MOTIVATIONAL FACTORS, PROFESSIONAL VALUES AND ASSOCIATE DEGREE NURSING STUDENTS' INTENT TO CONTINUE THEIR FORMAL EDUCATION: APPLICATION OF STRUCTURAL EQUATION MODELING

by

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Abstract

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The level of nursing education has been shown to influence nursing care with a direct correlation between higher nursing education and improved patient outcomes. However, only 16-20% of Associate Degree (AD) nurses return to school for a higher degree in nursing. Studies have focused on barriers why practicing AD nurses do not pursue further education, though, no study to date has looked at motivational factors for AD nursing students to continue education. This quantitative structural equation modeling (SEM) study investigates the relationship between motivational factors, professional values and the intent to continue formal post-AD nursing education for AD nursing students in their last semester. The framework for the study is based on the conceptual framework of Deci and Ryan's Self-Determination Theory (SDT), elements of a literature review, which provides linkages between intention to attain a post-AD nursing degree, motivational style, and professional values to create the theoretical framework. A sample of 62 AD nursing students in their last semester of nursing at major community colleges in New York City participated. Self-administered questionnaires included the Academic Motivation Scale (AMS C-28), the Nursing Professional Values Scale Revised (NPVS-R), and a personal questionnaire developed by the researcher.

Data analysis showed that AD nursing students with high professional values were self-determined with high intrinsic motivation. The majority of AD nursing students intended to pursue further education, however, intrinsic motivation did not have a direct effect in their intent decisional process. Finally, professional values did not have a direct effect on intent to continue education, but indirectly, professional values were a supportive factor of intrinsic motivation. Implications of this study support the enhancement of professional values in the AD nursing curriculum. Additional factors in the intent decisional process, including extrinsic motivators, should be explored in future research.

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"A man's success should be measured 'not so much by the position he has reached as by the obstacles which he has overcome."

~Booker T. Washington~

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Introduction

Research objective.

The impact of level of education on nursing practice has been a focal topic of conversation throughout the last decade (The American Association of Colleges of Nursing [AACN], 2008). In fact, level of nursing education has been shown to influence nursing care with a direct correlation between higher nursing education levels and improved patient outcomes (Aiken, Clarke, Cheung, Sloane, & Silber, 2003). Aiken and colleagues found that surgical patients had a survival advantage if treated in hospitals with a higher proportion of Bachelor of Science (BS) or Master's degree (MS) prepared nurses as compared to Associate Degree (AD) and diploma prepared nurses. Though one might expect that this striking finding concerning patient outcomes would motivate the majority of AD-prepared nurses to attain a BS degree in nursing, at present, only 16-20% of AD-prepared nurses attain a BS degree (Delaney & Piscopo, 2004; Spencer, 2008; U. S. Department of Health and Human Services, 2004).

Research to date has focused on practicing AD nurses' intent to return to school to pursue a post AD degree in nursing. Results of these studies (Delaney & Piscopo, 2004; Guay, Ratelle, & Chanel, 2008; Megginson, 2008; Spencer, 2008) show that a lack of such incentives as salary or title differences coupled with presence of formidable barriers including work and family constraints appear to tip the decisional balance scale against returning to college. These studies, however, do not view intent to attain a post-AD in nursing as a decisional process, but rather a moment decision. That is, most studies combine incentives and barriers in nurses' momentary decision to either pursue education

or continue work (Delaney & Piscopo, 2004; Krawczyk, 1997; Lange, 1986; Lillibridge & Fox, 2005; Spencer, 2008). Thus our knowledge of the decisional process is obscured.

In contrast to this momentary approach, Leonard (2003) and Spanard (1990) describe intent to pursue education as a multi-step decisional process, which begins with an initial desire to continue education followed by consideration of incentives, barriers and culminating in a decision to either continue or forego continuing education. Thus, this study takes a fresh look at the problem by proposing a three-stage intent decisional process initiated by AD nursing students prior to graduation. In stage one, some AD nursing students have a desire to continue education. Once this desire is recognized, they evaluate the incentives of pursuing a post AD-degree in nursing and make a conscious decision to continue their education. Immediately post-graduation, AD nurses enter the second stage of intent in which they evaluate actual or potential barriers. Though there are few tangible incentives, AD nursing students who reach the third stage of intent and enroll in a formal post-AD education program, are believed to be intrinsically motivated and strive for self-satisfaction through continuous learning. Furthermore, these AD nursing students are presumed to hold high professional values in that they want to be knowledgeable, caring, and compassionate nurses.

Although some AD nursing students are believed to have innate qualities of professional values, including caring and compassion, the majority learn values through nursing education, the clinical setting, and from personal experiences (Kubsch, Hansen, & Huyser-Eatwell, 2008). However, the literature has questioned if there is a difference in professional values based on educational background (Delaney & Piscopo, 2007; Fahrenwald et al., 2005; Morris & Fault, 2007; Osterman, Asselin, & Cullen, 2009;

Sexton, Hunt, Cox, Teasley, & Carroll, 2008; Thorpe & Loo, 2003; Vezeau, 2006). In comparing different nursing degree programs, including AD in nursing, BS in nursing, and the RN-BS program, the AD nursing program emphasizes psychomotor learning and technical skills used to carry out basic nursing and medical tasks, as well as provide experience in basic bedside nursing. Although post-AD nursing programs, including RN-BSN and BS in nursing, teach nursing skills, there is an additional emphasis on liberal art education, philosophy, theory, and scholarship in pedagogy (Kubsch et al., 2008; Spencer, 2008). Furthermore, post-AD nursing students are provided with education that supports the core nursing values of the American Association of Colleges of Nursing (AACN, 2008; Kubsch et al., 2008). If professional values are enhanced through specific courses in post-AD nursing education, would implementing an introductory course to professional values in the AD curriculum motivate more AD nursing students in the intent to continue education? That is, high professional values would sustain self-determination in the intent decisional process to pursue post-AD academic goals in nursing.

Problem statement.

The majority of research focuses on reasons why practicing AD nurses do not continue education. These nurses are in the second stage of intent, greatly influenced by barriers coupled with lack of extrinsic motivational factors to pursue post-AD nursing education. These factors may explain why only 16-20% returns to school. However, no research to date has explored motivation and supportive factors of AD nursing students in the first stage of intent, when some have a desire to purse education. It is proposed that if motivation and supportive factors are identified pre-graduation, in the first stage of intent,

interventions to increase supportive factors are likely to sustain motivation to pursue academic goals. The question posed then is: What are the relationships among motivational style, professional values and intent to obtain a post-AD nursing degree in AD nursing students in their last semester?

The conceptual framework.

The framework for this study is based on the conceptual framework of Deci and Ryan's Self-Determination Theory (SDT) (Ryan & Deci, 2000a; 2000b), elements of a literature review, which provides linkages between intention to attain a post-AD nursing degree, motivational style, and professional values to create the theoretical framework. Deci and Ryan's SDT is an empirical human motivational theory concerned with the choices individuals make with their own free will. Specifically, SDT proposes that there is a continuum of human self-determination (see Table 1) and these motivational types predict an individual's achievement of goals such as high academic achievement (Deci & Ryan, 2000; 2008b). There are three main types of motivation: intrinsic motivation, extrinsic motivation, and amotivation. Each motivational category is further divided into regulatory styles based on the extent to which their regulation is self-determined.

Table 1

The self-determination continuum, showing the motivational, self-regulatory, and perceived locus of causality bases of behaviors that varies in the degree to which they are self-determined (Ryan & Deci, 2000a).

Behavior		**Non self-determined**				**Self-determined**
Type of Motivation	**Amotivation**	**Extrinsic Motivation**				**Intrinsic Motivation**
Type of Regulation	Non-regulation	External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Intrinsic Regulation
Locus of Causality	**Impersonal**	**External**	**Somewhat External**	**Somewhat Internal**	**Internal**	**Internal**

To the far left of the continuum is amotivation, the state of lacking intention to act, either from not valuing an activity or not feeling competent to achieve a desired outcome. Individuals who are amotivated have a low likelihood of academic achievement. Extrinsic motivation is found in the middle of the continuum and individuals driven by this type of motivation are either completely motivated by external factors including rewards or avoiding punishment, or are motivated by behaviors that have more personal satisfaction. There are several degrees of extrinsic motivation and the least autonomous, referred to as *externally regulated*, is most similar to amotivation in that behaviors are performed purely for external rewards. As the continuum moves towards intrinsic motivation, the extrinsic categories of *introjected regulation, identified regulation,* and *integrated regulation* are defined by more autonomy in that the value of the activity shifts from purely external rewards to include increasingly more internal satisfaction. Finally, to the right of the continuum is intrinsic motivation, considered the most autonomous, in which the individual is self-determined (Ryan & Deci, 2000a;

Ratelle, Guay, Vallerand, Larose, & Senécal, 2007). Self-determined individuals are likely to achieve high academic goals because they seek out challenges to explore and learn, thus maximizing their capacities (Deci & Ryan, 2000).

According to Deci and Ryan (2000) intrinsic motivation begins in infancy when individuals are naturally self-determined. For example, by using a simple toy, a young child may seek out challenges and learn while engaged in solitary play resulting in a sense of achievement and internal self-satisfaction. Deci and Ryan propose that it is the most desirable type; because when the behavior is self-initiated it results in innate satisfaction and positive feelings from the activity itself not just from the rewards gained from the achievement. People who are self-determined demonstrate adaptive outcomes such as higher achievements within academics (Ballmann & Mueller, 2008; Ratelle et al., 2007; Vallerand, Fortier, & Guay, 1997).

However, despite the fact that humans have natural self-determination tendencies early in childhood, these can easily become diminished by various non-supportive conditions or even personality changes throughout life causing individuals to lose their inborn self-determination (Deci & Ryan, 2000). These non-supportive conditions may include lack of attachment and security in the early childhood years, or directives, deadlines, pressured evaluations and even threats in adulthood. On the other hand, supportive conditions can enhance self-determination because they allow people a greater feeling of autonomy. These supportive conditions may include opportunities for self-direction, choices, and acknowledgment of feelings. Therefore, because self-determination is innate and is either fostered by supportive conditions or becomes diminished by non-supportive conditions, SDT is not concerned with what causes self-

determination, but rather the conditions that sustain it (Deci & Ryan, 2000).

Deci and Ryan (2000) thus propose that supportive conditions will sustain innate self-determination and individuals who are self-determined will achieve high goals. Using these propositions, it is possible to view the phenomenon of the intent of AD nursing students to attain a post-AD nursing degree. That is, at present there is a lack of extrinsic motivators for AD nursing students in their intent to attain a post-AD nursing degree, including minimal salary increase and little or no employment recognition (Delaney & Piscopo, 2007; Spencer, 2008). Thus, AD nursing students with a desire to continue formal education are likely to be self-determined, the first step of the intent decisional process.

However, if AD nursing students who intend to attain a post-AD nursing degree are driven by self-determination rather than extrinsic motivation, what sustains this self-determination? This study proposes that professional values act as a supportive condition in that these AD nursing students maintain certain values of the nursing profession including caring, compassion (Perry, 2009), and a desire to continue the learning process both academically as well as within the workforce in order to optimize knowledge and be ready for any challenge (Kalman, Wells, & Gavan, 2009; Meyer, Hoover, & Maposa, 2006; Thorpe & Loo, 2003). These students view learning as a continued process with ever increasing goals (Kalman et al., 2009). The self-satisfaction achieved through self-determination may be fulfilled temporarily, but then there is a craving for additional learning in order to provide high quality nursing care.

Values are learned early in life and reinforced through cultural, religious, educational, and family influences (Vezeau, 2006). However, individuals may be

unaware of their personal values until challenged and required to reflect on them. Students entering a nursing program incorporate both personal and societal values, which over time are influenced by professional standards through education and clinical practice (Kubsch et al., 2008; Weis & Schank, 2000). Professional values eventually develop, which are recognized as beliefs and attitudes influencing behavior (Martin, Yarbrough, & Alfred, 2003). Although nursing students are obligated to learn the meaning of professional values, the strength of these values varies greatly in individual students (Vezeau, 2006). It is proposed that AD nursing students who crave knowledge and professionalism have strong nursing values. They have a desire to excel in nursing and are self-determined in their intent to pursue post-AD nursing education. The conceptual framework for the present study leads to the propositions that AD nursing students in their last semester who are self-determined have a desire to continue formal nursing education. Furthermore, professional values, considered a supportive condition, sustain self-determination in the intent decisional process.

Definitions.

Intent to obtain a post-AD in nursing is defined as the desires to continue formal nursing education beyond the AD nursing degree (Spanard, 1990). Intent to obtain a post-AD in Nursing will be measured by a 5-point Likert-type scale question.

Motivational style is defined as "what moves people to act, think, and develop" (Deci & Ryan, 2008a, p. 14). Motivation is measured on a continuum starting with amotivation or low self-determination to intrinsic motivation or high self-determination. Extrinsic motivation with an external focus falls between the two on the continuum (Deci & Ryan, 2008a; Ryan & Deci, 2000a). Motivational style will be measured by the

Academic Motivation Scale (Vallerand et al., 1992).

Professional values are defined as "Standards for action that are accepted by the practitioner and professional group and provide a framework for evaluating beliefs and attitudes that influence behavior" (Weis & Schank, 1997, p. 366). Professional values will be measured by the *Nursing Professional Values Scale* (Weis & Schank, 1997).

Delimitations.

The study population was limited to AD nursing students who were in their last semester of a community college nursing program. During this part of the program, the majority of AD nursing students attend nursing courses exclusively. According to Ballmann and Mueller (2008), students attending an allied health program have reached a professional level when enrolled only in courses directly related to the achievement of competency or expertise in their discipline. When students are focusing on their discipline and their future goals, the influence of motivational styles will become evident (Ballmann & Mueller, 2008).

The setting was limited to The City University of New York (CUNY), an institution with variety in population and cultures (CUNY Office of Institutional Research and Assessment [OIRA], 2009; Roach, 2007; The City University of New York [CUNY], 2009). Furthermore, CUNY institutions offer a variety of nurse education pathways including generic AD and BS programs, numerous accelerated programs, and advanced nursing degrees (AACN, 2008; CUNY, 2009). However, in order to get a true sense of motivation in the intent to continue education, this study was limited to CUNY institutions offering the AD in nursing as their highest nursing degree. It is proposed that when AD nursing students attending a community college, with AD only, have to transfer

to a school offering post-AD nursing programs, it may impact on their intent decisional process as they now have to apply to a new program. Also, geographic factors including distance to school may influence their intent decisional process (Baj, 1985; Boylston & Jackson, 2007; Kalman et al., 2009; Krawczyk, 1997; Megginson, 2008).

Furthermore, the study population was limited to AD nursing students attaining their first post-secondary school college degree. The literature (Spanard, 1990) documents differences in the college experience for first time college students and second-degree individuals; therefore, second-degree students were excluded from the sample. As per CUNY nursing program policy, it is expected that all students enrolled in clinical nursing courses maintain a minimum overall grade point average (GPA) of 2.0.

Research questions.

1. What are the relationships between professional values and motivational style in AD nursing students?

2. What are the relationships between motivational style and intent to continue formal post-AD education in nursing?

3. What are the relationships between professional values and intent to continue formal post-AD education in nursing?

Hypotheses.

1. Professional values are positively related to increased self-determination.

2. Self-determination is positively related to intent to continue formal post-AD education in nursing.

3. Professional values are directly and indirectly related to intent to continue formal post-AD nursing education.

Need for the study.

Educational background of nurses has been shown to play a significant role in patient care outcomes in that the level of nursing education can have a direct impact on both patient safety and quality of care (AACN, 2005; Aiken et al., 2003; Fagin, 2001). Several studies have found that an increase in proportion of Registered Nurses (RN) with higher degrees than an AD in nursing was associated with a significant decrease in mortality of post-operative surgical patients (Aiken et al. 2003; Estabrooks, Midodzi, Cummings, Ricker, & Giovannetti, 2005; Tourangeau et al., 2006).

Despite the benefits of obtaining a post-AD in nursing, the majority of AD nursing students do not pursue further education. Even with an increase in numbers of articulation agreements between two-year, four-year, and other advanced nursing programs, the number of post-AD prepared nurses is not significantly increasing (Sizemore, Robbins, Hoke, & Billings, 2007). The National Council of State Board of Nursing (NCSBN) reported in their most recent 2007 statistics that initially prepared AD RNs account for 58.4% of the workforce while only 38.4% hold a BS degree nationally (NCSBN, 2008).

In recent years, the argument in the United States over nursing degrees, suggesting BS in nursing as a minimum degree to practice as an RN, has shifted from entry into practice to continuing nursing practice. Influenced by Aiken and colleagues (2003), New York and other states are proposing a mandate requiring all RNs to obtain a BS in nursing within ten years of initial licensure (Boyd, 2010). Though it is still in the planning phase, nursing associations across the country are supporting the proposal (AACN, 2008; Barter & McFarland, 2001; New Jersey State Nurse's Association

[NJSNA], 2006). Once in effect, the AD nursing student will no longer have a choice but to continue education in order to maintain their RN licensure.

The only state successfully enacting legislation requiring a BS in nursing as the basic level of educational requirement for an RN in 1987 was North Dakota. Ten years after implementing the new regulations, the percentage of nurses holding a BS in nursing has increased by 54% (Tyler III, 2008). Although not mandated at this time, any changes in degree requirement for nursing practice need to be considered since it may influence the motivational factors and intent decisional process in pursuing a post-AD in nursing.

Studies to date have focused on the momentary intent decision to continue formal nursing education (Delaney & Piscopo, 2004; Krawczyk, 1997; Lange, 1986; Lillibridge & Fox, 2005; Spencer, 2008), in which the studied populations looked at RNs in the workforce who considered returning to school or were enrolled in a RN-BSN program (Delaney & Piscopo, 2004; Lange, 1986; Megginson, 2008). Additional studies explored the intent process retroactively in that AD nursing students were in the third stage of intent and actively pursuing post-AD education. They reflected on their desire to continue education, motivational factors, and incentives or barriers influencing their earlier stage of intent. These studies can only give us a glimpse of nurses' thinking during this process. Thus, this study is the first to consider the intent decisional process (Leonard, 2003; Spanard, 1990) in which the stage of intent is an important factor. AD nursing students in their last semester are presumed in their first stage of intent in that some have a desire and incentive to continue education. By focusing on motivation and supportive factors in the first stage of intent, incentives to pursue academic goals may be identified and reinforced.

Professional values are considered a supportive condition believed to sustain self-determination in the intent to continue post-AD nursing education, and this study took a deeper look at professional values of AD nursing students. Currently, there is great focus on professional values, including the standard code of ethics based on the American Nurses Association's (ANA, 2001) Code of Ethics with Interpretive Statements (see Appendix A), in RN-BSN, BSN, and higher nursing curricula (Fahrenwald et al., 2005; Phillips, Palmer, Zimmerman, & Mayfield, 2002; Thorpe & Loo, 2003; Vezeau, 2006). However, there is significantly less focus on professional nursing value in the AD nursing program (Martin et al., 2003; Sexton et al., 2008). Knowing that professional values combine personal and societal values, some of which are learned through nursing education (Fahrenwald et al.; Kubsch et al., 2008; Martin et al., 2003; Vezeau, 2006), the results of this study will be valuable to educators. Given the outcomes of this study, there is a need to inform CUNY policy in that suggestions can be made for changes in curriculum development to enhance professional values in the AD nursing program. If self-determination in the intent to continue post-AD nursing education is sustained by high professional values, AD nurse educators need to explore how to better enhance and emphasize these values in the curriculum.

