studies included participants within the appropriate age group.

Altogether, quantitative researchers utilized appropriate sample sizes that ranged from 72 to 1,006 participants. The mixed method research study comprised a population of 72 high school and college students. Researchers who used qualitative methods included 31 to 40 participants who were interviewed.



All of the quantitative researchers reported using questionnaires and surveys to collect data with Likert scale responses. Some researchers reported internal consistency, but others failed to address the Cronbach's alpha of the used instrument. Most researchers developed the studies' research instrument, while others used an instrument that was previously developed and tested. Only one study used translated surveys (Ma & Yeh, 2005). Even though some studies were not conducted in America, the research instrument used was in English. A number of researchers reported response rates that ranged from 63.9% to 90%; however, in other studies, the rate of response was not mentioned. Qualitative researchers reported interviewing participants but did not report where participants were interviewed. Most interviews were conducted by the researcher(s) and varied from telephone to face-to-face interviews.

Research ethics were rarely reported; for example, cover letter, consent forms, confidentiality, and Institutional Review Board (IRB) approval were never mentioned by the researchers. Most researchers collected data during class time or during breaks. Only one study was conducted in a public area (Ma & Yeh, 2005). In fact, these researchers mentioned that participants were asked to go to a private area to fill out the questionnaire, and a translated questionnaire was provided to those who did not speak English (Ma & Yeh).

Statistical data analyses applied to the research studies were *t*-tests, *z*-tests, ANOVA, MANOVA, and ad hoc tests. All of the reported statistical analyses seem to make sense and show congruency with the reported information. Some researchers used stronger statistical tests to analyze the data, but others used simple descriptive tests to analyze the research data. Overall, researchers reported data accordingly and



appropriately. Statistical results were followed by discussion and recommendations. Most of the researchers recommended further research to learn more about the phenomenon of young adults' career choices. In addition, researchers recommended the need to improve the nursing image to build a positive attitude toward nursing among the young population, their parents, and peers. The need for mentoring was also recommended to involve the young population of students to help attract them into the nursing profession. The researchers concluded that with a positive nursing image and a familiarity with nursing schools and healthcare, institutions would have a better chance to recruit the future nursing workforce.

#### Relationship of Literature to the Present Study

Strader et al. (1987) and Strader and Katz (1990) laid the foundation for the use of the TRA in the study of young adults' career choices. These studies serve as a validation for the use of the TRA in the prediction of behavioral intention of young adults' career choices and can be utilized as a basis for future research in this area of interest. The researchers reported that the guidelines provided by Ajzen and Fishbein (1980) for the instrument development and refinement were followed. While the internal consistency of the constructed instrument was reported for the 1990 study, the researchers did not report the instrument's reliability for the earlier study. However, reported statistical data analysis showed significant relationships between the TRA constructs.

The gap in knowledge about young adults' career choices is the limited research studies that have utilized the TRA as a theoretical framework, and the limited research on the Generation Y college student behavioral intention in choosing nursing as a career. The use of the TRA in this study allows for consideration of personal attitude (behavioral



beliefs), social influences (subjective norm), motivation to comply (normative beliefs), as well as intention (behavioral intention). Therefore, the utilization of the TRA constructs in this study served to predict the behavioral intention of college students toward choosing nursing as a career. The knowledge acquired from this research study can be used to predict future nursing shortages and to develop evidence-based recruitment strategies to catch the attention of the young adults and educate them about the nursing profession.

### Chapter Summary

The literature review described studies that have examined, explained, and provided an understanding of factors that have motivated young students in their career choice with implications for nursing schools in the recruitment of students. This literature review also described the application of the TRA to young adults' attitudes in nursing as a career. Studies that have not used the TRA as a framework but investigated the philosophical links of the theory were reviewed. The application of the TRA constructs to predict behavioral intention of Generation Y college students served as the framework for this inquiry.



## CHAPTER THREE

### METHODS

#### Introduction to the Method

This study explored the relationships between the prescribed variables internal to the Theory of Reasoned Action (TRA) and its efficacy in predicting the behavioral intent of Generation Y college students regarding choosing nursing as a career. Three phases were conducted; Phases 1 and 2 represented preliminary work carried out to develop and refine the research instrument used to collect the data in Phase 3. The ultimate aim was to measure the theoretical constructs and test their relationships in the target population.

#### Setting

Data was collected from students enrolled in a large community college in south Florida. The institution serves a large geographic area that is densely populated. In order to accommodate the community, the college offers courses on three satellite campuses. Because the investigator is a faculty member on one of the campuses, to avoid any impression of conflict of interest, all phases of the study took place on two of the three campuses, omitting the campus wherein the investigator is employed. The agency is a public institution that offers undergraduate education, technical, and occupational training to the community in which it is situated. In addition to a number of certificate programs, degrees awarded include associate's and bachelor's degrees.

The most recent information available from 2005 showed that 31,835 individuals were enrolled; of these, 17,384 were full-time students (Enge, 2008). The student population was ethnically diverse (36% White, 29%, Black, 21% Hispanic, 3% Asian,



3% other, and 8% foreign). Ninety-six percent of the students were from Florida, and the remaining 4% account for the out-of-state and foreign students.

The majority of the student population (74%) was between the ages of 18 to 29 with the remainder (26%) between the ages of 30 to 64 (Enge, 2008). Many students enroll into the college immediately following graduation from high school; however, some students are non-traditional.

### Sample

A convenience sample consisting of college students was recruited. The number of individuals recruited was dependent on the phase of the study. The inclusion and exclusion criteria, procedures for protection of human subjects, and recruitment approach were consistent throughout the study.

#### *Inclusion and Exclusion Criteria*

Participants were asked to provide demographic data that was used to describe the sample and to ensure that the participants met the inclusion criteria. Inclusion criteria included those individuals between the ages of 18 to 26 and first-time college students currently enrolled in their first or second college course. Therefore, those individuals outside of the age restrictions and/or enrolled beyond their second college course were excluded.

### Protection of Human Subjects

Protection of human subjects was ensured throughout all phases of the study. Approval to conduct all phases of the study was obtained from the Barry University Institutional Review Board (IRB) and the college provosts for the two satellite campuses of the community college wherein data was collected (Appendix A). *Informing Participants*



As responses were anonymous, a cover letter specific to the phase was provided to potential participants (Appendix B). The cover letter explained the purpose of the study, name of the researcher, faculty sponsor, ability to withdraw, and the organization affiliation. Participants were assured that responses would be viewed only by the researcher. Withdrawal opportunity was limited in that once surveys were co-mingled, there would be no way to identify individual forms; therefore, once instruments were co-mingled, participants could not withdraw their responses.

#### *Adverse Consequences and Benefits to Participants*

There were no anticipated risks to participation. Participants were informed that although there were no direct benefits, participation may help in the understanding of recruitment and retention of Generation Y young adults into the nursing profession.

#### *Recruitment*

Participants were recruited from the general population of students attending two of the designated campuses. They were approached in areas where students tend to congregate including the cafeteria, lounge areas, library, and patios throughout the campuses. The investigator initiated contact and asked if the individual was willing to participate in the study. Those individuals indicating willingness to participate received a copy of the appropriate cover letter, and the study was explained. Candidates were allowed to ask questions prior to and during completion of the research task. Once the participant responded to the survey instrument, the participant was instructed to place the survey into a sealed box supplied by the investigator. At this time, surveys were co-mingled, and withdrawal was not an option.



## Methods

Phase 1 and Phase 2 were considered preliminary work in that the purpose of these phases was instrument development and refinement and occurred prior to use of the resultant instrument for the data collection in Phase 3. Phase 3 was considered to be the main study in that data collected was used to measure and test the relationships of the theoretical constructs described in the TRA.

### *Phase 1: Instrument Development*

Phase 1 sought to provide information that was used to construct the first draft of the research instrument. The research questions to be answered included: What are the terms Generation Y college students use to describe the positive and negative attitudes they have toward choosing nursing as a career? Who are the referent groups Generation Y college students consider to be influential in their career choice decisions?

### *Research Design*

Phase 1 research design was qualitative and exploratory.

### *Procedure*

In this phase, participants were asked to complete demographic data and two open-ended questions (Appendix C). The first question asked participants to list positive and negative factors they perceived to be associated with choosing nursing as a career. The second question asked participants to list categories of people who were most influential in their career decisions and had helped them plan for a major in college.

### *Sample*

A sample of 50 individuals was recruited. Examination of the 50 surveys found 28 (56%) to be complete and meeting the inclusion criteria. The 28 participants ranged in



age from 18 to 23 years ( $M = 19.32$ ,  $SD = 1.54$ ). The majority were enrolled in their second college course ( $n = 17$ , 60.7%), while the remainder ( $n = 11$ , 39.3%) were enrolled in their first college course. Declared major areas of study are summarized in Table 1.

Table 1

*Declared Major Areas of Study of Phase 1 Participants (N = 28)*

Major	<i>n</i>	%
Automotive	1	3.5
Animation	1	3.5
Broadcasting	1	3.5
Business Administration	1	3.5
Criminal Justice	1	3.5
Computer Science	1	3.5
Education	1	3.5
English	1	3.5
Exercise Science	1	3.5
Finance	1	3.5
Human Resource Management	1	3.5
Mechanical Engineering	2	7.1
Medical Assistant	1	3.5
Nursing	5	17.8



Pharmacy	2	8.4
Political Science	3	8.4
Psychology	3	8.4
Sports Administration	1	3.5

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### *Qualitative Analysis*

The responses were reviewed and isolated into recurring themes (Appendix D).

*Attitude.* The positive and negative terminology associated with choosing nursing as a career were listed and then paired with a logical anonym to create a 15-item semantic differential scale. Positive semantics were collected to the right side of the scale; negative semantics were collected to the left side. A Likert scale ranging from 1 to 7 was added to allow for increments of attitude.

*Subjective norm.* Responses to the question regarding the categories of people most influential in career decisions were grouped based on frequency. The four most commonly identified referents were then incorporated into four two-part questions. The “a” part of the questions asked the respondents to provide an indication of their perception of the referent’s opinion of their becoming a nurse while the “b” part of the questions asked the respondents to indicate the extent of their motivation to comply with the opinion of the referent. Each item provided responses based on a 7-point Likert scale.

### *Phase 2: Instrument Refinement, Psychometric Estimation, and Scoring*

In Phase 2, the instrument developed in Phase 1 (Appendix E) was tested for content and face validity and reliability as internal consistency.



### *Research Design*

Phase 2 used a quantitative and exploratory design.

### *Sample*

Recruitment of the sample followed the procedure previously described. A total of 50 individuals were recruited. Of these, 39 surveys were found to be complete with the respondent meeting the inclusion criteria. Of the surveys eliminated from data analysis ( $n = 11$ ), four (36.36%) did not meet the age criteria; four (36.36%) did not meet the enrollment criteria in that they were beyond their first or second college course; two (18.18%) returned incomplete surveys. One respondent (9.1%) marked a change on the stem of the scale for attitude where, “For me, choosing nursing as my career is” was re-written as, “For me, choosing mass communication as my career is.”

Data analyses were carried out on the remaining 39 (78%) surveys. The participants ranged in age from 18 to 26 years ( $M = 19.15$ ,  $SD = 1.62$ ). The sample was nearly equally represented by gender (men:  $n = 19$ , 48.7%; women:  $n = 20$ , 51.3%). The majority were enrolled in their first college course ( $n = 23$ , 58.97%) while the remainder ( $n = 16$ , 41.03%) were enrolled in their second college course. Declared major areas of study are summarized in Table 2.



