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Assessment of Admission Criteria and Selection Process for Nurse Education Programs

Mary Ann Jarmulowicz
Walden University

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Dr. Deborah Bauder, Committee Member, Education Faculty

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Abstract

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by

Mary Ann Jarmulowicz

M. S. N., Georgetown University, 1990

B. S. C. S., University of Maryland, 1999

B. S. N., California State Fullerton, 1985

A. A., Golden Gate Community College, 1983

Diploma, Saint Francis Hospital, School of Nursing, 1972

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy Education

Walden University

January 2012

Abstract

Qualified student enrollment to nurse education program is limited by admission criteria predetermined by faculty; however, little is known regarding the development and consistency of selection criteria. The purpose of this study was to examine the admission requirements of nursing programs to better understand the philosophical underpinnings and complexity of selection criteria. The conceptual frameworks of teaching philosophy, complexity, and gatekeeping guided this research. This descriptive correlational study used a cross-sectional design to survey a purposeful sample of full-time faculty teaching in nurse education programs in a southeastern state. Descriptive analyses, independent *t* test, and a Lambda analyses were employed on self-reported program practices, teaching philosophy, and demographic data. Descriptive analysis documented that nurse education was a limited access major with 73% reporting either very or extremely competitive admission. Descriptive analysis identified 35 distinct admission criteria that were usually combined into a weighted scoring system that favored empirical evidence aligned to accreditation and licensure requirements. Independent *t* test revealed that associate degree programs employed significantly more criteria than did baccalaureate programs to select students. Lambda analysis found no association linking faculty teaching philosophy to the complexity of admissions criteria. This study demonstrated that competitive admission processes exist but vary significantly across programs, and suggests that more research is required since this variability in criteria may impact diversity within nursing education. Positive social change can be achieved by a critical review of admission requirements to ensure a more diverse nursing workforce able to deliver culturally competent care.

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Dedication

This dissertation is dedicated to my mother, Mary Anna Urban Jevsevar (6/28/1920-5/28/1990), and to all the past, present, and future first-generation college students. In 1948, my mother was processed through Ellis Island as she and her family fled the communist takeover of, what was at that time, Czechoslovakia. My mother always encouraged me to learn. She denied herself to save every dime so I could go to school and become a registered nurse, and in her words, a career woman. Thank you Mama, I could not have made it without you.

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As I teach, I continue to search and re-search. I teach because I search, because I question, and because I submit myself to questioning. I research because I notice things, take cognizance of them, and in so doing, I intervene. And intervening, I educate and educate myself to do research so as to know what I do not yet know and to communicate and proclaim what I discover. (p. 35)

Thank you all.

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Chapter 1: Introduction to the Study

Background

The purpose of this study was to evaluate gatekeeping admission practices of nursing education programs in a southeastern state and assess the relationship between faculty adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) and complex admission criteria used to limit qualified students to nurse education programs. *Gatekeeping*, as defined by Karen (1990), is “the process of developing and implementing criteria and practices that yield access to scarce resources” (p. 227). Gatekeeping is not a theoretical concept readily found in nursing education literature. Gatekeeping literature is found in public and private education (Fearing, 1996; Greene, 2007; Karen, 1990) and in social work education (Gibbs & Blakely, 2000). Gatekeeping in nursing literature is related more to limiting access to clinical resources (Bigger, 2004; Fry, 2005; McEvoy, 2000; McEvoy & Richards, 2007) than nursing education. Merrylees (2002) best described *gatekeeping* as a professional nursing responsibility achieved through “the entry requirement for training and education, the exit criteria for graduation from training and education, criteria for entry to the professional register including personal attributes [and] employment specifications” (p. 39). Brammer (2008) studied gatekeeping as a registered nurse responsibility to monitor and supervise student nurses in a clinical setting in the absence of nurse education faculty.

For the purpose of this study, *gatekeeping* occurred when admission criteria were used to limit qualified student access (Karen, 1990) to a nurse education program through (a) a student ranking stratification system (Kilgore, 2003); (b) an extremely competitive or very competitive admission process (Kilgore, 2003); (c) a high regulatory agency

influence on the admission criteria used (Gibbs & Blakely, 2000), and (d) specific admission criteria used to select out qualified students (Karen, 1990). According to Gibbs and Blakely (2000), whether gatekeeping is a desired practice or not, social work faculty are forced into a gatekeeping role by hierarchical control systems, such as accreditation agencies and legislation mandates for professional licensure. Similar gatekeeping requirements exist in nursing education, as well.

State Boards of Nursing, accreditation agencies, and clinical agencies expect graduates with the knowledge and competency to begin basic competent registered nurse practice (Klein, 2006). Nurse education faculty is charged with a professional responsibility to protect the general public through safe supervision of student clinical practice (Klein, 2006). A conflict may arise for nurse faculty as they are being asked to graduate more nurses to alleviate the nursing shortage, but at the same time to allow only those who are competent and skilled to graduate (Merrylees, 2002). As a result of this admission limitation, multiple admission criteria are used to select out qualified students.

However, according to Karen (1990), no college or university actually has a good process in place to select the student most likely to graduate. Instead, this selective process creates a “particular type of student” (Karen, 1990, p. 227), a student who has met prescribed admission standards as selected by an admission gatekeeper. The effect of this gatekeeping selection process on student selection remains unknown.

Furthermore, the gatekeeping selection process may produce unintended outcomes such as an ethnic or racial disparity. The National League for Nursing (NLN, 2011a) national survey reported baccalaureate minority student nurse ethnicity as 14% African-American,

6.5% Hispanic, 7.4 Asian, and .8% American Indian; and associate minority student nurse ethnicity as 13.9% African-American, 7.8% Hispanic, 6.3 Asian, and 1% American Indian. A comparison of ethnic characteristics between the general population estimate of the region studied (United States Census Bureau, 2008b) and student nurses (Southern Regional Education Board [SREB], 2009a) reflect a racial disparity. The general population ethnic estimates for the southeastern state under study was 51.3% female and 66% European-American (United States Census Bureau, 2008b), while the student nurse population was reported as 90% female and 77% European-American (SREB, 2009a). The African-American population estimate was 29%, while only 16% are enrolled in nursing programs (SREB, 2009a). These data characterize the student nurse population as a homogeneous European-American group. To understand the importance or potential impact of the selection of certain students based on particular admission criteria, an examination of the impact of gatekeeping on ethnic or racial disparity becomes important.

Childs et al. (2004) posited that African-American student nurses find difficulty gaining a level of comfort and cultural acceptance within predominantly white institution of higher learning. Matheson and Bobay's (2007) extensive review of oppressed group literature described oppressive nurse behavior as hierarchical, where a person with authority exerts power and control over others. Similarly, according to Freire (1993), in a hierarchical educational system the oppressed group conforms to a dominant group when they feel powerless and ultimately become submissive to dominant group pressures. Freire also posited, "Any situation in which 'A' objectively exploits 'B' or hinders his

and her pursuit of self-affirmation as a responsible person is one of oppression” (p. 55). Seago and Spetz (2003) reported the possibility of cultural bias in nursing programs. The selection process may have an unintended effect on ethnic diversity. It remains unknown if the personal adult teaching philosophy of faculty has a relationship with admission criteria used to select students.

Nurse education faculty is a career choice for professional nurses. Nursing literature reports professional nurses’ experience poor group self-esteem, lack of power and control, and workforce oppression by the hierarchical structure of the medical system (Roberts, 2000). This powerlessness may create learned oppressive group behavior that manifests as domination over other less powerful groups (Freire, 1993). According to Freire (1993), “Once a situation of violence and oppression has been established, it engenders an entire way of life and behavior for those caught up in it—oppressors and oppressed alike” (p. 58). As a predominantly female and European-American group, professional nurses may unknowingly create homogeneity in the educational setting (Puzan, 2003) through an admission process manifested as gatekeeping action (Greene, 2007; Karen, 1990; Kilgore, 2003).

An admission process manifested as gatekeeping action may create barriers and other unforeseen consequences on student nurse diversity. Originally student application and enrollment ethnicity was a focus of this study. However, the ethnicity data collected for this study was too unreliable to analyze. The problems related to the inability to complete ethnic analysis of students raised more questions about gatekeeping practices than answers and are discussed in detail in chapters 4 and 5.

Identification of barriers to registered nurse heterogeneity is necessary to enact social change. West, Griffin, and Iphofen (2007) noted, “In order for sustained positive change to occur in nursing practice environments, nursing must be willing to unveil those barriers within the discipline itself that deal with the very basic questions of identity and practice as professionals” (p. 129). Multiple studies of admission criteria as predictors for success have been completed (Coleman, 2006; Ehrenfeld & Tabak, 2000; Higgins, 2005; Kyle, 2000; Maggio, White, Molstad, & Kher, 2005; Marshall, 2006; Rech & Harrington, 2000; Sandiford & Jackson, 2003; Wacks, 2005). In addition, studies on faculty teaching perceptions and philosophy have been conducted (Boone, Gartin, Buckingham, Odell, & Lawrence, 2002; Ehrenfeld & Tabak, 2000; Greer, 2007; Gularte, 2007; Hanson & Stenvig, 2008; McDaniels, 1983; O’Brian, 2001; Papes, 1998; Powell, 2006; Rossetti & Fox, 2009; West, 2008; Zinn, 1983). Little research, however, has focused on admission criteria and adult teaching philosophy of nurse education faculty as it relates to gatekeeping practices.

Admission criteria, as described in this study, were the total number of requirements used to select and accept qualified student nurses. These criteria were determined through the extraction of accessible online documents for each nursing program in the southeastern state under study. *Admission complexity* was defined as the total number of admission criteria along with multiple admission pathways. The higher the number of admission criteria, the more complex the admission system (Daft & Bradshaw, 1980). Admission criteria used for student selection is determined by nurse faculty (McNelis et al., 2010; Sandiford & Jackson, 2003). One query that remains

unclear is whether these faculty admissions decisions are influenced in any way by a philosophy of teaching (Zinn, 2004).

Gatekeeping may result in social injustice for ethnic groups (Greene, 2007; Karen, 1990; Kilgore, 2003). Gatekeeping in nursing education is not well examined and its effect on student nurse diversity through selective and complex faculty devised admission practices (Greene, 2007) remains elusive.

Problem Statement

Although nursing education seems a logical solution to rectify the shortage of registered nurses, nursing education has been unable to increase enrollment to ameliorate the shortage (American Association of Colleges of Nursing [AACN], 2007; National League for Nursing Accrediting Commission [NLNAC], 2008b). Instead of increasing enrollment, the number of student nurses admitted to nursing programs is limited due to a (a) lack of faculty, (b) lack of clinical sites for student nurse experiential learning, (c) lack of qualified applicants, (d) lack of institutional resources (SREB 2005, 2007, 2010), and (e) lack of adequate funds to hire faculty (SREB 2007, 2010). Unqualified students are easily identified through the implementation of basic admission criteria for gatekeeping. However, a more complex admission criterion, such as a weighted or point system admission selection process, is used to stratify qualified students for selection. This weighted or point system gatekeeping action limits qualified students access to nursing education and selects a particular type of student (Karen, 1990)

To present the landscape of student nurses, an examination of recent enrollment numbers proves useful. Recent information indicates the number of qualified students

denied admission to nursing programs has doubled. In the 2009/2010 school year, the AACN (2011) reported over 67,563 qualified students were denied admission to nurse education as compared to 30,709 denied admission in 2006/2007 school year (AACN, 2007). For nurse education programs in the southeastern state under study, the SREB (2010) reported 1,151 qualified students were denied admission the 2009/2010 school year. Additionally, the registered nursing workforce of the southeastern state under study is not ethnically diverse when compared to the general population (SREB, 2010).

The 2007 population estimates were 51.3% female and 66% European-American (U. S. Census Bureau, 2008b), while the student nurse population was reported as 90% female and 77% European-American (SREB, 2007). African-Americans account for 29% of the population for the southeastern state under study (U. S. Census Bureau, 2008b), but only 16% are enrolled in nursing programs (SREB, 2009a). This racial disparity in health care has been well documented (Bellack, 2005; Coffman, Rosenoff, & Grumbach, 2001), but not adequately studied in relationship to the gatekeeping effect on student selection. Research has been completed on minority student's perceived barriers in program (Amaro, Abriam-Yago & Yoder, 2006; Coffman, Rosenoff & Grumbach, 2001; Evans, 2008; Meder, 1997; Noone, 2008; Seago & Spetz, 2003) while minimal research is published on the ethnicity of the applicant pool. Trice and Foster (2008) reported a change in ethnic diversity from 2% to 25% after instituting an interview as an admission selection criterion for applicants.

The selection of the most qualified student likely to succeed in nursing education has evolved to a process whereby only students with the highest admission criteria (GPA,

class standing, and test scores) are admitted (Marsh, 2004). However, this selection process may disproportionately create a homogeneous group of students (Bellack, 2005). According to Bellack (2005) and Pacquiao (2007) academic preparation and reported differences in standardized testing places minority students at a disadvantage if high cognitive criteria are used for selection without regard to other noncognitive criteria. This gatekeeping selection process, whether intentional or unintentional, effectively closes the gate and limit access to nurse education. The effect of this gatekeeping action on the ethnic disparity in registered nurse graduates (SREB, 2007) and professional nursing (Health Resources and Services Administration [HRSA], 2008) remains unknown. Homogeneity in nursing hinders the ability of the nursing profession to provide competent nursing care (Pacquiao, 2007).

The National Advisory Council on Nurse Education and Practice (NACNEP, 2001) reported, “A culturally diverse workforce is essential to meeting the health care needs of the population” (p. 14). The ethnic disparity in registered nurse education in the southeastern state under study calls to question whether professional nursing provides culturally competent care to residents. The AACN, *Diversity Fact Sheet*, (2009) issued the following statement:

All national nursing organizations, the Federal Division of Nursing, hospital associations, nursing philanthropies, and other stakeholders within the health care community agree that recruitment of underrepresented groups into nursing is a priority for the nursing profession in the U. S. (Recognizing the Need section, para. 1)

Providing culturally competent health care to the population served is a health care interest of legislative and accreditation bodies (Calvillo et al., 2009). The federal and state governments mandate collection of ethnicity data for university enrollment, however applicant ethnicity remains unknown.

The relationship between student ethnicity and teaching philosophy proved difficult to examine in this study due to the inability to analyze the ethnicity data collected. As a result, the relationship between teaching philosophy and admission criteria were examined. More detail about this relationship is presented in chapter 4 and 5. Future research should be directed towards identifying what relationship exists between gatekeeping admission criteria and student nurse ethnicity.

Purpose of the Study

The purpose of this study was to evaluate gatekeeping admission practices of nursing education programs in a southeastern state and assess the relationship between faculty adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) and complex admission criteria used to limit qualified students to nurse education programs. For the purpose of this study, *gatekeeping* occurred when admission criteria were used to limit qualified student access (Karen, 1990) to a nurse education program through (a) a student ranking stratification system (Kilgore, 2003); (b) an extremely competitive or very competitive admission process (Kilgore, 2003); (c) a high regulatory agency influence on the admission criteria used (Gibbs & Blakely, 2000), and (d) specific admission criteria used to select out qualified students (Karen, 1990). Gatekeeping through the use of complex admission criteria may have a negative effect on the

characteristics of students admitted to nurse education programs through selective and complex faculty devised admission processes influenced by National Council Licensure Examination for Registered Nurses (NCLEX-RN), the State Board of Nursing, accreditation agencies (Gibbs & Blakely, 2000), and state legislature.

Nature of the Study

This correlational and descriptive study evaluated gatekeeping admission practices in nursing education in a southeastern state under study by assessing the relationship between complex admission criteria used to limit qualified students to nurse education programs and faculty adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) through Chi-square Lambda analysis using PASW 18 statistical software. Admission criteria were extracted and identified from Internet sources. The sum of admission criteria by program corresponding to each participant was entered manually in the PASW version 18 software. Identified admission criteria served to substantiate the level of complexity of student nurse admission through a quantifiable number and the implementation of a weighted point prioritized selection process. Complexity of admission criteria were determined by the total number of criteria used. The higher the number of admission requirements the more complex the system (Daft & Bradshaw, 1980). Complex admission, an ordinal variable, was coded as a 1 for a sum of 7 to 12 criteria, a 2 for a sum of 13 to 19 criteria, and a 3 for a sum of 20 to 25 criteria. No program used more than 25 criteria for admission selection. Faculty adult teaching philosophy (liberal, behaviorist, progressive, humanistic, or radical philosophy) was scored using the Philosophy of Adult Education Inventory (Zinn, 2004). The PAEI score

for each participant was determined using Zinn (2004) formula as computed using a Microsoft Excel software computational process. The philosophy score was a number between 15 and 105 (Zinn 1983, 1990, 2004). A strong agreement with a particular philosophy was associated with a score of 95 to 105 and a score of 15 to 25 indicated a strong disagreement (Zinn 1983, 1990, 2004). The highest philosophy score for each participant was identified and designated as the participant's primary philosophy. The primary PAEI was a categorical and a nominal variable coded as: 1 = liberal, 2 = behaviorist, 3 = progressive, 4 = humanistic and 5 = radical philosophy. The primary PAEI variable was used for statistical analysis.

Student diversity, influential admission factors, and gatekeeping data were collected using a researcher developed, validated, and pilot tested Admission and Diversity Survey. Survey respondents consisted of a purposeful sample of full-time registered nurse education faculty in the southeastern state who make decisions related to the use of admission criteria for student selection. Incomplete surveys were not included in the analysis.

Descriptive statistics were used to characterize gatekeeping in nursing education. Respondents were stratified into associate and baccalaureate degree groups for comparison. Comparative mean scores were used to determine if any significant differences existed between baccalaureate and associate nursing degree programs. Chi-square, Lambda correlational analysis, was used to determine if any significant relationships existed between complex admission criteria and primary teaching philosophy of participants.

A research question was planned: *What is the ethnic background of associate degree and baccalaureate degree student nurses currently enrolled in nursing programs in the southeastern state?* The data collected for student nurse applicant and enrollment ethnicity was carefully evaluated and deemed unreliable for further descriptive or correlational statistical analysis. A detailed account of the unreliability of this data is reported in chapter 4. Nurse education faculty was either unaware, unable to report accurately, or preferred not to report ethnicity data.

It was decided to delete this question and reduce the research questions of this study to four. The unreliability of ethnicity data also altered another question: *What relationships exist between reported ethnicity, admission criteria, type of nursing program and teaching philosophy?* This question was revised to: *What relationship exists between complex admission criteria and primary teaching philosophy by type of nursing program?* This revision best reflects the research questions used in the final analysis of this study.

Research Questions

The following research questions guided this research:

1. What admission criteria are used to screen applicants to associate and baccalaureate degree nursing programs in a southeastern state?
2. What adult teaching philosophy is most prevalent among full-time faculty teaching in associate and baccalaureate degree nursing programs in a southeastern state?

3. Is there a significant relationship between complex admission criteria and primary teaching philosophy by type of nursing program?

H_O: There is no significant relationship between complex admission criteria and primary teaching philosophy.

H_A: There is a significant relationship between complex admission criteria and primary teaching philosophy.

4. What gatekeeping activities influence the admission criterion used to select highly qualified student nurses?

Information gleaned from this study revealed a need for more research to evaluate student ethnicity and gatekeeping in nurse education in the southeastern state under study.

Chapter 2 provides background information on nursing education, describes the characteristics of nurse faculty and student nurses, discusses the theoretical constructs that guided this research, presents previous research findings related to the variables under study, and concludes with the research methodology and details related to survey development and online implementation for this study. A detailed methodology discussion is presented in chapter 3. Findings are presented in chapter 4; and recommendations are presented in chapter 5. Chapter 5 also promotes research to foster social change that supports social justice for all students seeking admission to nursing education, as well as guide further research on ethnicity as a social issue. Findings may fuel political action to evaluate the cause for racial disparity within nursing education. The theoretical framework of gatekeeping, adult teaching philosophy, complexity, and social justice clarifies this perspective to fully understand the intent of this study.

Theoretical Framework

Theoretical constructs of gatekeeping, complexity, adult teaching philosophy, and social justice guided this research. Gatekeeping controls access to limited resources (Greene, 2007; Karen, 1990; Kilgore, 2003). As these controls are integrated, nursing enrollment numbers are limited (AACN, 2007; NLN, 2009) making it possible for the admission process to become increasingly complex. Although the desired outcome of admission selection is the most qualified student nurse, other consequences may result from gatekeeping actions that reject qualified students and may contribute to an ethnic disparity among student nurses in the southeastern state under study. Adult teaching philosophy may influence faculty decision-making of selective admission criteria and other controls that stratify qualified candidates for admission. A full discussion of gatekeeping, followed by complexity theory, adult teaching philosophy, and social justice as theoretical constructs for this research.

Gatekeeping Theory

Gatekeeping as defined by Karen (1990) is “the process of developing and implementing criteria and practices that yields access to scarce resources” (p. 227). Karen developed a theoretical model of gatekeeping that included the following constructs: (a) an organizational field, (b) a classification struggle, (c) standard operating procedures, and (d) outcomes (pp. 233-236). This model of gatekeeping can be further explained through an admission selection process whereby the organizational field is the admission criteria; the classification struggle is minority admission and regulations affecting admission practices; the standard operating procedure is the process used to

select students; and the outcome is student selection. Since little is known about gatekeeping in nurse education; social work literature is used to present this concept.