Chapter Summary

Despite studies showing a direct correlation between higher nursing education levels and improved patient outcomes, the number of AD nurses compared to BS or higher educational prepared nurses, continue to increase. Furthermore, because there is a lack of incentives to pursue post-AD education in nursing, the majority of AD nurses do not return to school. Studies thus far, however, have focused on incentives and barriers in

the momentary intent to continue education in AD nurses, but there is a lack of research exploring motivational factors in the intent decisional process of AD nursing students pre-graduation. Furthermore, supportive conditions, including professional values, need to be considered in the intent decisional process to pursue academic goals.

This chapter introduced the background of the problem: the need for AD nursing students to advance education and obtain post-AD in nursing degrees. The purpose of this study was identified: to explore the relationships between motivational factors, professional values and the intent for AD nursing students in their last semester to pursue post-AD nursing education. The scarcity of prior research supports the need for this study. Conceptual and operational terms to be used in the study were defined and the assumptions of the study as well as delimitations were discussed. The research questions were formally stated as: What are the relationships between professional values and motivational style in AD nursing students? What are the relationships between motivational style and intent to continue formal post-AD education in nursing? What are the relationships between professional values and intent to continue formal post-AD education in nursing? The need for the study and expected outcomes are explored, as well as anticipated contribution to research, education, and practice. Finally, the conceptual framework uses Deci and Ryan's (2000, 2008b) SDT, an empirical human motivational theory concerned with the choices individuals make with their own free will.

Chapter II

Review of the Literature

Literature review.

A conceptual framework cannot be measured. However concepts can be derived from the literature that provide or support concepts at the theoretical level that can be operationalized and measured (see Table 3). The literature review for this study supported the specific concepts utilized for the theoretical conceptualization.

Table 3

The Conceptual-Theoretical-Empirical (C-T-E) Model.

Conceptual	Motivation Type	Supportive Condition	Behavior
Theoretical	Intrinsic Motivation Extrinsic Motivation Amotivation	Professional Values	Level of intent to continue education
Empirical	Academic Motivation Scale – College Version (AMS-C 28)	Nursing Professional Values Scale Revised (NPVS-R)	Likert-type scale

Although there has been an increased focus on minimal educational requirements in nursing and the urgency for AD RNs to return to school for post-AD in nursing, the present reality is that most do not. As noted, the majority of nurses are currently prepared at the AD level and approximately 80% of these nurses never continue their education (Spencer, 2008). This study focuses on motivation and supportive factors of the remaining 16-20% who return to academia to achieve a post-AD in nursing. It is proposed that some AD nursing students driven by self-determination will have the desire

and incentive early in the intent decision process to continue formal nursing education. According to the SDT (Deci & Ryan, 2000), intrinsic motivation is seen as the main characteristic of self-determination as this type of behavior is driven by internal pleasure and self-satisfaction experienced when performing the task. Similar satisfaction and self-determination may also be experienced when a high level of extrinsic motivation guide the behavior. Furthermore, this study proposed that additional factors including professional values are supportive conditions in the first stage of the intent decisional process.

Intent to obtain post-AD in nursing.

Intent implies that the individual has a desire to make a change. In the educational context, Spanard (1990) describes intent as a means to a future change in which the individual's thinking and problem solving lead to continued education, perseverance while pursuing academic goals, and eventually completion of the intended college degree. Intent is presumed necessary in order for these actions to take place. This study proposed that AD nursing students in their last semester are in the process of forming their intent to continue formal post-AD nursing education.

According to Spanard (1990), intent is a three-step process necessary for students to follow in their decision to pursue or not pursue educational goals. First, students will acknowledge a desire to achieve higher academic goals, usually arising from intrinsic or extrinsic motivational factors, or a combination of both. Secondly, they will determine if the desire is strong enough by measuring pros and cons, including incentives and barriers, to invest time and money to continue formal education. Finally, the intent process is complete when students are actively involved in the educational process and achieve pre-

established academic goals. Although the intent process is variable in length, the second stage is usually shorter than the third stage. Once the desire to continue education is realized, the students spend days to months to evaluate the incentives followed by barriers, possibly making adjustments in their lives. Individuals moving into the third stage of intent generally spend a longer time achieving academic goals by completing their studies. The completion of the intent process is a transitional activity rather than an end in itself; a means to future change.

Though Spanard (1990) never tested the theory, Leonard (2003) explored the intent process using a slightly different model in a survey of AD nurses (n = 36) enrolled in a RN-BSN online program at the University of North Alabama. The majority of the students were working full time while completing online courses. Students reflected on how they had proceeded through the stages of the intent process described by Leonard as "contemplating", "planning" and "experiencing". In the first stage, contemplating, the AD RN considered returning to school but unlike Spanard's (1990) first stage, nurses also evaluated the pros and cons of continuing education while in this stage. The pros included personal satisfaction (33.3%), the desire to attend graduate school (30.6%), and the desire for career advancement as well as promotions (30.6%). There were three main cons or barriers including difficulty juggling a school schedule with other obligations (66.7%), family concerns (22.2%), and financial concerns (16.7%). According to Leonard, the second stage of intent, "planning", involves selecting an educational program, initiating the application process, and formalizing plans to continue education. Although the participants in the study had completed this stage and were currently enrolled in a RN-BSN program, or "experiencing", their reflections of the planning

process were found to be more difficult than expected. They referred, however, to the final stage of intent as a pleasant experience with a feeling of accomplishment and satisfaction.

Although the stages of the two intent models vary somewhat, the process is essentially the same (Leonard, 2003; Spanard, 1990). The researcher of this study proposes a similar three-stage intent decisional process initiated by AD nursing students prior to graduation. In stage one, some AD nursing students with high professional values have a desire to continue education and once the desire is recognized, they evaluate the incentives of pursuing post-AD education. Post-graduation, AD nurses enter the second stage of the intent decisional process in which actual or potential barriers factor into their intent to pursue academic goals. Finally, self-determined AD nurses, whose incentives and professional values are not diminished by barriers, will enter the third and final stage of the intent process by enrolling in a post-AD program.

Considering the AD nursing students in this study were in the first stage of the intent process having identified a desire to pursue academic goals, what are possible incentives influencing this stage? The majority of studies combine incentives and barriers in the intent to continue education rather than separating them into two different stages (Lillibridge & Fox, 2005; Megginson, 2008; Osterman et al., 2009). Although the incentives are initially strong, barriers tend to outweigh the incentives, resulting in the majority of nurses not returning to school. This study, however, took a unique look at the intent decisional process in that it explored AD nursing students with a desire to continue post-AD education, and their consideration of incentives.

Focusing on incentives, Lillibridege and Fox (2005) in their qualitative study,

interviewed a convenience sample of AD nurses completing an RN-BSN program (n = 6) about their experiences in advancing to post-AD education. At the time of the study, the participants were in the third stage of the intent process. Findings indicated that these nurses were mainly extrinsically motivated in their initial stage of intent, and their goals had been to enhance knowledge of skills in order to obtain better job security and possibly career enhancement. Because there were clear external motivators driving these AD nurses to continue education, the SDT considers these performances extrinsically motivated based on external awards, or in some cases avoidance of punishment (Deci & Ryan, 2000).

Warren and Mills (2009) examined nurses' preference for organizational incentives and rewards, and motivation to obtain an advanced nursing degree. In their descriptive cross-sectional (one group) design study using a random sample of diploma or AD nurses not enrolled in a post-AD program (n = 272), four scales were developed to examine the perceived importance of organizational rewards and incentives for nurses to continue education. The validity and reliability of the instruments were judged as adequate. Cross tabulations indicated that motivation to enroll in a post-AD program if the right combination of incentives and rewards were offered, was predictive of nurses planning to enroll in a post-AD program ($\chi^2 = 87.12$, $p = .000$).

Furthermore, logistic regression analysis suggested that predictors of nurses' willingness to return for post-AD nursing degrees included lower career satisfaction, OR 1.78 (CI = 1.21-2.61), higher professional commitment, OR 1.35 (CI = 1.05-1.74), the perception that a BS in nursing offered greater work opportunities, OR 1.33 (CI = 1.12-1.57), and organizational incentives, OR 1.64 (CI = 1.34-2.01) (Warren & Mills, 2009).

Based on these findings, nurses were intrinsically motivated in that they were committed professionally, but the remaining motivational factors were extrinsically oriented including career satisfaction, work opportunities and organizational incentives. Finally, results indicated that only 19.4% of the AD nurses in the study had the intent to continue formal nursing education. This is fairly consistent with the 2004 National Sample Survey findings of RNs in that 20.9% of AD prepared nurses obtained an RN-BS degree or higher degree in nursing (Health Resources and Services Administration, 2004). It is important to recognize that these were post-graduate employed AD RNs whose barriers may have been influential in stopping the intent process to continue education.

In a phenomenological qualitative study using a convenience sample of returning female diploma and AD RNs (n = 6) pursuing a RN-BSN, Megginson (2008) used focus group interviews in which she identified six incentive themes, or motivators, for nurses to continue education. While most were extrinsically driven, such as the opportunity for career advancement, some participants had been intrinsically motivated in Spanard's (1990) earlier stage of the intent process in their desire to achieve personal goals. These nurses described an "inner yearning to learn" and to "attain a higher, more critical level of thinking". The concept of support was evident in that encouragement from colleagues who had already obtained a RN-BSN had an impact on their decision (Megginson, 2008).

A supportive environment clearly has a positive effect on AD nurses' intent to continue formal education and becomes an incentive to move forward. In a qualitative study using a purposive sample of RNs (n = 11), in-depth interviews were used to describe the meaning of personal and professional growth for AD nurses who returned for a RN-BSN. Prior to expressing lived experiences of continuing education, the

participants identified support as a key factor in returning to school (Osterman et al., 2009).

Although much of the literature focuses on incentives based on extrinsic motivation or lack thereof, this study proposed that some AD nursing students are self-determined while advancing through the stages of the intent decisional process. In a phenomenological study using a convenience sample (n = 11) of AD nurses enrolled in a RN-BSN program, Kalman and colleagues (2009) identified personal rewards as a theme early in the intent process to continue education. AD nurses were more likely to return to academia when they believed the value of nursing education would improve self-confidence. Similarly, in a descriptive study using a convenience sample of AD nurses enrolled in a RN-BSN program (n = 62), Kearney (1994) found personal goals or desires (58%) and self-determination, to be primary reasons early in the intent for AD nurses to continue education. Only a small number of nurses (11%) specified the degree had been necessary for promotion, clearly an extrinsic motivator.

Delaney and Piscopo (2004) further explored the benefits of enrolling in a RN-BSN program and found the participants' intent to be influenced by a combination of intrinsic and extrinsic motivational factors. In their study, using a self-developed survey, data was analyzed using Miles and Huberman's method of content analysis. This method consisted of coding the data and identifying central themes. The convenience sample (n=101) consisted of practicing AD nurses not enrolled in a formal post-AD nursing program in Connecticut. The main incentive theme included raising potential on a personal and a professional level. However, only 28.7% were planning to return to school as the remaining sample identified competing demands such as time management, work,

and financial status as common barriers to continue formal education.

What then, is different in the small group of AD nurses willing to make personal sacrifices in their intent to reach academic goals? Considering the lack of recognition for post-AD in nursing, what are the incentives for AD nursing students to continue formal education? Bearing in mind that AD nurses pass the same licensing examination, can work alongside RNs with a BS in nursing, and have minimal difference in their pay scale, the external incentives to strive for post-AD education are low (Lillibridge & Fox, 2005; Taylor III, 2008). Therefore, AD nursing students who intend to continue on the educational path are believed to be self-determined, characterized by intrinsic or highly extrinsic motivation, and have deep inherent qualities and values.

Motivational factors.

The traditional meaning of motivation is "to be moved" to do something (Ryan & Deci, 2000a). Historically, most theories on motivation view the concept as a unitary phenomenon ranging from a small to a large amount of motivation. More recent literature (Ballmann & Mueller, 2008; Ratelle et al., 2007; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004) suggest that there are different kinds of motivation in which both the level and the orientation of motivation are considered. SDT assumes that individuals are by nature self-determined and eager to succeed since these actions are usually rewarded by personal satisfaction (Deci & Ryan, 2008b).

This study proposed that self-determination is a predictor of AD nursing students intending to continue formal education. One relevant descriptive study by Ballmann and Mueller (2008) used the Academic Motivation Scale (AMS-C 28) to identify the type of motivation influencing allied health professional-level college students. Their

convenience sample (n = 222) was enrolled in various health-profession majors, including a generic BS in nursing program, in a private university in the Midwest United States. Results indicated that the majority of the students in allied health curriculums considered themselves as having both intrinsic and extrinsic forms of motivation. Specifically, most participants (98.6%; n = 218), including all allied health programs, scored highest on the type of extrinsic motivation, *identified regulation*, more closely associated with intrinsic motivation on the AMS-C 28, followed by intrinsic motivation (97.7%; n = 216). The results were similar in the nursing student category with the extrinsic motivation, *identified regulation,* having the highest score (M = 6.3529) and intrinsic motivation following (M = 5.3625). Amotivation had the lowest ranking of all the categories (M = 1.6049). Findings supported the study's hypothesis predicting college students to be intrinsically motivated or have *identified regulated* extrinsic motivation more frequently than other types.

As reflected in the results of Ballmann and Mueller's (2008) study, motivation is not simply three separate categories, intrinsic, extrinsic, or amotivation, but rather a continuum of motivational styles, which are further divided into regulatory styles based on the extent to which their regulation is autonomous (Ryan & Deci, 2000a). To the far left of the continuum is amotivation or the state of lacking intention to act. Extrinsic motivation is found in the middle of the continuum and individuals driven by this type of motivation are either completely motivated by external factors including rewards or avoiding punishment, or are motivated by behaviors that have more of a personal meaning. There are several degrees of extrinsic motivation in which the least autonomous, referred to as *externally regulated*, is most similar to amotivation. As the

continuum moves towards intrinsic motivation, the extrinsic categories of *introjected regulation, identified regulation,* and *integrated regulation* become more autonomous in that the value of the activity shift from purely external rewards to include increasingly more internal satisfaction. Finally, to the right of the continuum is intrinsic motivation, considered the most self-determined (Ratelle et al., 2007; Ryan & Deci, 2000a).

In a survey examining the level of interest and plans for a convenience sample of non-enrolled RNs (n = 1,268) to return for a RN-BSN program in a southeastern state, Lange (1986) found that the majority expressed interest in obtaining a RN-BSN (77%), with only 23% expressing no interest. Scoring of interest was based on nine potential motivating factors asked of the participants including work-related motivation (69%), higher salary (59%), better job options (69%), job security (37%), pressure from the nursing profession (45%), and pressure from employers (11%) as part of extrinsic motivators. Furthermore, intrinsic motivators included increased knowledge (66%), feeling of achievement (65%), and learning new ideas (45%). Interestingly, 60% had not contacted a RN-BSN program to request information and while the remaining 40% had requested information, only 10% had made inquiries to more than one program (Lange, 1986). Considering the fact that less than half had inquired about RN-BSN programs raises the question of how influential barriers are for these nurses in the second stage of intent.

Demographics of AD nurses intending to continue formal education were identified by comparing responses of AD nurses indicating they were “very interested” in post-AD education with those who were “not at all interested” in further education. Results demonstrated significant differences ($p < .05$) in AD nurses intending to continue

formal education in that they were younger ($t = 17.58$; $p < .05$), single ($t = 2.06$; $p < .05$), more likely to have completed their AD in nursing more recently ($t = -14.89$; $p < .001$), had made inquiries about RN-BSN programs ($t = -4.92$; $p < .001$), and they identified more reasons for obtaining the degree than the "not at all interested" group (Lange, 1986).

A survey conducted at Marshall University, West Virginia explored motivational dimensions precipitating AD nurses' return for RN-BSN degree. A modified Educational Participation Scale (EPS), a 38-item questionnaire, was used to categorize motivational orientation in a convenience sample of AD nurses ($n = 57$) enrolled full-time or part-time in a RN-BSN program. On a Likert-type scale (1 - 5), the mid-score rating of three or above were viewed by the researchers as being significant. A total of seven significant motivational orientations were identified including Professional Knowledge: to keep up-to-date professionally (4.18), to learn something new (3.91), or to satisfy an inquiring mind (3.91); Professional Advancement: to keep up with competition (3.47); Acquisition of Credentials: to help me earn a degree (4.35), to acquire credentials for my records (3.71); and Improvement of Social Welfare Skills: to improve my ability to serve mankind (3.52). A follow-up qualitative portion of the study where the participants ($n = 55$) had to elaborate on why they enrolled in a nursing course, 21 (37%) stated they were primarily motivated by professional knowledge, including "improve the quality of my own professionalism," "for my own satisfaction," or to "improve myself and my nursing abilities" (Fotos, 1987). Results of the qualitative portion of the study were significant in that the majority of AD nurses returning to school were intrinsically motivated.

Thus far, the literature supports the presence of both extrinsic and intrinsic

motivational factors for AD nurses to continue formal education. However, focusing on AD nursing students, what motivational factors are needed to progress in the academic environment and enhance the intent decisional process to continue education? One study explored the relationship between educational goals and the motivation of learning, performance, and persistence in college students (Vansteenkiste et al., 2004).

In a total of three field experiments, the relationship between educational goals and the motivation of learning, performance, and persistence in high school and college students were explored (Vansteenkiste et al., 2004). In the first multivariate experimental study, the randomized sample (n = 200) was divided into four groups in different learning environments and assessed for levels of engagement in specific reading exercises (superficial, deep, or persistent), as well as type of motivation. Data analysis using MANOVA and univariate ANOVAs were significant ($p < .001$) for higher intrinsic motivation as well as deeper and more persistent learning when students were taught in an intrinsically motivating learning environment and given intrinsic rationales for learning. A second study (n = 377) was used to replicate and extend the results of the initial study by adding gender, study majors, and different intrinsic goals to their variables. The results were similar to those in the first study, significant ($p < .001$) for higher intrinsic motivation when gender and a different major was added, enhancing the generalizability of the study (Vansteenkiste et al., 2004).

Finally, a third field experiment (n = 224) used to extend the previous studies strongly supported the results in the first two studies. Overall, the three studies provided strong evidence in that students, who studied in intrinsically supportive environments and had intrinsic goals rather than extrinsic rewards, improved learning and performance

more than individuals with extrinsic goals (Vansteenkiste et al., 2004).

Despite the encouraging results by Vansteenkiste and colleagues (2004), other motivational studies have been less convincing. In a study by Ratelle and colleagues (2007), the AMS was used to explore the effects of different types of motivation on academic outcomes in high school and college students. The initial study used a convenience sample of high school students exclusively (n = 4498), and the results indicated that 9 out of 10 students were both intrinsically and extrinsically motivated to continue education. Furthermore, there was a positive correlation between the mixed intrinsic and extrinsic motivation, and positive academic outcomes ($p < .05$). None of the students were purely intrinsically motivated and the authors speculated that the high school environment did not foster such a motivational profile (Ratelle et al., 2007). These findings were almost replicated in a follow-up study of high school students (n = 942). Although a correlation between a high intrinsic motivational profile and positive academic achievements were not found, the authors tentatively concluded that intrinsic motivation by itself is enough to ensure positive academic outcome by protecting against the negative role of extrinsic motivation (Ratelle et al., 2007).