Table 2

*Declared Major Areas of Study of Phase 2 Participants (N = 39)*

Major	<i>n</i>	%
Accounting	2	5.12
Acting	1	2.56
Aerospace Engineering	1	2.56
Automotive	1	2.56
Biology	1	2.56
Broadcasting	2	5.12
Business Administration	4	10.26
Criminal Justice	3	7.69
Computer Science	1	2.56
Education	1	2.56
Fire Emergency Services	1	2.56
Graphic Design	1	2.56
Hotel and Tourism Management	1	2.56
Mass Communication	1	2.56
Nursing	8	20.51
Pharmacy	2	5.12
Political Science	1	2.56



Pre-Law	1	2.56
Pre-Medicine	1	2.56
Pre-Veterinary Medicine	1	2.56
Professional Pilot	1	2.56
Psychology	2	5.12
Tech-Theater	1	2.56

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### *Analysis of Psychometric Properties*

*Validity.* Validity is a quality criterion referring to the degree to which an instrument measures what it is intended to measure (Polit & Beck, 2004). Validity was assured based on the feedback from two experts. These experts were asked to review the survey and give an opinion as to whether the items were relevant, appropriate, and an adequate representation of the constructs they were intended to represent. In addition, they were asked if the measure seemed to make sense.

Feedback regarding content validity was provided by two researchers experienced in the use of the TRA and instrument development to measure the theoretical constructs. This feedback was implemented prior to taking the instrument to the students.

To provide evidence of face validity, participants were asked to read, complete, and comment on the instrument. The completed instruments were inspected for errors in completion that could be attributed to presentation of the items. Several changes were made on the original instrument based on these observations.

On the attitude scale, one participant marked through “nursing” and replaced it with “mass communication;” the responses were then attributed to the student’s major



area of study and not to the perception of choosing nursing as a career. Therefore, the presentation of “nursing as my career is” was altered to uppercase and bold letters to better indicate the intent of the question.

On the subjective norm scale, participants were asked to answer questions 1 to 4 that contained both “a” and “b” statements presented in the same group. One participant wrote on the bottom of the page that questions “a” and “b” were similar to each other, and the perception was that the questions were being answered twice. In order to clarify that “a” and “b” items were asking two different questions, items 1a to 4a were grouped and 1b to 4b grouped, and instructions explaining the intent of each section were added.

Lastly, two participants skipped lines and entered two responses to the next item. In an effort to aid the participants to focus on one item at a time, the survey’s presentation was changed so that each item was isolated on its own line with a shaded line between lines, and response options were separated into cells.

*Reliability as internal consistency.* Cronbach’s alpha was calculated for the attitude subscale, the subjective norm subscale, and the entire scale. The results of the item analysis and internal consistency are presented in Table 3. Criteria used to identify poorly functioning items included: (a) an item-total correlation of  $<.50$  and (b) an increase of more than .10 in the total reliability when the item was deleted (Nunnally, 1978).

Two items on the attitude scale, Difficult/Easy and Disappointing/Rewarding, met the criteria for deletion. Deletion of these two items resulted in a 13-item measure for attitude and increased the Cronbach’s alpha for the attitude scale from .917 to .927. The alpha for the entire 22-item scale consisting of attitude (13 items), subjective norm



(8 items), and behavior intent (1 item) was .944.

Table 3

*Item Analysis and Internal Consistency of the Subscales: Attitude and Subjective Norm*

	<i>M</i>	<i>SD</i>	Item-total correlation	Alpha if item deleted
Attitude ( <i>n</i> = 39)				
1. Unimportant/Important	4.28	2.37	.63	.912
2. Messy/Neat	4.69	1.94	.74	.907
3. Costly/Affordable	3.85	1.62	.64	.917
4. Unclean/Clean	4.92	1.80	.80	.909
5. Complex/Simple	3.18	1.73	.59	.912
<b>6. Difficult/Easy</b>	<b>3.80</b>	<b>1.67</b>	<b>.35</b>	<b>.919</b>
7. Safe/Unsafe	5.33	1.47	.70	.910
8. Bad/Good	5.18	2.02	.72	.908
9. Sad/Happy	4.49	1.97	.68	.909
10. Heavy/Light	3.80	1.44	.53	.914
11. Undesirable/Desirable	4.36	2.16	.74	.907
<b>12. Disappointing/Rewarding</b>	<b>5.18</b>	<b>1.92</b>	<b>.24</b>	<b>.924</b>
13. Foolish/Wise	4.95	1.81	.71	.908
14. Harmful/Beneficial	5.28	1.82	.87	.903
15. Punishing/Rewarding	5.15	1.91	.73	.908
$\alpha = .917$				
Subjective Norm ( <i>n</i> = 39)				
1a. My parents think that I should choose nursing as a career.	4.15	2.42	.76	.908
1b. I want to comply with what my parents think about me choosing nursing as a career.	3.21	2.12	.56	.923
2a. Other members of my family think that I should choose nursing as a career.	3.95	2.24	.77	.907
2b. I want to comply with what other members of my family think about me choosing nursing as a career.	3.69	2.03	.77	.907
3a. Most of my friends think that I should choose nursing as a career.	3.23	2.53	.78	.906



3b. I want to comply with what most of my friends think about me choosing nursing as a career.	3.21	2.09	.79	.905
4a. My co-workers think that I should choose nursing as a career.	3.46	2.34	.73	.910
4b. I want to comply with what my co-workers think about me choosing nursing as a career.	3.21	2.09	.72	.911
$\alpha = .921$				

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Note. Item in bold met the criteria for deletion.

### *Scoring*

*Attitude.* Attitude was scored by the participants' response to the semantic differentials. Responses to the 13 items were summed for a total score. Possible scores ranged from 13 to 91. The higher the score, the more positive attitude the participant had regarding the behavior of choosing nursing as a career.

*Subjective norm.* The score for subjective norm was calculated by summing the products of the estimation of the opinion of a referent toward the subject performing times the motivation to comply with the referent. Accordingly, the value ascribed to the "a" statement was multiplied by the value of the "b" statement. Once the values of the two statements were multiplied, a total score was determined by summing each of the multiplied groupings (Minnick, 1980; Quinn, 1996). Therefore, maximum possible score was 196, and the minimum score was four and allowed for a range of magnitude within the entire set.

*Behavioral intent.* One question was added to the instrument to measure the behavioral intention of choosing nursing as a career. The item provided a 7-point Likert scale wherein 1 indicated that the statement was completely false and 7 indicated that the



statement was completely true regarding the plan to choose nursing as a career. Possible scores ranged from 1 to 7.

### *Phase 3: The Main Study*

In Phase 3 the research instrument that was developed and refined through the previous two phases (Appendix F) was used to collect data from a stratified convenience sample representative of the target population. Stratification was used to assure relatively equal numbers of participants who intended to become nurses and those who did not intend to become nurses. The same inclusion criteria, recruitment processes, and protection of human subjects previously described were again implemented.

### *Research Design*

A cross-sectional survey utilizing correlation and descriptive methods was employed. The focus of this phase was to answer the question: Are attitude and subjective norm significantly related, uniquely or as a linear composite, to the outcome variable of behavior intent of Generation Y college students to choose nursing as a career?

### *Determination of Sample Size*

A priori estimation of sample size was made and employed based on a power analysis of the number of variables and statistical techniques. A study's sample size is related to power, effect size, and significance level (Munro, 1997). One hypothesis consisting of two predictor variables, attitude and subjective norm, and one outcome variable, behavioral intent to choose nursing as a career, were tested. The relationships among the variables were analyzed by means of multiple regression.



Sample size was calculated by means of G\*Power (Buchner, Erdfelder, & Faul, 1997). The statistical test employed was multiple regression, an  $F$ -test. For a medium effect size ( $f^2 = .15$ ), an alpha level ( $\alpha$ ) of .05, power ( $1 - \beta$ ) of .95, and using two predictor variables, a sample size of 107 was required; however, in anticipation of incomplete surveys, an additional 53 (50%) was collected. Therefore, 160 individuals were recruited to participate in Phase 3.

### *Statistical Analysis*

*Description of the sample.* The sample was described from data provided on the demographic section of the research instrument and analyzed by means of descriptive statistics.

*Hypotheses testing.* The relationship between the theoretical constructs was analyzed by means of parametric tests; therefore, the data met specific characteristics. The data was measured as continuous with interval or ratio scales. The variables were normally distributed in the population (normality); the relationship between the dependent variable and the independent variables was a linear relationship (linearity); there were equal variances in the scores of the dependent variables and the independent variables (homoscedacity); and each value was independent and not related to any other predictor value (multicollinearity and singularity). Prior to data analysis, diagnostic methods were conducted to assure none of these assumptions was violated, thereby increasing the likelihood of making a Type I and/or Type II error (Lomax, 2007; Tabachnick & Fidell, 2001).

Several techniques were employed to assure that the data conformed to the assumptions for parametric testing. To assure the data was normally distributed,



histograms with the normal curve line imposed were visually inspected for each variable. Additionally, the Kolmogorov-Smirnov (K-S) statistic was considered; a non-significant value ( $p > .05$ ) supported normality. Values for skewness and kurtosis were generated; values approximating zero indicated distribution normality.

A residual plot was used to assure the linear relationship between the independent variables and the dependent variables and support homoscedasticity. Collinearity statistics for tolerance and variance inflation factor (VIF) were considered. Indicators for multicollinearity were tolerance  $< .1$  and VIF  $> 10.0$  (Cohen, Cohen, West, & Aiken 2002; Pedhazur, 1997; Vogt, 2005).

One hypothesis was posed as it corresponded to the research question: There will be no significant contribution, uniquely or as a linear composite, between the predictor variables of attitude, subjective norm, and the behavioral intent of choosing nursing as a career. In this hypothesis, two independent variables, considered as predictors, and one criterion variable were identified. This hypothesis was tested by means of multiple correlation.

Vogt (2005) suggested that regression analysis is a method that can be used to explain the “nature and closeness of the relationship between two or more variables, specifically, the extent to which you can predict some by knowing others and the extent to which some are associated with others” (p. 269). In this study, regression analysis was used to assess the degree to which the dependent (outcome) variable was related to the independent (predictor) variables. In addition, regression analysis was also used to predict the score of the dependent (outcome) variable from scores on several independent (predictor) variables.



### Data Management and Quality Control

The data was collected and managed by the investigator. Only the primary investigator had access to hard copies of the collected data. Data collected on the survey instruments were transferred to a computer file that was accessed only by the primary investigator and a statistical consultant. The Statistical Package for the Social Sciences (SPSS), version 16, was used to analyze the data.

### *Data Cleaning*

Each survey instrument was examined for completion. Since participants may have provided incomplete surveys, only completed surveys were utilized for analysis. However, if the participant omitted one scale but completed the other scales, then the completed scale was included.

Each scale was manually scored. Manual scores were subtracted from computer calculated scores to assure no difference in the values. Frequency distributions were performed to detect impossible scores, data entry errors, and outliers.

Outliers were defined as any score falling below or above three standard deviations from the mean and identified by boxplots. Outliers were examined to determine if they were properly part of the population from which the sample was intended. If they were part of the target population, they remained in the analysis, but steps were taken to reduce their impact. Following the guidance of Tabachnick and Fidell (2001) for variable transformation, scores for the outlying cases were assigned a raw score that was one unit larger or smaller than the next most extreme score in the distribution.



### *File Storage*

Surveys instruments were maintained in a locked file cabinet in the investigator's home office. Hard copies were maintained separately from computer files. Computer files were stored on the investigator's home computer, which was password protected and secured by firewall software. These files will be maintained for a period of five years. At the conclusion of that time, all surveys will be shredded, and computer files will be deleted.

### Chapter Summary

This non-experimental cross-sectional survey study approached Generation Y students enrolled in one large community-based college in south Florida to explore their attitude toward choosing nursing as a career and to identify their referent groups and the impact these groups had on their behavioral intention toward choosing nursing as a career. The study progressed through a series of three phases. In Phase 1, an instrument specifically designed to operationally define the constructs of the TRA was constructed. In Phase 2, the instrument was tested for psychometric properties to assure it was appropriate to measure the constructs among the target population regarding the phenomenon of interest. In Phase 3, the final draft of the instrument was used to collect data from a sample of the target population. This data was used to test the theoretical relationships between the constructs.



## CHAPTER FOUR

### RESULTS

#### Introduction

The purpose of this study was to test the efficacy of the constructs of the TRA to predict the intent to choose nursing as a career among Generation Y students enrolled in their first or second semester at a large community-based college. One hypothesis was posed and reflective of the relationships proposed by the theory. Before hypothesis testing was carried out, the data was subjected to rigorous analysis to determine if the assumptions for parametric testing had been met. This chapter presents the results of these statistical analyses.