Gibbs and Blakely (2000) described *gatekeeping* practice in social work education as performed to manage enrollment numbers and meet accreditation standards. Grade point average (GPA), felony convictions, abusive behavior, drug audits, nonrecovering alcoholism, mental illness, and mental incompetence are admission gatekeeping controls for social work (Royse, 2000). According to Madden (2000), gatekeeping is “the responsibility [of faculty] to guard the entrance to the profession” (p. 147) and protect the public from incompetent practitioners. Royse (2000) noted that, “The best argument for gatekeeping and maintaining firm, uncompromising standards is that without them it is difficult to protect the vulnerable sections of society from dishonest, impaired, incompetent students” (p. 25). According to Klein (2006), registered nurse faculty is charged to protect the public through the education of competent nurses.

According to Royse (2000) a fine line exists when gatekeeping actions include students who meet requirements for admission but resources are limited. In the case of nurse education, this includes the exclusion of qualified students. According to Gibbs (2000), scarce resources influence enrollment caps to screen out students and selectively close the gate to admission. In the end, gatekeeping effectively stratifies qualified students who are denied admission to nursing education.

Two challenges exist for faculty to implement gatekeeping practices. First, is to develop “fair, valid and reliable criteria that can select, from any group of students, those who demonstrate the greatest potential to become professional social workers” (Gibbs,

2000, p. 166); and second, to establish “effective and fair mechanisms and processes for carrying out gatekeeping functions” (Gibbs, 2000, p. 166). Greene (2007) described gatekeeping as a process that can manifest as a disparate action. This gatekeeping is based on racial, gender specific and cultural heritage, with a foundation based on stratifying social relationships.

According to Greene, a gatekeeper can be an administrator, teacher, or administrative personnel who, knowingly or unknowingly, hinder student access to education. Karen (1990) and Fearing (1996) argued that no college or university actually has a good process in place to select the student most capable of success, and may, in fact, be selecting a particular type of student. Gatekeeping, as a process of selection, exists in registered nurse education in the southeastern state under study. This gatekeeping process for student selection to nursing education may contribute to a more homogeneous selection of European-American students. In order to determine if gatekeeping has an adverse effect on ethnicity of students, Bracy (2000) recommended comparing the proportion of minority group enrollment to that of the general population. For this study, gatekeeping is interpreted as the implementation of admission criteria that serves to control or limit qualified student nurses access to nursing education through the use of highly selective and complex admission practices as determined by faculty. Complexity theory is presented to describe this complexity of admission criteria used.

Complexity Theory

Growing interest suggests that complex system theory is relevant to registered nurse practice (Clancy, Effken, & Pesut, 2008). It is a theoretical framework important to

the admission process and procedure used for the selection of student nurses. *Complexity* is defined by the structure or order of systems (McMillan, 2004). Moody, Horton-Deutsch, and Pesut (2007) defined complexity as a dynamic interaction of “unpredictability, change, risk, and interconnectedness” (p. 320). Clancy et al. (2008) define interconnectedness as a system of highly connected and hierarchically structured materials, networks, or people. Eve, Horsfall, and Lee (1997) differed from Moody et al. (2007) by defining complexity as a single concept of “social non-predictability” (p. 4). Complexity is distinguished by the number of actions, parts, programs, or subsystems (Daft & Bradshaw, 1980) or by multiple interconnections (Eisner, 2005) within a system. The more variable the arrangement is; the more complex the system (Eve et al., 1997). Eisner (2005) stated, “Systems tend to become more complex with each new version despite our occasional interest in simplification” (p. 18). A system that increases in size and function evolves into a complex system with multiple boundaries of interconnectedness, making it difficult to manage and control (Eisner, 2005). However, increasing control is placed on an organizational system to maintain the homeostasis (equilibrium) but may result in gatekeeping actions with untoward effects. Nurse education faculty make decisions about which admission criteria to use for qualified student selection and faculty’s teaching philosophy may influence these decisions.

Adult Teaching Philosophy

Zinn (1990) noted that attitudes and beliefs of teachers may have an influence on policy and decision making. Nursing faculty make decisions and take action based on personal beliefs and life experiences, recommendations from other nursing faculty, and

program evaluation processes (McNelis et al., 2010; Siktberg & Dillard, 2001).

According to Zinn (1990), there are several benefits to identifying one's own personal teaching philosophy. These benefits include: improved decision making, recognition and resolution of internal conflict, and greater faculty awareness of teacher–learner relationships. In 1983, Zinn developed and field tested the Philosophy of Adult Education (PAEI) inventory as a means to “begin a process of philosophical inquiry and reflection on your [faculty] beliefs and actions” (p. 52).

The PAEI is based on five adult teaching philosophies: liberal, behaviorist, progressive, humanistic, or radical (Zinn, 1983, p. 47). Zinn stressed that all five philosophies are reasonable and accepted teaching practice. No particular adult teaching philosophy is better than another (Zinn, 2004). In fact, there is some overlap among the philosophies. According to Zinn (1990), “Typical overlapping combinations are liberal and behaviorist or progressive and humanistic” (p. 53). Humanistic and radical philosophies may also have equally high scores as each are somewhat similar. However, liberal and radical philosophies are very dissimilar so scores should exhibit large variability. When the liberal philosophy score is high; the radical philosophy score is low. Powell (2006) viewed liberal and behaviorist adult teaching philosophies as teacher-centered styles of instruction, whereas the humanistic and radical philosophies were considered as learner-centered styles of instruction. The liberal and behaviorist philosophies are more traditional instruction; while the humanistic and radical teaching philosophies are more facilitative instruction. The radical adult teaching philosophy has been associated with Freire's pedagogy of the oppressed model of education based on the

respect of the learner and an open dialogue between the teacher and student (Powell, 2006). Faculty make decisions based on their philosophy of teaching (Nuckles, 2000; Zinn 1983, 1990, 2004). These decisions may be a response to outcomes or events in order to maintain homeostasis or gain more control over a system. With each new additional process implemented, a new version is created gaining more control, but the accumulation of multiple control adds to the overall complexity of the system (Daft & Bradshaw, 1980). This complexity may contribute to gatekeeping actions that pose access barriers for minority students.

Social Justice

Social groups tend to move toward a predefined arrangement. Ethnic behaviors are the “norms of the collective” (Gharajedaghi, 2006, p. 32). Decision makers within the organizational membership establish norms. The development of cultural codes, organizational control, and self-maintenance produce predictable conduct. According to Doyle and George (2008), admission policies must be fair and equitable to promote social justice and to afford all students an equal chance of access to an education. According to Scarry (1999), nursing curricula maintains a status quo, creating students who conform to a prescribed registered nurse culture. On the other hand, nursing education can empower students to overcome experienced oppressive behaviors. To accomplish the latter, nursing education needs to embrace social change that liberates nurse education from years of forced “oppressive socialization” (Scarry, 1999, p. 423). Factors common to oppression are: “dominant group defined norms, institutional or economic held power, and threat of violence or violence, or target group invisibility” (Sensoy & DiAngelo,

2009, p. 345). Ethnic norms may make group members feel powerless. This powerlessness to define one's role results in anxiety, frustration, and fear (Sensoy & DiAngelo, 2009). Imposed fear can be considered oppressive, in the context of forced conformity of members, and an obstructive force to social change (Gharajedaghi, 2006).

According to Freire (1993), in a hierarchical educational system, the oppressed group is powerless, becomes static and submissive under dominant group pressures, and eventually conforms to dominant group behaviors. Freire (1993) described the oppressive nature of a teaching philosophy in the following ways:

- The teacher teaches and the students are taught;
- The teacher knows everything and the students know nothing;
- The teacher thinks and the students are thought about;
- The teacher talks and the student's listen-meekly;
- The teacher disciplines and the students are disciplined;
- The teacher chooses and enforces his choice, and the students comply;
- The teacher acts and the students have the illusion of acting through the action of the teacher;
- The teacher chooses the program content, and the students (who were not consulted) adapt to it;
- The teacher confuses the authority of knowledge with his or her own professional authority, which she and he sets in opposition to the freedom of the students;
- The teacher is the subject of the learning process, while the pupils are mere objects. (p. 73)

In this philosophy of teaching, the student takes a very passive role and continually adapts to the education system. According to Freire, instruction should involve active student learning. Freire stated, “to teach is not *to transfer* knowledge but to create possibilities for the production or construction of knowledge” (p. 30). Freire’s philosophy has been associated with radical adult teaching philosophy (Powell, 2006; Zinn, 1983, 1990, 2004). Through discovery and exposure of cultural domination behaviors or actions, oppressive behavior is confronted (Freire, 1993) and action can be taken to liberate from oppression. This study collected information to describe the characteristics of gatekeeping in nursing education. Gatekeeping may manifest in a negative way resulting in racial disparity. It also sought to determine if faculty teaching philosophy had a relationship with complex admission criteria. Operational definitions used in this study are presented next.

Operational Definitions

The purpose of this study was to evaluate gatekeeping admission practices of nursing education programs in the southeastern state under study and assess the relationship between faculty adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) and complex admission criteria used to limit qualified students to nurse education programs. To understand these variables and other terminology related to this study the following operational definitions were used:

Accessibility: an applicant’s ability to meet predetermined admission requirements to be selected and permitted to enroll in courses (Boezeroy & Vossensteyn, 1999).

Affordability: the financial ability of the student to pay the costs of higher education (Boezeroy & Vossensteyn, 1999).

Administrator: an individual who administers nursing programs (deans, directors, and/or chairs) as well as teaches in nursing curriculum, who holds a Masters in Nursing or higher degree and meets State Board of Nursing qualifications to administer programs (American Nurses Association, 2009).

Associate degree nursing (ADN): a 2-year community college or vocational education degree program that prepares students for registered nursing entry level practice (Bowman, 1992).

Baccalaureate nursing program (BSN): a 4-year university program that prepares students for registered nursing entry-level practice (Bowman, 1992).

Complex admission criteria: the number of admission criteria used, the number of steps or levels in the admission process and other weighted or ranking systems included in an admission procedure (Daft & Bradshaw, 1980).

Diversity: a proportional mix of gender race, and culture, of a group when compared to the general public (Madden, 2000).

Ethnic diversity: the physical features that distinguish groups of individuals (Sitzman, 2007).

Faculty adult teaching philosophy: the attitudes and beliefs of teachers that influence policy decisions about education (Zinn, 1990).

Gatekeeping: “the process of developing and implementing criteria and practices that yield access to scarce resources” (Karen, 1990, p. 227).

Higher education barriers: elements acknowledged in the literature that encumbers a student either with access to or success in achieving an educational goal (Bowman, 1992).

Registered nurse admission criteria: predetermined requirements by university nursing administrators and faculty that a student must achieve to be able to apply and be selected to a nursing program (Seago & Spetz, 2005).

Nurse faculty: an instructor or professor, licensed registered nurse, holding a Masters in Nursing Degree or higher who meet State Board of Nursing requirements to teach nursing curriculum in associate or baccalaureate degree nursing programs (Bowman, 1992).

Minority students: those students with an ethnic heritage that is not European-American and not female (Seago & Spetz, 2003).

Oppression: “Any situation in which ‘A’ objectively exploits ‘B’ or hinders his and her pursuit of self-affirmation as a responsible person” (Freire, 1993, p. 55).

Social justice: equal access and opportunity for all qualified individuals (Doyle & George, 2008).

Selectivity: the process used to determine students chosen to a higher education program (Boezeroy & Vossensteyn, 1999).

Assumptions, Limitations, Scope, and Delimitations

To complete this study, several assumptions were considered to be true, but lacked actual verification. Limitations present possible weaknesses or threats to the rigor

of this study (Creswell, 2009). The scope of the study outlines the extent of the research while delimitations further define and clarify the focus.

Assumptions

The following assumptions were made in this study. Nurse education is a complex system. Nurse faculty possesses a teaching philosophy that influences decisions about education policies, admission criteria, and nursing program requirements. A hierarchical system exists in registered nurse education where the nursing faculty is superior to the student. Full-time faculty is aware of the ethnic mix of student nurses enrolled in nursing programs.

Limitations

This study was a nonexperimental research design (Creswell, 2009; Johnson & Christensen, 2004), and as such, lacks the scientific rigor to provide empirical evidence of causation (Cook & Cook, 2008). The design of this study used—a cross-sectional, descriptive, correlational method with purposive sampling—limiting generalizability to other populations (Johnson & Christensen, 2004). Threats to the validity and reliability of the measurement tool may exist. Other confounding variables may be present that are not yet realized and may influence the results of the study. There could be a narrow variation in faculty adult teaching philosophy scores that no preferred teaching philosophy is identified. Admission criteria posted on the Internet may not be current or maybe in the process of revision during access and download. Recent faculty professional development programs may influence and change faculty perceptions of adult teaching philosophy during this study. Nonrespondents may have different views

but were not included in the study. Surveys yield low response rates, which limit the reliability and validity of findings (Fink, 2006). Low participant responses influence the data analysis and reliability of the results.

Scope and Delimitations

This study used purposive sampling of baccalaureate and associate degree full-time nurse education faculty teaching in 27 nursing education programs in a southeastern state. Faculty teaching in LPN programs, adjunct faculty, part-time faculty, and faculty not involved with decisions related to admission requirements were excluded. Students were excluded. The study examined teaching philosophy of full-time faculty and any relationship to admission criteria. The PAEI, an instrument with established validity and reliability, was selected to measure adult teaching philosophy of faculty. Permission to use the PAEI was obtained from Dr Lorraine Zinn (Appendix A). The PAEI is discussed in greater detail in chapter 3. Admission review was limited to the criteria used in the selection and enrollment of student nurses. Retention or graduation rates of students were beyond the scope of this study.

Significance of the Study

A crisis in health care is imminent as the national need for registered nurses is expected to exceed more than a half a million positions within the next six years (Dohm & Shniper, 2007). The registered nursing profession is plunging deeper into a nursing shortage instead of rising above it. Future demands on health care by the “baby boomer generation” may serve to increase the severity of this shortage. The National Institute on Aging (NIA, 2006) reported that the demand for health care will continue to increase as

the national population continues to age. In 2006, the fastest growing age group was those age 85 years and older (NIA, 2006). In 2010, Mauk reported centenarians as the fastest age group. Chronic disease and disability is associated with aging and nursing care is central to the health care burden of this group. However, as the population ages, so do nurse faculty within the southeastern state under study.

The NLN (2011c) report listed 63% of faculty between age 46 to 60 years for all academic positions; 30% age 60 years and older; and 6% age 30 to 45 years; fewer than 1% are younger than age 30 years. Enrolled student nurses are nontraditional and older students. In 2007, 52% of the student nurses were over the age of 30 (NLN, 2009, Student Demographics section, para. 4). Nursing as a professional collective continues to age. In spite of these data, nursing education continues to limit enrollment (AACN, 2007; NLN, 2009), leaving the nation with a fearful future prospect of an even greater registered nurse shortage in the years to come.

Nurse education is being called upon to rectify the nursing shortage (AACN, 2011) by increasing the number of graduates. Nurse education programs have described efforts to increase enrollment, including multiple entry points (Auerbach, Buerhaus, & Staiger, 2007; Muse, 1993; Rogers, 2009), accelerated programs (Lockwood, Walker, & Tilley, 2009), student retention (Jefferys, 2004), and competitive admission criteria to select students most likely to succeed (Marsh, 2004). In the latter, only students with high cognitive achievement (high GPA, high school class standing, and standardized test scores) are admitted to nursing programs. The effect of gatekeeping on the ethnicity of students remains unknown.

Nursing faculty is empowered to establish and enforce admission criteria for the selection of students to nurse education programs. This selection process has become an admission system comprised of multiple entrance criteria (Roberts, 2002); and rank ordered or weighted point calculation (Coleman, 2006) used to select students. This selection process is limited—due in part to nursing faculty shortage (Falk, 2007; Larson, 2006; SREB, 2007), available clinical placement opportunities (SREB, 2007), and regulation agencies (Kyle, 2000). In 1977, Morgan identified five admission criteria used to select students. In 2008, over thirty years later, this admission process evolved to 22 distinct admission criteria along with weighted, leveling, or ranked admission for associate and baccalaureate nursing programs in the southeastern state under study.

In 2008, the NLN reported that over half of the nursing programs earned a distinction of being *highly selective* (only a third of all applicants were selected), and *applicant discouragement* was suspect as being the cause for decreased nursing applications. Of all associate degree programs participating in the NLN national survey, 67% of associate degree programs reported being highly selective for student enrollment, while only 43% of the BSN programs were highly selective (NLN, 2009). According to the NLN (2009), approximately 40% of all qualified applicants were refused admission to nurse education programs for the 2006/2007 school year. For baccalaureate degree programs the same year, the AACN (2007) reported 30,709 qualified student nurse applicants were refused admission. Three years later, the AACN (2011) reported 67,563 qualified student nurse applicants were refused admission. Qualified student nurse rejection to a nurse education program has doubled in the past three years and the

outcome of this rejection process on ethnic diversity remains unknown. Admission criteria, as determined by faculty, are used for gatekeeping purposes to control qualified student access to nursing education.

Although some evidence indicates that admission criteria is based on a potential for graduation success (Ehrenfeld & Tabak, 2000; Higgins, 2005; Kyle, 2000; Maggio et al., 2005; Sandiford & Jackson, 2003; Wacks, 2005; Yu, DiGangi, Jannash-Pennell, Lo, & Kaprolet, 2007), other studies do not (Kyle, 2000; Marshall, 2006; Rech & Harrington, 2000). Nichol (2003) asserted that “the pool of undergraduates from which we choose is badly skewed toward the economic privileged” (p. 22). What remains unknown is the relationship of faculty teaching philosophy on admission criteria used as gatekeeping for student selection and enrollment.

Within the next 20 years the general minority population is expected to increase exemplifying the need for a culturally diverse nursing workforce (National Institute on Aging [NIA], 2006). The Sullivan Commission (2004) reported

Diversity is a critical part of the mission of health care and the national challenge of preparing our nation’s future workforce. America’s success in improving health status and advancing the health sciences is wholly dependent on the contributions of people from a myriad of diverse backgrounds and cultures, including Latinos, Native Americans, African-Americans, European-Americans, and Asian-Americans. The lack of diversity is a key barrier to ensuring a culturally competent health care system at the provider, organizational, and system levels. It diminishes our nation’s capacity to eliminate racial and ethnic

health disparities and compromises our national capacity to advance the health sciences. (p. 28)

Ethnic disparity in the nursing profession is problematic (Crow, Handley, Morrison, & Sheldon, 2004; Grossman et al., 1998; Seago & Spetz, 2003). Limited research is focused on minority student nurses and academic success (Evans, 2008; Uyehara, Magnussen, Itano, & Zhang, 2007). Ethnic disparity exists in registered nursing programs in the southeastern state under study (SREB, 2007).

Grossman et al. (1998) reported that minorities were not recruited and those minority students admitted to a nursing education perceived a nonsupportive learning environment. Although a cultural disparity was identified in Grossman's et al. (1998) study, no cause, origin, or plan of action was reported to rectify the problem. Admission criteria for student nurse selection have not been fully studied in relationship to the ethnic characteristics of registered nurses. It becomes increasingly important to study nurse education to include possible relationships between the concepts of student diversity, adult teaching philosophy, admission criteria, and gatekeeping.

For the purpose of this study, gatekeeping occurred when qualified students are denied access to a nursing education by means of complex admission criteria. Gatekeeping may have effects on student diversity through faculty devised complex admission practices. Findings may highlight a need for social change. This social change is based on an appreciation of the diversity of each individual's ethnic background, value, interconnectedness, and interrelationships (Moody et al., 2007).

Professional nursing is charged with providing competent care (Klein, 2006) not only for minorities but for the whole population receiving health care within the southeastern state under study. Grumbach and Mendoza (2008) highlighted the need for diversity in health care professions as a crucial public policy concern. This study assessed the current situation of gatekeeping in nursing education of a southeastern state and performed an evaluation of reported data to determine if a need exists for social change.

Summary

Registered nurses and nurse education are in high demand. According to Brady (2007), increased public understanding and seriousness of the nursing shortage has resulted in “a surplus of applicants” (p. 190). If this surplus is combined with projections of registered nursing as the largest job growth industry and profession (Dohm & Shniper, 2007; Larson, 2006), then the demand would exceed the supply. Although public demand for nurses is increasing, nursing programs have inadequate numbers of faculty, fiscal, and environmental resources, as well as limited clinical placements (SREB 2005, 2007, 2010), to admit all qualified applicants. As a result, enrollment to nursing programs is controlled (AACN 2007; NLN, 2008) through gatekeeping actions-the use of strict guidelines and admission criteria to limit access to scarce resources (Karen, 1990). As faculty and admission personnel attempt to select the most qualified student capable of program success, gatekeeping may have an adverse effect on the ethnic diversity of registered nurses within the southeastern state under study. Gatekeeping selects a “particular type of student” (Karen, 1990, p. 227), which may result in a homogeneous

group of female, European-Americans. The relationship of adult teaching philosophy of faculty, admission criteria, and ethnic diversity in association with possible gatekeeping actions must be studied, in order to understand the ethnic disparity in nursing and the nursing shortage.

A review of the literature in chapter 2 is followed by a description of the research methods to collect data in chapter 3. Chapter 4 presents the data findings of a descriptive and correlational analysis. Chapter 5 presents an in-depth critical analysis of the results, recommendations for future research, and a call for social change.

Chapter 2: Literature Review

Introduction

The purpose of this study was to evaluate gatekeeping admission practices of nursing education programs in a southeastern state and assess the relationship between faculty adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) and complex admission criteria used to limit qualified students to nurse education programs. Chapter 1 highlighted gatekeeping and the possible untoward outcomes gatekeeping may have on student nurse ethnicity. Gatekeeping practices limit student access to a nurse education due to scarce resources (Karen, 1990). Gatekeeping is not a well-researched concept in nursing education. As a result, gatekeeping theory is presented in this literature review as published from social work literature.