In a third and final study, the sample changed to college students (n = 410) in an educational setting characterized by fewer constrains than high school. College students differ from high school students in that they are not obligated to pursue their studies, and they can choose their academic programs, including courses as well as schedules. The authors hypothesized that an intrinsic motivational profile would be more evident in this population, and findings supported the hypothesis with a higher level of intrinsic motivation and lower level of extrinsic motivation ($p < .05$). While college students may

be somewhat influenced by external rewards such as increased salary, job security, and improved status, the majority continue their education because of self-determination and self-satisfaction (Ratelle et al., 2007). These findings support the SDT's perspective on quality of motivation in that intrinsic motivation will most likely lead to more persistence in education and achievement of academic goals.

Similar findings were anticipated in this study, that is, AD nursing students who are self-determined, driven by intrinsic motivation or a high level of extrinsic motivation, are more likely to have a desire in their intent to continue education. These students are believed to thrive for self-satisfaction in anticipation of reaching their academic goals. In a qualitative study, Lillibridge and Fox (2005) explored the role of self-determination and quality of motivation RN-BSN graduates (n = 6) had experienced through their intent to achieve academic goals. The participants with the highest success rate were identified as having clear-cut goals, being motivated, and having the need to enhance their knowledge while attaining a RN-BSN. The researchers concluded that those who started an educational program without clear motivational goals were more likely to drop out (Lillibridge & Fox, 2005).

Although the literature shows strong evidence that self-determination plays a role in the intent decisional process for AD nursing students to continue education, is it enough to pursue academic goals? Or, is there a need for additional supportive factors to sustain the motivational factors? This study proposed that AD nursing students who intend to continue formal education are self-determined, but the motivation is sustained by certain qualities held by these individuals such as caring, compassion, patient advocacy, and a craving for knowledge based on the American Nurses Association's

(ANA, 2001) Code of Ethics. This study explored the belief that self-determined AD nursing students who intend to reach post-AD academic goals have an innate set of unique qualities, including professional values.

Professional values.

Considering the fact that only one fifth of AD nursing students continue on to higher education and there are few external rewards for academic advancement, this study speculated that these students are motivated by goals of providing the best possible patient care through professional values. Professional values of nursing refer to a set of standards for action which serve as a framework for evaluating beliefs and attitudes accepted by the practitioner and professional group, influencing the behaviors of that group (Fahrenwald et al., 2005; Kubsch et al., 2008; Martin et al., 2003; Vezeau, 2006). Furthermore, professional values combine personal and societal values, some of which are learned through nursing education and the clinical settings, and others from personal experiences. The standard code of ethics taught in nursing curricula and followed in practice is based on the American Nurses Association's (ANA, 2001) Code of Ethics with Interpretive Statements (see Appendix A). This code is composed of nine moral principles (Dahnke, 2009; Weis & Schank, 2000).

The majority of studies focus on professional values, or lack thereof, learned through nursing curriculums (Fahrenwald et al., 2005; Thorpe & Loo, 2003; Vezeau, 2006). The AD nursing program emphasizes psychomotor learning and technical skills used to carry out basic nursing and medical tasks as well as provide experience in basic bedside nursing. On the other hand, post-AD nursing programs such as RN-BSN and BS in nursing, teach basic to complex nursing skills, but also emphasize liberal art education,

philosophy, theory, and scholarship in pedagogy (Kubsch et al., 2008; Spencer, 2008). Although both AD nurses and post-AD educated nurses consider themselves professionals, the literature has questioned if there is a difference in professional values based on educational background (Delaney & Piscopo, 2007; Fahrenwald et al., 2005; Morris & Faulk, 2007; Osterman et al., 2009; Sexton et al., 2008; Thorpe & Loo, 2003; Vezeau, 2006).

According to Phillips et al. (2002), developing professionalism is a predominant underlying goal of obtaining a BS in nursing. In their study, common attributes of professionalism were identified as knowledge, critical thinking ability, communication skills, leadership ability, participation in and use of research in practice, as well as involvement in professional nursing organizations. A convenience sample (n = 223) of nursing students in a RN-BSN program in Pennsylvania participated in the study. The Professional Development Self-Assessment Matrix (PDSAM), was used to assess four levels of professional development; professional awareness (Level 1), professional identification (Level 2), professional maturation (Level 3), and professional mastery (Level 4). Furthermore, nursing students were tested using the PDSAM at the entry of the program and immediately before graduation. Between-group means indicated that scores of graduating students were significantly higher on all four professional developments including nursing practice/process (t = 12.01; p = .000), leadership (t = 11.18; p = .000), professional integration (t = 11.58; p = .000), and research/evaluation (t = 6.92; p = .000) (Phillips et al., 2002). Based on these findings, it is tempting to draw the conclusion that professional values are exclusively learned in the nursing program. However, this study proposed that professional values are also an innate quality of some AD nursing students,

but are further enhanced through the nursing curriculum in post-AD education.

Recent studies have explored if the type of learning has an impact on professional values. The purpose of a study by Morris and Faulk (2007) was to identify if certain learning activities in a RN-BSN program had an impact on different nursing roles and values specified by the AACN. A convenience sample (n = 10) of RN-BSN students were given different assignments and assessed for what activities were mostly associated with professional values. An example of a learning activity was family assessment involving the students to form a relationship with families. Students were evaluated on their abilities to promote growth in the roles of patient advocate, educator, and information manager, and also in development of the values of caring, altruism, autonomy, and human dignity.

A follow-up survey was collected three months post-graduation in order to assess for any changes in professional values. The outcome demonstrated that several (13) of the learning activities were associated with professional values with the highest qualities identified as caring, altruism, and human dignity. Findings from the follow-up survey demonstrated change in professional values indicated by increased patient advocacy, increased confidence in the role of teacher of patients and families as well as other areas. Based on these outcomes, the authors concluded that professional behaviors had changed as a result of the educational experience, and that teaching-learning strategies may enhance professional values (Morris & Faulk, 2007).

Professional values may be taught in post-AD nursing curriculums, but how do students perceive these values? In a qualitative study (Osterman et al., 2009), nurses who recently completed an RN-BSN program were asked how the new degree influenced their

perception of being professional nurses. Several of the participants (n = 11) identified a basic broadening of their knowledge about the scope of professionalism, including awareness of others and more empathy when interacting with patients, peers, and members of the interdisciplinary team. A common theme, also reported by Lillibridge and Fox (2005), was the "aha" moment explained by the participants as "having an expanded world view" and "seeing the bigger picture". Nurses expressed their amazement of being challenged to think, to be research consumers, and leaders, as well as having increased confidence.

Kubsch and colleagues (2008) also compared the perception of professional values of RNs according to their educational background. In their quantitative study, a convenience sample of RNs (n = 590) employed in a hospital in the Midwest, including diploma nurses, ADNs, BSNs, RN-BSNs, as well as master's degree nurses, and nurses (n = 130) enrolled in a RN-BSN completion program were invited to participate. A Professional Value Survey developed by the researchers consisted of 50 statements testing specific professional values based on policies, codes and standards. Each item had five possible responses ranging from 1 to 5 with a higher score indicating strong professional values. Internal consistency of the instrument was determined using a Cronbach's alpha of 0.946 (Kubsch et al., 2008).

Descriptive statistical findings revealed the levels of perception of professional values among all practicing nurses with an overall mean score range from 3.98 to 4.68, in which a high mean indicated high perception of professional values. Within education, the highest mean was found in the RN-BSN in progress group and the lowest mean in the employed RNs holding an AD in nursing. Furthermore, ANOVA was used to determine

the differences in perceived professional values according to level of nursing education and other independent variables. The results were significant for a difference in perception of professional values according to level of nursing education ($F = 3.42$; $p = .006$). Tukey HSD post hoc analysis and mean scores demonstrated the most significant difference was in the RN-BSN in progress group, having the highest professional values than any of the other groups. Based on these findings, Kubsch et al. (2008) suggested that the RN-BSN completion curriculum is more flexible in teaching courses important to professional values.

In a similar quantitative study, Martin et al. (2003) examined whether professional values held by AD and BS nursing students differed. Their convenience sample ($n = 1366$) was obtained from 25 BS and 46 AD nursing programs in Texas. The instrument, the Nursing Professional Values Scale (NPVS), a 44-item questionnaire with 11 subscales was found to have a Chronbach's alpha of .95. Findings indicated that senior nursing students in AD nursing programs ($M = 182.35$; $SD = 21.24$; $n = 841$) did not differ significantly from BS nursing students ($M = 180.46$; $SD = 19.37$; $n = 501$) on the NPVS ($t = 1.6$; $p = .10$). Senior AD nursing students scored higher than the BS nursing students on 5 of the 11 subscales of the NPVS instrument. These items included safeguarding the client's right to privacy, assuming responsibility and accountability for individual nursing judgment, exercising informed judgment and use individual competence, implement and improve standards of nursing, and collaborate with other health professionals (Martin et al., 2003). This was the only study found in which AD nursing students had equal or higher measures in professional values as BS nursing students. Considering these AD nursing students were in the first stage of the intent

decisional process, some of them with a desire to continue education, could the high professional values also be explained by innate qualities rather than professional values taught in the curriculum? Furthermore, the authors stated limitations to the study were that there was no control for the values already inherent in the participants, and the study was done using a convenience sample exclusively in Texas.

Sometimes referred to as the hallmark of nursing, unique characteristics in nurses including caring and compassion; qualities that are easily diminished in our high-technology society of the 21st Century. However, some nurses have been observed to incorporate these values in their daily care regardless of the patient census or inadequate staffing. These nurses seem to prioritize care for the profession and advocate for patients. In a descriptive phenomenology study on how to convey compassion by Perry (2009), a purposive sample (n = 7) of RNs and Licensed Practical Nurses (LPN) were recruited from long-term care facilities through network sampling. Data collection was done through unstructured interviews and participant observation. Following a systematic analysis, the overarching theme in the study was "attention to the essential ordinary". Nurses were found to show compassion through paying attention to small things and promising their clients to never abandon them. In view of the last theme and according to the ANA Professional Code of Ethics, an important nursing role is patient advocacy (ANA, 2001; Simmonds, 2008). Patient advocacy refers to promoting the patients' best interests that ideally coincide with the interest expressed by the nurse (Simmonds, 2008). In a literature review by Simmonds, examining the meaning of patient advocacy to nurses, the main themes included informing and educating; valuing and respecting; supporting physically, emotionally and financially; protecting and representing; and

promoting continuity of care.

Keeping all these findings in mind, especially in reference to professional values and nursing education, the role of professional values and patient care outcomes need to be explored. Studies have shown a link in nursing education and patient-care outcomes based on nursing practice. Research demonstrates that when the proportion of RNs holding a BS or higher degree in nursing increases, patient morbidity and mortality decreases (Aiken et al., 2003; Estabrooks et al., 2005; Tourangeau et al., 2006).

Aiken and colleagues' (2003) landmark study changed the public view of how nurses' educational background can have a direct effect on patient care outcomes. Specifically, outcome data from hospital discharge abstracts were combined with information on specific hospital characteristics including survey data from nurses working in the institutions. The sample consisted of acute-care hospitals (n = 168) in Pennsylvania in 1999 and a random sample of working RNs (n = 10,184). Furthermore, discharge abstracts were obtained from patients (n = 232,342) who had been hospitalized for general surgery, vascular, or orthopedic procedures during a 19-month time period. The association between the educational level of nurses across hospitals and both deaths within 30 days of hospital admission and deaths within 30 days of admission among patients who experienced complications was examined (Aiken et al., 2003).

Data analysis included group comparison of hospital characteristics, nursing experience and staffing, as well as patient characteristics using descriptive statistics and significance tests (χ^2 and F tests). Logistic regression models were used to estimate the effects of a 10% increase in the proportion of nurses holding a BS or MS in nursing on patient mortality and failure to rescue. Findings indicated a statistically significant

relationship ($p < .05$) between the proportion of nurses in hospitals with BS and MS degrees and the risks of mortality and failure to rescue in that with each 10 % increase in the proportion of nurses with BS in nursing or higher degrees, decreased the risk of mortality ($p = .008$) and failure to rescue ($p = .02$) by 5% after controlling for patient and hospital characteristics. Using Odds Ratios (OR), Aiken et al. (2003) estimated that the odds of 30-day mortality and failure to rescue would be 19% lower in hospitals where 60% of the nurses had BS in nursing or higher degrees than in hospitals where only 20% of practicing nurses held a BSN.

During the same time Aiken and colleagues (2003) conducted their study, a similar studies was conducted in Canada. Estabrooks and colleagues (2005) investigated the effects of nurse education and skill mix (higher RN-to-non-RN ratios), continuity of care, and quality of work environment in predicting 30-day patient mortality after adjusting for individual patient characteristics and institutional factors. The sample consisted of acute care hospitals ($n = 49$), working RNs ($n = 6,536$), and patient discharge abstracts ($n = 18,142$). Admission medical conditions selected for the study included acute myocardial infarction, congestive heart failure, chronic obstructive pulmonary disease, pneumonia, or stroke. The selection was based on the acute, high volume, and high crude death rates.

Data analysis consisted of descriptive statistics and significance tests (χ^2 and ANOVA) used for comparison of hospital characteristics, hospital nursing characteristics, and patient variables. The significant findings related to nurse education ($p < .05$) and patient mortality ($p < .05$) indicated that hospitals with a higher proportion of BS prepared nurses were associated with lower rates of 30-day patient mortality.

Furthermore, hospitals with a higher proportion of RN-to-non-RN ratio were also associated with lower rates of 30-day patient mortality after adjustments were made for patient co morbidities and demographic variables (Estabrooks et al., 2005).

Based on these studies, there is clear evidence that higher educational levels decrease mortality rates in patient care outcomes. Furthermore, because post-AD nursing curriculums emphasize professional values, nurses holding post-AD degrees are also assumed to practice with higher professional values.

Chapter Summary

This chapter reviewed the literature related to the intent for AD nursing students to continue post-AD education, motivational factors in the intent decisional process, and professional values as a supportive factor. The literature was explored to support the independent variables; motivational factors and professional values, and the dependent variable; intent to continue post-AD nursing education, and it was organized into sections accordingly. Furthermore, the literature was used to support the conceptual framework, the SDT (see Table 3).

Chapter III

Methodology

Methods.

The primary goal of this quantitative research study was to answer the research question "What are the relationships among motivational style, professional values and intent to obtain a post-AD nursing degree in AD nursing students in their last semester?" which relates to motivational factors, professional values and AD nursing students' intent to continue their formal education. Structural equation modeling (SEM) was used to explore relationships among the independent variables and the dependent variable. This chapter presents the methodology used in the study, which is organized into five sections including instruments, population and sample, data collection procedures, data analysis, and protection of human subjects.

Design.

This quantitative, SEM study analyzed the relationships between the independent variables; motivational factors and professional values, and the dependent variable, intent to continue formal education. The convenience sample consisted of nursing students enrolled in community colleges with AD in nursing as the highest degree offered. The Academic Motivation Scale (AMS C-28) was used to measure motivational factor and the Nurse Professional Vales Scale Revised (NPVS-R) was used to measure professional values of AD nursing students. Additionally, a demographic questionnaire was collected, including a Likert-type scale to measure intent to continue post-AD education. Data analysis measured the relationships between a set of independent variables and a dependent variable.

Instruments.

Academic Motivation Scale – College Version (AMS-C 28).

The Academic Motivation Scale – College Version (AMS-C 28) (Vallerand et al., 1993), a 28-item self-administered questionnaire, measures different levels of motivation based on Deci and Ryan's (2000) SDT, an empirical human motivational theory concerned with the choices individuals make with their own free will. Seven subscales differentiate between three types of intrinsic motivation: Intrinsic Motivation To Know (IMTK); Intrinsic Motivation Toward Accomplishment (IMTA); and Intrinsic Motivation To Experience Stimulation (IMTES); three types of extrinsic motivation: Extrinsic Motivation Identified (EMI); Extrinsic Motivation Introjected (EMIJ); and Extrinsic Motivation External Regulation (EMER), and amotivation. Each subscale uses a 7-point Likert-type scale from "1" (does not correspond at all) to "7" (corresponds exactly). Scoring involves use of a specific formula to calculate the mean of each subscale followed by a total self-determination index score (see Appendix B). Possible score range from –18 (very little self-determination) to +18 (extreme self-determination). Permission to use the AMS-C 28 was obtained from Dr. Vallerand's research team (see Appendices C and D).

Validity.

Content validity was initially measured when the AMS-C 28 was translated from its French version to English (Vallerand et al., 1993), however no Content Validity Index (CVI) was reported. A three-step procedure was followed in which the instrument was initially translated by two bilingual teams (French-English), and then "back-translated" to its original language in order to prevent bias. The four bilingual individuals consisted of

two social psychologists and two graduate students in social psychology. In the second phase, a committee was formed consisting of the authors of the original instruments and the bilingual translators who finalized the scale instructions. In the third and final step, a pretest was conducted to determine whether the AMS-C 28 was clear and formulated in its new version (Vallerand et al., 1993).

Construct validity, the relationship between AMS-C 28 and motivational correlates, was measured by examining the link between academic self-concept and the AMS-C 28 subscales. Vallerand et al. (1993) predicted a strong correlation with the three IM subscales and a strong negative correlation with the amotivation subscale. In their instrument validity testing using students attending CEGEP (junior colleges) in the Montreal area (n = 217), findings indicated significant strong positive correlation of the three IM subscales (r = .67; r = .53; r = .39; $p < .05$) and a significant strong negative correlation of the amotivation subscale (r = -.46; $p < .05$). The EM subscales were also significant in their correlation, although not as strong as IM and amotivation (r = -.01; r = .21; r = .17; $p < .05$).

Several validity measures of the AMS-C 28 have followed. In a study by Cokley, Bernard, Cunningham, and Motoike (2001), academic self-concept was expected to be positively and significantly correlated with the IM subscales and EMIR. Furthermore, academic self-concept was expected to be negatively and significantly correlated with the remaining EM subscales and amotivation. Findings indicated that academic self-concept was significantly and positively correlated with all three IM subscales (r = .39; r = .32; r = .25; $p < .001$), but not correlated with EMIR (r = -.01) and EMER (r = -.14). As expected, there was a significantly negative correlation between amotivation and

academic self-concept (r = -.47; p < .001) (Cokley, 2000; Cokley et al., 2001).

The AMS-C 28 had clear evidence of criterion-related validity when results were compared to outcomes of other scales completed by the same population, including the Gottfried scale, Nicholl's Task Oriented, and Work Avoidance scale (Vallerand et al., 1993). The Gottfried Scale (Gottfried, 1985) measures intrinsic interest in learning, and when outcomes were compared to the AMS-C 28, there was a strong positive correlation with the IMTK subscale (r = .67) and a strong negative correlation with amotivation (r = -.46). The additional IM subscales were also correlating with the Gottfried scale (r = .53; r = .39), however, of lesser extent (Vallerand et al., 1993). The Nicholl's Task Oriented scale (Nicholls, Patashnick, & Nolen, 1985) assesses individual's value in learning something interesting. Predictions that the Nicholl's Task Oriented scale would positively correlate with the IM (r = .50; r = .47; r = .31) and negatively correlate with the amotivation subscale (r = -.39) held up (Vallerand et al., 1993). Finally, the Work Avoidance scale measures passitivity in the classroom. As predicted, the scale correlated negatively with the IM (r = -.19; r = -.15; r = -.07) and positively with amotivation (r = .26) (Vallerand et al., 1993).