A total of 184 surveys was distributed and returned. Of these, 128 (69.6%) met the inclusion criteria and were complete; 56 (30.4%) were not used because they either did not meet the inclusion criteria of age ( $n = 30$ , 53.6%) or enrollment in that the participants were beyond their first or second college course ( $n = 26$ , 46.4%).

#### Description of the Sample

The sample ( $N = 128$ ) was represented by men ( $n = 38$ , 29.7%) and women ( $n = 90$ , 70.3%). The participants ranged in age from 18 to 26 years ( $M = 19.63$ ,  $SD = 1.78$ ), representing Generation Y college students. Table 4 provides a summary of the declared majors represented by the sample.



Table 4

*Declared Major Areas of Study (N = 128)*

Major	<i>n</i>	%
Arts	2	1.56
Biology	8	6.25
Broadcasting	1	0.78
Business	4	3.13
Criminal justice	5	3.91
Civil Engineering	1	0.78
Computer Science	4	3.13
Dental Assistant	3	2.34
Education	4	3.13
English	1	0.78
Exercise Science	2	1.56
Fire Emergency Services	1	0.78
Forensics	1	0.78
Hospitality	2	1.56
Human Resources Management	1	0.78
History	1	0.78
International Relations	1	0.78
International Business	2	1.56
Journalism	2	1.56



Marketing	1	0.78
Mechanical Engineering	1	0.78
Network Administration	1	0.78
Nuclear Medicine	1	0.78
Nursing	64	50.0
Nutrition	1	0.78
Physical Therapy	2	1.56
Pre-Law	1	0.78
Pre-Veterinary Medicine	1	0.78
Psychology	1	0.78
Radiology	1	0.78
Speech Pathology	2	1.56
Theater	1	0.78
Not Reported/Unsure	4	3.13

#### Estimation of Internal Consistency

The Cronbach's alpha was calculated for the attitude subscale ( $n = 128$ ,  $\alpha = .90$ ), the subjective norm subscale ( $n = 128$ ,  $\alpha = .94$ ) and the entire scale ( $n = 128$ ,  $\alpha = .93$ ) based on data provided by the participants of the main study and compared to that obtained in the preliminary work: attitude ( $\alpha = .93$ ), subjective norm ( $\alpha = .92$ ) and the entire scale ( $\alpha = .94$ ).

#### Exploring the Data

To determine if the data met the assumptions of parametric testing, the data was explored.



### *Tests of Normality of Distribution*

The scores for the total attitude scale, total subjective norm scale, and intent scale were screened for outliers by frequency distributions, histograms with the normal curve imposed, and calculation of the Kolmogorov-Smirnov (*K-S*) value.

Initial descriptive statistics for attitude ( $M = 65.46$ ,  $SD = 15.96$ , range 13 to 91), subjective norm ( $M = 80.55$ ,  $SD = 68.25$ , range 4 to 196), and intent ( $M = 4.26$ ,  $SD = 2.68$ , range 1 to 7) also were calculated.

Raw scores were converted to *z*-scores and examined for outliers. While the frequency distribution for subjective norm and intent found all scores to be within two *SD* of the mean, seven outlying scores located at the extreme low end of the scale were detected for attitude. Boxplots were used to identify the outlying cases. In keeping with the previously described plan, these scores were changed to one unit smaller than the next most extreme score in the distribution. Therefore, outlying scores for attitude (13, 22, 24, 26, 33) were changed to 34. In this way, the outlying cases remained deviant but not as deviant as they were (Tabachnick & Fidell, 2001).

After outliers were managed, descriptive statistics were recalculated for attitude ( $M = 65.94$ ,  $SD = 14.76$ , range = 34 - 91). Using *z*-scores, the histograms were re-plotted, and skewness and kurtosis were examined (Appendix G). All scores on all variables fell within two *SD* of the mean. For attitude scores, the *z*-score of skewness was  $-.64$ ; the kurtosis *z*-scores were  $-.44$ . For subjective norm scores, the *z*-score of skewness was  $.56$ ; the kurtosis *z*-score was  $-1.11$ . For the intent scores, the *z*-score was  $-.16$ ; the kurtosis *z*-score was  $-.18$ . Positive values of skewness indicate that the scores tend to pile up on the left of the distribution, whereas negative values indicate a pileup on the right. Positive



values of kurtosis indicate a pointy distribution, whereas negative values indicate a flat distribution (Field, 2005).

To determine if the distribution as a whole deviated from a comparable normal distribution, the *K-S* test was computed for attitude ( $D [128] = .12, p = .00$ ), subjective norm ( $D [128] = .15, p = .00$ ), and intent scores ( $D [128] = .27, p = .00$ ). The significant values indicated that the distribution for these variables was different from a normal distribution; it was non-normal.

### Hypothesis Testing

One hypothesis was tested: There will be no significant contribution, uniquely or as a linear composite, between the predictor variables of attitude, subjective norm, and the behavioral intent of choosing nursing as a career. In this hypothesis, two independent variables, considered as predictors, and one criterion variable were identified. The variables were all initially measured as continuous data and appropriate for multiple regression. However, as the data was found not to meet the assumption of normality of distribution, the scores for the outcome criterion were transformed from continuous to dichotomous data wherein 1, 2, and 3 were re-coded to zero, indicating no intent to choose nursing as a career, and scores 4, 5, 6, and 7 were re-coded to one, indicating intent to do so. Therefore, based on this re-coding, this hypothesis was tested by means of logistic correlation. Logistic regression is well-suited for testing hypotheses about relationships between variables when the data does not achieve the assumptions considered necessary for linear parametric testing.



Collinearity statistics were calculated. The tolerance statistic (.67) was well above zero, and the VIF value (1.50) was considerably less than 10. These values were accepted as evidence that multicollinearity was not a concern.

Based on analysis of distribution, outlying scores for attitude were transformed to reduce the deviance. The scores used for hypothesis testing were the non-standardized, transformed scores.

The two-predictor logistic model was fitted to the data to test the hypothesis regarding the relationship between the likelihood that the intent of Generation Y college students to choose nursing as a career is predicted by attitude and subjective norm. The null model was rejected. The result showed that the predicted logit of (intent) =  $-7.048 + (.073) ** \text{attitude} + (.035) ** \text{subjective norm}$ . According to the model, the log of the odds of a Generation Y college student intending to choose nursing as a career was positively related to both attitude ( $p = .003$ ) and subjective norm ( $p < .00$ ) with subjective norm being the most influential predictor (see Table 5).

The soundness of the logistic regression model was supported by the overall model evaluation, statistical tests of individual predictors, and goodness-of-fit statistics.

#### *Overall Model Evaluation*

The logistic model provides a better fit to the data than the null model. This improvement was supported using three inferential statistical tests: the likelihood ratio, score test, and Wald test. Table 5 shows that all three tests yielded the same conclusions; namely, that the logistic model was more effective than the null model.



Table 5

*Logistic Regression Analysis of 128 Generation Y College Students' Intent to Choose Nursing as a Career*

Predictor	$\beta$	$SE\ \beta$	Wald's $X^2$	$df$	$p$	Odds Ratio
Constant	-7.05	1.65	18.16	1	.000	NA
Attitude	.07	.02	9.04	1	.003**	1.08
Subjective norm	.03	.01	23.03	1	.000**	1.04
Test			$X^2$	$df$	$p$	
Overall model evaluation						
Likelihood ratio test			97.04	2	.00	
Score test			97.04	2	.00	
Wald test			97.04	2	.00	
Goodness-of-fit test						
Hosmer & Lemeshow			12.37	8	.14	

*Note.* Cox and Snell  $R^2 = .53$ , Nagelkerke  $R^2 = .71$ . NA = not applicable  
 \*\*  $p < .01$ .

*Statistical Tests of Individual Predictors*

According to Table 6, both attitude and subjective norm were significant predictors of Generation Y college students' intent to choose nursing as a career.



Table 6

*Mean Values for Predictor Variables as a Function of Intent to Choose Nursing as a Career (N = 128)*

Variable	Intenders (n = 67)	Non-Intenders (n = 61)	t (126)
Attitude	74.30	56.75	8.33**
Subjective norm	126.94	29.61	11.48**

\*\* $p < .001$

#### *Goodness-of-Fit Statistics*

Goodness-of-fit statistics assess the fit of the logistic model against the actual outcome of whether the individual intends to choose nursing as a career. One inferential test and two descriptive measures are presented in Table 7. The inferential goodness-of-fit test is the Hosmer-Lemeshow test that yielded an  $X^2$  (8) of 12.37 and was insignificant ( $p > .05$ ), suggesting that the model was fit to the data well.



Table 7

*Inter-Correlations for Intent to Choose Nursing as a Career and Predictor Variables (N = 128)*

Measure	1	2	3
1. Behavioral intent	--	.60**	.71**
2. Attitude		--	-.59**
3. Subjective norm			--

\*\* $p < .01$

### Chapter Summary

A convenience sample of 128 Generation Y college students provided the data for this study. One hypothesis was tested for relationships among the variables of the theoretical model. The internal consistency calculation showed strong reliability and was calculated based on data provided by the participants of the main study, compared to that obtained in the preliminary work for the attitude subscale, subjective norm subscale, and the entire scale.

The data was explored and rigorous analysis was applied to determine if the data met the assumptions of parametric testing. The results showed significant values, indicating that the distribution of the predictors and outcome variables was different from a normal distribution. Therefore, the scores for the outcome criterion were re-coded to dichotomous data, and logistic regression analysis was employed.



The results of this study indicate that the null hypothesis was rejected. Both attitude and subjective norm were influential in the intent of Generation Y college students to choose nursing as a career, with subjective norm being slightly more significant in the prediction.



## CHAPTER FIVE

### DISCUSSION AND CONCLUSION

#### Introduction

This chapter summarizes and integrates the findings of this study and places the results into context with previously reported literature with both convergence and divergence. Findings are explained, and implications are presented.

#### Summary and Integration of Results

Generation Y college students represent a new generation of individuals who will be the majority of America's workers in the next few years (Tapscott, 1998). This generational group is already making a significant impact in the nursing profession since there is a marked decline of this population's interest in pursuing nursing as a career (Swearingen & Liberman, 2004). Reasons that have inhibited individuals from choosing nursing as a career include lack of positive attitudes and support from families and friends toward the profession (Al-Kandari & Lew, 2005; Bregman & Killen, 1999; Cohen et al., 2004; Grossman et al., 1989; Hoke, 2006; Katz, 2005; Ma & Yeh, 2005; Rossiter & Yam, 1998; Strader & Katz, 1990; Strader et al., 1987; Whitehead et al., 2007). Data collected for this study included descriptive information for Generation Y college students, which was comparable to findings about this generational group. Data was analyzed for the theoretical components of the TRA by Ajzen and Fishbein (1980). Results showed that the theoretical variables of attitude and subjective norm significantly predict behavioral intention, with subjective norm contributing more than attitude.



*Factors that Promote or Inhibit Generation Y on Their Career Choice in Nursing*

In this study, the Generation Y college students who were the intenders in choosing nursing as a career reported positive attitude and major support from their parents, family members, friends and co-workers toward the profession. Those who were the non-intenders in choosing nursing as a career reported negative attitude and little support from their parents, family members, friends and co-workers toward the profession.

*Integration of Findings with Previous Literature*

The Generation Y students' attitudes toward choosing nursing as a career identified by this study converge with findings from other studies (Al-Kandari & Lew, 2005; Grossman et al., 1989). Results from Al-Kandari and Lew, who surveyed Kuwaiti high school students on their perceptions, sources of information, and factors that affected their choice of nursing as a career, showed that positive attitudes toward nursing contributed to students' intention to choose the profession. On the contrary, students who reported negative attitudes toward nursing had no intention to choose the profession as a career path.