To further understand the purpose of this study, a comprehensive literature review is presented with an overview of the literature search process. In the paragraphs that follow, an overview of higher education within a southeastern state is presented, followed by a background of nursing education and a description of nurse education faculty and student nurses. Adult learning principles—including concepts of andragogy and pedagogy—as well as adult teaching philosophy are presented. A full description of the PAEI, an instrument used to measure five adult teaching philosophies (Zinn, 2004) is discussed. Subsequently faculty decision-making, complex systems and the quota control process that influences admission criteria in the selection of student nurses are discussed. Following the discussion on quota control, a detailed presentation of associate and baccalaureate program admission criteria as determined and implemented by faculty is

presented. Consequently, in this review, ethnic diversity in nursing education is discussed as it relates to social justice. Diversity and social justice are core elements of nursing curriculum requirements (AACN, 2008b) to promote culturally competent health care. In order to benefit society and establish fair and equitable treatment, ethnic diversity and social justice in nurse education suggests that student nurse characteristics should represent the general population (AACN 2008a; NLN 2009). This discussion concludes with literature that supports the research methodology and an overview of the factors that influence the development and implementation of an online survey.

Literature Search Criteria

Literature review pertaining to gatekeeping was conducted by a library online database resources EBSCO search (Academic Search Premier, CINAHL Plus with full text, Education Research Complete, Educational Resource Information Center, PsychARTICLES, PsychINFO, SocINDEX and ProQuest dissertation databases) using the key words *gatekeeping, nursing, admission, criteria, selective, selection, and higher education*. This effort did not locate primary research related to gatekeeping theory in nursing admission or nursing education. Literature related to gatekeeping was found for second-degree seeking students (Hegge & Hallman, 2008); education in general (Greene, 2007; Karen, 1990; Kilgore, 2003; Rech & Harrington, 2000); and social work (Cheng & Tang, 2008; Corra & Willer, 2002; Gibbs & Blakely, 2000; Moore & Urwin, 1991).

The literature review was extended to include ethnic diversity to examine the selection and use of nursing admission criteria for this group. The literature review yielded: editorials on the need for diversity in nursing (Bellack, 2005; Milone-Nuzzo,

2007), educational innovations related to diversity in nursing education (Noone, 2008; Noone, Carmichael, Carmichael, & Chiba, 2007; Underwood, 2006), diversity in nursing education (Evans, 2008; Kennedy, Fisher, Fontaine, & Martin-Holland, 2008; Grossman et al., 1998; Pacquiao, 2007; Seago & Spetz, 2003; Trice & Foster, 2008), barriers to the success of minority students (Amaro, Abriam-Yago, & Yoder, 2006; Meder, 1997), ethnic diversity and the NCLEX-RN[®] examination (Sitzman, 2007), as well as workforce ethnic diversity (Crow et al., 2004). The literature search was broadened to include related disciplines and admission requirements on diversity using keywords *medical school*, *diversity*, and *admission*. This search yielded three relevant articles (Fischbach & Hunt, 1999; Grumbach & Mendoza, 2008; Stoddard, 2005) for this study.

Another search was completed to identify related articles on complex systems in nursing education using key words *complex*, *complex systems*, *nursing*, *admission*, *criteria*, *selection*, *education*, and *higher education*. Several articles related to complexity in organizations (Anderson, 1999; Anderson & McDaniel, 1992; Anderson, Meyer, Eisenhardt, Charley, & Pettigrew, 1999; Clancy & Delaney, 2005; Clancy et al., 2008) were found; however, none were related to nursing education. To better understand nursing education programs, a full description of higher education and nursing education within the southeastern state under study is presented.

Higher Education in a Southeastern State

There are 84 higher education institutions comprised of two private, two independent, three research, four University of South Carolina regional campuses, 10 comprehensive teaching, 16 technical colleges, 23 independent senior institutions, and 24

out of state degree granting institutions (South Carolina Commission on Higher Education, 2010). The total student enrollment for 2009 was 200,204 for public institutions and 39,236 for independent institutions (South Carolina Commission on Higher Education, 2010, p. 18).

The Technical College System in the southeastern state under study consists of 16 technical colleges offering certificates and associate degrees (Russell, 2006). Of these technical colleges, 14 (87.5%) offer an associate degree in nursing. The higher education system of the southeastern state under study is complex with 27 institutions (13 baccalaureate and 14 associate degree granting institutions) offering a nurse education program (South Carolina Labor and Licensing Board, 2009). Registered nurse education is also complex, offering multiple programs and different education levels.

Registered Nurse Education

Three educational programs are available to educate students as a registered nurse: a baccalaureate degree, an associate degree, or a diploma-nursing program (U.S. Bureau of Labor Statistics, 2007). According to West et al. (2007), the first training program for registered nursing was a three-year hospital based diploma program. West et al. (2007) described diploma programs as an exploitive measure by hospital administrators to obtain a labor force under the auspices of registered nurse education. Diploma programs declined following the 1965 American Nurses Association declaration that a four-year baccalaureate degree (BS or BSN) was the entry-level education for registered nurse practice (Donley & Flaherty, 2002). In 2006, only 62 (4%) diploma programs existed nationally (National League for Nursing, 2007). A nurse graduate with

a diploma is eligible to sit for the National Council Licensure Examination for Registered Nurses (NCLEX-RN[®]) test. Diploma registered nurse education programs are not offered in the southeastern state under study.

According to Krampitz (1983), college-based nursing programs existed in 1899. The baccalaureate degree nursing program began with the establishment of the Association of Collegiate Schools of Nursing comprised of a membership of seven higher education institutions. The baccalaureate nursing education (BS or BSN) is a 4-year degree program (U. S. Bureau of Labor Statistics, 2007). The nursing graduate with a BS or BSN degree is eligible to sit for the NCLEX-RN test. The baccalaureate degree is recommended as the entry-level education for practice by the American Nurses Association. The Institute of Medicine (2010) recommended an increase in the number of baccalaureate prepared nurses.

In the 1950s, a 2-year associate degree program was created as a response to alleviate the nursing shortage at that time. The number of nursing graduates increased when the time-to-graduate for registered nurses was reduced to two years (Haase, 1990). By 1983, approximately 50% of all registered nurses were associate degree graduates (Haase, 1990). Associate degree registered nursing education programs continue to outnumber baccalaureate nursing programs nationally (U. S. Bureau of Labor Statistics, 2007). An associate degree registered nursing graduate is eligible to sit for the NCLEX-RN[®] test.

Nursing education continues to respond to the nursing shortage in a traditional way, to make more nurses faster by implementing new programs, such as fast-track and

advanced-entry programs (West et al., 2007). This response to the nursing shortage—by increasing the number of nurses—is paradoxical, as nursing education continues to limit enrollment and refuse admission to qualified students (AACN 2007; NLN, 2009). The characteristics of nurse faculty, especially age, may contribute to other aspects related to the nursing shortage.

Characteristics of Full-Time Faculty

The AACN (2011) reported the average age of doctoral-prepared full-professors as age 60.5 years, associate professors as age 57.1 years, and assistant professors as age 51.5 years. Associate degree nursing full-professors were younger (age 57.7 years), associate professors as age 56.4 years, and assistant professors as age 50.9 years. The NLN (2011c) report listed 63% of faculty between age 46 to 60 years for all academic positions; 30% of the faculty age 60 years and older, 6% between age 30 and 45 years, and less than 1% under the age of 30 years. With 30% of the faculty nearing retirement age, it is reasonable to suggest an even greater shortage of faculty will exist in the future. The diversity of faculty is also a cause of concern.

The NLN report (2011d) listed minority faculty as 7% African-American, 3% Hispanic, 2% Asian, and less than 1% American Indian nationally. The Health Resources and Services Administration (HRSA, 2008) report listed faculty ethnicity as 83% European-American, 5.4% African American, 5.5% Asian, and 3.6% Hispanic nationally. Grossman et al. (1998) reported national faculty ethnicity as 89.5% European-American, 8.9% African-American, and 2.16% Hispanic. Within the southeast state under study, the SREB (2010) reported European-American ethnicity as 86% and

African-American ethnicity as 13.2% for the 2009/2010 school year. Over the span of ten years the ethnicity of faculty does not appear to have made any gains toward ethnic diversity, but a gain has occurred between genders. In 2008, a male gender gain from 6.2% in 2004 to 9.6% was reported for registered nurses (HRSA, 2008). Professional nursing faces even greater challenges as the IOM (2010) report recommended doubling the number of doctoral prepared faculty within the next eight years. However, gains have been made with faculty academic achievement.

The NLN (2011e) survey reported academic positions of 46% doctoral prepared professors, 50% associate professor, and 27% assistant professors nationally. Master's level academic credential was highest at the instructor level (77%) and at the assistant professor level (72%). As the academic rank increased the number of master's prepared faculty decreased to 49% at the associate professor level and 52% at the professor level. Nationally, 25% of full-time nurse faculty were doctoral prepared, 67% masters prepared, and 7% baccalaureate prepared (NLN, 2011e). Lower doctoral academic preparation (19%) was reported for full-time faculty working in the southeastern state under study (SREB, 2010). A master's level education is the highest degree required by law to teach nurse education in the southeastern state under study (South Carolina Legislature, 2010). Faculty determines admission criteria for student selection and may influence the ethnic characteristics of student nurses enrolled in nursing programs.

Characteristics of Student Nurses

In 2007, within the southeastern state under study, student nurse demographics were reported as 87% female, 70% European-American, and 17% African-American

(SREB, 2007). Student nurse enrollment ethnicity, during this same time period, was reported as 89.8% female, 77.3% European-American (SREB, 2007). In 2007, the general population estimates were 51.3% female, 66% European American, and 29% African-American (United States Census Bureau, 2008b). During this time period, only 17% African-Americans were enrolled in nursing programs (SREB, 2007).

In 2005, the Technical College System Office in the southeastern state under study, reported minorities representing 36% of all enrolled associate degree seeking students. During this same period, 19% African-American, 3% Asian, 5% Hispanic, 1% Native American Indian/Alaskan, and 3% other race were enrolled in associate degree programs (SREB, 2007). The baccalaureate programs in the southeastern state under study, during this same period, reported a slightly higher African-American enrollment at 20%, but a lower 1.67% Asian, 1.03% Hispanic, and 0.41% Native American Indian/Alaskan enrollment, with 1.76% reported as other (SREB, 2007). Crow et al. (2004) reported nurse education graduates nationally were 91.34% female and 81% European-American, while during this same period, student nurse enrollment in the southeastern state under study was higher at 76.49% European-American. The SREB (2005, 2007) reported a 2% decrease in African-American student nurse enrollment from 2005 to 2007, with a 2% increase in European-American student nurse enrollment. Ethnic diversity changes over a four-year time period when associate and baccalaureate degree programs are compared (Table 1 and 2).

Table 1

Student Nurse Diversity in Associate Degree Programs for the Southeastern State in Study

| Year | European-American | African-American | Hispanic | Asian | American Indian | Other |
|------|-------------------|------------------|----------|-------|-----------------|-------|
| 2004 | 73.62% | 18.33% | 0.74% | 1.17% | 0.31% | 5.48% |
| 2005 | 77.13% | 18.92% | 1.1% | 1.3% | 0.5% | 1.05% |
| 2006 | 79.91% | 16.01% | 1.16% | 1.89% | 0.0% | 1.02% |
| 2007 | 75.14% | 19.91% | 1.25% | 1.64% | 0.6% | 1.46% |

Note: Adapted with permission from “Annual Survey Results” by the Southern Regional Education Board, 2005, 2006, 2007, 2009, Retrieved from <http://www.sreb.org/programs/nursing/presentationindex.asp>. Copyright 1999 by the Southern Regional Education Board.

Table 2

Student Nurse Diversity in Baccalaureate Degree Programs for the Southeastern State in Study

| Year | European-American | African-American | Hispanic | Asian | American Indian | Other |
|------|-------------------|------------------|----------|-------|-----------------|-------|
| 2004 | 80.37% | 14.98% | 0.83% | 1.50% | 0.25% | 2.08% |
| 2005 | 72.35% | 21.50% | 0.92% | 2.19% | 0.28% | 2.76% |
| 2006 | 84.80% | 9.36% | 1.36% | 1.56% | 0.19% | 2.73% |
| 2007 | 81.03% | 11.98% | 1.19% | 2.01% | 0% | 3.79% |

Note: Adapted with permission from “Annual Survey Results” by the Southern Regional Education Board, 2005, 2006, 2007, 2009, Retrieved from <http://www.sreb.org/programs/nursing/presentationindex.asp>. Copyright 1999 by the Southern Regional Education Board.

This ethnic disparity remains elusive and highlights the need to evaluate gatekeeping actions and possible relationships that exist between admission criteria and faculty adult teaching philosophy for associate degree and baccalaureate degree programs. As adult learners, student nurses are influenced by adult learning principles.

Adult Learning Principles

According to Ozuah (2005), adult learning theory can be traced to the 1800s and remained dormant until Lindeman’s writings in the 1920s. Later, Knowles (1990) was associated with adult learning theory. Written works (Elias & Merriam, 2005; Ozuah,

2005; Powell, 2006) credit Knowles with coining the term *andragogy*, defined as, “the art and science of helping adults learn” (Knowles, 1990, p. 54). However, Knowles (1990) explained exposure “to the term *andragogy* by a Yugoslavian adult educator ... and it [andragogy] seemed ... to be a more adequate organizing concept of adult learning theory” (p. 54). Principles of andragogy use a learner-centered approach to education and promote independent and self-directed learning (Powell, 2006).

Andragogy and Pedagogy

According to Powell (2006), *andragogy* and *pedagogy* are terms used to describe teaching methodologies. Andragogy (stemming from the Greek word *andra*, meaning man) is learner-centered, where the instructor is a facilitator of independent learning (Knowles, 1990). Andragogy teaching principles have application in adult education (Elias & Merriam, 2005; Knowles, 1990; Ozuah, 2005; Powell, 2006). “The term pedagogy (derived from the Greek words, *paid*, meaning *child*, and *agogus*, meaning ‘leader of’) translates literally into the art and science of teaching children” (Knowles, 1990, p. 54).

According to Ozuah (2005), origins of pedagogical teaching began in Europe during the seventh century and all levels of United States education remains continuous in this model. Pedagogical principles are teacher-centered and more applicable to the teaching of children (Ozuah, 2005; Powell, 2006). Pedagogical principles may have an application to adult education. It is when a pedagogical approach is sustained and the learner is held captive to remain in a learning dependent role that pedagogy may not be appropriate for adult learners (Ozuah, 2005).

According to Forrest and Peterson (2006), pedagogical teaching principles are inappropriate for adult learners and nurse education curricula. For a more appropriate educational experience, Bankert and Kozel (2005) advocated that nurse education transform out of a pedagogical teaching model into an andrological teaching model. Faculty who would espouse this transformation—and who would embrace an andrological philosophy—would theoretically move learners from a dependent to an independent learning role. Whichever teaching model is used, empirical evidence (Elias & Merriam, 2005; Galbraith, 2004; Pattison, 1999; Zinn, 1983, 1990, 2004) clearly illustrates the impact of faculty adult teaching philosophy on adult students and learning.

Adult Education Philosophy

According to Galbraith (2004), effective instruction of adults is a balance between a philosophy of teaching and application of adult education principles. Adult educators may incorporate philosophical beliefs about life in general and apply these beliefs to program design (Elias & Merriam, 2005). Clarification of one's teaching philosophy may provide a basis for (a) faculty-learner interaction, (b) the selection of instructional content, (c) the determination of teaching/learning objectives, (d) decisions related to instructional materials, as well as (e) educational outcomes (Elias & Merriam, 2005; Zinn, 1990). To integrate best practices in instruction, Nuckles (2000) suggested that an adult educator should create his or her own teaching philosophy rather than forcing a fit with an identified philosophy. This approach implies that one's philosophical teaching orientation is developed over time. Elias and Merriam (2005) reported three approaches to adopting one's personal philosophy of teaching: (a) identify a philosophy currently

being used, (b) formulate a philosophy based on several different theoretical constructs, or (c) choose a philosophy to develop as one's own.

Zinn (1983) developed the Philosophy of Adult Education Inventory (PAEI) as a means for teachers to identify their personal philosophy of teaching based on five philosophies described by Elias and Merriam at that time. The PAEI is “self-scored, self-reported, and self-interpreted to five teaching philosophies: Liberal, Progressive, Behaviorist, Humanistic, and Radical” (Zinn, 1983, p. 1). These philosophical constructs are best understood by describing the work of Elias and Merriam from which Zinn created the PAEI.

Liberal adult education. According to Elias and Merriam (2005), liberal adult education philosophy intent is to develop an individual holistically. Liberal adult education is based on cognitive, spiritual, moral, and sensory intellectual development. The learner develops as a sophisticated life-long learner with abstract theoretical understanding. The liberal adult educator, as described by Boone et al. (2002), is an expert having complete authority over instruction and student intellectual development. The instructor takes an authoritative approach to transmit knowledge. Learning is a teacher-directed approach (Powell, 2006; Zinn, 2004) and completed through a directed expert discussion (Elias & Merriam, 2005).

Liberal adult education stratifies education to the elite rather than the common man (Elias & Merriam, 2005) creating a societal divide. Education belonged only to those who could afford it. Liberal education fell out of favor following the civil war and the introduction of scientific learning principles (Elias & Merriam, 2005). Along with

liberal adult education, the behaviorist adult education philosophy is a teacher-centered philosophy (Powell, 2006).

Behaviorist adult education. According to Elias and Merriam (2005), the behaviorist adult education philosophy began in the 1920s with Watson's discovery of observable behavior and emerged as a prevalent teaching philosophy in the United States (Elias & Merriam, 2005). According to Elias and Merriam (2005), the educator is the instructional authority. Rules to direct student behavior and learning are explicitly stated as learning objectives (Elias & Merriam, 2005). Merriam and Caffarella (1998) best described this behaviorist approach as, "The teacher's role is to design an environment that elicits desired behavior toward meeting these goals and to extinguish behavior that is not desirable" (p. 128). Elias and Merriam (2005) explained the purpose of this philosophy is "to promote skill development and behavioral change; ensure compliance with standards and societal expectations" (p. 72). Change is achieved through a strong environmental influence, continual feedback as new behavior is practiced for learning to occur. Elias and Merriam (2005) stated the teacher is "manager; controller; predicts and directs learning outcomes" (p. 72). The behaviorist philosophy of teaching is teacher-centered and learner-dependent pedagogy.

The behaviorist approach is also a competency-based instruction (Boone et al., 2002). Registered nurse curriculum is based on skill development and competency-based principles. It may be subsumed that a nursing faculty member with a behaviorist approach may be inflexible, focused on creating and enforcing a learning environment of strict rules and guidelines. The prescriptive enforcement of rules is directed towards

conforming behaviors (Boone et al., 2002; Forrest & Peterson, 2006). Behaviorist teaching style, according to Elias and Merriam (2005), is “cold, inhumane, devoid of feeling and ignorant of the subjective, creative and intuitive dimensions of human behavior” (p. 105). Bankert and Kozel (2005) explained behaviorist teaching philosophy as the banking concept described by Freire (1993), whereby the teacher directs learning, disseminates information; the learner receives information and is expected to learn. Behaviorist philosophy does not address affective learning (Pattison, 1999). Affective learning is the development of a person who understands self, others, and can interrelate well with others (Elias & Merriam, 2005). The humanistic philosophy is more suited to address affective learning.

Humanistic adult education. Elias and Merriam (2005) explained the purpose of the humanistic adult education philosophy as the development of self-actualization. It is the growth and development of the whole person. Learning is of a personal nature. The humanistic philosophy is student centered. The “learner is highly motivated and self-directed; [and] assumes responsibility for learning” (Zinn, 2004, p. 73). The teacher is a “facilitator, helper; partner; [who] promotes but does not direct learning” (Zinn, 2004, p. 73). The humanistic philosophy incorporates principles of andragogy and influenced Knowles theory of adult learning (Elias & Merriam, 2005; Merriam & Caffarella, 1998). From this research, the humanistic philosophy, like progressivism, is considered to be learner-centered, self-directed learning (Boone et al., 2002). Unlike progressivism, a humanistic approach does not direct learning toward social change (Pattison, 1999).

Progressive adult education. Elias and Merriam (2005) explained the purpose of the progressive adult education philosophy is to promote social well-being, social responsibility, and scientific thought through problem-solving skill development. Progressive philosophy focuses on cognitive and affective learning. Motivation is integral to learning to develop the highest potential of the learner. Elias and Merriam (2005) stated this philosophy is learner-centered, which implies an andrological approach. The teacher guides experiential learning through active learning. According to Elias and Merriam (2005), the progressive movement reached its peak from 1890 to 1950 and influenced the theoretical work of Lindeman, Knowles, and Freire. Boone et al. (2002) stated the progressive philosophy is a conduit for social change and progressivism. It resurged in the 1970s but never equaled the stronghold that the behaviorist philosophy had. The radical philosophy's main focus is the adult learner.

Radical adult education. According to Elias and Merriam (2005), the radical philosophy began with 18th-century anarchists and was influential in the 1970s as a response to equality based desegregation (Elias & Merriam, 2005). The radical adult education philosophy was directed towards social change and emancipation (Foley, 2001). Foley stated "emancipatory education (from the Latin manus [hand] and capere [take]) aims to free people from some oppression, to free them to take control of their lives" (p 72). Pedagogy of the oppressed was fundamental to influence social change through education (Elias & Merriam, 2005; Freire, 1993). The learner becomes more powerful through education (Elias & Merriam, 2005). The radical adult educator directs efforts toward social justice by identifying injustice and eliminating the cause. Foley

(2001) further explained the role of the radical educator as one who encourages open dialogue and fosters individualism in order to achieve a just society. The learner and teacher are equals in the learning process. The teacher coordinates and suggests but does not direct learning. The radical philosophy is independent learner-centered instruction incorporating andrological principles.