Reliability.

The internal consistency of the AMS-C 28 subscales was assessed with test-retest using Cronbach's alpha. A sample of university students (n = 57) completed the AMS twice over a one-month period. The correlations ranged from .71 to .83 with a mean test-retest correlation of .79. The subscales reported to have the highest correlation were on either side of the AMS continuum including amotivation and EMER (r = .83; r = .83), as well as IMTA (r = .83) and IMTES (r = .80). These findings were similar to those

obtained with the original French version of the AMS (Vallerand et al., 1992). According to Nunnally and Bernstein (1994), a reliability coefficient value of .70 is sufficient for early stages of research. However, basic research should have reliability coefficient of .80 and a minimum of .90 when important decisions are based on the test scores. Granted the reliability of the AMS-C 28 was measured in the first translated version of the AMS-C 28 with the lowest mean test-retest correlation coefficient of .79, the instrument had adequate reliability.

Nursing Professional Values Scale Revised.

The Nursing Professional Values Scale Revised (NPVS-R) (Weis & Schank, 2000), a self-administered questionnaire measures professional nursing values based on the American Nurses Association's (ANA, 2001) Code of Ethics with Interpretive Statements (see Appendix A). Eleven subscales differentiate between value statements in the ANA code for Nursing (see Appendix E). Each subscale uses a 5-point Likert-type scale from "1" (not important), to "5" (most important). The NPVS-R was derived from the original Nursing Professional Values Scale (NPVS) (Weis & Schank, 2000). Scoring is norm referenced and possible scores range from 26 to 180, a high score indicates a strong professional value orientation. Permission to use the NPVS-R was obtained from Dr. Weis' Faculty Affairs Coordinator (see Appendices F and G).

Validity.

Content validity was established on the original NPVS using five judges with expertise in the area of the American Nurses' Association Code for Nurses (ANA, 2001; Weis & Schank, 2002). The expert team included nurse practitioners and nurse educators who had taught, published, and presented research on professional values and the

American Nurses' Association Code for Nurses. The judges evaluated the instrument for item-by-item relevance to the nine code statements. Agreement was needed among four of the five experts for retention of items and after careful review, two of the items were eliminated. Finally, a psychometric expert evaluated the items for clarity, readability and congruence of the rating scale to each item, giving evidence of construct validity (Weis & Schank, 2002).

Reliability.

Test-retest reliability for the original NPVS was established with a Cronbach's alpha of .94 both for the initial test and the retest. The selected sample included baccalaureate seniors (n = 357), masters' students (n = 125) and practicing nurses (n = 117) in the total sample (n = 599). The sample was randomly selected from a state board of nursing list including all NLN baccalaureate and masters' programs in the United States. Questionnaire packets were mailed to the potential participants and retest was done two weeks later. Factor analysis with Varimax rotation retained factors with Eigenvalues of 1.00 or larger and meeting the criteria of a minimum primary factor loading of .40 for each retained item, and at least a difference of .15 between the primary loading and secondary loading for an item. A total of 26 of the original 44 items on the NPVS met the criteria. The resulting instrument, NPVS-R, a 26-item scale has a Cronbach's alpha ranging from .73 to .87. Similarly to the AMS-C 28, the revised version of the NPVS had adequate reliability (Nunnally & Bernstein, 1994).

Personal questionnaire.

A personal questionnaire was developed by the principal researcher (see Appendix H) to collect demographic information including age, sex, ethnicity, caretaker

responsibilities, work, and socio-economic status. Furthermore, several questions pertained to educational status including highest degree to date and future educational plans. A Likert-type scale (Streiner & Norman, 2008) was developed to measure the dependent variable, "intent to obtain a post-AD in nursing". Rather than a nominal measure "yes" or "no" in the intent to continue education, the researcher was interested in the range of likelihood in the intent decisional process to pursue academic goals. Some AD nursing students in their last semester may have a strong desire in their intent to pursue education and will most likely answer a definite "yes". However others may have a desire, but have not considered all the incentives in the first stage of intent and therefore choosing "probably not", "undecided", or "most likely". Finally, some AD nursing students may have no intention to continue formal education and answer a definite "no". A question pertaining to when they intend to continue education followed.

Population and sample.

The convenience sample was limited to nursing students in their last semester of an AD nursing program in large public community colleges in New York City offering AD in nursing as the highest degree. Furthermore, the sample was obtaining their first college degree and maintained a minimum overall 2.0 Grade Point Average (GPA) while attending the AD nursing program as required by the nursing curriculum. Based on statistical calculations, a minimum sample size of 67 was suggested when using a moderate effect size (0.15), power of 0.80, and $\alpha = 0.05$ (Soper, 2010). These findings were comparable to Nunally and Bernstein's (1994) recommendations of a sample size of 60, or 30 subjects per independent variable.

The total sample consisted of 114 (n=114) senior AD nursing students from two

different colleges. The response rate was 100% of the students present during data collection. To prevent embarrassment, all students were included even if they were non-eligible based on pre-set delimitations. For example, students holding a prior college degree were included in data collection. Although unlikely, students with a GPA less than 2.0 were also included. Delimitations were based on literature findings documenting a difference in the college experience for first time college students and second-degree students (Spanard, 1990), possibly influencing motivational factors. Furthermore, as per CUNY nursing program policy, students enrolled in clinical nursing courses are required to maintain a minimum overall GPA of 2.0. The responses to the personal questionnaire, including highest educational degree obtained and GPA, resulted in the loss of 52 questionnaires, all based on students having obtained a prior college degree. The total remaining sample consisted of 62 (n=62) eligible AD nursing students, 54% of the total sample. This was an adequate sample size as per recommendations by Nunally and Bernstein (1994).

Data collection procedure.

This study used a total of two large public community colleges in New York City, meeting the criteria of only offering an AD in nursing as the highest nursing degree. Once Human Subjects approval was granted by the Institutional Review Board (IRB) (see Appendix I), approval for the study was obtained as needed from the Nursing Department chairpersons and faculty (see Appendix J and K). Collaboration with the faculty was done via written, phone and personal communication emphasizing the need for consistent data collection procedures. A packet was given to three classroom instructors prior to data collection. The packet contained three items: script, describing the nature of the study

with a detailed instruction sheet for instrument administration and collection of data; consent form; and the questionnaires. Informational flyers (see Appendix L) were posted in the Nursing Departments two weeks prior to data collection. Of note, data collection was done between weeks 6-12 in a 15-week semester so that it would not to interfere with students' preparation for final exams.

The actual data collection took place in the classroom immediately prior to or following a scheduled teaching session. On the day of data collection, the researcher introduced the study to the students (see Appendix M), including the procedure for obtaining informed consent, distributed the instrument packets with consent, and then left the room. The instructor of the scheduled teaching session was not present during data collection. The students were given approximately 30 minutes to sign the consent form and complete the questionnaires, and they all finished within that time period. Once finished, the participants separated the consent form from the questionnaires, enclosed the consent in a sealed envelope, and placed the sealed envelope in a designate bin in the classroom. The anonymous questionnaires were placed in a separate designated bin, away from the consent forms. All of the participants followed the instructions as indicated. Finally, the AD students present in the classrooms during introduction of the study received an incentive consisting of a RN badge hanger for their anticipated participation.

Data analysis.

Results were tabulated using Predictive Analysis Software (PASW) 18.0 and Analysis of Moment Structure (AMOS). The researcher entered data manually since some of the questions on the demographic questionnaire were "fill-ins", making the form difficult to scan. Furthermore, students may have found it more tedious to fill out a

scanning form rather than simply circle their answers directly on the questionnaires.

Demographic data was analyzed using frequencies, percentages, and cross-tabulation. Regression analysis was done using the forced entry option, in which all specified variables were entered simultaneously regardless of significance level. Following multiple regression analysis, SEM was used to determine the significance of direct and indirect effects of the independent variables on the dependent variable.

Protection of human subjects.

Approval for the proposed study was obtained from the Institutional Review Board (IRB) and IRBs of the institutions where data collection took place. Although there was only a minimal risk and no foreseeable harm to participate in the study, a written consent (see Appendix N) was obtained from the participants as per IRB request. The data collection method, however, allowed for complete anonymity and confidentiality. In addition to the consent form, the participants were informed that they were not obligated to answer all the questions and they could stop at any time while filling out the questionnaires. The benefits of participation were knowledge generation for nursing curriculum. The consent forms and questionnaires are kept strictly confidential in a locked file cabinet by the researcher for the next three years as per IRB policy.

Chapter Summary

This chapter introduced the quantitative research design using SEM and discussed the design rationale. The sample population was identified as AD nursing students in their last semester of a nursing program in large public community colleges in New York City, obtaining their first college degree. The sampling technique was presented. Instruments measuring the independent variables, the Academic Motivation Scale

(AMS-C 28) and the Nurse Professional Values Scale Revised (NPVS-R), were described in detail and reviewed for validity and reliability. Both instruments were found to be both valid and reliable. A personal questionnaire developed by the researcher was also described, including a Likert-type scale to measure the dependent variable, intent to continue post-AD education in nursing. The data collection setting, the classroom immediately prior to or following lecture, was identified. Protection of human subjects, IRB, and the script describing the study, procedure, risk, and subject withdrawal were also described. Finally, a brief introduction to data analysis techniques was presented.

Chapter IV

Results

This chapter presents the statistical findings of the study. The population, sample, and participants are summarized followed by a result section. Demographic data was analyzed using frequencies, percentages and cross-tabulations, followed by structural equation modeling (SEM) based on regression analysis. Finally, a summary of findings answers the research questions.

Population, sample, and participants.

The convenience sample population for this study consisted of AD nursing students attending their last semester of an AD nursing program in large public community colleges in New York City offering AD in nursing as the highest degree. Participants had to maintain a minimum overall GPA of 2.0 as required by the nursing curriculum. Of the two colleges used in the study, a total of 114 AD nursing students filled out the questionnaire packet with a response rate of 100%. However, once the researcher excluded non-eligible participants based on pre-set delimitations (prior college degree and GPA), the remaining sample consisted of 62 (n=62) eligible AD nursing students, 54% of the total sample.

Sample characteristics.

Frequencies.

Descriptive analysis of the sample (see Appendix O) showed the studied population to be majority female (77%). Most of the female and male participants were in the age group 21-35 years (40%). A total of 81% were 25 years or older and therefore considered to be non-traditional students, an important consideration when discussing the

study findings in Chapter V. Of note, a non-traditional student is considered a student 25 years or older who tends to have obligations outside academia, including work and family commitments (Ely, 1997). The ethnicity varied with the majority being Asian (37%) followed by Hispanic/Latino (21%), white (16%) and African American (15%). Approximately half of the sample was single (44%) and half married (44%) with a similar distribution of students having children (47%) or no children (53%). Furthermore, 60% had caretaker responsibilities to children, parents, or other family members. The overall majority of students worked while attending college (66%) with the amount of work hours ranging mostly from five to 40 hours.

An overwhelming 89% were “definite” in their intent to continue education with 10% “most likely” in their intent, and only one student answering “probably not”. Even more encouraging, 95% of the students intended to continue their education immediately or within one year of graduating with an AD in nursing. Although more than half of the students planned to pursue an RN-BS in nursing (63%), about one third of the sample (36%) wanted to apply for an accelerated nursing program including BS-MS or BS-NP in nursing.

Cross-tabulation.

By taking a closer look at statistical findings using cross-tabulation (see Appendix P), the age-group 25-30 years was dominant in several areas. This group of non-traditional students currently make up the new majority in secondary education, creating several implications for education. They tend to pursue educational goals either full-time or part-time while balancing school with employment, family and financial commitments, and without time for extracurricular campus activities (Ely, 1997).

Within the group of students aged 25-30 years, 44% had children and 52% had caretaker responsibilities including children and/or other family members. Of note, there was not a major difference between female (50%) and male (36%) students with children. There was almost the same amount of caretaker responsibilities among the female (60%) and male (57%) students. Also, in the non-traditional student groups, the majority worked (60%) in the 25-30 year age group, and 69% in the 31-35 year age group. However, 67% of the traditional student group age 21-24 years also worked. Of all the students working, there were slightly more female students (69%) than male students (57%).

Regardless of age or gender, the entire sample except for one student intended to pursue formal post-AD nursing education. However, the timing differed when taking age, sex, and caretaker responsibilities into consideration. Within the age group 24 years or younger, only 25% planned to continue school immediately while 75% intended to continue one year post-graduation. Although only 17% in this age group had children and 33% had caretaker responsibilities, 67% worked while attending college. Of the non-traditional students age 25 or older, 44% intended to continue education immediately, while 50% planned to wait one year. Many (52%) of the non-traditional students, age 25-30 years, had caregiver responsibilities.

While 38% of the female students, regardless of age, intended to continue formal post-AD nursing education immediately, the majority (58%) planned to return in one year. Of the male students, half the students (50%) intended to pursue further nursing education immediately while 43% planned to return to school within one year. Approximately half the group with childcare responsibilities (49%) planned to return immediately, while 49% planning to wait for one year. The majority of students without

childcare responsibilities (64%) planned to wait one year to pursue post-AD education in nursing and only 28% intended to move on immediately. These findings will be discussed further in Chapters V and VI.

Structural equation modeling.

Reliability and factor analysis.

Reliability and factor analysis were carried out on all subscales before regression analysis and SEMs were conducted. The reliability analysis was done to ensure that the relationships between the variables of each scale and subscale were sufficiently strong, such that the inclusion of the set of variables in a single scale or subscale was justified. To measure reliability, Cronbach's alpha was used with an alpha score of 0.7 or greater indicating acceptable high reliability, a score of 0.8 a good reliability, and an alpha score of 0.9 or higher considered excellent reliability (George & Mallery, 2003). The next step was to conduct factor analysis in order to compute factor scores for each of the scales and subscales. The newly created factor scores were used as variables in the regression analyses and SEMs (see Table 6).

Table 6

Reliability of Scales and Subscales

Variable	Cronbach's Alpha
Motivation	
Intrinsic Motivation (IM): To Know	.825
Intrinsic Motivation (IM): Toward Accomplishment	.759
Intrinsic Motivation (IM): To Experience Stimulation	.859
Extrinsic Motivation (EM): Identification	.738
Extrinsic Motivation (EM): Introjected Regulation	.831
Extrinsic Motivation (EM): External Regulation	.627
Amotivation	.770
Nurse Professional Value Scale (NPVS)	.941

The results indicate a minimum of acceptable reliability for all scales and subscales with the exception of the External Regulation subscale of extrinsic motivation, with only a slightly lower alpha score of .627. It has been reported that when dealing with psychological constructs, a Cronbach's alpha below .7 can be expected because of the diversity of the constructs being measured, however, it should be used with caution (Kline, 1999). The results of the reliability analyses and the factor analysis provide an acceptable degree of confidence in the scales and subscales.

Regression analyses.

Using PASW 18.0 including AMOS, regression analysis was conducted in order to explore the predictive power of the independent variables, the Academic Motivation subscales and the Nurse Professional Values Scale, on the dependent variable, intent to continue education. In this analysis, the seven subscales of the AMS-C 28 were regressed as individual subscales in which all specified variables were entered simultaneously, regardless of significance level. Furthermore, the NPVS-R was included in the analysis as a single scale (see Table 7).

Table 7

Regression Analysis on Intent to Continue Education

Variable	*B*	Beta	*p*	Tolerance	VIF
IM: To Know	-.157	-.331	.028	.377	2.653
IM: Toward Accom-plishment	.134	.282	.053	.396	2.528
IM: To Experience Stimulation	.022	.047	.700	.553	1.808
EM: Identification	-.036	-.076	.633	.326	3.071
EM: Introjected Regulation	-.045	-.094	.465	.492	2.032
EM: External Regulation	.130	.275	.052	.424	2.359
Amotivation	-.308	-.651	.000	.715	1.399
Professional Values	.025	.052	.630	.707	1.415
Constant	4.855		.000		

Notes: $F(8, 53)=8.839$, $p<.001$; $R^2=.572$.

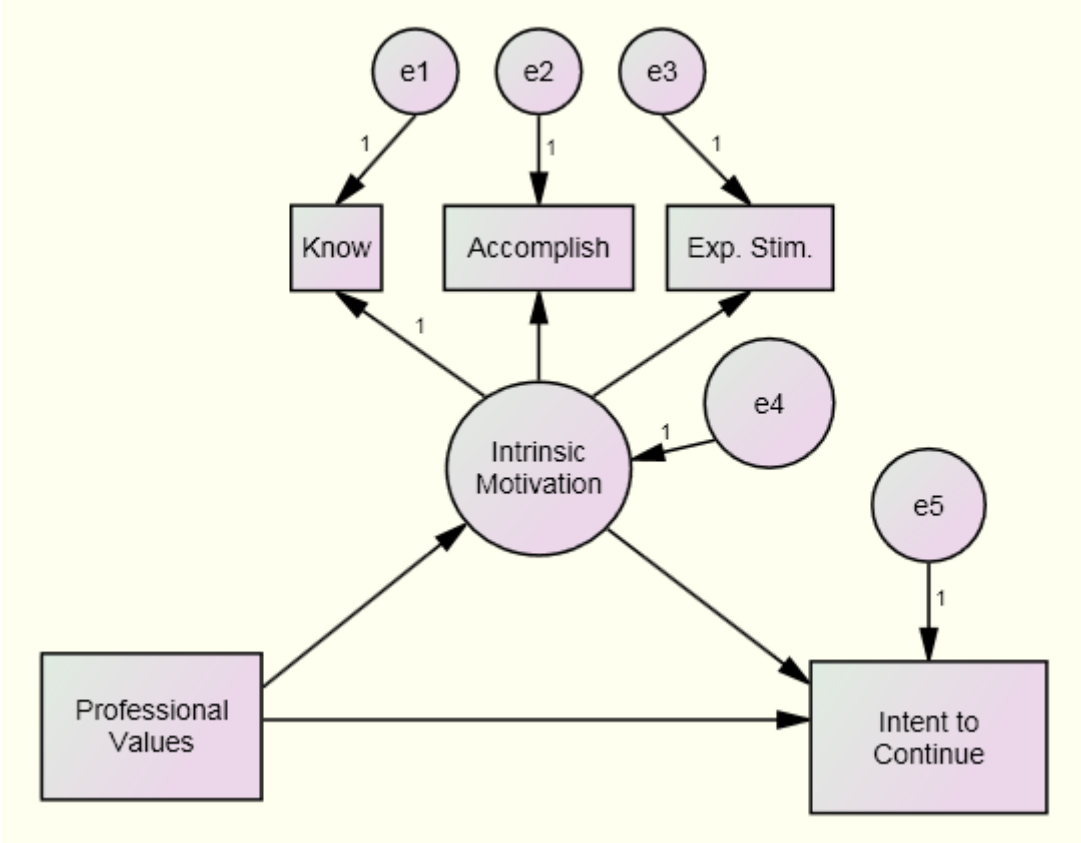
These results indicate that the effects of the "To Know" subscale of the intrinsic motivation scale and the amotivation subscale were both significant predictors of intent to continue nursing education. Additionally, the effects of “Toward Accomplishment” subscale of intrinsic motivation and the “External Regulation” subscale of the extrinsic motivation were found to approach statistical significance at the .05 level. The two measures used for multicollinearity, tolerance and the variance inflation factors (VIF), were within acceptable limits indicating no problems with multicollinearity.

Structural equation model.

In order to test the hypothesis of this research study, a SEM was developed. First, the SEM I was created as illustrated in Figure 1.