Results from the study by Grossman et al. (1989), who investigated students' perceptions of nursing as a career, are also congruent with the findings of this study. The results of this study showed that high motivational levels contributed to students' intention to choose nursing as a career, whereas the reported low motivational levels toward choosing nursing as a career deterred students from their intention to choose the profession.



Findings identified in this study also converge with findings from a study by Bregman and Killen (1999), who investigated adolescents' and young adults' career choice related to parental influences. Findings of this study showed that parental influence had the most important impact and played a significant role in the students' career choice.

Ma and Yeh (2005) investigated Chinese American young adult on their career decision. Findings showed that family conflict was a significant predictor of career indecision among U.S.-born young adults who were more vocal, independent, and refused to follow traditional Chinese norms. Their results diverge from the findings of this study because Generation Y college students, who were the intenders and non-intenders in choosing nursing as a career, reported family being very influential in their career decision.

### *Explanation for Findings*

The literature supported factors that have promoted and inhibited young adult students from choosing nursing as a career. This study asked participants to rank 13 items related to positive and negative factors related to choosing nursing as a career. In addition, participants were asked to rank eight items related to the people who had influenced their career decision and also asked about their intentions to comply with those who were important to them. These items derived from this study's preliminary work, and the results of this study closely resembled those from several studies' findings (Al-Kandari & Lew, 2005; Bregman & Killen, 1999; Grossman et al., 1989).

The items measuring attitude, unimportant were consistently ranked as the primary inhibitor, and important was always ranked as one of the primary supports of



choosing nursing as a career. An explanation for these findings is that Generation Y college students, who were the non-intenders, ranked choosing nursing as a career unimportant. The reason for this may be that they see no possibilities and have no desire or support from important others regarding choosing nursing as a career. On the other hand, all Generation Y college students who were the intenders ranked choosing nursing as a career as important. That is, for those choosing nursing as a career, the profession was viewed as of high significance, not only for themselves but for their parents, family members, friends, and co-workers.

### Summary and Integration of Hypothesis Testing

#### *Description of Major Study Variables*

This study tested the theoretical relationships of attitude and subjective norm in the prediction of behavioral intention. Results of this study showed that the theoretical variables of attitude and subjective norm contributed significantly to Generation Y college students' behavioral intentions in choosing nursing as a career. Results also showed that subjective norm contributed more in this prediction than did attitude.

#### *Integration of Findings with Previous Literature*

The available studies in nursing education from Strader et al. (1987) and Strader and Katz (1990) have utilized the TRA constructs of attitude and subjective norm to predict the behavioral intention and behavior of young adults signing up for a nursing program. Results from studies that have examined factors that are philosophically linked to the TRA constructs, but were not based on its theoretical foundations, converge with the findings of this study in that attitude and subjective norm were highly predictive of behavioral intention (Bregman & Killen, 1999; Hoke, 2006; Rossiter & Yam, 1998).



The findings of this study converge with findings from two studies by Strader et al. (1987) and Strader and Katz (1990), which used the theoretical foundations of the TRA constructs to formulate persuasive communication in an attempt to recruit young adults into nursing. Results from these studies showed that attitude and subjective norm were highly predictive of behavioral intention. The study by Strader et al. (1987) examined the effects of a systematically developed persuasive communication on students' beliefs, attitudes, intentions, and behavioral changes toward choosing a career as a RN. Participants were freshman college students who completed a pre- and post-intervention test survey. Results from the post-intervention survey showed a significant treatment main effect for belief-change and on attitude-change data. The behavioral intention analysis showed a significant treatment main effect in the experimental group. Researchers reported that change in attitude and changes in behavioral intention were significantly correlated.

Strader and Katz (1990) used the TRA as the theoretical framework to examine the effects of a persuasive communication on beliefs, attitudes, and career choice. This study was a duplication of the earlier research work by Strader et al. (1987). Participants were college students who were asked to complete pre- and post-intervention tests. Findings were somewhat similar to the previous study. Researchers reported that a treatment effect for belief-change data was significantly related to the attitude-change and that subjective norm analysis did approach statistical significance. Once again, researchers concluded that changes in attitude were significantly related to the change in behavioral intention of signing up for a nursing program.



Hoke (2006) applied the theory of planned behavior (TPB) to promote nursing as a career of choice to middle school students. Participants were asked to complete pre- and post- intervention questionnaires. Results showed that 48% of students reported a greater interest in choosing nursing as a career as their attitude improved after the intervention.

Bregman and Killen (1999) conducted a research study on adolescents' and young adults' reasoning about career choice and the role of parental influence. Participants were high school and college students from local schools. These results converge with findings from this study in that students' career choice was highly correlated with parental influence. Participants judged their subjective norm to be most the important influence in their career decisions. Researchers pointed out that parents have a very strong influence on their children's career choice, and children tend to choose careers that are well accepted or even planned by their parents.

Rossiter and Yam (1998) conducted an ethnographic study in Sydney, Australia, to investigate the perceptions of non-English-speaking high school students. Participants were high school students whose parents were from Lebanon, Vietnam, Korea, and China. Findings showed that students reported positive perceptions of nursing, such as helping and caring for people, and suggested that nursing should be introduced to ethnic parents. However, findings indicated that the non-English-speaking student population lacked motivation in pursuing nursing as a career. These results converge with the findings of this study because subjective norm was a stronger predictor of behavioral intention than attitude.

The results of the study conducted by Whitehead et al. (2007) diverge from results from the presented studies and from results of this study in that Whitehead et al.'s



research findings showed that high attitude toward nursing was not a predictor of behavioral intention. Whitehead et al. studied the reasons multiracial and multicultural students choose or do not choose nursing as a career. Participants were high school students in the areas of Liverpool and London, United Kingdom. Results showed that the majority of the students perceived nursing as caring for people, making them well, and as helping people, but did lack intentions in choosing nursing as a career.

### *Discussion of Findings*

The TRA has not been previously used to predict the behavioral intention of Generation Y college students in choosing nursing as a career. Prior studies have examined the philosophical link of the TRA constructs but were not based on its theoretical foundations. The majority of the studies previously reviewed suggest that college, high school, and middle school students' attitude and subjective norm were very significant predictors of behavioral intention, with attitude being the more dominant predictor (Bregman & Killen, 1999; Hoke, 2006; Rossiter & Yam, 1998; Strader & Katz, 1990; Strader et al., 1987). A possible explanation for these findings lies in the strength of the relationship between attitude and subjective norm for these groups. Attitude had more influence on behavioral intention than subjective norm, with increased volitional control or autonomy in choosing a career path.

However, the study by Rossiter and Yam (1998) suggested that even though participants reported positive attitude toward nursing, their subjective norm needed to be educated about the profession. Participants might have felt that they would not have the support of their parents if they would choose nursing as a career. In the case of the Generation Y college students, their significant others, who are their parents, family



members, friends and co-workers, strongly influence their career decision, which supports the explanation for this study's findings of subjective norm being the stronger predictor of behavioral intention than attitude. Most interesting is that although Generation Y college students' portrayed characteristics and aptitudes are different from prior generations used in past research studies, their attitude and subjective norm in the prediction of behavioral intention of choosing nursing as a career is still the same. An explanation of this is that humans are rational beings and make use of information available to them in that individuals' decision to perform or not to perform a behavior is strongly dependent on their attitudes and opinions from their important others and not dependent of their generational group preferences.

#### *Description of Hypothesis Testing*

In the TRA, Ajzen and Fishbein (1980) proposed that behavioral intention can be predicted on the basis of an individual's attitude and subjective norm. Consistent with the work of Strader et al. (1987) and Strader and Katz (1990), no attempt was made to examine the relationships between behavioral beliefs with attitude, normative beliefs with attitude, normative beliefs with subjective norm, or behavioral intention with behavior. The research instrument that was developed and utilized in this study did not measure beliefs or behavior. Therefore, this study posed to test the theoretical relationship between attitude and subjective norm with behavioral intention.

Logistic regression analysis was calculated, and results showed the theoretical variables of attitude and subjective norm to significantly predict behavioral intention of Generation Y college students in choosing nursing as a career. However, subjective norm



contributed more than attitude to Generation Y college students' decision of choosing nursing as a career.

#### *Integration of Findings with Previous Literature*

The studies from Strader et al. (1987) and Strader and Katz (1990) supported that positive attitude toward nursing was the predictor of the behavioral intention of choosing nursing as a career; however, subjective norm analysis was not significant in this prediction. The results of the study conducted by Whitehead et al. (2007) diverge from the results from Strader et al. and Strader and Katz studies, and from the results from this study in that Whitehead et al.'s study findings showed that high attitude toward nursing were not predictors of behavioral intention.

#### *Discussion of Findings*

In this study, the relationship between the variables was demonstrated by positive attitude toward nursing and behavioral intention of choosing nursing as a career. This supports findings by Strader et al. (1987) and Strader and Katz (1990) that the higher the attitude toward nursing, the higher the impact on students signing up for a career as a registered nurse. These findings support the fact that many Generation Y young adults lack knowledge about the role of the professional nurse and career opportunities within the profession. In addition, this offers an explanation for the importance of a positive image of nursing as a career to the public so that more Generation Y young adults will be inspired to become nurses.

Support from the people who were important to the Generation Y college student also demonstrated a relationship with behavioral intention of choosing nursing as a career. Bregman and Killen (1999) conducted a research study on adolescents' and young



adults' reasoning about career choice and the role of parental influence. Students reported that support from their parents was critical when making their career decisions. This finding implies that when students receive favorable support from the people that are important to them in choosing a career, they tend to be more confident and less confused about a career decision. The result further supports this study's findings of subjective norm being a more powerful predictor of behavior than attitude. In that, the opinions of parents, family members, and co-workers are indeed stronger determinants of Generation Y college students' career choices than their attitude.

#### Limitations of the Study

Findings from this study have provided insights into the variables that influence Generation Y college students' behavioral intent in choosing nursing as a career.

However, the following are identified limitations:

1. A cross-sectional survey utilizing correlation and descriptive methods was employed for this study. The use of this type of research design represents a limitation in the generalizability of the results.
2. A self-report, such as a survey, was used for data collection. Self-report measures could present a problem with regard to the validity of the study that is related to possible inaccurate data. In that, a survey instrument depends on the subjects' motivation, honesty, and ability to respond.
3. An anonymous survey indicates a problem related to the validity of the data. In the case of missing data, the researcher was unable to contact participants for clarification.



4. The exclusive use of Generation Y students from a community college located in south Florida was used for data collection. Sample that is drawn from only one college may limit the generalizability of the results.
5. Words that promoted or inhibited Generation Y college students in choosing nursing as a career were stated. Results were limited to specific words listed which did not allow for new or different factors to be identified.

### Discussion of the Findings

This study, while based on a sample of south Florida college students, is particularly noteworthy for its implications related to the TRA, nursing education and practice, future research, and public relations. The new information from this study's findings has been added to the body of nursing knowledge to provide insights into the future nursing workforce and strategies for recruitment success.

In this study, one hypothesis was tested, and results showed that the theoretical components of attitude and subjective norm were related to behavioral intention. Findings from this study converge with the theoretical assertions of the TRA; nonetheless, subjective norm imposed a stronger prediction of behavioral intention than attitude. Results of this study support the efficacy of the TRA in the prediction of Generation Y college student's behavioral intention in choosing nursing as a career. The stronger predictor was found to be subjective norm due to participants' perceived influence of these significant others in their career choices.

### *Theoretical Implications*

This study is important because it has contributed to the understanding of the effectiveness of the TRA and its theoretical assumptions. In this study, the influence of



attitude and subjective norm in the prediction of behavioral intention was established. If an individual shows favorable attitude toward a behavior and perceives important others as favorable toward the behavior, then the individual is likely to show behavioral intention toward the behavior. On the contrary, individuals who demonstrate unfavorable attitude toward a behavior and perceive important others to have unfavorable attitude toward the behavior are more likely to be deterred from the behavioral intention toward the given behavior.