All five of the adult teaching philosophies have value and merit (Zinn, 2004). There is no right or wrong adult education philosophy. Zinn (2004) cautioned the liberal and radical philosophies go against the mainstream of American education and the faculty who identify with these philosophies may experience discord, conflict, and discouragement in the education workplace. Identifying a prevalent adult teaching philosophy of nurse faculty may help to understand if a philosophical orientation has a relationship with admission criteria used to select students nurses.

Philosophy of Adult Education Inventory (PAEI)

The Philosophy of Adult Education Inventory (PAEI) is a survey instrument that assessed teaching philosophy in associate and baccalaureate degree nursing faculty. According to Zinn (2004) the goal of the PAEI is to foster inquiry into one's philosophical values and beliefs about adult education. Understanding one's philosophy may assist faculty to become more effective as an adult educator. Zinn (1983) explained,

The five philosophies described by Elias and Merriam were synopsized, identifying the following elements for each philosophy: purpose (of adult education), learner (role, characteristics), teacher (role), key words and concepts,

methods (of instruction), and people and practices associated with each philosophical orientation. (p. 48)

Zinn (1983) explained the PAEI was evaluated for content validity by a jury review of six experts in adult education. One of the jurors included Sharon Merriam, Ed. D., an author referenced by Zinn during construction of the PAEI. The experts were asked to comment on the survey tool (a) level of understanding, (b) accuracy of the philosophy descriptions, (c) prioritization of the concepts, and (d) to advise and recommend changes to the instrument (Zinn, 1983). Following expert review, the PAEI was revised. In April 1982, Zinn administered the first draft of the PAEI to 30 attendees of an adult education philosophy conference presentation. Zinn field-tested the PAEI from 1982 to 1983 on five different occasions:

1. In June 1982, with 12 graduate master's students enrolled in an adult education course using Elias and Merriam's text.
2. In July 1982, with four lead teachers and two teacher trainers in a workshop session on adult education.
3. In September 1982, with 25 adult education practitioners adult education workshop attendees.
4. In November 1982, with 10 staff members of an adult education program.
5. In January 1983, with 25 graduate students enrolled in an adult education course. (p. 51)

Zinn (1983) reported format and content to the PAEI was revised following each field testing episode: (a) to provide clearer instructions for interpreting and scoring the tool, (b)

for ease of completion by participants, (c) to clearly assess the constructs for each of the five philosophies being tested, and (d) to provide a useful tool for interpretation and use by adult educators.

During the course of the PAEI development, a statistician recommended a 7 point Likert scale instead of a 5 point scale to increase the range of scores; and the terminology was changed from “most” to “strongly agree” and “least” to “strongly disagree” (Zinn, 1983, p. 52). In February 1983, the PAEI was put to the final test. Forty-three participants, attending a presentation, completed the PAEI. Zinn (1983) reported 101 participants field tested the PAEI survey from June 1982 to January 1983. The content validity was assessed by mean scores. The mean score for two-thirds of the participants was a mean of 6 and the remaining third scored a mean of 5 to 5.8 on a 1 to 7 Likert scale. Factor analysis was completed. Twenty-one 21 factors were identified. A variance of greater than 0.50 was judged “internally consistent” (p. 132) as determined by communality coefficients. Reliability was determined on 86% of the field test participants ($n = 86$). Zinn (1983) used the following scale from Turney and Robb to determine the strengths of the correlations: “a correlation coefficient (r) of .80 -1.00 indicates a very high correlation, .60 - .79 = high, .40-.59 = moderate, .20 - .39 – slight and .01 - .19 = very slight correlation (Turney and [sic] Robb, 1971, p. 100)” (p. 115).

The coefficient α for each philosophy was radical ($\alpha = .86$), humanistic ($\alpha = .78$), behaviorist ($\alpha = .76$), progressive ($\alpha = .75$), and liberal ($\alpha = .75$) (Zinn, 1983, p. 122). The test-retest yielded a small group ($n = 8$) and the results were reported as “no conclusive evidence” (Zinn, 1983, p. 115). Zinn (1983) concluded, “Based on results of

the jury validation procedure, the PAEI was judged by the researcher to be a valid instrument for its intended purpose” (p. 132). The validity and reliability of the PAEI is justified, and the use of the PAEI important to this study.

The PAEI was used previously by West (2008) with seminary professors, Gularte (2007) to study the education philosophy of agricultural faculty, Powell (2006) to evaluate the adult education philosophy of workforce and entrepreneurship instructors, Boone et al. (2002) to study agricultural faculty, and O’Brian (2001) with rehabilitation educators. No studies were found using the PAEI to evaluate the adult education philosophy of registered nurse faculty. The research completed by these studies support the feasibility of using the PAEI for this research. Although the findings of these aforementioned studies are not generalizable to nursing, an understanding can be obtained through a compare and contrast of these studies for the purpose of this research.

West (2008) completed a nonexperimental, descriptive survey design of 165 full-time and part-time seminary professors achieving a response rate of 25%. The participants were male (62%), older than age 50 years, with an average teaching experience of 16.3 years. West completed this research in universities that typically serve the African-American community; however the diversity of the population surveyed was not reported. The teaching philosophy of seminary professors was reported as behaviorist ($n = 13$), radical ($n = 13$), progressive philosophy ($n = 8$), humanistic ($n = 1$), liberal ($n = 1$), and mixed ($n = 2$) (p. 110). ANOVA inferential statistics were completed on PAEI and demographic variables. The only significant finding was full-time teaching academic standing and the behaviorist philosophy ($f = 4.16$; $p = .049$).

A descriptive, cross-sectional research design was conducted by Gularte (2007) to identify the prevalent teaching philosophy of eight agricultural instructors teaching distance education using the PAEI© and evaluate the sense of community of 33 agricultural and communication graduate students participating in distance education in Florida. An 88% response rate ($n = 8$) was achieved for PAEI© participation by the instructors. These eight participants were all male, European-American (100%), 50% age 40-49 years with over 10 years of adult teaching experience (p. 104). Two-thirds (62.5%) of the instructors did associate with the progressive philosophy (Gularte, 2007, p. 118); and these findings are similar to Boone et al. (2002) and Powell (2006) for male participants. Other philosophies were reported as: liberal (12.5%) and humanistic (25%) (Gularte, 2007, p. 118). No tendency was reported toward a radical or behaviorist teaching philosophy which could be attributed to the small sample size ($n = 8$). No further analysis of the PAEI data was reported.

Powell (2006) completed an exploratory cross-sectional research design using the Philosophy of Adult Education Inventory (PAEI) and the Principles of Adult Learning Scale (PALS) inventories to determine the individual philosophy and teaching approach of entrepreneurship instructors and workforce education instructors in Alabama. Only the PAEI findings are applicable to this study. Powell achieved a 31% PAEI response rate from 29 entrepreneurship instructors, and an 83% PAEI response rate from 119 Alabama workforce education instructors for an overall response rate of 72.9% on the PAEI (p. 72). Powell's research was descriptive in nature. Entrepreneurship instructors, were mostly male (88.9%) and scored highest in the progressive philosophy. The

behaviorist philosophy was the other philosophy associated with this group (Powell, 2006). Of the workforce education instructors (79.5% female), Powell reported 49.5% identified with the behaviorist philosophy, 42.7% progressive, 5% humanistic, 3% liberal, and 1% radical philosophies (pp. 78 -79). Note these descriptive statistics add up to 101.2%, and Powell does not explain this statistical outcome. The radical and humanistic philosophies were least associated with entrepreneurship and workforce instructors. Powell explained this by suggesting that faculty may adapt and conform to the mainstream philosophy of the organization in which they teach. Boone et al. (2002) and O'Brian (2001) also conducted descriptive and correlational research on faculty teaching philosophy.

Boone et al. (2002) conducted correlational cross-sectional research using the PAEI to evaluate agricultural faculty's adult teaching philosophy in a tri-state area, Pennsylvania, West Virginia, and Virginia. A 38% response rate was reported. Participants in Boone's et al. study were predominantly male (83.9%), an average age of 44 years with up to 18 years of adult teaching experience (p. 533). Two-thirds (67.8%) of the participants associated with the progressive philosophy (p. 535), findings similar to Powell's (2006) reported research of entrepreneurship instructors who were mostly men. Other philosophies as reported by Boone et al. (2002) were: "Behaviorist (21.2%), Humanist (7.6%), and Radical (3.4%)" (p. 535). No tendency was reported toward a liberal teaching philosophy. Boone et al. reported a strong positive correlation between liberal and behaviorist philosophies ($r = .81$) (p. 533), and behaviorist and progressive philosophies ($r = .72$) (p.534). A positive association was found between liberal and

progressive ($r = .59$) and humanistic and progressive philosophies ($r = .55$). Consistency occurred across the tri-state area. Pennsylvania, West Virginia, and Virginia agricultural educators had progressive philosophy followed by behaviorist and humanistic philosophies. Only four of the participants reported an association with the radical philosophy.

O'Brian (2001) completed a descriptive, cross-sectional survey design of 453 full-time rehabilitation educators using the PAEI to determine teaching philosophy with a response rate of 23% ($N = 104$). The participants were male (60.6%), white (88.8%), older than age 50 years, with an average of 16.3 years of teaching experience. O'Brian reported progressive philosophy ($n = 58$), behaviorist ($n = 16$), humanistic ($n = 11$), mixed grouping ($n = 11$), radical ($n = 4$), and liberal ($n = 4$). ANOVA inferential statistics were completed on PAEI and demographic variables. The only significant finding related to teaching philosophy was receiving state funding ($f = 5.35$; $p = .002$).

Studies from West (2008), Gularte (2007), Powell (2006), Boone et al. (2002), and O'Brian (2001) were descriptive in nature and included predominantly male participants. Powell's study also included workforce educators who were women (79.5%). The predominant philosophy of these five studies was split between behaviorist and progressive philosophies. Like West (2008), Powell (2006), and Boone et al. (2002), this study sought to determine the prevalent adult teaching philosophy in nurse educators. Faculty's perception and personal philosophical belief may influence faculty decision-making. Possibly a teacher has a fully developed adult teaching philosophy, develop a teaching philosophy over time (Zinn, 1983); or as Powell (2006) stated adapt a

philosophy to conform to fit organizational culture. This study advances past research by using the PAEI to determine if any relationship exists between faculty adult teaching philosophy and decisions influencing the use of admission criteria to select students.

Nurse Education Decision Making by Faculty

Siktberg and Dillard (2001) described one nursing school's faculty's decision making response to accreditation and State Board of Nursing benchmarks for program success following four years of NCLEX-RN® first time pass rate scores below the national average. Decisions to change program criteria were made on the advice and experience of faculty from other programs. Table 3 organizes and demonstrates how decisions were made.

Table 3

Decision-making Process of Nurse Faculty for Program Admission Requirements

| Change | Standard | Experience | Evidence | Outcome |
|--------------------|--|----------------------------------|--|--|
| Admission Policy | GPA 2.0 | Sought advice from other faculty | No research evidence | GPA increased to 2.75 |
| Progression Policy | Three-Course Failure Policy | Reviewed program outcomes | Program outcome evidence | Returned to a two-course failure policy |
| Curriculum change | Grade of 70% for passing nursing courses | Sought advice from other faculty | No research evidence used for decision | Passing grade of 78% with no rounding up |

Note. Adapted from "Assisting at-risk students in preparing for NCLEX-RN®" by L. L. Siktberg, and N. L. Dillard, 2001, *Nurse Educator*, 26(3), pp. 150-152, copyright Lippincott Williams & Wilkins

When a lack of empirical evidence existed for an admission criterion, McNelis et al. (2010) reported faculty chose to implement new admission requirements based on faculty experience and beliefs. Zinn (1983), concerned over "how educational and programmatic decisions were made" (p. 39), developed the PAEI to assist faculty to understand personal beliefs that influence instruction, education, and decision-making. The PAEI

was used to assess the teaching philosophy faculty and explore the relationship between adult teaching philosophy and the complexity of admission criteria.

Complex System

There is growing evidence that complexity theory is applicable to nursing (Clancy & Delaney, 2005). Clancy et al. (2008) studied complex theory and its application to nursing practice, research, and education. According to Clancy et al. (2008) systems naturally evolve to become complex. New and different techniques must be implemented to effectively manage complex health care systems (Clancy & Delaney, 2005). Most importantly, a decision made in a complex system is path dependent; and reverting to a previous state is difficult (Clancy & Delaney, 2005).

Goldspink (2007) used a complex system approach to describe education reform. “An advocate of policy change who wants to maximize his/her [sic] chance of making a difference will try to locate the patterns that shape the existing dynamics within the system” (Goldspink, 2007, p. 85). An analysis of admission requirements for nursing education may help to identify patterns and relationships that influence the system. Changes to the system, based on program evaluation, may result in a reactive action to maintain homeostasis instead of proactive action for controlled change. As change creates a newer version, access to higher education is still limited to qualified students through the use of admission criteria.

Admission Criteria

Admission criteria has evolved from five criteria listed by Morgan in 1977 to over 22 criteria identified following my review in 2008 of nursing programs in the

southeastern state under study. Morgan (1977) reported criteria as (a) older than 17 years of age, (b) high school graduate, (c) submit a completed admission application by the deadline, (d) achieve a placement test cut off score, and (e) meet a predetermined GPA (p. 65).

Crow et al. (2004) completed a descriptive correlational study using a cross-section survey design to determine admission criteria used by nurse education programs. Surveys were emailed to 513 deans and directors for a response rate of 18.7%. In descending order eleven admission criteria were reported: (a) GPA, (b) ACT[®] scores, (c) high school GPA, (d) SAT[™] scores, (e) letters of reference, (f) interviews, (g) standardized entrance exam, (h) faculty developed entrance exam, (i) mathematics exam, (j) reading comprehension, and (k) critical thinking assessment.

For a graduate course project in 2008, I assessed the admission criteria of nurse education programs in the southeastern state under study using open access online information. This review included 81% of the baccalaureate degree programs and 79% of the associate degree programs. Over twenty admission criteria were identified from this project. To present the information in a logical manner, I categorized these criteria into cognitive, curricular, health care experience, physical performance, legal and ethical, time-limited, and residency categories:

- Cognitive developmental criteria (GPA, course grades, college aptitude testing, commercial prenursing admission test);

- Curricular criteria (specific high school course completion, program advisement, information sessions, general education requirements, prerequisite course or science course completion);
- Health care experience (clinical experience, hospital volunteer work, Certified Nursing Assistant, Emergency Technician, or Paramedic);
- Physical performance (health screening, vaccinations, core competency skills);
- Professional (essay, résumé, personal references);
- Legal and Ethical requirements (criminal background history, drug screening, liability insurance);
- Time limited requirements (college aptitude testing, science and mathematics course completion, nursing application and completed checklist, health screening, Cardiopulmonary Resuscitation certification); and
- Residency (county of residence).

No consistent admission criteria were identified across educational level or by programs.

Weighted admission is generally based on a point system. Coleman (2006) explained that on a point system, numerical values are awarded for certain criteria, such as preadmission test scores, Scholastic Aptitude Test (SAT™) or American College Testing (ACT®) scores, GPA, and a ratio of earned course credit to attempted course credit. The higher the preadmission test scores; the higher the SAT or ACT scores, the higher GPA, and credit to credit earned ratio; the higher the number of points awarded to applicants. Students are placed in rank order from highest to lowest weighted points.

The students with the highest weighted points are selected for admission and enrolled until all available seats are filled. This is similar to the point system described by Trice and Foster (2008) and the rating scale described by Kilgore (2003). Those qualified students remaining on the list are denied enrollment. Other admission policies involve a leveling process whereby a student enters nursing as a lower division student and after successful completion of introductory nursing courses is admitted to upper division nursing (USC, 2007-2008). Weighting and ranking adds intricacy to the admission process and was included in the evaluation of admission criteria for this study.

Ofori and Charlton (2002) conducted a correlational research design on a convenience sample of 315 student nurses (80% female) admitted May and November of 1999. Although convenience sampling was a limitation to Ofori and Charlton (2002) study, “The findings suggest that good entry qualifications are not necessarily good indicators of performance and that academic support-seeking is a better indicator, accounting for a considerable proportion of the variance in student performance” (Ofori & Charlton, 2002, p. 513). This highlights the need for research on the admission criteria used for student nurse selection. In the paragraphs that follow, the literature highlights the admission criteria that have been studied for baccalaureate and associate degree student success.

Baccalaureate Degree Admission Criteria

Newton, Smith, and Moore (2007) completed an exploratory descriptive study of admission criteria at a university nursing program that admits student nurses twice an academic year. The participants included 108 students enrolled in the fall semester and

76 students enrolled in the winter semester for a total of 184 student nurses. The participants were 92% European-American and 86% female. Newton et al. found a significant difference between the fall and winter student nurse admissions. GPA was predictive of success for the fall admission group, while TEAS composite score was predictive of success for the winter admission group. Newton et al. explained the difference between these two groups was possibly due to admission weight score differences, course repetition differences, or direct admission from high school. Although similar admission criteria were used to select students for these two groups, this study demonstrates that no specific admission criteria were predictors for success. The frequency of GPA and nursing readiness admission testing was a part of the admission process in Newton's study.

Trice and Foster (2008) completed a retrospective case study on the effects of admission interview on the ethnic diversity in student nurse admission. Although the interview process was time intensive, the authors reported a 23% increase in minority student ethnic diversity. The NCLEX-RN pass rates remained consistently high and academic failure was the primary cause of student attrition. Interview as a selection criterion was identified as contributing to increased diversity in this study.

Uyehara et al. (2007) completed a longitudinal study to identify program outcomes predictive of NCLEX-RN success. The participants were 280 students (224 graduates and 56 withdrawals) admitted to the nursing program over a five-year period. The majority of students were female and Filipino with 17.5% European-American and less than 1% African-American. In this study, European-Americans could be considered

a minority group. The only significant finding for success on the NCLEX-RN was the NLN Adult Health Comprehensive Test ($p < .0001$) (Uyehara et al., 2007). Low Pathophysiology grades correlated positively ($p < .0001$) with program withdrawal. No significant differences existed between Filipino students attrition rates as compared to other students. This study highlights the need to further identify criteria used for nursing student selection.

Associate Degree Admission Criteria

High first semester attrition rates at a South Florida associate degree program exceeded 41% and 65% of the students required reading remediation prompted Sandiford and Jackson (2003) to conduct a correlational study on 190 enrolled student nurses to determine factors contributing to student success. The participants were 52% European-American, 27% African-American, and 18% Hispanic. Variables under study included pre-semester GPA, achievement testing, language skills, math skills, hours of employment, and financial status. Although this study is not generalizable, Sandiford and Jackson found GPA ($p = .004$), reading level ($p = .001$), and college level language skills ($p = .001$) had significant relationships with student success. Students with higher GPAs and higher college level reading were successful to graduation. This study highlights reading skill as a possible admission criterion worthy of consideration. The nursing programs in the southeastern state were evaluated for reading as an admission criterion.

Marshall (2006) conducted an ex-post facto study of 314 associate degree nursing graduates of a Maryland community college. This study had two purposes first to

determine if the admission criteria predicted graduate success on the NCLEX-RN and second to determine if vulnerable students were as successful as nonvulnerable students on NCLEX-RN. According to Marshall, “vulnerable nursing student is that student who is likely to be unsuccessful on the NCLEX-RN on the first attempt. Such students have transferred from another nursing school, repeated . . . general education courses or were developmental students” (p. 4). Marshall found ACT[®] scores and the GPA of five prenursing courses were predictors of student success on the NCLEX-RN. No significant difference was found between vulnerable or nonvulnerable students and NCLEX-RN success. Both groups were equally successful. Although course failures and course repetition were not statistically significant, Marshall still asserted that repeat courses did have an effect on NCLEX-RN success and should be considered as admission criteria. Repeat courses as admission criteria were assessed in nurse education programs in the southeastern state under study.

An ex-post facto study was conducted by Higgins (2005) on 213 students admitted fall 1999 ($n = 67$), spring 2000 ($n = 69$) and fall 2000 ($n = 77$) at a Texas community college to evaluate attrition and NCLEX-RN licensure pass rates. Quantitative measures were obtained from student records and other files. Qualitative data was collected by telephone and personal interviews from 45 directors, 10 faculty, and 30 new graduates to determine predictors of student success. The variables in this study were age, gender, race, prerequisite course grades (English, Anatomy and Physiology I, Anatomy and Physiology II, Microbiology, Chemistry, and Psychology), preadmission test scores, HESI Exit Examination, and nursing skills course. The

outcome measures were program and NCLEX-RN success. There were no statistically significant findings for age, gender, or race on program or NCLEX-RN success.

Although the correlations are positive and low, Anatomy and Physiology II ($r = 0.152$) and Microbiology ($r = 0.191$) were reported as statistically significant for program success, while Anatomy and Physiology I ($r = 0.171$) was reported significant for NCLEX-RN success. Preadmission test components of reading ($r = 0.124$), mathematics ($r = 0.129$) and science ($r = 0.184$) were statistically significant for program success, while HESI exit examination scores ($r = 0.518$), science course GPA ($r = 0.413$), and nursing skills course ($r = 0.281$) were statistically significant for NCLEX-RN success.