Figure 1

Structural Equation Model I



In the SEM I, the Nurse Professional Values Scale is represented as a single variable (see Table 8). Similarly, intent to continue nursing education is also represented in this model as a single variable, which corresponds with the original variable in the survey asking AD nursing student their intent to continue formal education post-graduation. The independent variable intrinsic motivation is represented in the SEM I as a single factor, but with the three subscales as indicators: the “IM: To Know”

subscale, the "IM: Toward Accomplishment" subscale, and the "IM: To Experience Stimulation" subscale. Additionally, this model includes errors for all endogenous variables, which is standard in SEM. The results of this model are presented in Table 8.

Table 8

Structural Equation Model I: *Regression Weights (Group number 1 - Default model)*

Variable: regression			Estimate	*S.E*	*C.R*	*p*
Intrinsic Motivation	<-----	Professional Values	.326	.112	2.914	.004
IM: To Know	<-----	Intrinsic Motivation	1.000			
IM: Toward Accom-plishment	<-----	Intrinsic Motivation	.903	.181	4.988	***
IM: To Experience Stimulation	<-----	Intrinsic Motivation	.897	.181	4.970	***
Intent	<-----	Professional Values	.083	.066	1.243	.214
Intent	<-----	Intrinsic Motivation	.033	.091	.366	.714

Table 8 (continued)

Structural Equation Model I: *standardized regression weights (group number 1 – default model)*

Variable: regression			Estimate
Intrinsic Motivation	<-----	Professional Values	.403
IM: To Know	<-----	Intrinsic Motivation	.809
IM: Toward Accom-plishment	<-----	Intrinsic Motivation	.731
IM: To Experience Stimulation	<-----	Intrinsic Motivation	.726
Intent	<-----	Professional Values	.174
Intent	<-----	Intrinsic Motivation	.057

Structural Equation Model I: *Chi Square*

Model	NPAR	χ^2	*df*	*p*	χ^2/df
Default model	11	10.725	4	.030	2.681
Saturated model	15	.000	0		
Independence model	5	78.985	10	.000	7.898

Table 8 (continued)

Structural Equation Model I: *RMSEA*

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.166	.047	.290	.053
Independence model	.366	.270	.407	.000

Structural Equation Model I: *baseline comparisons*

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.864	.661	.910	.756	.903
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

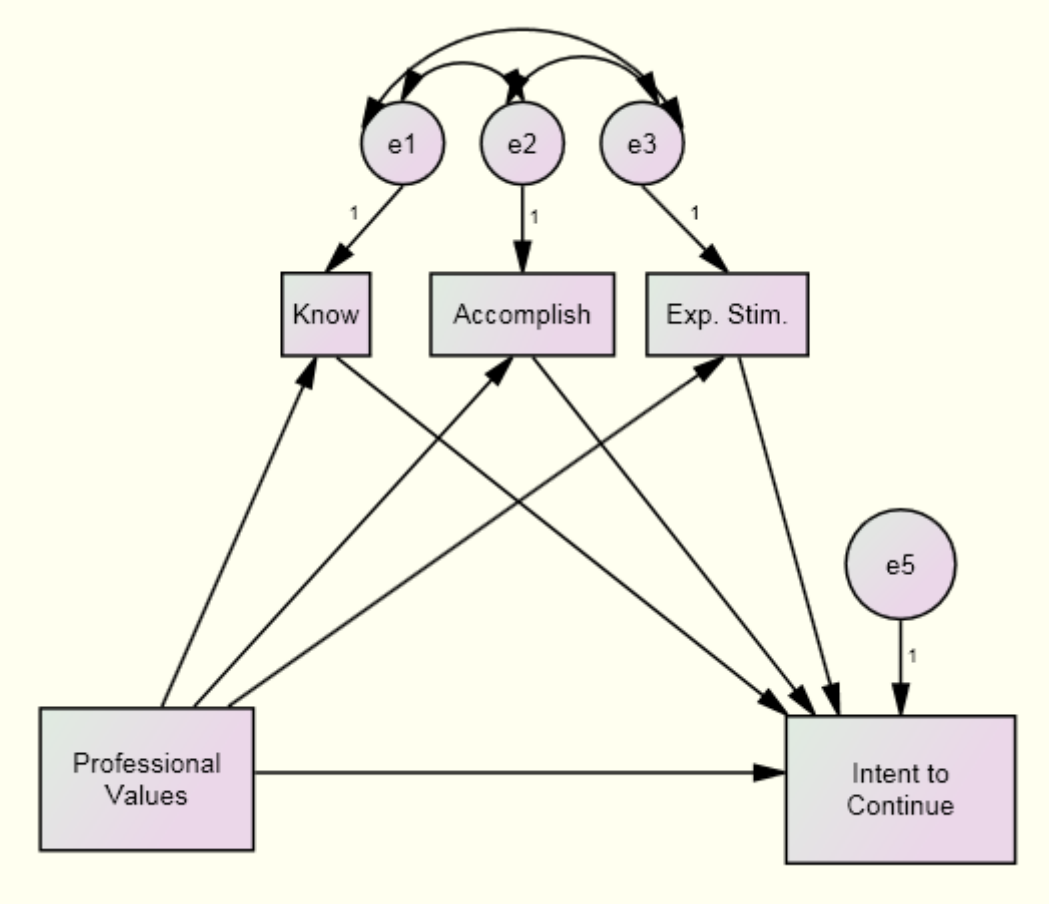
As shown in Table 8, one out of the three paths, the path between professional values and intrinsic motivation was found to be positive and significant. However, both the direct path between professional values and intent to continue formal education, and the direct path between intrinsic motivation and intent to continue formal education, were found not to be significant. In regard to model fit, the model statistics were acceptable with a relative chi-square of 2.681, in which a value of less than 3.0 is considered acceptable (McIver & Carmines, 1981), and a Comparative Fit Index (CFI) of .903, expected to be .90 or greater. The Normal Fit Index (NFI) measure of .864 indicated a borderline model fit. However, the Root Mean Square Error of Approximation (RMSEA)

for this model was .166, suggesting that some modifications to the model should be made.

In order to find a greater number of significant results, a second SEM was conducted (see Figure 2). This structural equation model is very similar to the first, however intrinsic motivation is modeled differently. Instead of modeling intrinsic motivation as one factor, the three individual subscales are included. The aim of running the second model was in an attempt to find a greater number of significant effects in relation to the paths between professional values and intent to continue formal education, and also between intrinsic motivation and intent to continue formal education. Furthermore, in the second SEM, covariance was specified between the three errors relating to the intrinsic motivation subscales. This was justified due to the relationship between the three intrinsic motivation variables. That is, the three intrinsic motivational subscales: “IM To Know”; “IM Toward Accomplishment”; and “IM To Experience Stimulation” are all intrinsically regulated. Individuals motivated by either one of the intrinsic motivational subscales have a degree of self-determination; they strive to achieve goals for self-satisfaction. Intrinsic motivation, including all three subscales, is different from extrinsic motivation where individuals are driven by external factors including rewards or avoiding punishment (Ryan & Deci, 2000a).

Figure 2

Structural Equation Model II



The results of this model are presented in Table 9. In the SEM II, the path between professional values and the "IM: To Know" subscale was found to be statistically significant, while the path between professional values and the “IM: To Experience Stimulation" subscale was found to be non-significant (p=.069). Additionally, the path between professional values and intent was found to approach significance at the .05 level (p=.056), while the path between the "IM: To Know” subscale and intent to continue formal education was found to be non-significant (p=.1).

Table 9

Structural Equation Model II: *regression weights (group number 1 – default model)*

Variable: regression			Estimate	*S.E*	*C.R*	*p*
IM: To Know	<-----	Professional Values	.450	.114	3.941	***
IM: Toward Accomplishment	<-----	Professional Values	.173	.126	1.368	.171
IM: To Experience Stimulation	<-----	Professional Values	.227	.125	1.818	.069
Intent	<-----	Professional Values	.124	.065	1.912	.056
Intent	<-----	IM: To Know	-.136	.083	-1.645	.100
Intent	<-----	IM: Toward Accomplishment	.183	.077	1.342	.180
Intent	<-----	IM: To Experience Stimulation	.055	.076	.727	.467

Table 9 (continued)

Structural Equation Model II: *standardized regression weights (group number 1 – default model)*

Variable: regression			Estimate
IM: To Know	<-----	Professional Values	.450
IM: Toward Accom-plishment	<-----	Professional Values	.173
IM: To Experience Stimulation	<-----	Professional Values	.227
Intent	<-----	Professional Values	.263
Intent	<-----	IM: To Know	-.287
Intent	<-----	IM: Toward Accomplishment	.218
Intent	<-----	IM: To Experience Stimulation	.116

The indirect effects from the SEM II are presented in Table 10. The indirect effect of interest was the indirect path between professional values and intent to continue formal education. Findings for this path consisted of a standardized indirect effect of -.065, indicating that a one standard deviation increase in professional values was associated with a .065 standard deviation decrease in intent, which was indirect, through the three intrinsic motivation variables.

Table 10

Structural Equation Model II: indirect effects (group number 1 – default model)

Variable	Professional Values	IM: To Experience Stimulation	IM: Toward Accom-plishment	IM: To Know
IM: To Experience Stimulation	.000	.000	.000	.000
IM: Toward Accomplishment	.000	.000	.000	.000
IM: To Know	.000	.000	.000	.000
Intent	-.031	.000	.000	.000

Structural Equation Model II: standardized indirect effects (group number 1 – default model)

Variable	Professional Values	IM: To Experience Stimulation	IM: Toward Accom-plishment	IM: To Know
IM: To Experience Stimulation	.000	.000	.000	.000
IM: Toward Accomplishment	.000	.000	.000	.000
IM: To Know	.000	.000	.000	.000
Intent	-.065	.000	.000	.000

Summary of Results

The findings for each of the research questions.

1. ***What are the relationships between professional values and motivational style in AD nursing students?***

Professional values have a significant positive direct effect on the highest level of intrinsic motivation "To Know", indicating high self-determination.

2. What are the relationships between motivational style and intent to continue formal post-AD education in nursing?

Intrinsic motivation, including all three subscales ("IM To Know"; "IM Toward Accomplishment"; "IM To Experience Stimulation"), did not have a direct effect on the intent to continue formal post-AD education in nursing.

3. What are the relationships between professional values and intent to continue formal post-AD education in nursing?

Professional values have no direct effect on intent to continue formal post-AD nursing education, but it has an indirect effect on intent through all three intrinsic motivation variables.

Chapter Summary

Chapter IV details the findings of frequencies, percentages, cross tabulations and SEM of the study. Regression analysis was conducted in order to analyze the direct and/or indirect effects of the independent variables, the AMS-C 28 subscales and the NPV-R scale, on the dependent variable, intent to continue formal post-AD nursing education. Furthermore, a SEM was developed to test the hypothesis of the research study. However, in order to find an increased number of significant paths, a second SEM

was developed using the subscales of intrinsic motivation. Finally, the effects of the indirect paths of interest were analyzed followed by a summary of the results.

Chapter V

Discussion

In this chapter, a discussion of the study findings is presented. The relationships between professional values, intrinsic motivation and intent to continue formal education are discussed based on structural equation modeling (SEM). Implications for education and future research are discussed in Chapter VI.

Discussion of results.

Professional values have a significant positive direct effect on the highest level of intrinsic motivation "To Know", indicating high self-determination.

According to Weis and Schank (1997), professional values are defined as "standards for action that are accepted by the practitioner and professional group and provide a framework for evaluating beliefs and attitudes that influence behavior" (p. 366). Findings from this study show that AD nursing students who hold high professional nursing values are also self-determined in that they have high intrinsic motivation. These AD nursing students are motivated to learn for the sheer pleasure of learning partially due to their high professional values. However, the questions to be asked are how much of these professional values are innate qualities as part of the AD nursing students' personalities and how much is learned through academia? Because there is no definitive answer to this question, the study findings make a clear argument for emphasizing professional values as part of the AD nursing curriculum.

The importance of professional values in nursing cannot be underestimated. AD nursing students are faced with ethical dilemmas from the first day they enter the nursing program. Although some nursing students may have an internal sense of ethical decision

making through established professional values, others learn these values through nursing education and practice. It has been argued that the type of educational program for the RN may make a difference in learning professional values (Kubsch et al., 2008). That is, the BS nursing program provides greater emphasis and time to professional values; whereas the AD nursing program emphasizes psychomotor learning and technical skills. The BS nursing program consists of more liberal arts including courses that develop a more extensive background in philosophical and theoretical approaches. The American Association of Colleges of Nursing (AACN) (2005), an organization that is very influential on the curriculum of BS and higher degree programs, states that the BS programs in nursing must support core values of human dignity, integrity, autonomy, altruism, and social justice (Kubsch et al., 2008). Based on the results from this study, professional values should be reinforced in AD nursing programs in order to sustain intrinsic motivation in AD nursing students.

Even students with a strong sense of personal values may benefit from further examining their values, especially in regards to ethical decision making. Research has shown that professional values can be reinforced in nursing programs by value role-modeling of faculty, as well as providing formal classroom and clinical experiences (Martin et al., 2003; Vezeau, 2006; Weis & Schank, 2002). Ideally, professional values should be introduced early in the nursing program as part of students' exploration of their own professional identity. Vezeau suggests that professional values through lecture, skill's performances, and clinical scenarios, should be introduced no later than the first quarter of the sequence of nursing courses.

In the current study, professional values had a significant effect specifically on

intrinsic motivation “to know”. This subscale is sometimes referred to as the highest form of intrinsic motivation in that the behavior is performed simply for the pleasure the individual experiences while learning or trying to understand something new (Cokley, 2000). Furthermore, this type of motivation relates to constructs including exploration, curiosity, learning goals, intrinsic intellectuality, and intrinsic motivation to learn. Students search for meaning in the process of learning something new in order to experience self-satisfaction (Vallerand et al., 1992; 1993).

A separate calculation of the AMS-C 28 was performed to analyze individual self-determination scores of the study participants (see Appendix Q). According to Vallerand et al. (1992), the possible scores range from -18, indicating “very little self-determination”, to +18, “extreme self-determination”. Although the developers of the scale have not specified the exact scores pertaining to the intrinsic motivational subscales versus extrinsic motivational subscales, studies report that the majority of people tested with the AMS-C 28 scale scored around 10, indicating intrinsic motivation. Furthermore, a high index has been associated with positive consequences within academia and a low index with negative consequences for the individual (Vallerand et al., 1992).

The self-determination scores of the participants in this study ranged from -0.5 to 13 with a mean score of eight. These findings indicate that some students were extrinsically motivated and driven by tangible rewards, while others were intrinsically motivated, wanting to learn for the pure pleasure of the experience (Deci & Ryan, 2008a). However, the mean score of eight indicates that the overall participating AD nursing students were driven more by intrinsic motivation.

Intrinsic motivation, including all three subscales, did not have a direct effect on the intent to continue formal post-AD education in nursing.

Considering that almost all of the participating AD nursing students intended to continue formal post-AD nursing education (89% "definitely"; 10% "most likely"; and only one student answering "probably not"), intrinsic motivation had a non-significant direct effect on the intent to continue formal nursing education. Therefore, other factors contributing to intent should be explored, including extrinsic incentives such as the proposed mandate "BSN in 10" for AD nurses to obtain a BS in nursing within 10 years of initial licensure to maintain RN status.

In the first stage of intent, some AD nursing students recognized a desire to continue formal post-AD education, and they evaluated the incentives to pursue academic goals. If intrinsic motivation does not have an effect on intent, what are the incentives for these AD nursing students? Although research to date has focused on the intent of practicing AD nurses to return for continued formal nursing education, could similar factors apply to some of these AD nursing students?

One potential incentive to pursue higher nursing education, but also an extrinsic motivator, is the proposed mandate: "BSN in 10" Bills S4051/A2079B in New York and S620 (nee S2529)/A3768 in New Jersey (Boyd, 2010). If implemented in the future, this "Educational Advancement for the Nursing Profession" is to ensure that a BS in nursing becomes the standard for continued RN licensure in those states. The bill was originally suggested due to higher patient acuity, advanced technology as well as procedures for nurses, complex patient care, and shorter lengths of patient stay, creating greater demands for nurses (Boyd, 2010). If passed, the bill will require all RNs to obtain their BS in

nursing within 10 years of initial licensure. It does not call for the BS in nursing as the minimal requirement for entry into practice, but rather maintaining RN licensure. Furthermore, the proposed bill does not advocate for closing of AD nursing programs and nurses will still be able to enter the profession with an AD in nursing. If implemented, however, the mandate will require AD nurses to return to school for higher nursing education.

If the bill is passed, it could have serious implications for AD nursing programs, both positive and negative. For example, it will ensure that a BS in nursing is the minimal standard for RN licensure within 10 years of practice, something that has been implemented in other countries. There are, however, speculations that enrollment in two- and three-year nursing programs may suffer as potential nursing students will opt for four year BS programs required to continue practice (Boyd, 2010; Frey, 2007). Considering the results from this study, could the proposed bill be an incentive, an extrinsic motivator, for some AD nursing students intending to pursue further education?

Another possible factor to the large number of AD nursing students intending to continue education, without the effect of intrinsic motivation, may be the shift in nursing shortage. According to recent statistics, there is still a National and New York State nursing shortage (Gillibrand, 2009), with a prospective need for almost 60,000 RNs in New York City alone over the next 10 years. However, it is becoming increasingly difficult for new RNs, especially AD nursing graduates, to find employment. Part of the problem is contributed to the aging nursing population, including the “baby boomers” that work longer in part due to financial strains (Gillibrand, 2009). According to the 2008 National Sample Survey of Registered Nurses (AACN, 2010), the average age of the RN

population in 2008 was 46 years of age, up from 45.2 in year 2000.

The recent recession in the U.S. economy led to an "easing" of the nursing shortage in some parts of the country in that many vacant RN positions were quickly filled (American Association of Colleges of Nursing [AACN], 2009). Furthermore, the economy brought certain changes to the field of nursing making it difficult for new RNs to obtain jobs. For example, retired nurses returned to the workforce; nurses who had planned to retire held on to their positions; part-time nurses resumed full-time positions; and employed nurses worked overtime to provide financial support for their families, especially if the spouse was laid off (AACN, 2009). Although the entire healthcare field is impacted by the recession, one of the main problems is what to do with the new nursing graduates. According to recent National statistics, the classes of 2008 and 2009 were hit hardest with approximately 40% of the 2009 graduates still not employed, and the 2010 graduates will probably have similar issues entering the workforce (Goulette, 2009). Rather than focusing on the job market as their only option, the AACN strongly recommend that new RN graduates pursue education while searching for jobs. This study emphasizes the importance of reinforcing continued education to AD nursing students while they are considering the incentives in the first stage of intent. If motivation and supportive factors are identified pre-graduation, interventions to increase supportive factors are more likely to sustain motivation to indirectly pursue academic goals.

Further influential factors of the economy are the downsizing, hiring freeze, and closing of hospitals. Hospitals are treating fewer patients leading to fewer in-patient RN positions (AHA, 2010; Goulette, 2009). As a result, the AACN reinforce continuing education for nurses (AACN, 2009). Recognizing the enhanced opportunities for masters

and doctorate prepared nurses, new graduates should also be encouraged to pursue higher levels of advanced education in areas of growing demands.