Additional endorsement to the TRA is seen in its relative influence with predictors of attitude and subjective norm. In the TRA model, Ajzen and Fishbein (1980) claim that favorable attitude and subjective norm specifically direct and powerfully influence individual's behavioral intention. Nonetheless, Ajzen and Fishbein identify that in some circumstances the individual may not perceive attitude and subjective norm as equally positive. Because of that, Ajzen and Fishbein advise that it is essential to evaluate the predictor's importance. In this study, results indicated that attitude and subjective norm were strong predictors of behavioral intention; surprisingly, subjective norm was identified as the more powerful predictor of behavioral intention than attitude. According to the study's findings, behavioral intention was strongly influenced by subjective norm when individuals perceived that important others were favorable toward the behavior. However, external variables were not significant in the relationship with behavioral intention and could not be considered as a contributing variable.

#### *Implications for Nursing Education*

An essential component of an attractive education is the ability to understand the learners. Since Generation Y is the future generation of nurses, nursing school



administrators and educators who are in the position to recruit, retain, and motivate learners need to work together to promote nursing, especially to male students. It is also important to recognize that the new Generation Y learner portrays unique attributes and has different expectations from colleges, universities, and professors when compared to prior generational groups (Duchsher & Cowin, 2004; Johnson & Romanello, 2005; Oblinger, 2003; Reynolds, 2005; Skiba, 2005). In addition, nursing schools need to work toward improving enrollment of Generation Y students by involving parents, family members, friends, and co-workers as part of recruitment procedures.

In this study, results showed that Generation Y male students are at a minimum compared to the female population. Nursing administrators and deans of academic affairs need to work together in promoting nursing to Generation Y's male population. Nursing school programs need to focus on recruiting male students by conducting middle school and high school visits, promoting "man-to-man" mentoring programs, allowing student to visit nursing schools and hospitals, incorporating health classes that invite male nurses to talk to male students about the profession, and changing the nurse image to attract both men and women into the profession.

The literature supports that the new generation of learners has developed unique attributes and aptitudes, which were influenced by their environment (Oblinger, 2003). In this study, 50% of the Generation Y college students who were the non-intenders reported being enrolled in 32 different academic majors. This finding was explained by Pletka (2007), who identified Generation Y individuals as being like no other group in history because they have more choices, access, and ability to choose what they perceive will meet their needs. Pletka also emphasized that many schools have been slow or



resistant to changes, which has caused an increase in dropout rates around the country. Nursing schools administrators and educators have the responsibility to be attentive to what is important to this generational group when recruiting and retaining students into nursing. In addition, nursing schools need to adopt new technologies and the latest educational methods so that Generation Y students will perceive nursing as an attractive profession and that, in turn, may contribute to their intention in choosing nursing as a career path.

Results of this study also suggested that important others opinions are the most influential predictors on Generation Y college student's career decisions. Therefore, it is imperative that nursing schools include parents, family members, friends, and co-workers as a part of recruitment procedures. An investigation by Larsen, McGill, and Palmer (2001) found that nursing students made career decisions as early as during their middle school years. Nursing schools could promote open house day to bring middle school and high school students with their important others to visit and talk to the faculty, deans, and nursing students about nursing as a career. The open house could also be an opportunity for students and important others to learn about online learning, simulation labs, and scholarship opportunities.

In times when change is inevitable, research questions may evolve from the challenges presented in the classroom, which opens opportunities for nurse educators to research and discover new information to improve learning. Results from this research study have provided insight to nursing schools and educators in the understanding that Generation Y college students' attitude and subjective norm toward nursing as a career are important predictors to successfully recruit the next generation of workers.



*Implications for Healthcare Agencies and Nursing Practice*

It is predicted that there will be a shortage of skilled nurse professionals in the next decade. In nursing, the impact of a shortage signifies inadequate and inconsistent patient care. It is likely that Generation Y college students who have negative attitudes and perceive important others as unfavorable toward the profession will not choose nursing as a career. On the other hand, Generation Y college students who have positive attitudes toward nursing and perceive important others as favorable toward the profession will choose nursing as a career.

Results of this study showed that Generation Y college students' positive attitude, combined with the positive opinions toward nursing of their important others, influence their decision in choosing nursing as a career. Healthcare organizations need to gain the attention of Generation Y college students because these individuals are in a position to choose a career path in nursing. Studies have supported that major factors that cause Generation Y students to not choose certain careers are comparable salary and poor reputation about the profession, such as unsafe work environments to care for patients (Casey, Fink, Krugman, & Propst, 2004; Roche et al., 2004; Terjense & Freeman, 2007). In this case, redirecting nursing practice and human resource policies in healthcare organizations that promote satisfaction of the new generation of nurses is imperative to help the profession survive and to maximize patient care delivery.

Results of this study also showed that the opinions of important others have greater influence in the Generation Y college student's career choice than their attitudes toward the profession. Some studies have reported that parents have a stronger influence in students' career choice in which some parents plan a career path for their children



(Bradford, Buck, & Meyers, 2001; Bregman & Killen, 1999). For example, nurses who are dissatisfied with the profession will not approve or recommend nursing to their children, friends, or family members. Healthcare organizations need to be reminded that the opinions of important others have a greater influence in the Generation Y college student's career choice than the student's own attitudes toward the profession. Nurses who are satisfied with their profession and employer will approve or recommend nursing as a profession to their children, friends, or family members.

Research questions frequently develop from clinical practice and allow for research in the quest for evidence-based measures that lead to strategies to improve recruitment and retention of Generation Y students. Such knowledge will allow nursing schools and healthcare organizations to gain an understanding of Generation Y students' work values and expectations. This is critical because in the war of talents, Generation Y students are the ones who will select a career in nursing and the organizations they want to work for, and their decisions will be based on their attitudes and favorable opinions of their important others.

### *Implications for Research*

There is a call for more research that will use the TRA model to predict the behavior intention and behavior of the next generation of workers. While this research study added to the body of knowledge regarding the TRA's efficacy in predicting and explaining Generation Y college students' behavioral intention to choose nursing as a career, the theory can be used to explain and predict other specific behavioral intentions and behaviors.



Ajzen and Fishbein (1980) postulated that attitude and subjective norm are predictors of behavioral intention. The basis of this approach is that people use information available to them in a reasonable and conscientious manner to arrive at a decision to perform or not to perform a behavior. With the use of the TRA, effects of a wide range of external variables can be explained by examining their effect on belief, attitude toward the behavior, subjective norm, and intention. Thus, the TRA provides a comprehensive framework that can help explain numerous inconsistent findings in nursing research and other sciences.

Results from this study showed that Generation Y college students' attitude and subjective norm were strong predictors of the behavior intention of choosing nursing as a career. Future research study is needed to explore Generation Y college student's attitude, subjective norm, and behavioral intention to predict the behavior of signing up for a nursing program. In addition, more research is necessary to understand the attitudes of Generation Y college students as they pertain to contemporary nursing education and professional practice, healthcare organizations, and the public. Since the nature of science is to help researchers transcend generational evolution, research questions need to be a global assignment from opposite parts of the world to identify patterns of difference that will bring understanding to the aspirations and expectations of the workforce of the future.

#### *Implications for Public Relations*

America, like many countries around the globe, is experiencing a shortage of nurse professionals. If Generation Y college students' attitudes and their important others' opinions have been based on the stereotypical image of the hospital-based nurse



and nursing's reputation as a woman's job, then these negative images need to change. Transforming the negative nursing image and promoting a positive representation of nursing would support the values placed on choosing nursing as a career.

Results of this study showed that Generation Y college students who perceived nursing as positive and had positive opinions of important others about the profession had intentions in choosing nursing as a career. If Generation Y is in the position to choose or not choose a career in nursing, then it is imperative to educate the public about the importance of the profession. In this case, nursing leaders and professionals have the responsibility to promote change from an unfavorable nursing image that has perpetuated and brought inequalities into the profession to a favorable nursing image that captures the attention of Generation Y students and their important others. These changes in nursing image could be promoted by motivating Generation Y nursing students and professionals to become members of the American Nursing Association (ANA). Such membership could strengthen nursing as a profession and help in the standardization of nursing practice, uniform, salary, nurse-patient ratio, and other important professional issues that are causing job dissatisfaction. Another change in nursing image could be a better representation of nursing in the U.S. Congress to promote new laws that will provide nurses with safer work environments for patient care. Together, these changes may help to create a stronger and more respected nursing image to the public that, in turn, will promote nursing as a career choice to the younger population.

Research questions emerge during major changes when the need for new ways of thinking and doing allow researchers to discover important information that will impact the American public, nursing profession, and practice. Therefore, when the aging



American population has increased, more individuals are facing chronic diseases, and many nurses are leaving the profession, Generation Y students and their important others need to perceive nursing as a noble career of choice.

### Chapter Summary

The empirical adequacy of the TRA was determined through statistical analyses. The results of this study showed the theoretical variables of attitude and subjective norm to significantly predict behavioral intention, with subjective norm contributing more than attitude. Many factors that have promoted or inhibited Generation Y college students in their career choice in nursing were summarized and integrated with the findings of this study. The results of this study were also aligned with previous literature, looking at both convergence and divergence.

One null hypothesis was tested and rejected that was calculated using logistic regression analysis. Results showed the positive relationship between the variable of attitude to be correlated with behavioral intention, with subjective norm contributing more than attitude to the Generation Y college students' decision of choosing nursing as a career. Conversely, the negative relationship between attitude and subjective norm correlated with Generation Y college students' behavioral intention not to choose nursing as a career.

The findings from this study have provided insights to the body of nursing knowledge about Generation Y college students' behavioral intent in choosing nursing as a career. The findings of this study call the attention of nursing school leaders and educators to the need to understand the next generation of workers through new research. Additionally, the findings of this study warn nurse leaders, who are in a position to



transform nursing's poor image to a strong representation of the profession, to gain public support placed on choosing nursing as a career. The results of this study may contribute to global support for nurse researchers in the quest for new knowledge in the understanding of the future generation of nurses.



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Appendix A  
Approval Documents



*Barry University IRB Letter (Phase I)*

**BARRY**  
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11300 NE Second Avenue  
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Research with Human Subjects  
Protocol Review

Date: July 11, 2008

Protocol Number: 080503

Title: Attitudes /Beliefs and Expectations of Young Adults Toward  
Nursing as a Career

Approval Date: 7/10/2008

Name: Luciene Mendonca-Cali

Address: 2200 South Ocean Blvd. Apt. 106  
Delray Beach, FL 33483

Sponsor: Dr. Lynne Bryant

School: Nursing

Dear Ms. Mendonca-Cali:

On behalf of the Barry University Institutional Review Board (IRB), I have verified that the specific changes requested by the IRB have been made. Therefore, I have granted final approval for this study as exempt from further review. Enclosed is the Consent Cover letter with the IRB stamp. Please use this letter when collecting your data.

As principal investigator of this protocol, it is your responsibility to make sure that this study is conducted as approved by the IRB. Any modifications to the protocol or consent form, initiated by you or by the sponsor, will require prior approval, which you may request by completing a protocol modification form.

It is a condition of this approval that you report promptly to the IRB any serious, unanticipated adverse events experienced by participants in the course of this research, whether or not they are directly related to the study protocol. These adverse events include, but may not be limited to, any experience that is fatal or immediately life-threatening, is permanently disabling, requires (or prolongs) inpatient hospitalization, or is a congenital anomaly cancer or overdose.

The approval granted expires on July 10, 2009. Should you wish to maintain this protocol in an active status beyond that date, you will need to provide the IRB with and IRB Application for Continuing Review (Progress Report) summarizing study results to date.



If you have questions about these procedures, or need any additional assistance from the IRB, please call the IRB point of contact, Mrs. Barbara Cook at (305)899-3020 or send an e-mail to [dparkhurst@mail.barry.edu](mailto:dparkhurst@mail.barry.edu) . Finally, please review your professional liability insurance to make sure your coverage includes the activities in this study.

Sincerely,



Doreen C. Parkhurst, M.D., FACEP  
Chair Institutional Review Board  
Assistant Dean, SGMS &  
Program Director, PA Program  
Barry University  
Box SGMS  
11300 NE 2nd Avenue  
Miami Shores, FL 33161

Enc: Cover Letter

cc: Dr. Lynne Bryant

.....  
Note: The investigator will be solely responsible and strictly accountable for any deviation from or failure to follow the research protocol as approved and will hold Barry University harmless from all claims against it arising from said deviation or failure.