Program director's interviews were also completed by Higgins (2005) and generated the following program success themes: preadmission assessment test, campus counseling, college reading ability, assessment test score, high GPA, prerequisite course requirements, limiting student readmission, limited enrollment, and remediation. For NCLEX-RN success, nursing administrators identified exit examinations, achievement testing, and remediation as factors contributing to student success. Faculty themes for program success were faculty mentoring, professional development, recognition, and appreciation. One faculty theme, preadmission criteria, mirrored the administrator theme for program success. For NCLEX-RN success, the faculty themes for student success were varying teaching methods, improved test-item writing, and curricular course changes. Student themes for academic success were motivation, test taking skill, course test review, study skill, and learning contracts. For NCLEX-RN success, student identified NCLEX-RN style questions on course exams, review books, and review

courses. Although not generalizable outside of associate degree programs in Texas, the research methods used to obtain data and the evidence gained can guide the implementation of preadmission requirements that influence program and NCLEX-RN success. This study also highlights themes of personal beliefs and philosophy that could have an effect on admission decisions.

Wacks (2005) surveyed a convenience sample of 266 associate degree student nurses and found the Watson-Glaser Critical Thinking Appraisal ($p = .005$) had a significant association with NCLEX–RN success. No significant correlation was found between prenursing GPA, ACT[®] score, or other demographic variables and success on the NCLEX–RN. This demonstrates that in other studies GPA may not be a predictor of success. Critical thinking is not an admission criterion for the nursing programs in the southeastern state under study.

Roberts (2002) conducted an ex post facto, descriptive correlational study on the effects of ranked and nonranked admission criteria for California community colleges. Ranked selection included specific admission requirements while nonranked was an open door admission policy. A survey was administered to 71 associate degree college directors achieving a 40.8 % response rate ($n = 29$). A total of 9,150 student records (3,558 ranked admissions and 5,592 open enrollment admissions) were evaluated over a 5-year period. During this period, no colleges changed from nonranked to ranked admission procedures. Four colleges that changed from ranked to nonranked admission criteria and experienced an 82% to 77% decrease in student success. Five colleges that changed to mixed nonranked and ranked admission procedures also experienced an

86.3% to 82.9% decline in retention. Although decreases were evident in student success with ranked and nonranked admission selection, no significant relationship was found between ranked and nonranked admission selection and success on the NCLEX-RN. Although this study is not generalizable, the findings highlight the use of rank order admission criteria for student selection and ranked weighted selection is considered an admission criterion for this research study.

From 1995 to 2000, Kyle (2000) conducted a nonexperimental, ex post facto study of a convenience sample of 399 associate degree student nurses to determine what admission criteria predicted student success to and including graduation. Twenty-nine students were licensed practical nurses continuing their education. Mean GPA was 3.122 for this group. Students ($n = 3$) with a GPA less than 2.0 were successful to graduation. Kyle analyzed the effect of course repetition on student graduation and found that 82% of successful students did not repeat courses. The students were then placed in groups by the number of course repetitions to graduation. Of those students who repeated one course 74% were successful. Those repeating two courses 70% were successful. Students ($n = 2$) with three course repetitions, 100% were successful. Students ($n = 2$) repeating four courses none (0%) were successful. In the analysis of findings, student success did not correlate significantly with course repetition. GPA ($p = .001$), transfer hours ($p < .0001$), science courses ($p = .0369$), and course credits prior to admission ($p = < .001$) did correlate positively with student nurse graduation success. This study demonstrates that GPA, the amount of transfer hours, science coursework, and the amount of course credit should be a consideration for admission criteria. The fact that

students continued to be successful with repeat coursework prompts an examination of the use of no more than two repeat courses as an admission criterion. The number and type of repeat courses are an admission criterion for nursing education in the southeastern state under study.

From the literature presented here admission criterion are numerous and vary between nursing degrees and programs. Table 4 organizes the use of admission criteria presented in this literature review.

Table 4

Review of the Literature for Nursing Program Admission Criteria

| Admission Criteria | Associate Degree | Baccalaureate Degree |
|--------------------------------|---|-------------------------|
| GPA | Kyle (2000) Sandiford and Jackson (2003) | Newton et al. (2007) |
| Science course GPA | Kyle (2000) Higgins (2005) | |
| Pre nursing assessment testing | NLN - Canillas-Dufau,(2005) NET Reading - Sevcik (2002) Higgins (2005) | Uyehara et al. (2007) |
| SAT/ACT | ACT [®] Reading - Marshall (2006) ACT [®] - Sandiford and Jackson (2003) Wacks (2005) | |
| Course credit completion | Kyle (2000) | |
| Cumulative earned credit hours | Kyle (2000) | |
| Pre nursing course completion | Kyle (2000) | |
| Repetition of courses | Marshall (2006) | |
| Critical thinking | Wacks (2005) | |
| Transfer courses | Kyle (2000) | |
| Admission ranking | D. Roberts (2002) | |
| Interview | Ehrenfeld and Tabak (2000) | Trice and Foster (2008) |
| Criminal check | Bradley (2005) | |

Note. GPA = grade point average; SAT = Scholastic Assessment Test; ACT = American College Testing.

Student success was correlated with GPA by Kyle (2000) and Sandiford and Jackson (2003). Success was correlated with prerequisite course GPA by Marshall (2006). Success in program was correlated with SAT™ scores by Maggio et al. (2005). Success in program was correlated with ACT® scores by Marshall (2006). Rech and Harrington (2000) concluded that ACT® scores should not be used to select African-American men and reported Algebra as a gatekeeping course for these individuals. Preadmission screening for reading ability and comprehension was recommended by Higgins (2005) and Sandiford and Jackson (2003). Higgins (2005) recommended that mathematics and science scores be included as admission criteria. Science prerequisite course evaluation was recommended by Higgins (2005) and Kyle (2000). Critical thinking (Wacks, 2005) and interviews (Ehrenfeld & Tabak, 2000) were also recommended as admission criteria. Although nursing programs use course repetition as a factor to limit student nurse admission, Marshall (2006) and Kyle (2000) did not find significant correlations between course repetition and program or NCLEX-RN success. Kyle (2000) did not find that previous clinical experience affected success. Other admission criteria are used for nursing student selection such as course grades of “C”, time-limit imposed for SAT™ and ACT® scores, time-limit imposed for science or math courses, work experience, place of residency, essay, résumé, personal references, attendance to information sessions, physical performance standards, completed admission checklist, health screening, cardiopulmonary resuscitation certification, and possession of liability insurance. This control using admission criteria is considered gatekeeping by Karen (1990) and Kilgore (2003).

Gatekeeping

Limited information on gatekeeping practice exists in nursing education. Nursing literature on gatekeeping was completed in the clinical setting (Lewis, 1990; McEvoy, 2000). An in-depth discussion of clinical gatekeeping is beyond the scope of this study. Instead, a short summary of important literature (Corra & Willer, 2002; Fearing, 1996, Karen, 1990; Kilgore, 2003; Lewis, 1990; Rech & Harrington, 2000) as it pertains to this study is presented.

According to Lewis (1990), the nurse is the gatekeeper and the gatekeeping action is control over another person by limiting access to information, individuals, and things. According to Corra and Willer (2002), gatekeepers control accessibility. A gatekeeper is “a switchman who turns on and off the access to valued things” (Corra & Willer, 2002, p 186). Power and control can be exerted over others through gatekeeping action. Gatekeeping is power. Gatekeeping actions exhibited as power would be the imposition of expectations to conform student behavior. Students conform to expected “professional behavior” (Lewis, 1990, p. 814). By controlling access, gatekeepers may create opportunities for some while at the expense of others. Gatekeeping can be applied to any situation that controls access and this study sought to examine gatekeeping actions.

In a review of Harvard admission practices, Karen (1990) found that aptitude test scores, alumni status, race or ethnicity, cultural capital, elite prep school attendance, academic and athletic potential ratings, community activity, and personal qualities were all associated with an increased likelihood of admission (p 231). Through this review, Karen argued that no college or university actually has a good process in place to select

the student most likely to succeed to graduation. Karen's theoretical construct of *gatekeeping* was explained as having an organizational field, a classification struggle, and an outcome. When applied to nursing, the organizational field is the admission process or all the procedures used to select students; the classification struggle is the legal and accreditation agency policies affecting nursing admission; and the outcome is the selection and enrollment of students.

Rech and Harrington (2000) conducted a descriptive study on 63 African-American students to determine if an Algebra course had a gatekeeping effect on student access. "Algebra is often seen as the gatekeeper course in institutions of higher education in that if it is not passed successfully, a student is no longer able to continue into certain majors and on to graduation" (Rech & Harrington, 2000, p. 62). In the case of mathematics, cultural bias existed toward females and minorities negatively influencing their performance. In Rech and Harrington's study, ACT scores were highly predictive of European-American men passing algebra but not African-American men. Rech and Harrington asserted "A gatekeeper course such as this one [algebra] unsuccessfully negotiated will slow if not stop the progress of the most talented African-American man" (p. 70). Based on the results of this study, academic and nonacademic factors may be influential on the success of minority male students.

Kilgore (2003) described *gatekeeping* as a limiting procedure for elite college admissions. The role of the admission officer is to exclude those students who are obviously under-prepared for that environment. Often, this means excluding those student whose qualifications—however impressive in an absolute sense—fail to make the

applicant stand out relative to the rest of the pool” (p. 1). In this role, the gatekeeper (nursing faculty) decides the criteria to be used for admission selection and while this action prevents those unqualified from entering it also denies access to qualified students.

Boezeroy and Vossensteyn (1999) conducted a study on nine countries to compare selection policies according to their range of programs, criteria used for selection, and the characteristics of applicants rejected. Boezeroy and Vossensteyn found:

- The larger the range of programmes covered by selection procedures, the more selective the system.
- The selectivity of a higher education system is higher if the criteria are more restrictive and if they are applied to a large number of programmes.
- The higher the rate of rejection, the more selective a system of higher education is. (p 352)

Ware (1996) stated that only a limited number of students can be admitted to nurse education programs due to the number of available and qualified faculty and clinical resources. Ware also suggested admission criteria be determined by “selective admission policies” (p. 6) to choose the student most capable of success. The admission criteria and processes are manipulated by nurse education faculty to select only the most qualified student through predetermined admission criteria. Fearing (1996), Karen (1990) and Roberts (2002), think otherwise and question the fairness and value of a highly selective admission process. Roberts (2002) argued that nursing education research has only lead to questionable findings and has not accurately confirmed the selection of the student

most likely to succeed using predetermined admission criteria. Karen (1990) and Fearing (1996) posited that the admission criteria are unable to select or identify the most successful student, while Roberts (2002) posited strict admission criteria assist in the selection of students who have best chance to succeed in nurse education.

To select students, Kyle (2000) recommended using admission standards to first eliminate those students who are not qualified. Second, evaluate those qualified students and place these qualified students in a highest to lowest rank order. The selection process is usually completed by a nursing faculty committee or by a group of faculty in accordance with predetermined criteria (Newton et al., 2007; Ware, 1996). This study identified the admission criteria used to select students and evaluated the relationship between teaching philosophy and admission criteria in baccalaureate and associate degree nursing programs.

Diversity in Nursing Education

Boezeroy and Vossensteyn (1999) reported a barrier to higher education was accessibility. Other barriers were defined as selectivity, the student's ability to meet admission requirements and affordability, the student's ability to pay for the cost of higher education (Boezeroy & Vossensteyn, 1999). It is the direct and indirect financial support to students, course load provisions, and financial aid. Boezeroy and Vossensteyn concluded that the extent of accessibility is governed by a student's perception of selectivity and affordability. Selectivity, affordability, and accessibility may have an effect on the type of student selected for admission. The AACN (2009) and NLN (2008) reported nursing program admission as a highly selective process.

Research on student success and nursing admission selection has been conducted primarily on convenience samples of female, European-American homogenous groups and are not generalizable to a minority student nurse population (Coleman, 2006; Hopkins, 2008; Johnson & Robson, 1999; Newton et al., 2007; Sand-Jecklin & Schaffer, 2006). Coleman (2006) conducted a study using a static group comparison design of three colleges in the northeast region of the United States, of the 317 respondents only 6% represented minorities. Johnson and Robson (1999) conducted a qualitative study on 146 female students entering health education (student nurses, $n = 87$). The participants were 92% European-American. Newton et al. (2007) completed an exploratory descriptive study on 173 baccalaureate student nurses and 92% were European-American. Hopkins (2008) completed a study to identify at risk students. The participants were 383 associate degree student nurses who were female (89.6%) and European-American (62%). Since the participants of these studies are predominantly European-American women, this composition highlights a need for research on what constitutes success of minority students.

Other researchers studied diverse student nurse populations (Uyehara et al., 2007) or specific minority populations (Amaro et al., 2006; Davis et al., 2004; Evans, 2008; Noone, 2008; Sitzman, 2007). Other research (Amaro et al., 2006; Meder, 1997) was directed toward identifying minority student's challenges and perceived barriers to higher education.

Nurse Education Challenges of Minority Students

Noone (2008) and Sitzman (2007) both reviewed the literature on diversity in nursing education. Noone (2008) stated “ethnically diverse students are more likely to experience educational and economical challenges than their white counterparts” (p. 134). GPA and course grades, as admission criteria, place minorities at a disadvantage (Noone, 2008). Unlike Sitzman (2007), Noone’s (2008) strategies for a more diverse nursing student body focused on recruitment and retention through tutoring, bridge programs, and study skill development. Noone (2008) completed a literature review on ethnic diversity in nursing education and concluded that recruitment alone will not fix the ethnic disparity in nursing education. Financial difficulties (Childs et al., 2004; Evans, 2008), feelings of isolation and discrimination (Amaro et al., 2006; Childs et al., 2004), poor academic skills (Seago & Spetz, 2003), English as a second language (Noone, 2008), and poor learning environment (Amaro et al., 2006) were reported in the literature as barriers to minority student success.

A review of ethnic diversity literature was completed by Sitzman (2007). Three prevailing themes were identified: (a) a need for a diverse nursing workforce, (b) a lack of formal research on ethnic diversity in nursing, and (c) an ethnic disparity in nursing education. Sitzman (2007) recommended determining educational priorities and implementing actions directed toward eliminating system imperfections.

Childs et al. (2004) completed a literature review on minority students and retention. According to Childs et al., African-American student nurses find difficulty gaining a level of comfort and cultural acceptance within predominantly white higher

learning institutions. Childs et al. reported minority students experienced feelings of inadequacy along with poor academic preparation and financial difficulties. These factors contribute to low minority enrollment and were barriers to success. An ethnic disparity exists within nursing faculty resulting in no mentors or role models for minority students. Faculty may be intentionally or unintentionally influencing student perception of discrimination. Childs et al. recommended a review of faculty philosophy, values, and beliefs towards minority students. The need for increasing cultural awareness of faculty is supported by the labeling of minority students as *at risk students* in the literature (Hopkins, 2008).

In a qualitative, exploratory study of two public colleges and universities in Washington State, Evans (2008) completed semi-structured interviews with 14 entering minority students and 18 Anglo (p. 307) students to explore education and social backgrounds of minority student nurses in relationship to student success. It might be subsumed that Anglo would mean European-American ethnicity. Minority students were reported as Hispanic or Latino and American Indian. A theme of family health care background influence on nursing as a career was reported by 39% of minority students and 39% of the Anglo students. Parental occupation for 57% of the minority students was blue collar workers, while 66% of the Anglo students reported parents with professional occupations. Encouragement to attend college was reported by 86% of the minority students, while 94% Anglo students reported college was as an expectation. Evans found that Anglo students reported being better educationally prepared for college and possessing social and financial means to succeed in nursing school than minority

students. Minority students felt underprepared for college more often than Angelo students. Mentoring, tutoring, and financial support were recommended to assist minority students with nursing program success. This study highlights themes that demonstrate the importance of high school college preparation courses and the ethnic differences that exists between students. This study may demonstrate a confounding variable whereby minorities may be admitted to nursing programs in sufficient numbers but not able to succeed to graduation thereby influencing the ethnic diversity mix of students at graduation.

Amaro et al. (2006) completed a qualitative study based on grounded theory to identify perceived barriers of culturally diverse students in nursing programs. Seventeen ethnically diverse graduates, six from baccalaureate programs and eleven from associate degree programs were interviewed using open-ended questions. Students perceived barriers of prejudice, discrimination, or racism in either the nurse education program or the clinical setting. One student expressed a perception that dropout rates were a direct result of a particular faculty member who was determined to weed out and eliminate students. Again this demonstrates the influence of faculty philosophy on students and the need to study faculty adult teaching philosophy.

An online and telephone survey was completed by Seago and Spetz (2003) at 71 California community colleges in the 2001-2002 school year, to study “admission requirements and practices, attrition rates, on-time completion rates, NCLEX-RN first-time pass rates, support programs, and methods of delivering information about nursing program to potential students” (p. 556). The ethnic diversity of graduates was 42%

European American, 19% Latino, 12% Asian, 11% Filipino, and 9% African-American. Seago and Spetz stated that these cultural characteristics are moving toward a reflection of the general population of California. The on-time completion rate was lower, the first time NCLEX-RN pass rate was lower, and attrition was higher for minority student nurses. Seago and Spetz concluded that African-American students may be underprepared for the rigors of nursing curriculum or there may be a cultural bias that affects these students. Further research was recommended.

From the literature presented here, one might conclude that minority students may be underprepared for the rigors of nursing education, may not be successful in program, or a cultural bias may be present. The report on these previous studies demonstrated the interconnection between faculty and students and supports the need to identify relationships between faculty adult teaching philosophy and student diversity. Additionally, faculty may be intentionally or unintentionally fostering student perceptions of discrimination and oppression.

Oppressive Behavior in Nursing Education

Clark (2008), Fletcher (2006), Freshwater (2000), Myrick and Tamlyn (2007), Roberts (2000), and Scarry (1999) examined oppressive behavior in nursing education. Matheson and Bobay (2007) completed an extensive literature review and was not successful finding nurse education research using Freire's model of oppression as a theoretical framework. However, Meder (1997) completed a qualitative phenomenological research study on baccalaureate student nurses in the United States with Freire's model of oppression as a theoretical foundation, while Choules (2007),

Fletcher (2006), Freshwater (2000), and Roberts (2000) described oppression in nursing citing Freire's theory. Waldow (1992) completed a dissertation on oppression in Brazilian nursing using Freire's conscientization approach to oppressive behavior. Although oppressive group behavior has been studied in professional clinical nursing, only literature related to nursing education is discussed in the following paragraphs.

Matheson and Bobay (2007) completed an extensive literature review to validate oppressive group behavior in the nursing profession. This review included terms such as: "assimilation, marginalization, self-hatred, and low self esteem, submissive aggressive syndrome, and horizontal violence of oppressed group behavior" (Matheson & Bobay, 2007, p. 229). These themes are all dimensions of Freire's pedagogy of the oppressed. Matheson and Bobay concluded "oppressed group behaviors as a consequence of oppression of nurses have not been studied as a distinct phenomenon" (p. 232). Until oppressive behavior is studied and made explicit, liberation from oppression may not be achievable (Freire, 1993).

According to Choules (2007) oppression in education is invisible and unrecognizable. This invisibility is an act of denial that oppression actually exists in nurse education and that nondominant groups are excluded from education experiences. Oppression in the profession of nursing can be made visible through self-reflection and education (Matheson & Bobay, 2007).

Myrick and Tamlyn (2007) explored nursing curriculum, faculty intentions, and actions to maintain a status quo. Myrick and Tamlyn stated that nursing curriculum is in a revolution that fosters the liberation of the student and faculty from traditional teaching

and learning. Myrick and Tamlyn cautioned that nursing faculty must be ever vigilant in a hierarchical system to avoid intentional or unintentional activities that oppress rather than liberate student nurses.

An extensive review of the literature was completed by Fletcher (2006) to examine beliefs about nursing gender identity in relationship to feminine powerlessness, leadership, and oppression based on experience. According to Fletcher, nursing is influenced by “hierarchical, autocratic, oppressive institutions” (p. 50). Fletcher takes the same position as Roberts (2000), noting that self-identity is the key to raising the nursing profession out of oppression. Clark (2008), Fletcher (2006), and Roberts (2000) support the fact that once recognized the oppressed must be liberated from the oppressive environment. Fletcher (2006) stressed, “I think it is important, when working in oppression, to not perpetuate aggression by solidifying the sense of enemy” (p. 56). The key to empowerment is awareness and understanding of one’s own reality (Freire, 1993) within an oppressive environment. Fletcher concluded by soliciting nursing leadership to action toward a more ethnically diverse profession.

Roberts’s (2000) model is based on development of a self-identity as a means to overcome oppression. Clark (2008) modeled the act of horizontal violence in nursing as a means to understand oppression. Roberts (2000) argued that nursing leadership and nursing organizations have not been able to develop group cohesion to overcome powerlessness. Roberts (2000) asserted that “Socialization as a nursing student, prior experiences, and work as a nurse all combine to develop the assumptions and beliefs about how to behave as a professional” (p. 78). Oppressive behaviors may be learned in

nursing school from faculty who teach nursing. Roberts proposed an untested conceptual model of self-identity that can transcend out of oppression. This model leads one out of oppression through five stages: (a) unexamined acceptance, (b) awareness, (c) connection, (d) synthesis, and (e) political action. This is in keeping with Freire's (1993) assertion that freedom from oppression must originate from the individual.

Through a qualitative phenomenological approach, Meder (1997) found Freire's pedagogy of the oppressed to be an applicable theoretical foundation to explain African-American baccalaureate degree seeking nursing student's perceptions of nursing education in a European-American environment. Meder's interviews of 11 student nurses uncovered the emotion of fear. Nursing faculty used scare tactics to obtain conformity in nursing education. Inferiority surfaced as student's felt a need to accept the education load without complaint. Students were "put in their place" (Meder, 1997, p. 319). Faculty may be inadvertently sending oppressive messages and place unconscious educational barriers towards minority students. According to Meder, "This dyadic structure [faculty-student] one person or group actively works to impede, obstruct, and thwart the progress of others" (p. 318). If the existence of oppressive behavior is unknown, it was difficult to eliminate oppression. Meder's research was completed to understand the intricacies of ethnic disparity in nursing education as a means to effect social change.