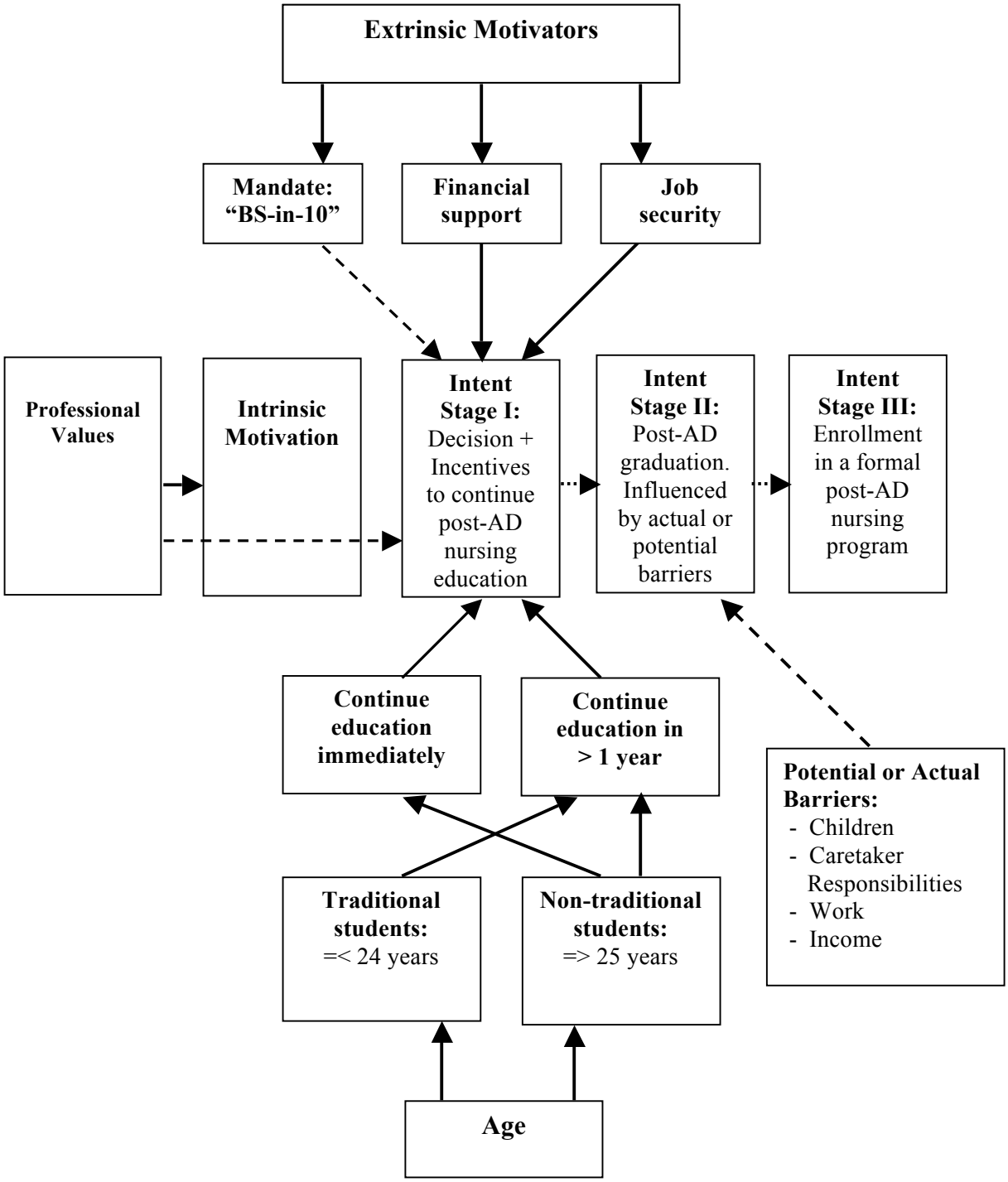
In the past decade, literature has focused on barriers for AD nurses in the workforce to return to school. The main barriers identified are competing priorities such as multiple role demands, time constraints, and limited resources, especially financial (Delaney & Piscopy, 2004; Megginson, 2008). However, participants in this study were in their first stage of the intent decisional process. In this stage, some AD nursing students recognize an initial desire to continue education and they evaluate the incentives to pursue educational goals, but are not considering the barriers (Leonard, 2003; Spanard, 1990). As reported in Chapter IV, regardless of age, sex, marital status, children, caretaker responsibility, or income, almost all participating AD nursing students intended to pursue post-AD education. However, the timing to continue education varied. Of the total sample, 40% intended to continue "immediately (next semester)" and 55% responded in "one year".

The significance of waiting one year is the fact that these AD nursing students will enter the second stage of intent post-graduation, evaluating barriers of returning to school. According to the literature, many AD nurses will not pursue further education because of the overwhelming barriers (Delaney & Piscopy, 2004; Megginson, 2008). One study identified main barriers as difficulty juggling school with other obligations, family responsibilities, and financial concerns (Leonard, 2003). Based on an open-ended question in the personal questionnaire: "What would help you most in your plan to continue education?" the participants stated potential barriers to pursue further education and possible solutions including financial hardship, child care, and time restraints.

Furthermore, extrinsic motivational factors such as job security, financial support, and the proposed "BSN in 10", were among the incentives to continue education (see Figure 3).

Figure 3

Post-analysis considerations in the intent decisional process



Professional values have no direct effects on intent to continue formal post-AD nursing education, but it has an indirect effect on intent through all three intrinsic motivation variables.

One of the important finding in this study was the significant direct effect professional values have on high intrinsic motivation indicating high self-determination. This finding is one indicator of the vital role professional values have in AD nursing students. Though, professional values did not have a significant direct effect on the intent to pursue formal post-AD nursing education and did not play a direct role in the intent decisional process. Rather, professional values were considered a supportive condition, sustaining self-determination in the intent to continue post-AD nursing education. This held true in that professional values were found to have an indirect effect on intent through intrinsic motivation. These results emphasize the importance of reinforcing professional values in the AD nursing curriculum in order to sustain self-determination in the AD nursing students.

Limitations.

Social desirability and response bias is a limitation difficult to control. Social desirability has been described as the tendency for participants to present a favorable response in order to conform to socially acceptable values, to gain social approval, or avoid criticism. It is more likely to occur in response to socially sensitive question (Van de Mortel, 2008). In this study, the researcher attempted to control for certain aspect of social desirability, especially in the student-professor relationship. For example, the participants filled out the questionnaires on their own time rather than academic time and neither the classroom instructor nor researcher was present during data collection. The

consent form and instructions clearly indicated that the participants did not have to answer all the questions and they could stop at any time. They could also choose not to participate in the study. Furthermore, the sample was informed that non-participation would not influence their grade or academic progress. Age may be an important factor in that younger students are more likely to have social desirability influence their responses. Although the mean age in this study was 31 years, the age factor in social desirability should be considered in future research.

Although there was only a small amount of missing data, it was appropriately accounted for by the researcher. Two of the questionnaire packets had less than 29% of the questions answered and could not be used for the study. For the AMS-C 28 questionnaire, a total of three questions from three different questionnaires had missing values (1%), and the category mean score was used. The calculated category mean score of all other subjects for the missing data question, has been documented as an acceptable method for missing continuous data if less than 15% (George & Mallery, 2008; 2010). Similarly, the NPVS-R questionnaire had a total of four missing values (2%) from four different questionnaires, and again, the category mean score of all the other subjects was used. The personal questionnaire had a total of four missing questions from four different questionnaires. However, since this was categorical data, an additional level code was created indicating "unknown" as the answer (George & Mallery, 2008).

An initial limitation was that of the AMS-C 28 questionnaire. In its original version developed by Vallerand et al. (1992), one of the questions was directed to high school students rather than a college population. Another question pertained to why students currently go to college rather than why they want to pursue future educational

goals. Permission to change the questions in order to fit the sample population was obtained from the developers of the questionnaire prior to data collection (see Appendix R).

Chapter Summary

In this chapter, the research questions were answered indicating if the hypothesis were accepted or rejected. All findings were described in detail, using the theoretical framework to explain the results. Finally, limitations of the study were discussed.

Chapter VI

Conclusions, Recommendations, and Implications

This quantitative structural equation modeling (SEM) study investigated the relationships between motivational factors, professional values and the intent to continue formal post-AD nursing education for AD nursing students in their last semester. The framework for the study was based on the conceptual framework of Deci and Ryan's (2008b) Self-Determination Theory (SDT), elements of a literature review, which provides linkages between intention to attain a post-AD nursing degree, motivational style, and professional values to create the theoretical framework. A sample of 62 AD nursing students in their last semester of nursing at major community colleges in New York City participated. Self-administered questionnaires included the Academic Motivation Scale (AMS C-28), the Nursing Professional Values Scale Revised (NPVS-R), and a personal questionnaire developed by the researcher. Data analysis showed that AD nursing students with high professional values were self-determined with high intrinsic motivation. The majority of AD nursing students intended to pursue further education, however, intrinsic motivation did not have a direct effect in their intent decisional process. Finally, professional values did not have a direct effect on intent to continue education, but indirectly, professional values were a supportive factor of intrinsic motivation. Implications of this study supported the enhancement of professional values in the AD nursing curriculum. Additional factors in the intent decisional process, including extrinsic motivators, should be explored in future research.

Implications for education and health policy.

The positive direct effect of professional values on intrinsic motivation in AD

nursing students reinforces the need for including content and methods related to these values in the AD nursing curriculum. The majority of AD nursing curricula do not have a specific course on professional values or ethics in nursing. Rather, professional values are integrated into different courses as topics on ethical decision-making and covered throughout the nursing program. Findings from this study support the suggestion to incorporate an introductory course on professional nursing values in the first semester of the AD nursing program.

Vezeau (2006) recommends that professional values should be introduced no later than the first quarter of the sequence of nursing courses as part of students' exploration of their own professional identity. Ideally, there should be a formal professional values course as well as integrated content throughout the nursing program. Enhancement of professional values may sustain self-determination through intrinsic motivation in nursing students, making learning a pleasurable and self-satisfying experience. Furthermore, strong professional values would indirectly sustain self-determination in the intent decisional process to pursue post-AD academic goals.

Although self-determination, including all three subscales of intrinsic motivation, did not have a direct effect on the intent to continue formal post-AD nursing education, 99% of the AD students intended to pursue educational goals. However, 55% of these students planned to wait one year before returning to school, moving them into the second stage of intent. In the second stage, AD nurses are greatly influenced by barriers, which may explain why currently only 16-20% of practicing AD nurses attain a BS degree in nursing (Delaney & Piscopo, 2004; Spencer, 2008; U.S. Department of Health and Human Services, 2004). Granted the majority of AD nursing students in this study

intended to pursue educational goals, it is important to encourage them to continue education immediately rather than waiting to face potential or actual barrier post graduation in the second stage of intent.

In order to intervene during the first stage of intent, nursing faculty should assist with appropriate advisement regarding transfer, articulation agreements, and financial support. In the open-ended question of the personal questionnaire survey: "What would help you most in your plan to continue education?" several of the study participants expressed the need for "better academic advisement in the second or third semester of nursing", "in-college services for other college transfers", and overall "more information on RN-BSN programs including pre-requisites, application process, and length of program." These finding were similar to research by Jacobs (2006) and Kearney (1994). In their studies, students placed importance on academic advisement in planning to meet degree requirements and assistance with registration. Furthermore, providing information about RN-BS in nursing programs or even starting courses towards BS in nursing while in the AD program was shown to facilitate the process of continuing education (Jacobs, 2006).

Besides traditional "face-to-face" on campus nursing programs, there are multiple combinations of online post-AD nursing programs, including hybrid as well as long-distance online programs. A hybrid web-based course design is usually a mix of traditional classroom teaching and online distance learning, providing increased flexibility for the student. Hybrid courses use online discussion boards or chat rooms to maintain the student-teacher relationship. In comparison, a web-based course is completely online, including assignments, online instructions, and tests, if applicable

(Teeley, 2007).

An in-depth assessment of individual students' situations is necessary to facilitate a smooth transition. Academic advisement should not only include transition to RN-BS in nursing program, but also accelerated higher education programs including master's level and eventually doctoral degrees to meet the need for nurses to fill specialty roles and faculty positions (AACN, 2009). Nursing faculty need to be aware of articulation agreements between colleges and/or universities in order to maximize the transfer of credits for AD nursing students. There are several accelerated nursing programs available including the "traditional" RN-BSN program; the "2+2" program in nursing; a fairly new model known as the Dual Degree Program in Nursing (DDPN) also referred to as the "1+2+1" program; and the Oregon Consortium for Nursing Education (OCNE) model (Bastable & Markowitz, 2006; Tanner, Gubrud-Howe, & Shores, 2008).

AD nursing students who choose the RN-BSN program graduate from an AD nursing program and then consider a suitable continuation to a BS degree in nursing. The program may be on campus, a hybrid version, or a completely web-based online program. AD nursing students may prepare for transfer to the RN-BSN program by taking courses such as advanced statistics, sciences, or liberal art courses if transferrable. It is important for faculty to give appropriate advisement to these students and know articulation agreements between different nursing programs. The "2+2" is different in that there is an agreement between the AD and BS program in nursing, providing a sequential approach to undergraduate nursing students with a guaranteed admission to a BS nursing program when they apply to the AD nursing program, granted they meet all the requirements. Several CUNY and the State University of New York (SUNY) institutions have

successfully implemented the “2+2” program. A new model, the DDPN or “1+2+1” is similar to the “2+2” program, but is designed for the traditional student directly out of high school. Students in this program attend an AD program and a BS in nursing at two different colleges or universities with a different sequence (Bastable & Markowitz, 2006).

The OCNE, a statewide coalition, was designed in response to the nursing shortage and the need for a “new” kind of nurse, including specific competencies, in order to care for a changing patient population. Initially developed and implemented as a statewide coalition community college and university nursing programs in Oregon, the model is gaining popularity across the country, including New York State. The OCNE developed a four-year curriculum, including one year of pre-requisites: science courses, arts, and electives, followed by three years of nursing courses. There are several options for students in this program. Nursing students who are enrolled in an AD in nursing community college program may either continue to pursue a BS in nursing, taking coursework provided by the Oregon Health Sciences University (OHSU) School of Nursing faculty, or they may graduate with an AD in nursing while deciding if they want to pursue further nursing education (Tanner et al., 2008).

An important aspect of the OCNE is the implementation of an integrative practicum, consisting of a preceptor clinical experience in the final phase of the curriculum. This gives nursing students an opportunity to apply theoretical knowledge through critical thinking in the practice setting. Furthermore, the practicum may ease the transition for nursing students into the role of professional nursing. Although the OCNE is fairly new and re-evaluated for potential changes, the first class of students

successfully completed the AD in nursing in 2008 and the BS in nursing in 2009 (Tanner et al., 2008). The OCNE model was recently implemented in two CUNY schools, Queensborough Community College and Hunter-Bellevue School of Nursing (Kennedy, 2009).

In an open-ended question of the personal questionnaire, the participants were asked: "What would help you most in your plan to continue education?" A dominant theme in the answers was financial support. The participants expressed the need for financial support for tuition, books, paying for child-care while attending school, and transportation. Multiple studies to date have shown that the lack of financial aid is a major barrier to continuing education (Delaney & Piscopo, 2004; Lillibridge & Fox, 2005; Morgenthaler, 2009). Thus, creative advisement to explore financial resources or alternative ideas is helpful in motivating AD nursing students to pursue further education. For example, the need for childcare expenses may be reduced if hybrid or web-based nursing programs are suggested.

In this study, only 25% of the traditional students 24 years or younger planned to continue school immediately while 75% intended to continue one year post-graduation. Although only 16% in this age group had children and 33% had caretaker responsibilities, the majority (67%) worked while going to school. Given their responses to the open-ended question, it is possible to speculate that the decision to delay the intent to continue education was the need for financial stability. Several of the AD nursing students replied that they wanted to secure a job in order to pay for tuition or in hopes of receiving employment tuition reimbursement. This response is supported by the current instability of the job market for AD nursing graduates.

Among the non-traditional students, defined as students age 25 or older, often with competing priorities including family and work responsibilities (Ely, 1997), in the age-group 25-30 years, 44% had children and 52% had caretaker responsibilities including children and/or other family members. Also, in the non-traditional student groups of those in the 25-30 year age group, the majority worked (60%), and 69% in the 31-35 year age group. Of note, non-traditional students currently make up the new majority in secondary education, creating several implications for education. Studies (Bowl, 2001; Ely, 1997) have shown that non-traditional students have competing priorities, which may impact on their academic progress. These students tend to pursue educational goals either full-time or part-time while balancing school with employment, family and financial commitments, and without time for extracurricular campus activities (Ely, 1997).

Although more of the non-traditional students had children and caretaker responsibilities than the traditional students, the percentages of students working were fairly equal in both groups. Interestingly, only 25% of the traditional students intended to continue education immediately, but 44% of the non-traditional students, age 25 and older, had the intention to enroll in a post-AD nursing program the following semester. One may speculate that the older, non-traditional students have longer experience in the work-environment than the traditional students aged 24 years or less, and they seek to secure a position as well as long-term job security through higher nursing education.

Many students have no choice but to work while pursuing education, placing an added burden on their role as student and family member. Work-study programs used to be an option for newly graduated nurses transitioning into the field of nursing while

waiting to take the licensure exam, and also while pursuing higher education. New nurses were employed on a unit, but with a preceptor to ease the transition and give additional time for academia. Although work-study programs were popular in the 1980s and 1990s in New York, especially due to the extensive nursing shortage, the programs were not cost-beneficial and eliminated in most health-care institutions.

A similar option, however, for financial aid is tuition waiver programs through health care institutions. Many of these programs have binding contracts in which the newly employed AD nurses continue education immediately towards an RN-BSN, and they have a certain time limit to complete their education while working. If these AD nurses break the contract, they are also in danger of loosing their jobs (New York Health and Hospital Corporation [HHC], 2011). AD nursing students need to be aware of financial aide options through academic advisement.

Finally, AD nursing students should be advised on the implications of the proposed "BSN in 10" bill (Boyd, 2010). If this bill is implemented, a BS in nursing will become the standard for continued RN license in New York, requiring all RNs to obtain their BS in nursing within 10 years of initial licensure. Although the "BSN in 10" bill is not in effect at this time, AD nursing students need to be aware of long-term requirements, and it should be used as an opportunity to encourage these students to continue nursing education immediately.

Implication for future health policy is the goal to increase the number of post-AD educated nurses to improve patient care and patient care outcomes. In their study, Aiken and colleagues (2003) demonstrated the importance of continued education in that there was a direct correlation between higher levels of nursing education and improved patient

care outcomes. Through appropriate curriculum changes reinforcing professional values early in the AD nursing program, AD nursing students are more likely to be self-determined in their intent to pursue higher nursing education. Furthermore, appropriate advisement should be implemented throughout the AD nursing program. Faculty also need to be aware of articulation agreements and nursing programs available to the AD nursing students post-graduation.

Implications for future research.

Although the majority of AD nursing students who participated in this study intended to continue formal post-AD nursing education, intrinsic motivation had no direct effect on intent. In future research, it would be interesting to explore the role of extrinsic motivation and factors that contribute to extrinsic motivation in the intent decisional process. Research in the past decade has emphasized the lack of incentives to pursue formal post-AD nursing education including insignificant pay differential and similar practice agreements. However, recent changes in the healthcare field make continued education a necessity in many cases. Extrinsic motivators may include the "BSN in 10" proposed mandate, and the idea that many health care institutions prioritize new employee applicants holding an RN-BSN over AD nurses now that the nursing shortage is improving.