*Barry University IRB Letter (Phase 2)*



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Research with Human Subjects  
Protocol Review

Date: September 10, 2008

Protocol Number: 080503

Title: Attitudes /Beliefs and Expectations of Young Adults Toward  
Nursing as a Career

Approval Date: 9/9/2008

Name: Luciene Mendonca-Cali

Address: 2200 South Ocean Blvd. Apt. 106  
Delray Beach, FL 33483

Sponsor: Dr. Jo Ann Kleier

School: Nursing

Dear Ms. Mendonca-Cali:

On behalf of the Barry University Institutional Review Board (IRB), I have verified that the instrument you submitted for Phase 2 as requested by the IRB has been reviewed and accepted. Therefore, you may proceed with collection of this phase of your research.

As principal investigator of this protocol, it is your responsibility to make sure that this study is conducted as approved by the IRB. Any modifications to the protocol or consent form, initiated by you or by the sponsor, will require prior approval, which you may request by completing a protocol modification form.

It is a condition of this approval that you report promptly to the IRB any serious, unanticipated adverse events experienced by participants in the course of this research, whether or not they are directly related to the study protocol. These adverse events include, but may not be limited to, any experience that is fatal or immediately life-threatening, is permanently disabling, requires (or prolongs) inpatient hospitalization, or is a congenital anomaly cancer or overdose.

The approval granted expires on July 10, 2009. Should you wish to maintain this protocol in an active status beyond that date, you will need to provide the IRB with and IRB Application for Continuing Review (Progress Report) summarizing study results to date.



If you have questions about these procedures, or need any additional assistance from the IRB, please call the IRB point of contact, Mrs. Barbara Cook at (305)899-3020 or send an e-mail to [dparkhurst@mail.barry.edu](mailto:dparkhurst@mail.barry.edu) . Finally, please review your professional liability insurance to make sure your coverage includes the activities in this study.

Sincerely,



Doreen C. Parkhurst, M.D., FACEP  
Chair Institutional Review Board  
Assistant Dean, SGMS &  
Program Director, PA Program  
Barry University  
Box SGMS  
11300 NE 2nd Avenue  
Miami Shores, FL 33161

cc: Dr. Jo Ann Kleier

.....  
Note: The investigator will be solely responsible and strictly accountable for any deviation from or failure to follow the research protocol as approved and will hold Barry University harmless from all claims against it arising from said deviation or failure.



*Barry University IRB Letter (Phase 3)*

**BARRY**  
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Research with Human Subjects  
Protocol Review

Date: November 17, 2008

Protocol Number: 080503

Title: "Attitudes and Subjective Norm as Predictors of Behavioral  
Intention toward Choosing Nursing as a Career among Generation  
Y College Students." Phase III

Approval Date: November 17, 2008

Name: Luciene Mendonca-Cali

Address: 2200 South Ocean Blvd.  
Delray Beach, FL 33483

Sponsor: Dr. Jo Ann Kleier

School: Barry University School of Nursing

Dear Ms. Mendonca-Cali:

Your protocol has been reviewed and accepted as exempt from further review. You may proceed with data collection. Enclosed is a stamped Cover Letter indicating that the IRB has reviewed and accepted your protocol. Please use this form when collecting your data.

As principal investigator of this protocol, it is your responsibility to make sure that this study is conducted as approved by the IRB. Any modifications to the protocol or consent form, initiated by you or by the sponsor, will require prior approval, which you may request by completing a protocol modification form.

It is a condition of this approval that you report promptly to the IRB any serious, unanticipated adverse events experienced by participants in the course of this research, whether or not they are directly related to the study protocol. These adverse events include, but may not be limited to, any experience that is fatal or immediately life-threatening, is permanently disabling, requires (or prolongs) inpatient hospitalization, or is a congenital anomaly cancer or overdose.

The approval granted expires on May, 2009. Should you wish to maintain this protocol in an active status beyond that date, you will need to provide the IRB with an IRB Application for Continuing Review (Progress Report) summarizing study results to date.



If you have questions about these procedures, or need any additional assistance from the IRB, please call the IRB point of contact, Mrs. Barbara Cook at (305)899-3020 or send an e-mail to [dparkhurst@mail.barry.edu](mailto:dparkhurst@mail.barry.edu) . Finally, please review your professional liability insurance to make sure your coverage includes the activities in this study.

Sincerely,



Doreen C. Parkhurst, M.D., FACEP  
Chair Institutional Review Board  
Assistant Dean, SGMS &  
Program Director, PA Program  
Barry University  
Box SGMS  
11300 NE 2nd Avenue  
Miami Shores, FL 33161

cc: Dr. Jo Ann Kleier

.....  
Note: The investigator will be solely responsible and strictly accountable for any deviation from or failure to follow the research protocol as approved and will hold Barry University harmless from all claims against it arising from said deviation or failure.



*Broward Community College South Campus Provost's Consent Letter (Phases 1 and 2)*



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1000 Coconut Creek Blvd.  
Coconut Creek, FL 33066

**JUDSON A. SAMUELS CAMPUS**  
7200 Hollywood/Pines Blvd.  
Pembroke Pines, FL 33024

**PINES CENTER**  
16957 Sheridan St.  
Pembroke Pines, FL 33331

**MIRAMAR CENTER**  
7451 Riviera Blvd.  
Miramar, FL 33023

**TIGERTAIL LAKE CENTER**  
580 Gulfstream Way  
Dania Beach, FL 33004

June 26, 2008

Dear Luciene,

I have received your request to collect data for the preliminary study for your dissertation titled: "Attitudes and Subjective Norm as Predictors of Behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students."

It is my understanding that you will be seeking volunteers for phases 1 and 2 from the general population of students who are attending Broward Community College South Campus after the approval from the Barry University's IRB. In addition, procedures will be taken to maintain the anonymity of participants during all phases of the study. In phase 1, participants will be asked to fill out a survey that will take approximately 10-15 minutes to complete. In phase 2, participants will be asked to fill out a survey developed after phase 1 that will take approximately 10-20 minutes to complete.

You have my permission to conduct the surveys from July through December 2008. Prior to beginning data collection for your study, please introduce yourself to the Provost Dr. Lourdes Oroza and Dr. Janice Stubbs, Dean of Student Affairs so that they know of your interests and data collection.

Best Wishes as you continue your dissertation.

Sincerely,

Dr. Judith E. Scherer  
VP for Academic Affairs  
Broward Community College  
Office: (954)201-7426  
[jscherer@broward.edu](mailto:jscherer@broward.edu)

[www.broward.edu](http://www.broward.edu)

"AN EQUAL ACCESS/EQUAL OPPORTUNITY INSTITUTION"



*Broward Community College South Campus Provosts Consent Letter (Phase 3)*



Office of the Vice President for Academic Affairs  
Willis Holcombe Center  
Phone: (954) 201-7426/Fax : (954) 201-7576



WILLIS HOLCOMBE CENTER  
111 East Las Olas Blvd.  
Fort Lauderdale, FL 33301

INSTITUTE FOR  
ECONOMIC DEVELOPMENT  
111 East Las Olas Blvd.  
Fort Lauderdale, FL 33301

A. HUGH ADAMS CENTRAL CAMPUS  
8301 S.W. Davin Road  
Davie, FL 33314

NORTH CAMPUS  
1000 Coconut Creek Blvd.  
Coconut Creek, FL 33066

JUDSON A. SAMUELS SOUTH  
CAMPUS  
7200 Hollywood/Pines Blvd.  
Pembroke Pines, FL 33024

PINES CENTER  
16897 Sheridan St.  
Pembroke Pines, FL 33331

WESTON CENTER  
4205 Bonaventure Blvd.  
Weston, FL 33332

MIRAMAR AUTOMOTIVE/  
MARINE CENTER  
7451 Riviera Blvd.  
Miramar, FL 33023

MIRAMAR TOWN CENTER  
2050 Civic Center Place  
Miramar, FL 33025

TIGERTAIL LAKE CENTER  
580 Gulfstream Way  
Dania Beach, FL 33004

October 28, 2008

Ms. Luciene Mendonca

Dear Luciene:

I am in receipt of your request to collect data for the research study titled "Attitudes and Subjective Norm as Predictors of behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students."

It is my understanding that you will be seeking volunteers for the Main Study/Phase 3, from the general population of students who are attending Broward College Central Campus. In Phase 3, participants will be asked to fill out a survey that will take approximately 15-20 minutes to complete.

You have permission to conduct the surveys from October, 2008, through May, 2009. Prior to beginning data collection for your study, please take the opportunity to introduce yourself to the Central Campus Provost, Dr. Lois Bolton, and Mr. David Asencio, Dean of Student Affairs, so that they know of your interests and data collections.

Best wishes as you continue your dissertation.

Sincerely,

Judith E. Scherer, Ph.D.  
Vice President for Academic Affairs  
Broward College  
(954) 201-7426  
[jscherer@broward.edu](mailto:jscherer@broward.edu)



Appendix B  
Informed Consent Forms



*Barry University Cover Letter Preliminary Study (Phase 1)*

Dear Research Participant:

Your participation in a research project is requested. The title of the study is “Preliminary Study for Instrument Development for My Study: Attitudes and Subjective Norm as Predictors of Behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students.” The preliminary study is being conducted by Luciene Mendonça-Cali, a student in the Nursing department at Barry University, and is seeking information that will be useful in the field of Nursing. The aim of this preliminary study is to develop a research instrument based on the Theory of Reasoned Action (TRA) to be utilized in a research study titled: “Attitudes and Subjective Norm as Predictors of Behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students.” **In accordance with this aim, the following procedures will be used: Participants will be asked to fill out a survey that will take approximately 10-15 minutes to complete.** I anticipate the number of participants to be 50 college students enrolled in their first and second college course.

Your consent to be a research participant is strictly voluntary. You may decline to participate or to drop out at any time during the study. There are no adverse consequences if you participate or decide not to participate in this study.

Although there are no direct benefits to you, your participation in this study may help in the development of a survey to be utilized in a research study titled: “Attitudes and Subjective Norm as Predictors of Behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students.” In addition, your participation in this study may help our understanding of recruitment and retention of young adults from Generation Y into nursing education, healthcare practice, and the nursing profession.

As a research participant, information you provide will be kept anonymous; that is, no names or other identifiers will be collected on any of the instruments used. Data will be kept in a locked file in the investigator's home office. By completing and returning the requested information you have shown your agreement to participate in the study. However, you have the ability to withdraw from the study at any time during the completion of the requested information. If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Luciene Mendonça-Cali, at (954) 201-2449, or my supervisor, Dr. Jo Ann Kleier, at (305) 899-3038, or the Institutional Review Board point of contact, Barbara Cook, at (305) 899-3020.

Thank you for your participation.

Sincerely

Luciene Mendonça-Cali MSN, RN



*Barry University Cover Letter Preliminary Study (Phase 2)*

Dear Research Participant:

Your participation in a research project is requested. The title of the study is “Preliminary Study for Instrument Development for My Study: Attitudes and Subjective Norm as Predictors of Behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students.” The preliminary study is being conducted by Luciene Mendonça-Cali, a student in the Nursing department at Barry University, and is seeking information that will be useful in the field of Nursing. The aim of this preliminary study is to test a research instrument based on the Theory of Reasoned Action (TRA) to be utilized in a research study titled: “Attitudes and Subjective Norm as Predictors of Behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students.” **In accordance with this aim, the following procedures will be used: Participants will be asked to fill out a survey that will take approximately 15-20 minutes to complete.** I anticipate the number of participants to be 50 college students enrolled in their first and second college course.

Your consent to be a research participant is strictly voluntary, and you may decline to participate or to drop out at any time during the completion of the survey. There are no adverse consequences if you participate or decide not to participate in this study.