In a phenomenological, qualitative research study, Clark (2008) interviewed seven student nurses (4 European-American females and 3 European-American males) age 30 to 50 years. The purpose of Clark's study was to identify and document

perceptions of incivility behavior in nursing faculty and to develop a conceptual model of incivility in nursing education (p. 286). The themes that emerged from the participants were “1) faculty making demeaning and belittling remarks, 2) faculty treating students unfairly or subjectively, and 3) faculty pressuring students to conform” (Clark, 2008, p. 286). Subthemes of “condescending remarks and putdowns, exerting superiority and rank over students, and making rude gestures and behaviors” (p. 286); “perceived gender bias; arbitrary changes in syllabi, assignments; and class schedules; violation of due process; and subjective grading practices” (p. 286); and “feeling pressured to conform to the strict requirements of nursing school, often at the whim of faculty ... fear of being weeded out; being made to jump through hoops; feeling compelled to play the game; and being threatened with failure” (Clark, 2008, p. 278). A limitation of this study was the underrepresentation of minorities in the sampling for the participants. In this study, European-American student nurses were the majority experiencing incivility. This study highlights the effect faculty have on students and the need to evaluate adult teaching philosophy.

Freshwater (2000) raised the awareness of horizontal violence in nursing and the possible contribution that nursing education may play from an oppressive standpoint. Nursing faculty may feel powerless, and, as such, may exert power over student nurses to overcome this emotion. Nursing education may reinforce submissive positioning and powerlessness in student nurses to maintain a cultural norm. Freshwater advocated action against hierarchical subordination and oppression in nurse education. As a caring profession, nurse faculty should care for the student’s professional growth and advocate

the development of student's self-assurance and self-esteem in order to facilitate a culturally competent nursing workforce.

The review of the literature identified the need to complete research on gatekeeping activities in nursing education and to analyze the relationship between adult teaching philosophy of faculty and admission criteria used for student selection. This study seeks to fill gaps that exist in nursing education literature on faculty teaching philosophy and gatekeeping. The literature review of the methodology to complete this research is presented next.

Review of Methods

A descriptive, correlational survey design was selected to describe and identify relationships between variables in this study. Student ethnic diversity was reported by respondents as an ethnic percentage of applicant and enrolled student nurses. The ethnic data collected was not reliable enough to complete statistical analysis and this was explained in more detail in chapter 4 and 5. The prevalent adult teaching philosophy of associate and baccalaureate nurse education faculty was measured by the Philosophy of Adult Education Inventory (PAEI, Zinn 1983, 1990, 2004). The PAEI scores range from 15 to 105, and the highest numerical score achieved for a liberal, behaviorist, progressive, humanistic, or radical philosophy was identified as the prevalent philosophy of the participant. Admission criteria were extracted from Internet accessible documents. The numerical quantity of admission requirements plus other procedures used to select student nurses for admission and enrollment determined the complexity of admission criteria. Gatekeeping, for the purpose of this study, occurred when qualified students are

denied access to a nursing education by means of complex admission criteria. This study sought to describe gatekeeping as it exists (Cook & Cook, 2008) and determine the relationship between adult teaching philosophy of full-time faculty and complex admission criteria variables. Therefore, a cross-sectional correlational study was an appropriate approach to study relationships among variables and between groups. Several studies influenced the methodology decided for this study.

Crow et al. (2004) completed a descriptive correlational study using a cross-section researcher designed survey to determine admission criteria used by nursing programs, to identify what data predicted student success, and determine which criteria predicted NCLEX-RN success. Surveys were emailed to 513 deans and 96 responses were received for an 18.7 % response rate. The descriptive nature of this study identified admission criteria used in nursing programs. In descending order of frequency the following admission criteria were identified: college GPA, ACT[®] scores, high school GPA, SAT[™] letters of reference, interviews, mathematics exam reading comprehension, critical thinking, faculty developed exam, and a standardized entrance exam. This list guided the identification and quantification of admission criteria data retrieved for this study. Permission was obtained from the authors to use the criteria list as a guide for the collection of admission data for this study.

Grossman et al. (1998) completed a cross-sectional study of 90 deans and directors of nursing programs in Florida to study student diversity. A response rate of 51% was achieved. The researcher developed survey included 14 questions with nine open ended questions. Content validity was determined by three nursing experts, and an

inter-rater reliability of 90% was achieved by two data coders. Grossman et al. concluded that the number of minority students was disproportionate to the general minority population of the state.

Powell (2006) and Boone et al. (2002) completed descriptive correlational research with a cross-sectional approach in their respective studies using the Philosophy of Adult Education Inventory to determine prevailing adult teaching philosophy of educators. Details pertaining to the PAEI, which was chosen to measure faculty adult education philosophy, were discussed previously. According to Johnson and Christensen (2004), descriptive research provides an accurate depiction of the condition under study. The reliability and validity of the PAEI instrument as presented in Galbraith (2004) was discussed previously. This instrument appears to be a good measure and fit to evaluate adult teaching philosophy in this study. The PAEI and a researcher developed survey tool were delivered as an online survey unless the participant requested an alternate method. Factors that influence development of a survey are discussed further.

Survey Method for Data Collection

According to Fink (2006), “Surveys are used to collect information from or about people to describe, compare, or explain their knowledge, feelings, values, and behavior” (p. 1). “Survey questionnaires provide an efficient way to collect data. Questionnaires can: (i) reach large numbers of people at relatively low cost; (ii) ensure anonymity; and (iii) be written for specific purposes” (Inoue, 2003, p. 3). The components of a survey include instructions to complete the survey, the questions, and responses (Fink, 2006). The directions or instructions should be explicit to guide the participant towards

completion. The questions should be asked in such a way to be free of bias and to ensure accurate data collection. In a formal paper and pencil survey, a cover letter is essential to successful research using a questionnaire (Inoue, 2003). For an online or emailed survey, this letter could be included in the body of the email message or placed as an attachment to identified participants. The cover letter includes a purpose for survey, a need, a statement of privacy, a return date, and a courtesy statement of thanks for participation (Fink, 2006). The reader is referred to Appendix C for example of the cover letter to be used in this survey.

Fink (2006) and Selm and Jankowski (2006) listed several advantages to the use of online survey tools: (a) worldwide access, (b) the survey can be programmed to provide for a variety of open and closed responses, (c) hyperlinks can provide further clarification to the question or definition of words, and (d) the data can be automatically downloaded to statistical software for analysis. Glover and Bush (2005) reported mixed reviews when comparing online and pencil and paper survey response rates. Selm and Jankowski (2006) reported an improved response rate with online delivered surveys.

The survey design ultimately determines the quality of the survey and the success of achieving an adequate response rate (Fink, 2006). Behavioral issues related to technological factors influence participation and response rates. The researcher should work to develop a user-friendly, web-browser interface with check boxes, option buttons, and text entry boxes to enable participants to respond quickly and easily to the survey (Fink, 2006). Online survey generating software provides other options such as forced responses to ensure all questions are answered. The software can also afford an

opportunity for respondents to hold their place to leave and return to complete the survey at a later time (Cheskis-Gold, Loescher, Shepard-Rabadam, & Carroll, 2006). For this study, the online survey presented only one or two survey questions at a time to minimize scrolling and effort by the participant in the online environment. To facilitate responses, radio buttons and text boxes were included in the question design. A more detailed description is provided in chapter 3.

Likert scale questions for researcher-developed survey items were included in this survey. Inoue (2003) stated, “never” or “always” should not be descriptors on a Likert scale, explaining “few things in life are definitively ‘never’ or ‘always’” (p. 8). The use of *almost* [emphasis added] is proposed (i.e., *almost* never or *almost* always) and a 1 to 7 rating scale for responses. Likert scale questions were used and are explained in more detail in chapter 3.

Summary

According to Sand-Jecklin and Schaffer (2006) “the current shortage of nurses has been likened to a perfect storm, the result of a convergence of forces including increased demand, decreased supply, and unsatisfactory work environments” (p. 138). This scenario is evident nationally and in southeastern state under study. According to the NLN (2011c), one-third of the current registered nursing workforce in the southeastern state under study is over the age of 50. Within 20 years, one-third of the registered nursing workforce will be eligible for retirement. During the same 20-year period that the nursing workforce is aging, the population of the southeastern state under study is projected to increase by 28% (United States Census Bureau, 2008c).

In the future, the Hispanic population of the southeastern state under study is expected to increase; the African-American population is expected to remain stable; and the European-American population is expected to decrease (United States Census Bureau, 2008a, 2008b). According to the Kaiser Family Foundation (2009), 40% of the children under the age of 17 years are African-American in the southeastern state under study. The 2007 population estimates for the southeastern state under study were 51.3% female and 66% European-American (United States Census Bureau, 2008b), but the student nurse population of the southeastern state under study was recently reported as 90% female and 77% European-American (SREB, 2009). Although African-Americans account for 29% of the population of the southeastern state under study, only 16% are enrolled in nursing programs (SREB, 2009).

Taken together these facts highlight the future need for a more diverse nursing workforce to provide culturally diverse health care to a diverse and growing population. The literature review has provided evidence that faculty values and philosophy does have an influence on nurse education. It is not fully understood what relationships exists among variables. This study sought to identify relationships among student reported diversity and other variables, however the data collected was not reliable enough to analyze. Therefore, the relationship between the complexity of admission criteria and adult teaching philosophy of faculty was evaluated using correlational Lambda analysis. While chapter 3 provides an overview of the methodology, chapter 4 presents the findings, and chapter 5 presents conclusions and future directions for nurse education research.

Chapter 3: Research Methods

Introduction

Chapter 3 describes the descriptive, correlational, cross-sectional survey design used in this study. The purpose of this study was to evaluate gatekeeping admission practices of nursing education programs in the southeastern state and assess the relationship between faculty adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) and complex admission criteria used to limit qualified students to nurse education programs. This study addressed the following research questions:

1. What admission criteria are used to screen applicants to associate and baccalaureate degree nursing programs in a southeastern state?
2. What adult teaching philosophy is most prevalent among full-time faculty teaching in associate and baccalaureate degree nursing programs in a southeastern state?
3. Is there a significant relationship between complex admission criteria and primary teaching philosophy by type of nursing program?

H_O: There is no significant relationship between complex admission criteria and primary teaching philosophy.

H_A: There is a significant relationship between complex admission criteria and primary teaching philosophy.

4. What gatekeeping activities influence the admission criterion used to select highly qualified student nurses?

Gatekeeping occurs when qualified students are denied access to a nurse education by means of complex admission criteria. Gatekeeping was measured through survey questions related to limited access and factors influencing the use and determination of admission criteria. Student diversity data was collected through the Admission and Diversity survey. However, the data obtained was limited and deemed unreliable for analysis. The complexity of admission criteria were measured by the total number of criteria used for admission as well as other procedures used to select student nurses. A higher number of admission criteria indicate a more complex admission procedure. The Philosophy of Adult Education Inventory (PAEI) measured the variables of liberal, behaviorist, progressive, humanistic, and radical adult teaching philosophies (Zinn, 2004). The highest numerical score achieved for a teaching philosophy indicated the philosophy most descriptive of the participant.

Details of the procedures and processes implemented for the research design along with a description of the setting and sample are presented next. Followed by a full description of the PAEI instrument and procedures implemented for content review to ensure a valid and reliable Admission and Diversity survey was developed. The pilot study is presented with complete details of question review and revisions. Procedures for data collection and the statistical analysis are presented. The chapter concludes with the measures used to protect the rights of participants and Institutional Review Board approval for this study.

Research Design and Approach

A descriptive, correlational approach using a cross-sectional survey design was completed to collect data from full-time faculty teaching in associate and baccalaureate degree registered nurse education programs in the southeastern state under study. According to Johnson and Christensen (2004) descriptive research is classified by a study that has an objective or goal to depict a condition or observable fact. The collection of data to describe applicant and enrolled student nurse ethnicity was not successful as the data was unreliable to statistically analyze. Admission criteria and its complexity and the prevalent adult teaching philosophy of full-time associate and baccalaureate degree faculty data was obtained and analyze using descriptive and correlational Chi-square, Lambda analysis. A correlational survey design is best suited to describe relationships between variables known to exist (Cook & Cook, 2008). However, the variables are not able to be manipulated (Fitzgerald, Rumrill, and Schenker 2004; Johnson & Christiansen, 2004). This correlational design explored the relationship (Fitzgerald et al., 2004) between the complex admission criteria and the primary teaching philosophy (liberal, behaviorist, progressive, humanistic, and radical) of full-time faculty as measured by the PAEI. Descriptive and correlational research is not causal in nature (Cook & Cook, 2008) so only the relationship among variables was analyzed. The setting and sample best describes the location of the study and the participants.

Setting and Sample

The setting for this research was an online accessible survey delivered through SurveyMonkey software. The survey was created in a simple design format to facilitate

viewing and to reduce scrolling by the participants. The survey was completed by a purposeful sampling of full-time registered nurse faculty teaching in associate and baccalaureate degree nurse programs in the southeastern state under study. A purposive sample is justified as the participants are judged to have expertise a particular phenomenon (Trochim, 2006). Participants included in this study are considered experts in the admission process and the selection of student nurses. Participation was voluntary as stated on the email inviting participants to take part in the study, Appendix C.

Setting

According to the South Carolina Commission on Higher Education (2010), there are 84 higher education institutions comprised of two private, two independent, three research, four public state campuses, 10 comprehensive teaching, 16 technical colleges, 23 independent senior institutions, and 24 out of state degree granting institutions. Of these universities, 13 offer a baccalaureate degree registered nurse education program approved by the State Board of Nursing (South Carolina Labor and Licensing Board, 2009). The southeastern state's Technical College System consists of 16 technical colleges (Russell, 2006). Of these colleges, 14 offer an associate degree registered nurse education program approved by the State Board of Nursing. No diploma registered nurse education programs are approved in the southeastern state under study (South Carolina Labor and Licensing Board, 2009). A new associate degree program was approved after data was collected for this study (South Carolina Labor and Licensing Board, 2011). This new nursing education program did not exist at the time of data collection and was not included in this study, but is recorded for sample and setting accuracy.

According to the SREB (2007) report, nursing education administrators of the southeastern state under study are 100% female and 100% European-American. Of the 16 administrators, eight hold doctorate level education with 75% as a Doctorate in Nursing. The remaining eight hold a master's degree in nursing. The average age of administrators is 56.5 with a range between 33 to 67 years of age. The SREB (2007) reported full-time faculty as 97.45% female, 88% European-American, 10% African-American, 1% American Indian, 1% Asian, and 0% Hispanic. The average age of full-time faculty in this 2007 report was not stated. Data from 2007 was the last SREB published nursing education data at the website, data for 2009-2010 was provided electronically.

To ensure only subjects for inclusion participated in this survey, a demographic question, "Do you teach full time?" was included on a researcher-developed survey. This question excluded adjunct faculty and part-time faculty. No surveys were received where the subject answers no to this question. Students were not included in the sample.

Sample Size

Surveys are known to produce inconsistent and low response rates. An adequate sample size is important to the reliability and validity of this research. A population size of approximately 385 potential participants (SREB, 2007) was identified. Fink (2006) recommended using a sample-size calculator available from the Web to determine sample size. Power analysis was completed online using Raosoft at a statistical confidence level of 95% with a 5% margin of error to determine the number of participants. According to the power analysis, 193 participants sample size was required to reach a 95% confidence

level. However, 68 useable surveys were obtained. Raosoft calculation was reevaluated to identify an obtained confidence level and margin of error. Using the obtained sample size of 68, this study achieved a 95% confidence interval with a 10.80% margin of error (Raosoft, Inc., 2004). This margin of error means that 10.80% of the responses could be considered a deviation from an expected true response. Therefore, with a sample size of 68 there is 95% confidence that the responses are true within a 10.80% of the margin of error.

Response rates for similar PAEI research were higher at 38% for Boone et al. (2002), 25% for West (2008), and 23% for O'Brian (2001). The procedure to identify participants and achieve a good response rate is presented next. Content expert review, the pilot study, and changes to the Admission and Diversity Survey follows the Instrumentation and Materials section.

Sample Verification

From Internet published associate and baccalaureate degree program websites, I extracted a faculty listing for each nurse education program. An introductory email was sent to administrators (deans, directors, or department chairs) to explain the purpose of the study and requested verification of full-time faculty on the lists. This process took approximately three weeks. One email reminder was sufficient to achieve full-time faculty verification. Follow-up telephone contact was planned but not necessary as administrators replied quickly to this verification request. Once the list was verified, participants were entered on an Excel spreadsheet to ensure program representation. Participants were then emailed an invitation to participate.

Invitation to Participate

An initial email message served as an invitation letter to participate in the study, Appendix C. Glover and Bush (2005) proposed a general email invitation for online surveys. In this email message, three survey options (Selm & Jankowski, 2006) were offered: an online web-based survey, an email attachment survey, or a mailed survey. A link to the survey was included in the email message to facilitate direct access to the survey. All participants chose the online format. Two weeks after the initial invitation, nonrespondents received an email message reminder encouraging participation in the survey. A link to the survey was also included in this email message. To participants who completed the survey, a thank you email message was sent along with PAEI scores and an interpretation of their results, Appendix D. This process continued every two weeks for three months in an attempt to reach the calculated sample size or till maximum participation was achieved. A maximum of three email invitations were sent.

Protection of Subjects and Programs

The email message inviting subjects to participate clearly stated participation was voluntary, Appendix C, and confidentiality would be maintained. No specific personal identifying data was requested on the survey tool except for an email address as a verification of consent to participate. To protect the identity of academic programs a specific identifier (BSN_A, BSN_B ... BSN_M or ADN_A, ADN_B ...ADN_N) was used rather than program name. All data collected was kept strictly confidential and no data was viewed or shared between individuals, groups, programs, or institutions. No identifying information was included in the writing of this research. Data from

SurveyMonkey was directly downloaded to my personal computer; secured with a password known only to me. All printed documents were filed in a locked cabinet. All data was entered into the statistical software, analyzed, and evaluated by me. Risks to the participants included a physical risk of computer fatigue, a psychological risk of technology frustration, or strain associated with the use of technology (NIH, 2008).

Instrumentation and Materials

The online survey included the Admission and Diversity Survey and the PAEI (Zinn, 1983, 1990, 2004). Demographic information was collected at the end of the survey. Specific details about designing the online survey, development of the Admission and Diversity Survey and the PAEI are discussed in the following sections. I created the online version of this survey using SurveyMonkey™ software.

The online survey was of a simple design without clip art, pictures, or animation. Glover and Bush (2005) offer three suggestions for online survey design that call for online surveys to be presented cleanly, load quickly, and run smoothly. SurveyMonkey was used to create the online survey. Selm and Jankowski (2006) recommended online survey-generating software to facilitate the design and implementation of the survey. Horizontal radio buttons were used for categorical yes or no responses for survey design questions, for example: “Do you have input or make decisions related to admission requirements or procedures for the selection of nursing students? yes no.” Other questions included text boxes for data entry, for example: “To the best of your knowledge, enter a percentage of ethnic diversity for the most recent applicants to the prelicensure (generic) registered nurse program. European-American , African-

American[], Hispanic[], American Indian[], Asian[], Mixed ethnicity[], other[], or I do not know[].” European-American and African-American terminology was used following guidance from American Psychological Association (2010). An ethnic percentage was entered in the box provided and the responses added to 100%. Horizontal radio buttons were used for PAEI Likert scale questions. Radio buttons, drop down menus, single or multiple selection responses, and text boxes for open ended responses are typical online question response formats recommended by Fink (2006). At the top of the online survey screen an indicator was included to permit the participant to monitor his or her progress toward completion. Forced response options were used to prompt the participant to answer questions before progressing in the survey. However, these questions were found to frustrate the pilot study participants and this forced response option was removed for the study.

Questions were presented so that one to two questions filled the monitor screen to minimize up and down scrolling by the participant. Greenlaw and Hepp (2002) recommended principles of web page design, such as beta testing, to debug programs. Greenlaw and Hepp (2002) also recommended evaluation of the online survey tool completely, conducting testing on different types of computers (Apple or PC), using different hardware and software (cable, high speed, and dial-up modems), multiple browsers, different monitor screen displays, and through different Internet service providers. The volunteer nurse educators from an education Listserv used different computers, software, and connections to beta test the online survey design for usability. The next technological issue to address is human behavior when using technology.

Slow processing speed, impatience to exit the survey, and fear that the survey was not successfully loaded results in a double click phenomenon and multiple survey submissions (Glover & Bush, 2005). Multiple submissions are problematic and affect the overall results of the data collected. SurveyMonkey has an established identification procedure to control multiple submissions, uninvited submissions, and maintaining confidentiality. The <http://www.address> for the study had a unique identifier placed at the end of the URL address to track all invited participants, for example: ?c=1201. Another influencing factor to consider for the online survey for this study was completion time

According to Glover and Bush (2005), if a survey takes too long to complete, respondents will exit the survey. Glover and Bush considered 10 to 35 minutes a reasonable time for survey completion. The PAEI was estimated to take 30 minutes to complete. Admission and Diversity questions increased survey completion time to 35 – 40 minutes to complete this study. The pilot study was implemented to assess the readability of the admission and diversity questions, identify any user technological issues related to online design, and receive comments about question clarity from pilot study participants.