Based on the study findings, qualitative methods would be appropriate to understand the experience of AD nursing students who intend to purse the RN-BSN or higher degree in nursing. Responses to the open-ended questions: "What would help you most in your plan to continue education?" would be more meaningful through in-depth interviews or focus groups. For example, topics such as "time management"; "family

support"; and "work discrimination related to increasing professional education" should be explored further. Additional qualitative questions may include: "What do you foresee as the greatest barriers in pursuing educational goals?" and "How will the RN-BSN or higher degree in nursing help you in the future?" Furthermore, one finding that emerged from data suggesting a future qualitative study was that non-traditional students aged 25 years and older were more intent to continue education immediately, even though they tend to have more responsibilities outside academia, than traditional students. Proposed questions to non-traditional students may include: "What are some reasons you want to pursue education immediately after obtaining an AD in nursing?" or "What are some of the benefits you believe you may experience if you continue education immediately post-AD graduation?"

Finally, even though the power was adequate for the sample size in this study, future studies would benefit from a larger sample. Furthermore, the research was conducted in an urban area including three nursing programs within two large size colleges. A suggestion is to branch out to include a larger geographic area with participants from more colleges/universities and nursing programs.

Chapter Summary

Implications for education and future research were discussed. In the relationship between professional values, intrinsic motivation and intent to continue formal post-AD education, professional values had a direct effect on intrinsic motivation. This finding reinforces the importance of professional values in the nursing curriculum, possibly including an entry-level course in the AD nursing curriculum. Although professional values did not have a direct effect on intent to pursue further education, professional

values did have an indirect effect through intrinsic motivation. If professional values sustain intrinsic motivation in the intent decisional process, emphasis should be placed on professional values through education. Although the majority of AD nursing students intended to continue education, intrinsic motivation did not have a direct effect on their intent to purse educational goals. Future research should include alternative factors, including extrinsic motivation incentives, such as the proposed “BSN in 10” bill and advisement within academia.

Appendix A

Table 2. American Nurses Associations' Code of Ethics

Code #	*American Nurses Association's Code*
1	The nurse, in all professional relationships, practices with compassion and respect for the inherent dignity, worth, and uniqueness of every individual, unrestricted by considerations of social or economical status, personal attributes, or the nature of health problems.
2	The nurse's primary commitment is to the patient, whether an individual, family, group, or community.
3	The nurse promotes, advocates for and strives to protect the health, safety, and rights of the patient.
4	The nurse is responsible and accountable for individual nursing practice and determines the appropriate delegation of tasks consistent with the nurse's obligation to provide optimum patient care.
5	The nurse owes the same duties to self as to others, including the responsibility to preserve integrity and safety, to maintain competence, and to continue personal and professional growth.
6	The nurse participates in establishing, maintaining, and improving health care environments and conditions of employment conducive to the provision of quality health care and consistent with the values of the profession through individual and collective action.
7	The nurse participates in the advancement of the profession through contributions to practice, education, administration, and knowledge development.
8	The nurse collaborates with other health professionals and the public in promoting community, national, and international efforts to meet health needs.
9	The profession of nursing, as represented by associations and their members, is responsible for articulating nursing values, for maintaining the integrity of the profession and its practice, and for shaping social policy.

Appendix B

Scoring of the AMS-C 28

To calculate a person's score on the AMS, you need to find the mean response for each of the subscales. These means will vary between 1 and 7. You then insert these means in the following formula, which will able you to calculate a self-determination index:

2((know+acc+stim/3)) + iden - ((intro+reg/2) + 2amo)= self-determination index

know= intrinsic motivation to know
acc= intrinsic motivation to accomplishments
stim= intrinsic motivation to experience stimulation
iden= identification
intro= introjected regulation
reg= external regulation
amo= amotivation

This formula will give you scores ranging from -18 (very little self-determination) to +18 (extreme self-determination).

Most of the people we have tested with this scale obtain scores around 10.

Highest level of self-determination: 2((7+7+7/3)) + 7 - ((1+1/2) + 2*1)

So:

2((7+7+7/3))+7-((1+1/2)+2(1)= would be the highest self-determined score = 18

2((21/3))+7-((2/2)+2(1)

2((7))+7-((1)+(2)

2((7))+7-(3)

2((7))+7-(3)

14+7=18

This index is only used for research purposes. Nevertheless, we noticed that a high index is associated with positive consequences and, on the opposite, a low index is associated with negative consequences for the person.

Appendix C

Permission Letter for the AMS-C 28

Health Sciences Doctorate Programs
Audiology (Au.D.) Nursing Science (DNS) Physical Therapy (DTP) Public Health (DPH)
The Graduate School and University Center
The City University of New York
365 Fifth Avenue
New York, NY 10016-4309
Tel 212.817.7980 Fax 212.817.1680

September 10, 2009

Dr. Robert J. Vallerand
Laboratoire de Recherche sur le Comportement Social
Universite du Quebec a Montreal
C.P. 8888, Station "A"
Montreal, QC, Canada H3C 3P8

Dear Dr. Vallerand:

I am writing to request permission to use the Academic Motivation Scale (AMS-C 28) College version in my research study. The purpose of the study is to explore the effects of intrinsic motivation and professional values on associate degree nursing students planning to continue their education in order to achieve academic goals. Please let me know if you would like further information regarding the proposed research study.

I also agree to send you further reliability and validity test results for the AMS-C 28 at the above address.

Sincerely,

Unn Hidle, CRN, CPNP, DNS(C)
Doctorate Candidate
The City University of New York (CUNY)
Graduate College
Associate Professor
CUNY LaGuardia Community College
Long Island City, New York, 11101

Appendix D

Permission to use the AMS-C 28

"St-Louis, Ariane" st-louis.ariane@uqam.ca
Thursday - October 29, 2009 8:42 AM
<uhidle@lagcc.cuny.edu>

RE: SPN Profile Message: Permission for use of the AMS
Mime.822 (5168 bytes) [View] [Save As]

Hi,

You can download the AMS from our web site:
http://www.er.uqam.ca/nobel/r26710/LRCS/echelles_en.htm

AMS: To calculate a person's score on the AMS, you need to find the mean response for each of the subscales. These means will vary between 1 and 7. You then insert these means in the following formula which will able you to calculate a self-determination index:

2((know+acc+stim/3)) +iden - ((intro+reg/2) +2amo)= self-determination index
know= intrinsic motivation to know
acc= intrinsic motivation to accomplishments
stim= intrinsic motivation to experience stimulation
iden= identification
intro= introjected regulation
reg= external regulation
amo= amotivation

This formula will give you scores ranging from -18 (very little self-determination) to +18 (extreme self-determination). Most of the people we have tested with this scale obtain scores around 10.

Highest level of self-determination: 2((7+7+7/3)) + 7 - ((1+1/2) + 2*1) So:

2((7+7+7/3))+7-((1+1/2)+2(1) = the highest self-determined score = 18
2((21/3))+7-((2/2)+2(1)
2((7))+7-((1)+(2)
2((7))+7-(3)
2((7))+7-(3)
14+7=18

I would like to mention that this scale has not been normalised. This index is only used for research purposes. Nevertheless, we noticed that a high index is associated with positive consequences and, on the opposite, a low index is associated with negative consequences for the person.
I hope these few words will help you.
I wish you good luck in your research project.

Appendix E

NPVS-R Subscale	Value Statement (ANA [1985] Code for Nurses)
1.	The nurse provides services with respect for human dignity and the uniqueness of the client, unrestricted by considerations of social or economic status, personal attributes, or the nature of health problems.
2.	The nurse safeguards the client's right to privacy by judiciously protecting information of a confidential nature.
3.	The nurse acts to safeguard the client and the public when health care and safety are affected by the incompetent, unethical, or illegal practical of any person.
4.	The nurse assumes responsibilities and accountability for individual nursing judgments and accountability for individual nursing judgments and actions.
5.	The nurse maintains competence in nursing.
6.	The nurse exercises informed judgment and uses individual competence and qualifications as criteria in seeking consultation, accepting responsibilities, and delegating nursing activities to others.
7.	The nurse participates in activities that contribute to the ongoing development of the profession's body of knowledge.
8.	The nurse participates in the profession's efforts to implement and improve standards of nursing.
9.	The nurse participates in the profession's efforts to establish and maintain conditions of employment conducive to high quality nursing care.
10.	The nurse participates in the profession's effort to protect the public from misinformation and misrepresentation and to maintain the integrity of nursing.
11.	The nurse collaborates with members of the health professions and other citizens in promoting community and national efforts to meet the health needs of the public.

Appendix F

Permission Letter for the NPVS-R

Health Sciences Doctorate Programs
Audiology (Au.D.) Nursing Science (DNS) Physical Therapy (DTP) Public Health (DPH)
The Graduate School and University Center
The City University of New York
365 Fifth Avenue
New York, NY 10016-4309
Tel 212.817.7980 Fax 212.817.1680

September 10, 2009

Dr. Darlene Weis
Marquette University
College of Nursing, Clark Hall
P.O. Box 1881
Milwaukee, WI 53201-1881

Dear Dr. Weis:

I am writing to request permission to use the Revised Nurses Professional Values Scale (NPVS-R) in my research study. The purpose of the study is to explore the effects of intrinsic motivation and professional values on associate degree nursing students planning to continue their education in order to achieve academic goals. Please let me know if you would like further information regarding the proposed research study.

I agree to send you further reliability and validity test results for the NPVS-R at the above address.

Sincerely,

Unn Hidle, CRN, CPNP, DNS(C)
Doctorate Candidate
The City University of New York (CUNY)
Graduate College
Associate Professor
CUNY LaGuardia Community College
Long Island City, New York, 11100

Appendix G

Permission to use the NPVS-R

From:	"Ennenbach, Julie" <julie.ennenbach@marquette.edu>	
To:	"uhidle@lagcc.cuny.edu" <uhidle@lagcc.cuny.edu>	
Subject:	NPVS-R Tool	
Attachments:	Hidle Letter 2.doc (25088 bytes)	[View] [Open] [Save As]
	NPVS-R abstract revised.doc (36352 bytes)	[View] [Open] [Save As]
	VALUES SCALE REVISED 2 05.doc (41984 bytes)	[View] [Open] [Save As]
	Mime.822 (157259 bytes)	[View] [Save As]

Hi Unn Hidle,

Please find attached the necessary tools for the use of the NPVS-R. If you should have any questions regarding these components, please contact Dr. Weis directly: Darlene.weis@marquette.edu<mailto:Darlene.weis@marquette.edu.

Thank you,

Julie Ennenbach
Faculty Affairs Coordinator
Marquette University
College of Nursing
414.288.5632

"The richest person is not the one who has the most,
but the one who needs the least."

[cid:image001.gif@01CA5228.46B27370]<http://www.marquette.edu/>

Appendix H

Personal Questionnaire

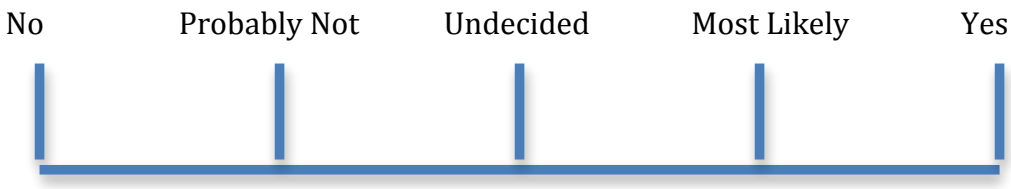
Please make an "X" next to the answer that best applies to you:

1) Is this your first college degree?
   ___ Yes
   ___ No

2) What is your highest level of education (including from another country)?
   ___ High School Diploma
   ___ GED (General Equivalency Diploma)
   ___ Baccalaureate degree
   ___ Master's degree
   ___ Doctorate degree
   ___ Other: _____

3) What is your current overall GPA?
   ___ Less than 2.0
   ___ 2.0 – 2.4
   ___ 2.5 – 2.9
   ___ 3.0 – 3.4
   ___ 3.5 – 4.0

4) Are you planning to continue nursing education once you graduate from this associate degree program? (***circle one of the options***)



5) If you plan to continue nursing education, how long do you think it will take before you return to school?
   ____ Immediately (next semester)
   ____ 1 year
   ____ 2 years
   ____ 3 - 5 years
   ____ 5 - 10 years
   ____ more than 10 years
   ____ Not applicable

6) If you plan to return to school for nursing, what type of program are you considering?
   ____ RN-BS in nursing
   ____ Combined BS – MS in nursing
   ____ Combined BS – NP in nursing
   ____ Other: _____
   ____ Not applicable

7) Sex
   ____ Female
   ____ Male

8) Age
   ____ under 21
   ____ 21 – 24
   ____ 25 – 30
   ____ 31 – 35
   ____ 36 – 40
   ____ 41 – 50
   ____ 51 – 60
   ____ over 60

9) Do you have children?
   ____ Yes
   ____ No

10)If “yes”, how many children do you have?

___ 1
___ 2
___ 3
___ 4
___ 5
___ 6 - 7
___ 8 – 9
___ 10 or more
___ Not applicable

11)Do you have caretaker responsibilities?

___ Yes
___ No

12)For whom do you have caretaker responsibilities?
(***mark all categories that apply***)

___ Child/children
___ Siblings
___ Parents
___ Grandparents
___ Other _____
___ Not applicable

13)Do you currently work while attending this nursing program?

___ Yes
___ No

14)If so, how many hours per week do you work?

___ Less than 5 hours
___ 5 - 10 hours
___ 11 - 20 hours
___ 21 – 30 hours
___ 31 – 40 hours
___ over 40 hours
___ Not applicable

15)Place of employment?
____ On campus
____ Off Campus
____ Health care field
____ Other
____ Not applicable

16)Marital status
____ Single
____ Single living with partner
____ Married
____ Separated
____ Divorced
____ Widowed

17)Ethnicity
(***mark all categories that apply***)
____ American Indian or Alaska Native
____ Asian / Native Hawaiian / Other Pacific Islander (non-Hispanic)
____ Black or African American (non-Hispanic)
____ Hispanic or Latino
____ White (non-Hispanic)
____ Other: _____

18)What is your current household income?
____ less than $10,000
____ $10,000 - $19,000
____ $20,000 - $29,000
____ $30,000 - $39,000
____ $40,000 - $49,000
____ $50,000 - $74,000
____ $75,000 - $99,000
____ $100,000 or more

19)What would help you most in your plan to continue education?

_____

_____

_____

Appendix I

Institutional Review Board Approval Letter

The City University of New York

CUNY-Wide IRB
Office of Research Conduct
535 E 80th Street
New York, New York 10021
212.794.5504
212.794.5378, fax

TO: Prof. Unn Hidle
LaGuardia Community College - Nursing Science

FROM: Rev. David Koseey D.K.
CUNY-Wide IRB: IRB00000149

SUBJECT: IRB Approval (Expedited Review)

STUDY: **10-10-071-0149 Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue Their Formal Education**

DATE: November 8, 2010

The CUNY-Wide IRB: IRB00000149 has approved the above study involving humans as research subjects. This study was Approved - Expedited Category: 7 - based on 45CFR46.

IRB Number: **10-10-071-0149** This number is a CUNY-Wide IRB: IRB00000149 number that should be used on all consent forms and correspondence.

Approval Date: **November 4, 2010**
Expiration Date: **November 3, 2011**

THIS APPROVAL IS FOR A PERIOD OF ONE-YEAR OR LESS. YOU SHOULD RECEIVE A COURTESY RENEWAL NOTICE BEFORE THE EXPIRATION OF THIS PROJECT'S APPROVAL. HOWEVER, IT IS YOUR RESPONSIBILITY TO INSURE THAT AN APPLICATION FOR CONTINUING REVIEW APPROVAL HAS BEEN SUBMITTED BEFORE THE EXPIRATION DATE NOTED ABOVE. IF YOU DO NOT RECEIVE APPROVAL BEFORE THE EXPIRATION DATE, ALL STUDY ACTIVITIES MUST STOP UNTIL YOU RECEIVE A NEW APPROVAL LETTER. THERE WILL BE NO EXCEPTIONS. IN ADDITION, YOU ARE REQUIRED TO SUBMIT A FINAL REPORT OF FINDINGS AT THE COMPLETION OF THE PROJECT.

Consent Form: All research subjects must use the approved and stamped consent form. You are responsible for maintaining signed consent forms for each research subject for a period of at least three years after study completion.

Mandatory Reporting to the IRB: The principal investigator must report, within five

Hidle 10-10-071-0149

business days, any serious problem, adverse effect, or outcome that occurs with frequency or degree of severity greater than that anticipated. In addition, the principal investigator must report any event or series of events that prompt the temporary or permanent suspension of a research project involving human subjects or any deviations from the approved protocol.

Amendments/Modifications: All amendments/modifications of protocols involving human subjects must have prior IRB approval, except those involving the prevention of immediate harm to a subject. Amendments/modifications for the prevention of immediate harm to a subject must be reported within 24 hours to the IRB.

Stipulations: ***The consent document(s) that will be used in this research must be stamped by the CUNY-Wide IRB before your research can begin at CUNY.***

If you have any questions, please do not hesitate to contact Arita Winter in the IRB Office at 212.794.5504.

Good luck on your project.

Sign the Verification Statement below. Return the original signed copy of this memo to the IRB Office and retain a copy for your records. The IRB Office must receive a copy of the signed verification statement before research may begin.

VERIFICATION:

BY SIGNING BELOW, I ACKNOWLEDGE THAT I HAVE RECEIVED THIS APPROVAL AND AM AWARE OF, AND AGREE TO ABIDE BY, ALL OF ITS STIPULATIONS IN ORDER TO MAINTAIN ACTIVE APPROVAL STATUS, INCLUDING TIMELY SUBMISSION OF CONTINUING REVIEW APPLICATIONS AND PROPOSED PROTOCOL MODIFICATIONS, AS WELL AS PROMPT REPORTING OF ADVERSE EVENTS, SERIOUS UNANTICIPATED PROBLEMS, AND PROTOCOL DEVIATIONS. I AM AWARE THAT IT IS MY RESPONSIBILITY TO BE KNOWLEDGEABLE OF ALL FEDERAL, STATE AND UNIVERSITY REGULATIONS REGARDING HUMAN SUBJECTS RESEARCH INCLUDING CUNY'S FEDERALWIDE ASSURANCE (FWA) WITH THE DEPARTMENT OF HEALTH AND HUMAN SERVICES OFFICE OF HUMAN RESEARCH PROTECTIONS.

Signature of Principal Investigator — Date: 11/10/10

Signature of Faculty Advisor for Student Research — Date: 11/12/10

Appendix J

Letters to Chairpersons of Nursing Departments

Health Sciences Doctorate Programs
Audiology (Au.D.) Nursing Science (DNS) Physical Therapy (DTP) Public Health (DPH)
The Graduate School and University Center
The City University of New York
365 Fifth Avenue
New York, NY 10016-4309
Tel 212.817.7980 Fax 212.817.1680

Professor Jacqueline Nichols
Chairperson
Nursing Department, Room S-785
Borough of Manhattan Community College
199 Chambers Street
New York, NY 10007

November 8, 2010

Dear Professor Nichols:

My name is Unn Hidle and I am a Graduate Student in the City University of New York (CUNY) Doctorate of Nursing Science program at the Graduate Center, New York. I have prepared a research study titled "*Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue Their Formal Education*", and Human Subject approval was granted by the CUNY-Wide Institutional Review Board.