Although there are no direct benefits to you, your participation in this study may help in the development of a survey to be utilized in a research study titled: “Attitudes and Subjective Norm as Predictors of Behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students.” In addition, your participation in this study may help in our understanding of recruitment and retention of young adults from Generation Y into nursing education, healthcare practice, and the nursing profession.

As a research participant, information you provide will be kept anonymous; that is, no names or other identifiers will be collected on any of the instruments used. Data will be kept in a locked file in the investigator's home office. By completing and returning this survey, you have shown your agreement to participate in the study. However, you have the ability to withdraw from the study at any time during the completion of the survey. If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Luciene Mendonça-Cali, at (954) 201-2449, or my supervisor, Dr. Jo Ann Kleier, at (305) 899-3038, or the Institutional Review Board point of contact, Barbara Cook, at (305) 899-3020.

Thank you for your participation.

Sincerely,

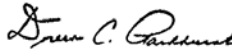
Luciene Mendonça-Cali MSN, RN



*Barry University Cover Letter Main Study (Phase 3)*

Approved by Barry University IRB:

Date: NOV 17 2008

Signature:  *Dr. C. Calhoun, M.D., Ph.D.*  
Barry University  
Cover Letter  
Main Study (Phase 3)

Institutional Review Board  
Protocol Form  
October, 2008 7

Dear Research Participant:

Your participation in a research project is requested. The title of the study is "Attitudes and Subjective Norm as Predictors of Behavioral Intention toward Choosing Nursing as a Career among Generation Y College Students." The study is being conducted by Luciene Mendonça-Cali, a student in the nursing department at Barry University, and is seeking information that will be useful in the field of nursing. The aim of this study is to collect data using a survey instrument based on the Theory of Reasoned Action (TRA). **In accordance with these aims, the following procedures will be used: Participants will be asked to fill out a survey that will take approximately 15-20 minutes to complete.** I anticipate the number of participants to be 160 college students enrolled in their first and second college course.

Your consent to be a research participant is strictly voluntary. Once you have responded to the survey instrument, you will be instructed to place the survey into a sealed box. Withdrawal opportunity will be limited in that once surveys have been mixed together there will be no way to identify individual forms; therefore, once surveys are mixed together, you will not be able to withdraw your response.

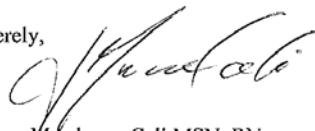
The alternative for participants is not to participate or not to participate fully by completing the survey instruments. There are no adverse consequences if you participate or decide not to participate in this study. Although there are no direct benefits to you, your participation may help in the understanding of recruitment and retention of Generation Y young adults into the nursing profession.

As a research participant, information you provide will be kept anonymous; that is, no names or other identifiers will be collected on any of the instruments used. Surveys instruments will be maintained in a locked file cabinet in the investigator's home office. By completing and returning this survey, you have shown your agreement to participate in the study.

If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Luciene Mendonça-Cali, at (954) 201-2449, or my supervisor, Dr. Jo Ann Kleier, at (305) 899-3038, or the Institutional Review Board point of contact, Barbara Cook, at (305) 899-3020.

Thank you for your participation.

Sincerely,



Luciene Mendonça-Cali MSN, RN



## Appendix C

### Nursing Career Assessment Inventory (Phase 1)



*Nursing Career Assessment Inventory (Phase I)*

My age is \_\_\_\_\_ years      My Major ☐ \_\_\_\_\_

*I'm taking my* ☐ *1<sup>st</sup> college course* ☐ *2<sup>nd</sup> college course* ☐ *Other* \_\_\_\_\_

**Please list all the WORDS that you think applies to each question.**

**1. List positive and negative factors associated with choosing nursing as a career.**

**2. List categories of people who have most influenced your career decision and have helped you plan for a major in college.**

**THANK YOU FOR YOR PARTICIPATION!**



## Appendix D

### Results of Data Collection (Phase 1)



*Results of Data Collection (Phase I)***Participants Answers to Question #1****1. POSITIVE FACTORS ASSOCIATED WITH CHOOSING NURSING AS A CAREER**

STUDENT'S RESPONSES	NUMBER OF RESPONSES
Better benefits/great benefits/more benefits	5
Saving lives/save someone's life	3
Knowing you help someone	1
Great experience/experience	2
Help/helping people/help others/help people when they are sick/care for sick patients/being in a helpful position	12
Taking control	1
Make money/a lot of money/good pay/good salary	7
Comfortable uniform	2
Meet new people everyday	2
Good environment/like the hospital environment	2
Very rewarding	1
Making more money than other majors like computer science	1
Caring for people/caring	2
Nursing is a great career for me/great career	2
Success	1
Responsibilities	2
Career that provides teamwork	1
More career option as a nurse	1
Job are easier to get with a nursing degree	1
You are doing a good deed when you help heal others	1
Working for something you believe in	1
Nursing is a good field	1
Vast knowledge of the human body	2
Make a difference in someone's life	2
Put a smile in someone who is sick's face	1
Demanding field	1
Love/dedication/commitment	1
Programs for nursing offered anywhere not competitive	1
An opportunity to be a vital part of the healthcare team	1
Flexible hours/schedule	1



---

## 2. NEGATIVE FACTORS ASSOCIATED WITH CHOOSING NURSING AS A CAREER

---

STUDENT'S RESPONSES	NUMBER OF RESPONSES
Seeing something bad go wrong with patients	1
Messing up	1
Having someone die on the table	1
Schedule/hours/long hours/crazy work	9
schedule/always on call	
Dealing with death/death	3
Sad family members	1
Being exposed to diseases/a lot of health risks	1
when you are a nurse	
Cleaning after people	1
Get attached to patients	1
A lot of science courses	1
Cleaning blood/contact with blood	2
Take long time in college/more classes/a lot of school	4
You have a lot of responsibilities	1
There is very little room for errors	1
A lot of work and time consuming/hard work	3
I don't like hospitals. I had very bad experiences with hospitals. If it wasn't for that, I'd probably consider a career in nursing.	1
Lost someone's life	1
Medicine field	1
Malfunction	1
Gory situation	1
Inability to function in stable environment	1

---



*Participant Answers to Question #2*


---

**PEOPLE WHO HAVE MOST INFLUENCED YOUR CAREER DECISION/AND HAVE HELPED YOU PLAN FOR A MAJOR IN COLLEGE**

---

STUDENT'S RESPONSES	NUMBER OF RESPONSES
Family	11
Parents	5
Mother/mom	6
Father/dad	4
Grandmother/Godmother	2
Brother/Cousin	4
Uncle	1
Many people that are friends and are linked to my career	1
Friends/Church members	7
Co-worker/supervisor/the nurses at work	3
Counselor/adviser	6
Myself/personal experiences	4
Information I read about my career influenced me as well	1
Politician that are doing great job also influenced my decision/role model/guest speaker	3

---



## Appendix E

### Nursing Career Assessment Inventory (Phase 2)



*Nursing Career Assessment Inventory (Phase 2)*

There are many factors that can affect the decision to choose a career path. This survey is part of an investigation that hopes to understand some of the reasons young college students do or do not choose nursing as their career. Thank you for volunteering to share your perceptions in this regard.

Please provide the following information about yourself.

As of my last birthday, my age is \_\_\_\_\_ years

My gender is ☐ Male ☐ Female

Currently my academic major course of studies is \_\_\_\_\_

Which of the following best describes your current enrollment status?

I'm currently enrolled in my

☐ 1<sup>st</sup> college course

☐ 2<sup>nd</sup> college course

☐ Other \_\_\_\_\_



### Instructions

Please read each statement carefully and answer by circling the number that best describes your perception. There are no correct or incorrect answers. Please adhere to the following guidelines:

- Provide an answer for each item – do not omit any.
- Do not circle more than one number on a single item.



The following scale measures attitude toward choosing nursing as a career.

Please complete the sentence:

For me, choosing nursing as my career is

Unimportant	1	2	3	4	5	6	7	Important
Messy	1	2	3	4	5	6	7	Neat
Costly	1	2	3	4	5	6	7	Affordable
Unclean	1	2	3	4	5	6	7	Clean
Complex	1	2	3	4	5	6	7	Simple
Difficult	1	2	3	4	5	6	7	Easy
Unsafe	1	2	3	4	5	6	7	Safe
Bad	1	2	3	4	5	6	7	Good
Sad	1	2	3	4	5	6	7	Happy
Heavy	1	2	3	4	5	6	7	Light
Undesirable	1	2	3	4	5	6	7	Desirable
Disappointing	1	2	3	4	5	6	7	Rewarding
Foolish	1	2	3	4	5	6	7	Wise
Harmful	1	2	3	4	5	6	7	Beneficial
Punishing	1	2	3	4	5	6	7	Rewarding



Career decisions may be influenced by a number of people that are important in your life. The following statements have been constructed based on feedback from young adults asked to identify those groups of people they viewed as being important in their career decisions. Please respond to the following sentences based on your own perceptions.

1a. ***My parents*** think that I should choose nursing as a career.

Strongly disagree   1   2   3   4   5   6   7   Strongly agree

1b. I want to comply with what ***my parents*** think about choosing nursing as a career.

Strongly disagree   1   2   3   4   5   6   7   Strongly agree

2a. ***Other members of my family*** think I should chose nursing as a career.

Strongly disagree   1   2   3   4   5   6   7   Strongly agree

2b. I want to comply with what ***other members of my family*** think about choosing nursing as a career.

Strongly disagree   1   2   3   4   5   6   7   Strongly agree

3a. Most of ***my friends*** think I should choose nursing as a career.

Strongly disagree   1   2   3   4   5   6   7   Strongly agree

3b. I want to comply with what most of ***my friends*** think about choosing nursing as a career.

Strongly disagree   1   2   3   4   5   6   7   Strongly agree

4a. ***My co-workers*** think I should choose nursing as a career.

Strongly disagree   1   2   3   4   5   6   7   Strongly agree

4b. I want to comply with what ***my co-workers*** who think about choosing nursing as a career.

Strongly disagree   1   2   3   4   5   6   7   Strongly agree



Lastly, please respond to the next item based on your current career plans and intentions.

I absolutely ***do not*** plan  
to choose nursing as my  
career.

1

2

3

4

5

6

7

I absolutely ***do***  
plan to choose  
nursing as my  
career

THANK YOU FOR YOR PARTICIPATION!



## Appendix F

### Nursing Career Assessment Inventory (Main Study – Phase 3)



*Nursing Career Assessment Inventory (Main Study – Phase 3)*

There are many factors that can affect the decision to choose a career path. This survey is part of an investigation that hopes to understand some of the reasons young college students do or do not choose nursing as their career. Thank you for volunteering to share your perceptions in this regard.

Please provide the following information about yourself.

As of my last birthday, my age is \_\_\_\_\_ years

My gender is     ☐     Male     ☐     Female

Currently my academic major course of studies is \_\_\_\_\_

Which of the following best describes your current enrollment status?

I'm currently enrolled in my

- ☐ 1<sup>st</sup> College Course
- ☐ 2<sup>nd</sup> College Course
- ☐ Other \_\_\_\_\_

**Survey continues on next page.**



### Instructions

Please read each statement carefully and answer by circling the number that best describes your perception. There are no correct or incorrect answers. Please adhere to the following guidelines:

- Provide an answer for each item – do not omit any.
- Do not circle more than one number on a single item.

The following scale measures attitude toward choosing nursing as a career.

Please complete the sentence: For me, choosing **NURSING AS MY CAREER** is

Unimportant	1	2	3	4	5	6	7	Important
Messy	1	2	3	4	5	6	7	Neat
Costly	1	2	3	4	5	6	7	Affordable
Unclean	1	2	3	4	5	6	7	Clean
Complex	1	2	3	4	5	6	7	Simple
Unsafe	1	2	3	4	5	6	7	Safe
Bad	1	2	3	4	5	6	7	Good
Sad	1	2	3	4	5	6	7	Happy
Heavy	1	2	3	4	5	6	7	Light
Undesirable	1	2	3	4	5	6	7	Desirable
Foolish	1	2	3	4	5	6	7	Wise
Harmful	1	2	3	4	5	6	7	Beneficial
Punishing	1	2	3	4	5	6	7	Rewarding

**Survey continues on next page.**



Career decisions may be influenced by a number of people that are important in your life. The following statements have been constructed based on feedback from young adults asked to identify those groups of people they viewed as being important in their career decisions. Please respond to the following sentences based on **your perceptions** of the opinion of these groups regarding you choosing nursing as a career.