Pilot Study and Implications

A pilot study was conducted from June 18, 2010 to July 10, 2010. The pilot study consisted of (a) content expert evaluation of the Admission and Diversity Survey, (b) implementation of the pilot study, (c) procedural evaluation of data management, and (d) analysis methods. A summary of all of these steps is presented.

Content Expert Evaluation

The Admission and Diversity items were constructed from the literature review and based on the theoretical concepts related to admission, ethnic diversity, and gatekeeping as discussed in chapter 2. Table 5 displays the linkages of the research questions, to the survey questions, the variables under study and the statistical analysis. Demographic questions were included to describe participant characteristics. The survey items were reviewed by three content experts, all nonresidents of the southeastern state under study. Two were tenured nursing faculty with doctoral degrees and administrative responsibilities, and more than 30 years of nursing education experience. The third reviewer was a master's prepared nursing educator. Meetings were suggested; however electronic review was requested by the experts. The electronic document and comments were returned for review. The reviewer's comments were evaluated and subsequent changes made to enhance content validity of the survey instrument. Specific details of the changes are presented. The PAEI was not evaluated for content as per Dr. Lorraine Zinn instructions. A short summary of the PAEI instrumentation follows.

Table 5

Research Survey Questions, Variables, and Statistical Analysis

| Research Question | Survey Question | Variables | Analysis |
|--|---|--|--|
| What is the ethnic background of associate degree and baccalaureate degree student nurses currently enrolled in a southeastern state under study's nursing programs? (deleted) | This survey question was deleted. On the survey, Q 8 was to determine if minority students are applying to nursing programs and Q 9 determined the ethnic diversity of the current admitted cohort. | Applicant ethnicity and enrolled ethnicity. | It was planned to complete descriptive statistics and a single sample <i>t</i> test to compare mean scores of diversity all groups between associate or baccalaureate programs. However, data was not reliable enough to analyze. |
| 1. What admission criteria are used to screen applicants to a southeastern state's associate and baccalaureate degree nursing programs? | Q 2 established who makes decisions about the admission process. Researcher extracted data from internet sources to identify the criteria used. A cumulative number indicated system complexity. | Cognitive developmental criteria, curricular criteria, health care experience; physical performance; professional; legal requirements; time limited requirements; and residency. | Descriptive statistics; Group means Frequencies |
| 2. What adult teaching philosophy is most prevalent among full-time faculty teaching in a southeastern state's associate and baccalaureate degree nursing programs? | PAEI Questions 10 - 25 has five responses relating to a particular adult teaching philosophy. The scores were tabulated and rank ordered. The highest number was the most prevalent adult teaching philosophy. | Liberal, Behaviorist, Humanistic, Progressive, and Radical. | Descriptive statistics and a comparative table of associate and baccalaureate degree programs; independent sample <i>t</i> test to determine if there is a significant difference between each of the five philosophies in the associate or baccalaureate group. |
| 3. What relationship exists between admission criteria and teaching philosophy by associate or baccalaureate nursing program? (revised to remove ethnicity) | Researcher extracted admission data identified the criteria used. A cumulative number indicated the system complexity. The higher the complexity the more restrictive the admission process. PAEI Question 10 - 25 had five responses relating to a particular adult teaching philosophy. The scores were tabulated and the philosophies ranked. The highest number was the most prevalent adult teaching philosophy. | Complexity of admission criteria was the cumulative number of the admission criteria; each adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) score was determined. All variables were correlated to identify relationships between and among variables. | Cross-tabulation and Lambda correlational analysis. Biserial to evaluate associate and baccalaureate degree programs. |
| 4. What gatekeeping factors influence the admission criterion used to select highly qualified student nurses | Q 3 established that enrollment is limited (gatekeeping). Q 4 determines how students are selected to programs (gatekeeping). Q5 determine the factors that have high influence on admission criteria used in student selection, Q 6 identified and prioritizes the admission criteria used to select only the most qualified students. Q7 identifies the competitive nature of student selection. | The existence of limited enrollment was an ordinal measure. A prioritization scale was used to identify the factors most influential for student selection. | Descriptive statistics, Mean scores |
| Demographic data | Q25 was gender, Q 26 was age, Q 27 was ethnicity, Q 28 was registered nurse experience, Q 29 was nurse educator experience, Q 30 was highest level of education, Q 31 divided the respondents into associate and baccalaureate groups and Q32 collected academic position data. | Male, female, age, ethnicity, years of nursing experience, years teaching as nursing faculty, level of education attained, associate degree teaching, baccalaureate degree teaching. | Descriptive statistics, <i>t</i> test to compare associate and baccalaureate degree programs. |

Admission and Diversity Survey

No previously developed instruments were found that measured admission and diversity. Therefore, it was appropriate to create survey questions. The Admission and Diversity (AD) survey, Appendix E, was developed by me based on literature review as described in detail in chapter 2. After content reviewer's recommendations were received subsequent changes made to the survey. The survey was then created on SurveyMonkey for the execution of the pilot study. A text comment box was provided at the end of each question to provide participants an opportunity to respond to the clarity and understanding of each question, identification of any language bias, and the online survey experience. Each question is first presented in its original format followed by the final form and the coding used to analyze the responses. For ease in interpretation, the content review and the pilot study responses are combined. The relationship of the survey to the research questions as well as detailed analysis procedures is provided in Table 5.

Implementation of the Pilot Study

Following expert review and online development of the Admission and Diversity survey, an email request for volunteers to complete the pilot survey was sent to a nurse educator Listserv. A limitation to this methodology is the convenience sampling procedure. I correspond on this Listserv email discussions and recognize names, but I am not closely acquainted with any of the pilot study participants. The nurse educators on the Listserv from the southeastern state under study were asked to exclude themselves from the pilot study. A total of 31 educators from Alabama, California, Indiana, Kansas,

Maine, Ohio, Oklahoma, Oregon, Texas, and Washington volunteered to complete the pilot survey. No pilot study participants were from the southeastern state under study. One participant was retired and chose to respond to the questions in the context of previous teaching experience. A total of 16 individuals participated for a return rate of 52%. Along with completing the survey the pilot study participants were asked to comment on the readability, understanding and usability of online survey completion.

Admission and Diversity Questions

Minor revisions (correction of typographical errors), elimination of the forced response, and elimination of questions to reduce completion time, were made to the Admission and Diversity survey. Each question is presented as it appeared on the pilot study survey. Expert and pilot participant had the opportunity to make suggestions for each question and comments are included. The final revision is presented for each question.

Question 1. “Do you have input or make decisions related to admission requirements or procedures for the selection of prelicensure (generic) student nurses to the nursing program? Yes or No.” The comments received were: “What do you mean by input?” and “I suggest a second question to assess the kind of involvement—faculty vote, admissions committee, program director.” This question was changed to: “Do you have an influence on the determination of admission requirements for prelicensure (generic) nursing students? Yes or No.” Coding for influencing admission requirements was INF_ADM (1 = *Yes* and 2 = *No*).

Question 2. “Is nursing student enrollment limited? Yes or No.” The three comments received were: “Fine”, “Quite Clear”, and “This question seems awkward. Is there a limited enrollment of students into the prelicensure (generic) nursing program?” This question was changed to: “Is there a limit to the number of nursing students enrolled to the prelicensure (generic) registered nursing program? Yes or No.” Coding for nursing student limited enrollment was NS_LIMIT (1 = yes and 2 = no).

Question 3. “Prelicensure (generic) nursing student selection for registered nursing education program is made by: (a) a first qualified, first applied, and first selected process, (b) admission department personnel, (c) a nursing department individual, (d) a nursing department group or committee, (e) a point or weighted system, and (f) other.” No comments were made on this question; therefore, no changes were made. Coding for nursing student selection was SEL_RN (6 = other, 5 = a first qualified, first applied, first selected process, 4 = admission department personnel, 3 = a nursing department individual, 2 = a nursing department group or committee, and a 1 = a point or weighted selection procedure).

Question 4. “The admission procedure or process is a: (a) one-step process, (b) two-step process, or (c) three-or-more step process.” Comments received were: “I have no idea what this means” and “I don't know what you mean by one step etc. process.” This question was deleted from the survey.

Question 5. “How much influence (0 = *no influence or no opinion*, 1 = *lowest influence* to 7 = *highest influence*) do the following agencies or factors have on determining nursing admission criteria or requirements? (a) State Board of Nursing, (b)

Accreditation agency, (c) Empirical evidence for education practice, (d) Previous teaching experience with students, (e) Personal teaching philosophy about learning, (f) Previous events or occurrences with students, (g) Clinical agency recommendation or requirements, (h) State law or regulation, and (i) NCLEX pass rates.” The comment received was, “I’m not sure what you’re trying to determine here. Some of this appears to ask what I know about the requirements set by regulatory and accrediting agencies and some to ask about how I determine which applicant would make the best student/nurse.” Therefore, the options of (a) State Board of Nursing, (d) previous teaching experience with students, and (h) State law or regulation were removed from the list. The question was changed to: “How much influence (0 = *no influence or no opinion*, 1 = *lowest influence* to 7 = *highest influence*) do the following agencies or factors have on determining nursing admission criteria or requirements? (a) accreditation agency, (b) empirical evidence for education practice, (c) personal teaching philosophy about learning, (d) previous events or occurrences with students, (e) clinical agency recommendation or requirements, and (f) NCLEX pass rates.” Coding for this question was accreditation agency as INFDEC_ACCR, empirical evidence for education practice as INFDEC_EMP, personal teaching philosophy about learning as INFDEC_PTP, previous events or occurrences with students as INFDEC_EXP, clinical agency recommendation or requirement as INFDEC_CLIN, and NCLEX pass rates as INFDEC_NCLEX (0 = *no influence*, 1 = *lowest influence*, 2 = *lower influence*, 3 = *low influence*, 4 = *moderate influence*, 5 = *high influence*, 6 = *higher influence*, and 7 = *highest influence*).

Question 6. “List in priority order, the top five admission criteria that you believe restricts or controls the access of qualified prelicensure nursing student’s selection.” The criterion that has most control should be listed first. Enter responses in text format. A suggestion was offered: “may be better if you identified somewhere between 7–10 criteria and then asked the participant to rank order these variables.” This question was changed to: “Prioritize the following list. Choose the top five admission criteria that you believe restrict or control the access of qualified prelicensure nursing student's admission to a registered nursing program: (a) Science GPA, (b) Prerequisite course grades, (c) Previous college GPA, (d) Standardized testing (e. g., TEAS, COMPASS, SAT™, ACT®), (e) Specific course GPA, (f) Cumulative GPA, (g) Prerequisite course credit completion, (h) High school transcript, (i) Date of previous course credit completion, (j) Previous course failures, (k) Written essay, and (l) other(please specify).” The responses were coded science GPA as PZE_SGPA, prerequisite course grades as PZE_PCGPA, previous college GPA as PZE_PC, standardized testing as PZE_TEST, specific course GPA as PZE_SPGPA, cumulative GPA, as PZE_CGPA, prerequisite course credit completion as PZE_CRC, high school transcript as PZE_HST, date of previous course credit completion as PZE_TIME; (j) Previous course failures, coded as PZE_PREREQ, written essay as PZE_ESSAY, and other as PZE_OTHER (1 = first choice, 2 = second choice, 3 = third choice, 4 = fourth choice, and 5 = fifth choice).

Question 7. “What terminology best describes the admission process? (a) Extremely competitive or selective, (b) Very competitive or selective, (c) Competitive or selective, (d) Somewhat competitive or selective, (e) Not competitive or selective at all,

or (f) Unable to describe.” No comments were received for this question. No changes were made to this question. The selection process question was coded SEL_PROC (5 = *extremely competitive or selective*, 4 = *very competitive or selective*, 3 = *competitive or selective*, 2 = *somewhat competitive or selective*, 1 = *not competitive or selective at all*, and 0 = *unable to describe*).

Question 8. “To the best of your knowledge, please enter a percentage of ethnic diversity (the ethnic mix) for the prelicensure (generic) nursing student applicants?: (a) European-American, (b) African-American, (c) Hispanic, (d) American-Indian, (e) Asian, (f) Mixed Ethnicity, (g) Other, and (h) I do not know.” The suggestion was made to consider using the term White rather than European-American; however, because the term African-American was used, the term European-American was retained for this question for proper written documentation as suggested by American Psychology Association (2010). No changes were made to this question. Coding for this question was EA_BA = European-American, AA_BA = African-American, H_BA = Hispanic, AI_BA = American Indian, A_BA = Asian, ME_BA = Mixed ethnicity, O_BA = other, and U_BA = unknown (1 = European-American, 2 = African-American, 3 = Hispanic, 4 = American Indian, 5 = Asian, 6 = Mixed Ethnicity, and 7 = other).

Question 9. “To the best of your knowledge, please enter a percentage of the ethnic diversity (ethnic mix) for the most recently enrolled students to the prelicensure (generic) registered nursing program. (a) European-American, (b) African-American, (c) Hispanic, (d) American-Indian, (e) Asian, (f) Mixed Ethnicity, (g) Other, and (h) I do not know.” Suggestion was made to consider using White rather than European-American,

however since the term African-American was used European-American was retained for this question for proper written documentation as suggested by American Psychology Association (2010). No changes were made to this question. Coding for this question was EA_AA = European-American, AA_AA = African-American, H_AA = Hispanic, AI_AA = American Indian, A_AA = Asian, ME_AA = Mixed ethnicity, O_AA = other, and U_AA = unknown (1 = European-American, 2 = African-American, 3 = Hispanic, 4 = American Indian, 5 = Asian, 6 = Mixed Ethnicity, and 7 = other).

Demographic Questions

The content reviewers were also asked to review and comment on demographic data collection questions. Each question is presented with recommendations for revision. The question is then stated in its final format with the coding used for analysis.

Demographic question 1. “I am: Male Female.” No comment received for this question. No changes were made. Coding for gender was Gender_FM (1= female and 2 = male).

Demographic question 2. “My age as of this survey is ____: Enter your age in the text box .

Suggestion was made to: “Use groupings (maybe 5-year intervals) for age, nursing practice, and teaching experience.” This question was changed to: “My age as of this survey is: 70 and older, 65 to 69, 60 to 64, 55 to 59, 50 to 54, 45 to 49, 40 to 44, 35 to 39, 30 to 34, 25 to 29, and 20 to 24.” Coding for age was Age_Yrs (1 = 70 and older, 2 = 65-69 age group, 3 = 60 – 64 age group, 4 = 55-59 age group, 5 = 50 – 54 age group, 6 = 45 – 49 age group, 7 = 40 – 44 age group, 8 =

35 – 39 age group, 9 = 30 – 34 age group, 10 = 25 – 29 age group, and 11 = 20 -24 age group).

Demographic question 3. “The ethnic group I associate myself with the most is: European-American, African-American, Hispanic, American-Indian, Asian, Mixed Ethnicity, and other .

No comments were received. No changes were made to this question. Coding for ethnicity was ETHNIC_FAC (1 = European-American, 2 = African-American, 3 = Hispanic, 4 = American Indian, 5 = Asian, 6 = Mixed Ethnicity, and 7 = other).

Demographic question 4. “I have been a registered nurse for _____ years. Enter the number of years in the text box .

Suggestion made to “Use groupings (maybe 5-year intervals) for age, nursing practice and teaching experience.” This statement was changed to: “I have been a registered nurse for _____ years: 40+, 35 to 39, 30 to 34, 25 to 29, 20 to 24, 15 to 19, 10 to 14, 5 to 9, and 0 to 4.”

Coding for years of nursing experience was RN_Yrs (1 = 40+, 2 = 35 – 39 age group, 3 = 30 – 34 age group, 4 = 25 – 29 age group, 5 = 20 -24 age group, 6 = 15– 19 age group, 7 = 10 – 14 age group, 8 = 5 - 9 age group, and 9 = 0 – 4 age group).

Demographic question 5. “I have taught nursing for a total of _____ years. Enter the number of years in the text box. .

As in the previous questions, a suggestion was made: “Use groupings (maybe 5-year intervals) for age, nursing practice, and teaching experience.” This question was changed to: “I have been a registered nurse for _____ years: 40+, 35 to 39, 30 to 34, 25 to 29, 20 to 24, 15 to 19, 10 to 14, 5 to 9, and 0 to 4.” Coding for years of teaching experience was NE_Yrs (1 = 40+,

2 = 35 – 39 years, 3 = 30 – 34 years, 4 = 25 – 29 years, 5 = 20 -24 years, 6 = 15– 19 years, 7 = 10 – 14 years, 8 = 5 - 9 years, and 9 = 0 – 4 years).

Demographic question 6. “The highest degree I hold is: Ph.D. in Nursing, Ph.D. in another discipline, DNP, Masters Degree in Nursing, and Other Degree not listed. Please explain .

” No comment was received on this statement. No change was made to this question. Coding for level of education was ED_HED (1 = Ph.D. in Nursing, 2 = Ph. D. in another discipline, 3 = Doctorate in Nursing Practice, 4 = Masters in Nursing, and 5 = Baccalaureate in Nursing).

Demographic question 7. “I teach student nurses at the: associate degree level baccalaureate degree level.” No comment was received on this statement. No change was made to this question. Coding was TCH_LEVEL (1 = associate degree nursing and a 2 = baccalaureate degree nursing).

Demographic question 8. “My job title is: Chair, Dean, Director, faculty, Instructor, Tenured Professor, Associate Professor, Assistant Professor, Adjunct Faculty Adjunct Instructor, or other, please explain .

” No comments were received; however, I considered faculty and instructor to be redundant. Tenured professor and adjunct position were noncontributory to this research. These options were eliminated to decrease the number of options and reduce the time to complete the survey. Question was changed to: “My job title is: Chair, Dean, Director, Instructor, Associate Professor, Assistant Professor, or other, please explain .

” Coding for teaching positions was JOB_TITLE (1 = Chair, 2 = Dean, 3 = Director, 4 = Instructor,

5 = Associate Professor, and 6 = Assistant Professor. Readers are directed to Appendix E for a full version of the final survey instrument.

Philosophy of Adult Education Inventory

The Philosophy of Adult Education Inventory (Appendix E) was used exactly as written in 2004 as requested by Dr. Lorraine Zinn (L. Zinn, personal communication, March 18, 2009). Dr. S. Merriam, coauthor of the *Philosophical Foundations of Adult Education* and content expert reviewer for Zinn's Philosophy of Adult Education Inventory in 1983, was emailed a request for an expert opinion on the PAEI. Her reply was "the PAEI has been used a lot and is valid for what it does assess [liberal, behaviorist, humanistic, progressive, and radical philosophies]" (S. Merriam, personal communication, November 29, 2009).

The PAEI scores five adult teaching philosophies: (a) liberal, (b) behaviorist, (c) progressive, (d) humanistic, and (e) radical. It consists of 15 incomplete sentences followed by five options that correspond to the philosophical concepts to complete the sentence. A Likert of 1 to 7 was coded as 1 = Strongly Disagree, 2 = Mostly Disagree, 3 = Mildly Disagree, 4 = Neutral, 5 = Mildly Agree, 6 = Mostly agree, 7 = Strongly Agree (Zinn, 1983, 1990, 2004). The scoring for a particular philosophy range is 15 to 105. Zinn (1983) stated a score of

- 105 - 95 indicated a strong agreement with that particular philosophy,
- 94-66 was an agreement,
- 65-56 was a neutral score (neither agreeing nor disagreeing),
- 55-26 was a disagreement and a low score of

- 25 - 15 was a strong disagreement with a particular philosophy. (p. 191)

The PAEI takes approximately 30 minutes to complete (Zinn, 2004). On the recommendation and permission of Dr. Lorraine Zinn, explanation of the results of the PAEI, Appendix D, was provided to the participants following data collection and scoring of adult teaching philosophy.

The number of questions in this survey was considerable with the admission criteria, demographic, and PAEI questions. This was an important consideration for this survey completion rate. Data collection procedures were evaluated and data analysis completed to evaluate data collection procedures and precision of the data analysis.

Pilot Study Data Management

Data were downloaded directly from SurveyMonkey as an Excel spread sheet for the pilot study. Only one participant requested email delivery of the survey and this data was manually entered to the Excel spreadsheet by me. An Excel spreadsheet was appropriate to track each participant, calculate the PAEI results (Appendix F), and identify surveys for analysis inclusion or exclusion. All electronic data remained confidential in an electronic file on a password protected private computer. One hard copy survey was maintained in a designated file in a locked file cabinet accessible only to me.

The Excel spreadsheet provided a review of the data for completeness, as well as an easy upload to PASW[®] Statistics version 18 software. One pilot study survey was incomplete and not included. Participants ($n = 4$) who reported no influence on admission decisions were excluded. A total of 16 individuals participated, 12 complete

surveys were used in the pilot study analysis (six baccalaureate degree faculty and six associate degree faculty).

The PAEI inventory included 75 numerical values used to score each pilot study participant's five teaching styles. For the pilot study, the data was entered manually by me. It was a time intensive procedure and prone to data entry error. For the research study, the procedure was revised to include an Excel spreadsheet that would automatically compute these 75 values following a simple copy and paste procedure and instantly produced the five adult teaching philosophy scores using Zinn's (2004) calculation formula. This reduced data entry error and expedited scoring. The highest score on the PAEI represented the preferred adult teaching philosophy either liberal, behaviorist, humanistic, progressive, and radical philosophies (Zinn, 1983, p. 191).

The pilot survey evaluated completion time. The mean duration to complete the survey was 40 minutes, with a maximum of 88 and a minimum of 15 minutes. This was considered acceptable for this study. Although the sample size for the pilot study was small, an analysis of the finding allowed for an evaluation of the analysis methodology before implementing this study.