With your permission, I plan to conduct the research in November/December 2010 at Borough of Manhattan Community College among other CUNY campuses. The participants in the study will consist of senior AD nursing students in their last semester, and data collection will take place following a scheduled nursing lecture or nursing skill's lab. It will not interfere with scheduled class time. Participation is voluntary and there is no foreseeable harm to the subject. The estimated time to complete the study surveys is less than 30 minutes.

At your convenience, I would like to set up a brief meeting or phone-call to discuss any details of the study.

Thank you for your consideration and I am looking forward to hearing from you.

Sincerely,

Unn Hidle, CRN, CPNP, DNS(C)
Doctorate Candidate
The City University of New York (CUNY)
Graduate Center
Email: uhidle@lagcc.cuny.edu
Phone: 917 674 7206

Health Sciences Doctorate Programs
Audiology (Au.D.) Nursing Science (DNS) Physical Therapy (DTP) Public Health (DPH)
The Graduate School and University Center
The City University of New York
365 Fifth Avenue
New York, NY 10016-4309
Tel 212.817.7980 Fax 212.817.1680

Professor Rosann Ippolito
Chairperson Health Sciences Department
LaGuardia Community College
31-10 Thomson Avenue
LIC, Queens, NY 11101

November 8, 2010

Dear Professor Ippolito:

My name is Unn Hidle and I am a Graduate Student in the City University of New York (CUNY) Doctorate of Nursing Science program at the Graduate Center, New York. I have prepared a research study titled "*Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue Their Formal Education*", and Human Subject approval was granted by the CUNY-Wide Institutional Review Board.

With your permission, I plan to conduct the research in November 2010. The participants in the study will consist of senior AD nursing students in their last semester, and data collection will take place following a scheduled nursing lecture or nursing skill's lab. Participation is voluntary and there is no foreseeable harm to the subject. The estimated time to complete the study surveys is less than 30 minutes.

At your convenience, I would like to set up a brief meeting or phone-call as soon as possible to discuss any details of the study. Thank you for your consideration and I am looking forward to hearing from you.

Sincerely,

Unn Hidle, CRN, CPNP, DNS(C)
Doctorate Candidate
The City University of New York (CUNY)
Graduate Center

Appendix K

Permission from Chairpersons to Conduct Study

Health Sciences Doctoral Programs
Audiology (Au.D.) Nursing Science (DNS) Physical Therapy (DPT) Public Health (DPH)

The Graduate School and University Center
The City University of New York
365 Fifth Avenue
New York, NY 10016-4309
TEL 212.817.7980 FAX 212.817.1680

Professor Jacqueline Nichols
Chairperson
Nursing Department
Borough of Manhattan Community College
199 Chambers Street
New York, 10007

November 8, 2010

Dear Professor Nichols:

This letter will confirm our recent conversation. I am a Graduate Student in the City University of New York (CUNY) Doctorate of Nursing Science program at the Graduate Center, New York, and I have prepared a research study titled "*Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue Their Formal Education*". Human Subject approval was granted by the CUNY-Wide Institutional Review Board.

I would like your permission to conduct my research in your Nursing Department in November-December 2010. The participants in the study will consist of senior Associate Degree nursing students in their last semester, and data collection will take place following a scheduled nursing lecture or nursing skill's lab, not to interfere with lecture time. Participation is voluntary and there is no foreseeable harm to the subject. The estimated time to complete the study surveys is 30 minutes.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me in the enclosed return envelope. Thank you very much.

Sincerely,

Unn Hidle, CRN, CPNP, DNS(C)
Doctorate Candidate
The City University of New York (CUNY)
Graduate Center

PERMISSION GRANTED FOR THE REQUEST ABOVE:

Professor Jacqueline Nichols

Date: November 8, 2010

THE GRADUATE CENTER
THE CITY UNIVERSITY OF NEW YORK

Health Sciences Doctoral Programs

Audiology (Au.D.) Nursing Science (DNS) Physical Therapy (DPT) Public Health (DPH)

The Graduate School and University Center
The City University of New York
365 Fifth Avenue
New York, NY 10016-4309
TEL 212.817.7980 FAX 212.817.1680

Professor Patricia Dillon
Deputy Chairperson Nursing Program
LaGuardia Community College
Health Sciences Department, E300
31-10 Thomson Avenue
LIC, Queens, NY 11101

November 8, 2010

Dear Professor Dillon:

This letter will confirm our recent conversation. I am a Graduate Student in the City University of New York (CUNY) Doctorate of Nursing Science program at the Graduate Center, New York, and I have prepared a research study titled "*Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue Their Formal Education*". Human Subject approval was granted by the CUNY-Wide Institutional Review Board.

I would like your permission to conduct my research in your Nursing Program in November-December 2010. The participants in the study will consist of senior Associate Degree nursing students in their last semester, and data collection will take place following a scheduled nursing lecture or nursing skill's lab, not to interfere with lecture time. Participation is voluntary and there is no foreseeable harm to the subject. The estimated time to complete the study surveys is 30 minutes.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me in the enclosed return envelope. Thank you very much.

Sincerely,

Unn Hidle, CRN, CPNP, DNS(C)
Doctorate Candidate
The City University of New York (CUNY)
Graduate Center

PERMISSION GRANTED FOR THE REQUEST ABOVE:

Professor Patricia Dillon

Date: November 8, 2010

Health Sciences Doctoral Programs
Audiology (Au.D.) Nursing Science (DNS) Physical Therapy (DPT) Public Health (DPH)

The Graduate School and University Center
The City University of New York
365 Fifth Avenue
New York, NY 10016-4309
TEL 212.817.7980 FAX 212.817.1680

Professor Rosann Ippolito
Chairperson Health Sciences
LaGuardia Community College
Health Sciences Department, E300
31-10 Thomson Avenue
LIC, Queens, NY 11101

November 8, 2010

Dear Professor Ippolito:

This letter will confirm our recent conversation. I am a Graduate Student in the City University of New York (CUNY) Doctorate of Nursing Science program at the Graduate Center, New York, and I have prepared a research study titled "*Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue Their Formal Education*". Human Subject approval was granted by the CUNY-Wide Institutional Review Board.

I would like your permission to conduct my research in your Nursing Program in November-December 2010. The participants in the study will consist of senior Associate Degree nursing students in their last semester, and data collection will take place following a scheduled nursing lecture or nursing skill's lab, not to interfere with lecture time. Participation is voluntary and there is no foreseeable harm to the subject. The estimated time to complete the study surveys is 30 minutes.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me in the enclosed return envelope. Thank you very much.

Sincerely,

Unn Hidle, CRN, CPNP, DNS(C)
Doctorate Candidate
The City University of New York (CUNY)
Graduate Center

PERMISSION GRANTED FOR THE REQUEST ABOVE:

Professor Rosann Ippolito

Date: November 8, 2010

Appendix L

Informational Flyer

The Graduate School and University Center
The City University of New York
Health Sciences Doctorate Program

Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue Their Formal Education

Associate Degree Nursing Students in Their Last Semester Wanted for a Research Study

On (*date[s] and time[s]*), immediately following (*lecture/skill's lab*) in (*location*), a study on motivation and professional values of Associate Degree nursing students' intent to continue formal education will be conducted. Eligible volunteers are Associate Degree nursing students in their last semester of the nursing program.

Participation in this research study involves no risks and strict confidentiality will be maintained. Volunteers will spend a maximum of 30 minutes immediately following class to complete three questionnaires for research purposes. The benefit to participation is knowledge generation for nursing curriculum, nurse educators, and the City University of New York policy.

If you have any questions, please feel free to contact: Unn Hidle 718 482 5767 or uhidle@lagcc.cuny.edu.

This research is conducted under the direction of:

Unn Hidle, RN-C, MS.Ed, PNP-C, MS
Graduate Student
Doctorate of Nursing Science Program
The Graduate Center of the City University of New York
365 Fifth Avenue
New York, NY 10016-4209

Appendix M

Instructions for Introducing the Study (Script)

My name is Unn Hidle and I am the Principal Investigator of this study, a graduate student in the Doctorate of Nursing Science at The Graduate Center of the City University of New York (CUNY). The study is titled: "*Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue their Education*" and will investigate the relations between motivation, professional values and associate degree nursing students' intent to continue their formal education.

Participation in this study is strictly voluntary and you may stop at any time. Furthermore, choosing not to participate will have no effect on your grade or evaluation of this course. If you agree to take part in this study, you will be given three questionnaires with a consent form as the cover page. You will also receive a blank envelope. Once I leave the room, you need to read and sign the consent, separate it from the questionnaires, and place it in the envelope. You may begin answering the questionnaires. When you are done, please leave the questionnaires in this bin (*pointing to one bin with a sign "questionnaires"*) and the envelope in this separate bin (*pointing to another bin with a sign "envelopes"*) before leaving the room. Remember not to write your name anywhere on the questionnaires.

As a token of my appreciation for your participation in this study, you will receive this RN badge holder (*hold it up to show*).

Appendix N

Consent Form

Health Sciences Doctorate Programs
Audiology (Au.D.) Nursing Science (DNS) Physical Therapy (DTP) Public Health (DPH)
The Graduate School and University Center
The City University of New York
365 Fifth Avenue
New York, NY 10016-4309
Tel 212.817.7980 Fax 212.817.1680

My name is Unn Hidle and I am graduate student in the Doctorate of Nursing Science Program at The Graduate Center of the City University of New York (CUNY), and Principal Investigator of this project, entitled "*Motivational Factors, Professional Values and Associate Degree Nursing Students' Intent to Continue Their Formal Education*." The study is expected to identify what motivates Associate Degree (AD) nursing students in their intent to continue education. I would like permission to have you fill out three questionnaires about your level of motivation and professional values.

The time to fill out the questionnaires will take approximately 30 minutes. All information gathered will be kept strictly confidential, and will be stored in a locked file cabinet, to which only I, and my advisor, will have access. Participation in this study is strictly voluntary and participation or lack thereof will have no bearing or impact on your course evaluation, performance or grade. At any time, you can withdraw from the study.

The risks from participating in this study are no more than encountered in everyday life. The benefit of your participation is the knowledge generated for nursing curriculum, nurse educators, and CUNY policy. There will be approximately 100 participants taking part in this study. I may publish results of the study, but names of people, or any identifying characteristics, will not be used in any of the publications.

If you have any questions about this research, you can contact me at (718) 482-5767 or uhidle@lagcc.cuny.edu, or my advisor Dr. Martha Whetsell at (718) 960-8199 or Martha.whetsell@lehman.cuny.edu. If you have questions about your rights as a participant in this study, you can contact Arita C. Winter CUNY-Wide IRB Administrator, Office of Research Conduct, City University of New York, (212) 794-5504, arita.winter@mail.cuny.edu. Please refer to IRB number 10-10-071-0149.

Thank you for your participation in the study. I will give you a copy of this form to take with you.

_____ _____

Participant's signature Date Investigator's signature Date

CUNY-Wide IRB Approval 11/4/10

Appendix O

Table 4: Frequency Distribution of Demographic Variables for Associate Degree Nursing Students

	Percentage (%)	Sample (*n*)
Sex		
Female	77.4	48
Male	22.6	14
Age		
21 – 24 years	19.4	12
25 – 30 years	40.3	25
31 – 35 years	21.0	13
36 – 40 years	6.5	4
41 – 50 years	9.7	6
51 – 60 years	3.2	2
Marital Status		
Single	43.5	27
Single living with partner	6.5	4
Married	43.5	27
Separated	3.2	2
Divorced	3.2	2
Children		
Yes	46.8	29
No	53.2	33
Number of Children		
1	19.4	12
2	19.4	12
3	6.5	4
4	1.6	1
N/A (no children)	53.2	33
Caretaker Responsibilities		
Yes	59.7	37
No	40.3	25

	Percentage (%)	Sample (*n*)
Caretaker; Whom?		
Child/children	25.8	16
Parent	12.9	8
Child/children & parent	12.9	8
Other	8	5
N/A (no caretaker responsibilities)	40.3	25
Overall GPA		
2.5 – 2.9	3.2	2
3.0 – 3.4	53.2	33
3.5 – 4.0	41.9	26
Unknown	1.6	1
Intent to Continue Education		
No	0	0
Probably not	1.6	1
Undecided	0	0
Most likely	9.7	6
Yes	88.7	55
Continue Education: When?		
Immediately (next semester)	40.3	25
1 year	54.8	34
2 years	1.6	1
3-5 years	3.2	2
Return to School for What Degree?		
RN-BS in Nursing	62.9	39
Combined BS-MS in Nursing	24.2	15
Combined BS-NP in Nursing	11.3	7
Other	1.6	1
Work While Attending College?		
Yes	66.1	41
No	33.9	21

	Percentage (%)	Sample (*n*)
Work Hours Per Week		
< 5 hours	3.2	2
5 – 10 hours	11.4	7
11 – 20 hours	12.9	8
21 – 30 hours	17.7	11
31 – 40 hours	14.5	9
> 40 hours	4.8	3
Unknown	1.6	1
N/A (not working)	33.9	21
Place of Employment		
On campus	8.1	5
Off campus	17.7	11
Health care field	17.7	11
Other	22.6	14
N/A (not working)	33.9	21
Ethnicity		
Asian/Native Hawaiian/ Other Pacific Islander (non-Hispanic)	37.1	21
Black or African American (non-Hispanic)	14.5	9
Hispanic or Latino	21.0	13
White (non-Hispanic)	16.1	10
Unknown	3.2	2
Other	8.1	5
Household Income		
< $10,000	14.5	9
$10,000 - $19,000	14.5	9
$20,000 - $29,000	12.9	8
$30,000 - $39,000	11.3	7
$40,000 - $49,000	11.3	7
$50,000 - $74,000	17.7	11
$75,000 - $99,000	9.7	6
$100,000 or more	4.8	3
Unknown	3.2	2

Appendix P

Table 5: Cross Tabulation

Factor	Age (years)					
	21-24	25-30	31-35	36-40	41-50	51-60
Sex						
Female	11	19	10	3	3	2
Male	1	6	3	1	3	0
Children						
Yes	2	11	6	3	5	2
No	10	14	7	1	1	0
Caretaker responsibilities						
Yes	4	13	8	4	6	2
No	8	12	5	0	0	0
Continue education						
Immediately (next semester)	3	3	9	4	5	1
In 1 year	9	20	3	0	1	1
in 2 years	0	1	0	0	0	0
in 3-5 years	0	1	1	0	0	0
Work						
Yes	8	15	9	4	3	2
No	4	10	4	0	3	0
Work amount						
< 5 hours	1	1	0	0	0	0
5 – 10 hours	1	2	2	0	1	1
11 – 20 hours	2	4	2	0	0	0
21 – 30 hours	2	5	2	1	1	0
31 – 40 hours	1	2	1	3	1	1
> 40 hours	1	0	2	0	0	0
Unknown	0	1	0	0	0	0

Factor	Intent to Continue Formal Post-AD Education				
	No	Probably not	Undecided	Most likely	Yes
Sex					
Female	0	1	0	4	43
Male	0	0	0	2	12
Age					
21 – 24 years	0	0	0	2	10
25 – 30 years	0	0	0	3	22
31 – 35 years	0	1	0	1	11
36 – 40 years	0	0	0	0	4
41 – 50 years	0	0	0	0	6
51 – 60 years	0	0	0	0	2
Children					
Yes	0	0	0	2	27
No	0	1	0	4	28
Caretaker responsibilities					
Yes	0	1	0	4	32
No	0	0	0	2	23
Degree					
RN-BS in nursing	0	0	0	4	35
BS-MS in nursing	0	0	0	1	14
BS-NP in nursing	0	0	0	1	6
Other	0	1	0	0	0
Work					
Yes	0	1	0	2	38
No	0	0	0	4	17
Work amount					
< 5 hours	0	0	0	0	2
5 – 10 hours	0	0	0	2	5
11 – 20 hours	0	0	0	0	8
21 – 30 hours	0	0	0	0	11
31 – 40 hours	0	0	0	0	9
> 40 hours	0	1	0	0	2
Unknown	0	0	0	0	1

Factor	Continue Formal Post-AD Education; When?			
	Immediately	1 year	2 years	3-5 years
Sex				
Female	18	28	1	1
Male	7	6	0	1
Caretaker responsibilities				
Yes	18	18	0	1
No	7	16	1	1
Work amount				
< 5 hours	0	1	1	0
5 – 10 hours	3	4	0	0
11 – 20 hours	2	6	0	0
21 – 30 hours	4	6	0	1
31 – 40 hours	7	2	0	0
> 40 hours	0	2	0	1

Appendix Q

Table 11: Self-Determination Scores

	Self-Determination Index Based on Subscale Means (Possible Score: -18 to +18)	
Student	Actual Score	Rounded Score
1	10.34	10
2	11.00	11
3	13.16	13
4	7.16	7
5	11.29	11
6	8.88	9
7	8.25	8
8	6.29	6
9	11.83	11
10	6.88	7
11	5.46	5
12	8.17	8
13	9.63	10
14	11.29	11
15	8.34	8
16	8.13	8
17	4.87	5
18	6.16	6
19	9.59	10
20	5.13	5
21	9.5	10
22	1.59	2
23	4.53	5
24	11.46	11
25	7.41	7
26	9.96	10
27	5.53	6
28	7.73	8
29	7.12	7
30	11.84	12
31	12.08	12

Self-Determination Scores

Student	Self-Determination Index Based on Subscale Means (Possible Score: -18 to +18) Actual Score	Rounded Score
32	8.21	8
33	10.95	11
34	7.33	7
35	3.71	4
36	11.38	11
37	3.63	4
38	11.71	12
39	10.71	11
40	9.38	9
41	7.63	8
42	11.04	11
43	11.71	12
44	8.92	9
45	9.71	10
46	11.58	12
47	10.50	11
48	7.13	7
49	4.54	5
50	1.13	1
51	4.10	4
52	12.88	13
53	10.88	11
54	8.88	9
55	- 0.50	- 1
56	8.34	8
57	7.04	7
58	7.79	8
59	8.00	8
60	8.67	9
61	4.72	5
62	4.96	5

Self-Determination Index scores are based on the formula:
2((know + acc + stim / 3)) + iden – ((intro + reg/2) + 2amo = Self-Determination Index

Appendix R

Permission to Change Items #1 and #19 on the AMS-C 28

Envoyé : 29 juin 2010 20:21

Hi Ariane St-Louis,

I was recently granted permission to use the AMS-C 28 scale for my doctoral research (see attached letter). Thank you for the email reply with explanation of scoring of the scale. I am preparing data collection for early fall 2010 and will use the scale as planned. However, my study population will consist of students already enrolled in college and their motivation to continue further college education. I would like to ask permission to make two minor wording changes to the following questions in order for the sample population not to be confused:

Question #1:
"Because I need at least a high school diploma in order to find a high-paying job later."
Change the words "high school diploma" to "college degree"
Questions #19:
"I can't see why I go to college and frankly, I couldn't care less."
Add the word "further" after college: "I can't see why I go to college further and frankly, I couldn't care less."

Please let me know if you would like a more detailed rational for the changes.
I am looking forward to hearing from you regarding the decision to my inquiry.

Sincerely, Unn Hidle

>>> "St-Louis, Ariane" 06/30/10 8:42 AM >>>

Dear Unn Hidel,

High school diploma can be modified by college degree in Question #1.

Although for Question #19, I think it would be better phrased this way: "I can't see why I would go to college further" So add the word 'would' after the second I.

Thanks!
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