1a. <b><i>My parents</i></b> think that I should choose nursing as a career.								
Strongly disagree	1	2	3	4	5	6	7	Strongly agree
2a. <b><i>Other members of my family</i></b> think I should chose nursing as a career.								
Strongly disagree	1	2	3	4	5	6	7	Strongly agree
3a. Most of <b><i>my friends</i></b> think I should choose nursing as a career.								
Strongly disagree	1	2	3	4	5	6	7	Strongly agree
4a. <b><i>My co-workers</i></b> think I should choose nursing as a career.								
Strongly disagree	1	2	3	4	5	6	7	Strongly agree

While these groups may hold an opinion as to whether or not you should choose nursing as your career, you may or may not be motivated to comply with their opinion. Please respond to the following sentences based on your degree of desire to comply with their opinion regarding you choosing nursing as a career. The next section contains statements designed to measure to what extent you want to comply with the opinion of these groups.

1b. I want to comply with what <b><i>my parents</i></b> think about me choosing nursing as a career.								
Strongly disagree	1	2	3	4	5	6	7	Strongly agree
2b. I want to comply with what <b><i>other members of my family</i></b> think about me choosing nursing as a career.								
Strongly disagree	1	2	3	4	5	6	7	Strongly agree
3b. I want to comply with what most of <b><i>my friends</i></b> think about me choosing nursing as a career.								
Strongly disagree	1	2	3	4	5	6	7	Strongly agree
4b. I want to comply with what <b><i>my co-workers</i></b> think about me choosing nursing as a career.								
Strongly disagree	1	2	3	4	5	6	7	Strongly agree

**Survey continues on next page.**



Lastly, please respond to the next item based on your current career plans and intentions.								
I absolutely <b><u>do</u></b> <b><u>not</u></b> plan to choose nursing as my career.	1	2	3	4	5	6	7	I absolutely <b><u>do</u></b> plan to choose nursing as my career

You have completed the survey.

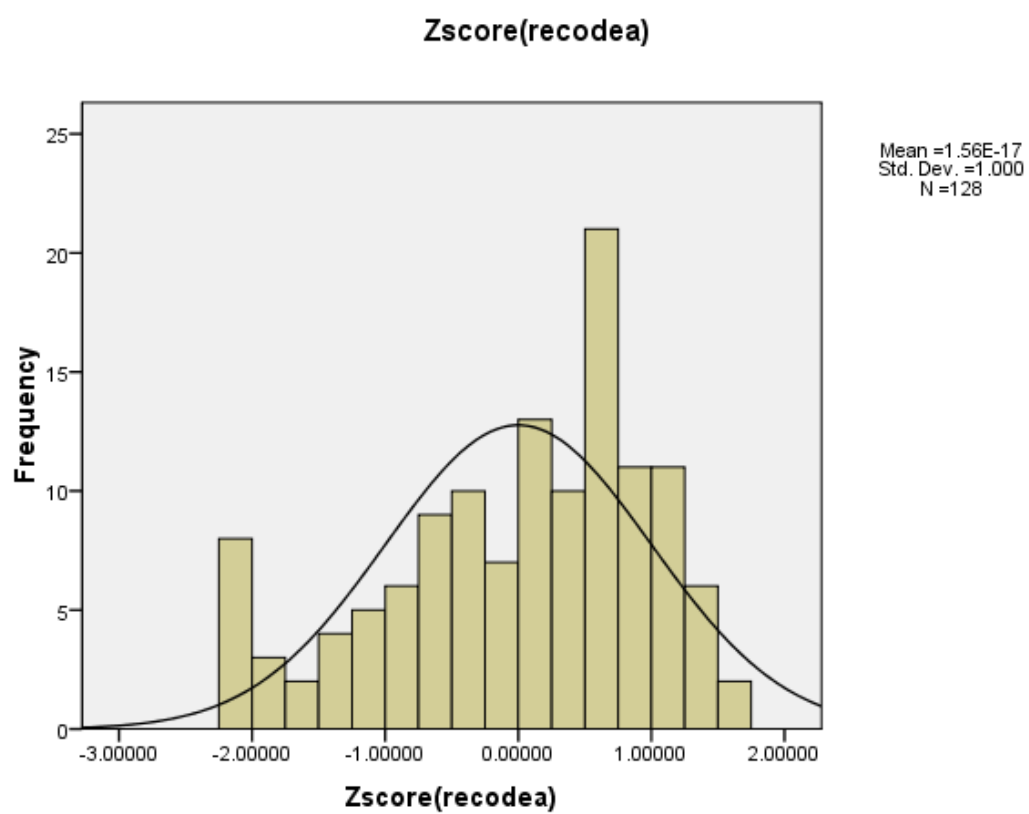
**THANK YOU FOR YOR PARTICIPATION!**



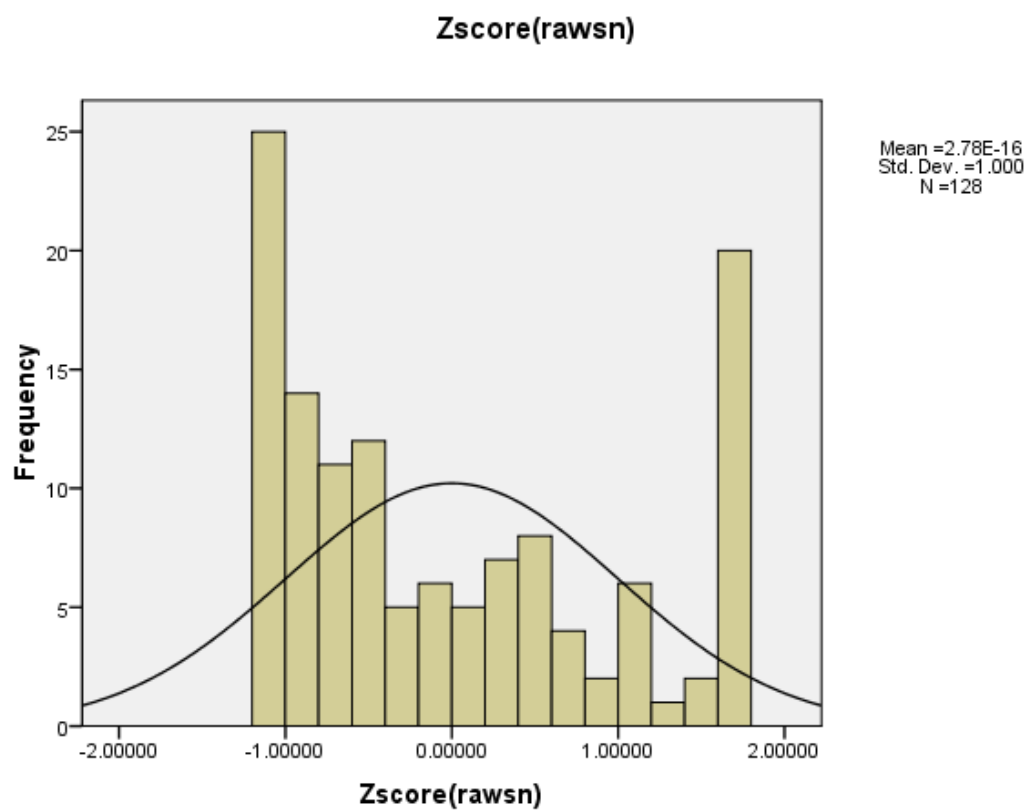
## Appendix G

### Frequency Distributions of Variables

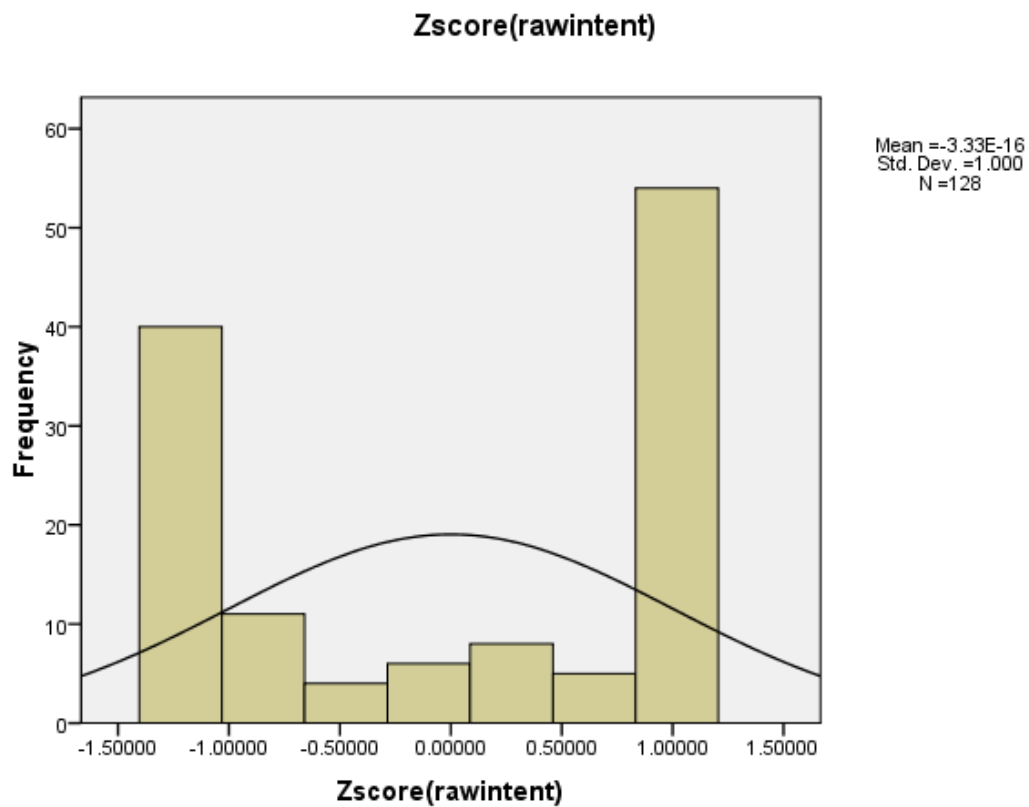


*Frequency Distributions of Variables**Attitude*



*Subjective Norm*



*Behavioral Intent*



## Appendix H

### Vita



## Vita

**Luciene Mendonça-Cali**[lmendonc@broward.edu](mailto:lmendonc@broward.edu)

<b>Education</b>	<b>2005-2009</b>	<b>Barry University – Miami Shores, FL</b> Degree of Doctor of Philosophy in Nursing
	<b>2000-2002</b>	<b>Florida Atlantic University – Boca Raton, FL</b> Master's degree in Nursing Administration
	<b>1996 – 1999</b>	<b>Florida International University – Davie, FL</b> Bachelor's degree in Nursing
	<b>1991 – 1995</b>	<b>Broward Community College – Coconut Creek, FL</b> Associate of Science Degree in Nursing
<b>Work Experience</b>	<b>2003-Present</b>	<b>Broward College – North Campus, FL</b> Assistant Professor of Nursing
	<b>2002-2003</b>	<b>North Broward Medical Center – Pompano Beach, FL</b> Emergency Room – RN Staff
	<b>2000-2002</b>	<b>North Broward Hospital District – Information Systems Fort Lauderdale, FL</b> Nursing Informatics – CareNet Project Team
	<b>1998-2003</b>	<b>Broward Community College – Davie, FL</b> Adjunct Nursing Instructor – CE
	<b>1995-2000</b>	<b>North Broward Medical Center – Pompano Beach, FL</b> RN Staff – Telemetry, ICU, and Stress Lab
	<b>1995-1997</b>	<b>Atlantic Home Health Care – Fort Lauderdale, FL</b> RN Staff – Hospice Care