Data for admission criteria were collected by me from online sources using Appendix G and Appendix H. The list obtained admission criteria were verified for completeness and accuracy before it was included in the data analysis. This data was entered manually by me to an excel database and a raw score of admission criteria for each associate and baccalaureate degree program was tabulated and used for analysis.

Validity and Reliability

The PAEI, a tool with previously established reliability and validity, was used in this study. Fink (2006) recommended using a published survey with established reliability and validity. The Admission and Diversity survey was developed using the extensive literature review as discussed in chapter 2. Fink stated surveys are valid and reliable based on the definitions and selection of questions grounded in applicable theoretical model constructs. Content expert evaluation established face validity.

A pilot study on a representative sampling of participants is another method to validate a survey tool (Johnson & Christensen, 2004). The reliability of the survey tool was tested with the pilot and retested upon study completion. According to Fink (2006), a survey tool's reliability is based on consistent and repeated measures.

Only completed surveys were used for data collection and determination of response rates. Missing data from a survey eliminated that particular participant from the study. A no response to question 2, "Do you have input or make decisions related to admission requirements or procedures for the selection of prelicensure (generic) nursing student to the nursing program?" excluded the participant. Only usable data was entered into the PASW[®] 18 version software, a registered trademark of SPSS Inc. software for graduate students. Participation was equal to a one (1) and no participation equal to zero (0). Responses were summed and divided by the number of faculty asked to participate to obtain a response rate. I verified subject inclusion criteria, evaluated responses for duplication, uninvited participation, and completion of the survey to determine the response rate.

Response Rate

To improve response rate, participants were offered three options to complete the survey, an email downloadable version, a pen and paper version, or a link to the online survey. A hyperlink to the online survey was provided in the initial message and any follow-up messages. This link provided direct access to the online survey encouraging an immediate response to the survey (Fink, 2006; Glover & Bush, 2005; Selm & Jankowski, 2006). Within two weeks of the initial request, if the calculated sample size was not achieved an email reminder (Appendix I) was sent as an attempt to reach the level of participation desired. A third email reminder served as a prompt for nonparticipants to complete the survey. According to Fink (2006) and Selm and Jankowski (2006), multiple notification attempts and follow up reminders increase response rates. When all efforts were made to obtain the desired response rate, including third email invitations, the study was concluded and data analyzed.

Data Collection and Analysis

Data was uploaded to the PASW[®] software, a registered trademark of SPSS Inc. and coded to divide the participants into associate and baccalaureate degree program groups. Demographic variables of male, female, age, race, years of nursing experience, years of teaching experience, highest level of education attained, type of degree program, and position title were nominal data and analyzed using descriptive statistics of frequency, mean, median, and mode. Diversity was a percentage ratio score. Ethnic diversity was grouped into two variables of applicant and enrolled student nurse ethnicity. Adult teaching philosophy included five variables of liberal, behaviorist,

progressive, humanistic, and radical philosophies. The five PAEI variables were numerical scores and the primary faculty teaching philosophy, for each participant, was the highest score of the five philosophies and coded by me as nominal data of 1 for liberal, 2 for behaviorist, 3 for progressive, 4 for humanistic, and 5 for radical. There was one variable for admission criteria and one variable for complex admission criteria. The variable admission criteria were the total additive number of criteria. The score for the admission variable ranged from 7 to a high of 25. No program listed more than 25 criteria used for admission selection. The variable complex admission criteria were a coded into three groups: 1 for a criteria sum between 7 to 12 criteria, 2 for a criteria sum between 13 to 19 criteria, and a 3 for a criteria sum between 20 to 25 criteria. Complex admission was an ordinal variable. Data on gatekeeping was collected through five questions on the Admission and Diversity survey (Appendix E). Descriptive analyses of the data from these five questions were used to identify the characteristics of gatekeeping used in nursing education.

Descriptive analysis and frequency statistics were used to describe and compare variables as well as determine group means between associate and baccalaureate degree programs. Independent sample *t* tests were used to determine statistical significance at a level of $p < .05$ between associate and baccalaureate degree programs. Correlational analysis was conducted on nominal data using Chi-square, cross-tabulation, and Lambda statistical analysis. According to Cook and Cook (2008) correlational statistics can be used to identify relationships between variables which are not causal. *Lambda* statistical

analysis is a nonparametric statistic to analyze if a relationship exists between nominal or ordinal data (White & Korotayev, 2003).

IRB Approval

The Walden University approved this research study June 15, 2010 (Appendix J). Approval number for this study is 06-15-10-0287751.

Study Timeline

The timeline for completion of this study is presented in Table 6.

Table 6

Timeline to Complete this Research

| Month | Week | Activity |
|-------|------|--|
| 1 | 1 | Submit IRB. |
| | 2 | Approval to proceed. |
| | 3 | Collect list of possible participants from web. |
| | 4 | Create participant database for tracking. Email nurse administrators to verify full-time faculty. |
| 2 | 1 | Obtain content experts to assess the survey. Meet with experts for content validity. |
| | 2 | Reminder to deans and directors to verify full-time faculty list. Create the pilot survey on SurveyMonkey™. |
| | 3 | Obtain pilot test volunteers. Notify pilot testing volunteers to complete the pilot testing. |
| | 4 | Download data daily to Excel spreadsheet. Evaluate data collection. Load to PASW version 18 for graduate students. |
| 3 | 1 | Revise Admission and Diversity survey. |
| | 2 | Email participants to complete the survey within two weeks. |
| | 3 | Download survey results daily. Check completeness of data. |
| | 4 | Email reminders to those who have not participated. |
| 4 | 1 | Download survey results. Check completeness of data. |
| | 2 | Email reminders to encourage participation. |
| | 3 | Continue to download data and review for completeness. |
| | 4 | Input data for analysis into the PASW database version 18 for graduate students. |
| 5 | 1 | Analyze data. |
| 6 -18 | 1-4 | Write findings, revise results, and final approval |

Summary

This chapter presented a descriptive, correlational research methodology for a nonexperimental study that was conducted using a cross-sectional survey design. The setting for this survey is higher education registered nurse degree programs in a southeastern state. This study was conducted on a purposive sampling of full-time nurse education faculty teaching in associate and baccalaureate degree nursing programs in a southeastern state. Faculty teaching in LPN programs, adjunct faculty, part-time faculty, and faculty not involved with decisions about admission procedures were not included in this study. The research included an Admission and Diversity survey developed by me from the review of literature, and the PAEI (Zinn, 1983, 1990, 2004). The Admission and Diversity survey was evaluated for face validity and content validity by a panel of experts. A pilot study identified weaknesses and inconsistencies that could influence the reliability and the validity of the instrument. The pilot study delineated procedures, test data retrieval, and storage. Incomplete surveys were not included in the data analysis. Data was downloaded to an Excel spreadsheet and evaluated for completeness prior to the PASW software analysis. Coding divided the participants into associate degree and baccalaureate degree groups for analysis of the variables applicant student nurse ethnicity, enrolled student nurse ethnicity, liberal, behaviorist humanistic, progressive, radical adult teaching philosophies, and complex admission criteria. Quantitative data on the demographic characteristics of the associate and baccalaureate group participants was analyzed using descriptive statistics (frequency, mean, median, and mode) and percentages. Descriptive statistics were used to describe and compare group means

between associate and baccalaureate degree faculty. Independent sample *t* tests were used to determine a statistical significance at a level of $p < .05$ among variables and groups. Correlational analysis was conducted on nominal data using cross-tabulation and Lambda analysis to determine the strength of relationships between nominal variables. Participant and program confidentiality was maintained throughout this study. Chapter 4 presents the results of the data analysis.

Chapter 4: Results

Introduction

This descriptive, cross-sectional study evaluated gatekeeping admission practices in nursing education programs within a southeastern state under study and assess the relationship between faculty adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) and complex admission criteria used to limit qualified students to nurse education programs. Walden University Institutional Review Board approved this study June 15, 2010. The IRB approval number is 06-15-10-0287751. The research questions for this study were:

1. What admission criteria are used to screen applicants to associate and baccalaureate degree nursing programs in a southeastern state?
2. What adult teaching philosophy is most prevalent among full-time faculty teaching in associate and baccalaureate degree nursing programs in a southeastern state?
3. Is there a significant relationship between complex admission criteria and primary teaching philosophy by type of nursing program?

H_O: There is no significant relationship between complex admission criteria and primary teaching philosophy.

H_A: There is a significant relationship between complex admission criteria and primary teaching philosophy.

4. What gatekeeping activities influence the admission criterion used to select highly qualified student nurses?

Chapter 4 presents the research study findings, the description of the setting, the sample size, and the demographic characteristics of the participants, followed by each research question with related findings. The chapter ends with a summary of all findings.

Research Study Findings

This cross-sectional study was conducted from August 15, 2010, to December 9, 2010 and surveyed full-time nurse education faculty teaching in associate and baccalaureate degree programs in a southeastern state. Data related to the number of full-time faculty were extracted from the website for each nursing program. To ensure reliability and accuracy of data, the nursing program administrator (dean, chair or director) was asked to verify the full-time faculty list within each program.

Verification of the Participant Pool

Nursing administrators ($n = 27$) from registered nurse education degree programs in the southeastern state under study were asked to verify the list of extracted full-time faculty names from the Web. Of the 27 nursing administrators, 26 (96%) participated, 12 (46%) from baccalaureate and 14 (54%) from associate degree programs. One baccalaureate program administrator declined participation, noting in an email message, “We will not be able to distribute your request [survey] to our faculty” with the following explanation: “[Program] characterization would be skewed if responses were low and/or misinterpreted.” The name of this individual and the program remain confidential. Although efforts were made to explain the study and allay concerns, this administrator did not allow the survey to go forward, thus reducing the participant pool by 35 baccalaureate faculty.

Sample Size

A total of 492 full-time faculty names were extracted from nursing program websites. Subsequently, the verified total number of full-time faculty was 420. As noted, one nursing administrator declined to participate, precluding the inclusion of an additional 35 full-time baccalaureate nursing faculty for a final participant pool of 385.

Email invitations (Appendix C) were emailed to 177 (46%) baccalaureate and 208 (54%) associate full-time faculty. Ninety-seven participants participated in the online survey, yielding a return rate of 25%, but only 68 surveys were complete and usable, yielding a final response rate of 18% for analysis. Thirty-four (50%) full-time baccalaureate faculty and 34 (50%) full-time associate degree faculty surveys were analyzed using PASW Statistics 18 software, a registered trademark of SPSS Inc. To ensure confidentiality, a unique identifier (ADN-A, -B, -C or BSN-A, -B, -C) was randomly assigned to each program. The file including the unique identifier list was placed in a locked cabinet, accessible only by me.

The total population invited to participate, the frequency of completed surveys by participants by program, and the percent of completed surveys by program are listed in Table 7. ADN_L had two incomplete surveys and three repeated attempts to encourage participation were unsuccessful. BSN_B declined participation and were not included in the survey. The response rate for the ADN full-time faculty was 16%; while BSN was higher at 19%. With two aforementioned exceptions, at least one or more full-time faculty participated from each program, see Table 7.

Table 7

Frequency of Participant by Nurse Education Program in a Southeastern State

| Program | Full-Time Teaching | Participants Responding | |
|---------|--------------------|-------------------------|-----|
| | Faculty by Program | (f) | (%) |
| ADN_A | 2 | 1 | 50 |
| ADN_B | 9 | 1 | 11 |
| ADN_C | 28 | 4 | 14 |
| ADN_D | 8 | 4 | 50 |
| ADN_E | 17 | 1 | 6 |
| ADN_F | 13 | 1 | 8 |
| ADN_G | 9 | 1 | 11 |
| ADN_H | 12 | 2 | 17 |
| ADN_I | 8 | 1 | 12 |
| ADN_J | 12 | 4 | 33 |
| ADN_K | 43 | 7 | 16 |
| ADN_L | 10 | 0 | 0 |
| ADN_M | 10 | 6 | 60 |
| ADN_N | 9 | 4 | 44 |
| Total | 208 | 34 | 16% |
| BSN_A | 7 | 3 | 43 |
| BSN_B* | 35* | 0 | 0 |
| BSN_C | 38 | 7 | 18 |
| BSN_D | 9 | 2 | 22 |
| BSN_E | 36 | 4 | 11 |
| BSN_F | 5 | 1 | 20 |
| BSN_G | 1 | 1 | 100 |
| BSN_H | 11 | 2 | 18 |
| BSN_I | 26 | 4 | 15 |
| BSN_J | 9 | 2 | 22 |
| BSN_K | 13 | 2 | 15 |
| BSN_L | 3 | 1 | 33 |
| BSN_M | 19 | 2 | 11 |
| Total | 177 | 34 | 19% |
| Total | 385 | 68 | 18% |

Note. *Declined participation not included in total population.

Because two programs were just established and one was an online satellite university program, a low number of full-time faculty existed for ADN_A, BSN_G, and BSN_L nursing programs. Because of this low number of faculty, one BSN program had 100% participation and three ADN programs had greater than 50% participation. Programs with more faculty had lower participation rates than programs with fewer faculty.

Demographic Characteristics of Participants

Table 8 provides a comparison of baccalaureate and associate degree faculty gender and age demographic characteristics. The total sample for gender was $N = 68$. However, one participant did not provide age, thus reducing sample size to $N = 67$.

Table 8

Comparison of Gender and Age of Full-time Faculty in a Southeastern State

| Characteristic | All Faculty <i>N</i> (%) | Baccalaureate <i>n</i> (%) | Associate <i>n</i> (%) |
|----------------|-----------------------------|-------------------------------|---------------------------|
| Gender | | | |
| Female | 63 (92.6) | 30 (88.2) | 33 (97.0) |
| Male | 5 (7.4) | 4 (11.8) | 1 (3.0) |
| Total | 68 (100%) | 34 (100%) | 34 (100%) |
| Age | | | |
| 70 + | 1 (1) | 1 (3) | 0 (0) |
| 60 to 69 | 15 (24) | 8 (24) | 7 (20.5) |
| 50 to 59 | 30 (45) | 15 (46) | 15 (44.2) |
| 40 to 49 | 9 (13) | 6 (18) | 3 (8.8) |
| 30 to 39 | 11 (16) | 3 (9) | 8 (23.5) |
| 20 to 29 | 1 (1) | 0 (0) | 1 (3) |
| Total | 67 (100%) | 33 (100%) | 34 (100%) |

Note. 70 + is age 70 years and older.

Sixty-three (92.6%) of participants were female and five (7.4%) were male.

Baccalaureate degree programs included a higher percentage of male faculty (11.8%), while associate degree programs had a higher percentage of female faculty (97%).

Participants age range was from age 25 to 70 years and older. Forty-six participants (86%) were age 50 years or older with the remaining 21 (14%) under age 50 years.

Ethnicity of full-time faculty. Participant ethnicity is summarized in Table 9.

Two participants did not answer this question and the population was reduced to $N = 66$.

Table 9

Comparison of Ethnicity of Full-time Faculty in a Southeastern State

| Ethnicity | All Faculty <i>N</i> (%) | Baccalaureate <i>n</i> (%) | Associate <i>n</i> (%) |
|-------------------|-----------------------------|-------------------------------|---------------------------|
| European-American | 58 (87) | 30 (91) | 28 (85) |
| African-American | 4 (6) | 1 (3) | 3 (9) |
| Hispanic | 0 (0) | 0 (0) | 0 (0) |
| American Indian | 0 (0) | 0 (0) | 0 (0) |
| Asian | 0 (0) | 0 (0) | 0 (0) |
| Mixed ethnicity | 1 (2) | 1 (3) | 0 (0) |
| Other | 3 (5) | 1 (3) | 2 (6) |
| Total | 66 (100%) | 33 (100%) | 33 (100%) |

Full-time faculty ethnicity was reported as European-American (87%), African-American (6%), and mixed (2%). No full-time faculty reported Hispanic, American-Indian, or Asian ethnicity. Associate degree faculty was more ethnically diverse, albeit minimally, when compared to baccalaureate degree faculty. Full discussion of these findings is reported in chapter 5. The registered nurse experience of the participants is presented next.

Registered nurse experience of full-time faculty. Details of registered nursing experience are compared in Table 10. One associate degree participant did not respond and the population for analysis was reduced to 67.

Table 10

Comparison of Registered Nurse Experience of Full-time Faculty in a Southeastern State

| Years of Nursing Experience | All Faculty <i>N</i> (%) | Baccalaureate <i>n</i> (%) | Associate <i>n</i> (%) |
|-----------------------------|-----------------------------|-------------------------------|---------------------------|
| 40 + | 10 (15) | 4 (12) | 6 (18) |
| 30 to 39 | 25 (37) | 16 (47) | 9 (27) |
| 20 to 29 | 14 (21) | 8 (23) | 6 (18) |
| 10 to 19 | 13 (19) | 4 (12) | 9 (27) |
| 0 to 9 | 5 (8) | 2 (6) | 3 (10) |
| Total | 67 (100%) | 34 (100%) | 33 (100%) |

Note. 40 + is age 40 years or more of nursing experience.

Thirty-five full-time faculty (52%), 20 baccalaureates and 15 associate degree program faculty, reported 30 or more years of registered nursing experience. Baccalaureate nursing faculty reported more years of registered nursing experience than associate degree faculty.

Years of teaching experience of full-time faculty. Years of teaching experience for participants is listed in Table 11. The total population ($N = 68$) is equally split into subgroups of associate degree ($n = 34$) and baccalaureate degree ($n = 34$) full-time faculty.

Table 11

Comparison of Teaching Experience of Full-Time Faculty in a Southeastern State

| Years of Teaching Experience | All Faculty (<i>N</i> = 68) (<i>f</i>) (%) | Baccalaureate (<i>n</i> = 34) (<i>f</i>) (%) | Associate (<i>n</i> = 34) (<i>f</i>) (%) |
|------------------------------|---|---|---|
| 30 to 39 | 10 (15) | 4 (12) | 6 (18) |
| 20 to 29 | 10 (15) | 9 (27) | 1 (4) |
| 10 to 19 | 16 (23) | 8 (23) | 8 (23) |
| 0 to 9 | 32 (47) | 13 (38) | 19 (55) |
| Total | 68 (100%) | 34 (100%) | 34 (100%) |

The majority of participants (70%) reported up to 19 years of teaching experience. Fifty-five percent of the associate degree faculty reported up to 9 years of teaching experience while only 38% of the baccalaureate degree faculty reported up to 9 years of teaching experience. The most teaching experience, of 30 – 39 years, was reported by 15% of the participants, six associate and four baccalaureate degree full-time faculty. Participants' level of education follows next.

Level of education of full-time faculty. Participant level of education is summarized in Table 12.

Table 12

Comparison of Level of Education of Full-Time Faculty in a Southeastern State

| Level of Education | All Faculty <i>N</i> (%) | Baccalaureate <i>n</i> (%) | Associate <i>n</i> (%) |
|---------------------------------|-----------------------------|-------------------------------|---------------------------|
| Doctorate in Nursing | 14 (19) | 12 (35) | 2 (6) |
| Doctorate in another discipline | 3 (4) | 3 (9) | 0 (0) |
| Doctorate of Nursing Practice | 4 (7) | 4 (12) | 0 (0) |
| Masters Degree in Nursing | 46 (68) | 15 (44) | 31 (91) |
| Baccalaureate in Nursing | 1 (2) | 0 (0) | 1 (3) |
| Total | 68 (100) | 34 (100) | 34 (100) |

The majority of participants (68%) reported a master's degree in nursing as the highest level of education achieved. Baccalaureate degree faculty reported higher education as a Ph. D. in nursing (19%), a Ph. D. in another discipline (4%), a Doctorate in Nursing Practice (DNP) (7%), and a master's degree in nursing (44%). No faculty teaching at the associate degree level reported a DNP degree or a doctorate in another discipline. Only 4% of the associate degree faculty reported a Ph. D. in nursing, while 91% reported a master degree in nursing. A master degree in nursing is the highest degree required by law to teach in associate and baccalaureate nurse education programs (South Carolina Legislature, 2010). A baccalaureate degree is highest education requirement for teaching laboratory and clinical skills.

Academic position of full-time faculty. Faculty academic positions are summarized in Table 13.

Table 13

Comparison of Academic Position of Full-Time Faculty in a Southeastern State

| Position | All Faculty <i>N</i> (%) | Baccalaureate <i>n</i> (%) | Associate <i>n</i> (%) |
|-----------------------------|-----------------------------|-------------------------------|---------------------------|
| Chair | 3 (4) | 3 (9) | 0 (0) |
| Dean | 1 (2) | 0 (0) | 1 (3) |
| Director | 4 (6) | 2 (6) | 2 (6) |
| Associate Professor | 8 (12) | 5 (15) | 3 (9) |
| Assistant Professor | 11 (16) | 11 (32) | 0 (0) |
| Instructor/Faculty/Lecturer | 36 (53) | 9 (26) | 27 (79) |
| Other | 5 (7) | 4 (12) | 1 (3) |
| Total | 68 (100%) | 34 (100%) | 34 (100%) |

Eight participants reported the academic position of Dean, Director, or Chair. The academic position of instructor was reported by 36 participants. Academic positions of associate or assistant professor were held in baccalaureate programs. Over half of the associate degree faculty held instructor positions. No Assistant Professor academic position was reported at the associate degree level. Most academic positions at the associate degree program were instructor. A Ph.D. education level is not required to teach at the associate degree technical college level (The South Carolina Legislature, 2010).

To summarize, the demographic profile of participants in this study were female (93%), European-American (85%), older than age 50 years (66%), with more than 30 years of nursing experience (52%), but less than 9 years of teaching experience (47%), with a masters in nursing education (68%), and holding academic position of instructor (53%).

Research Question Findings

A research question, *What is the ethnic background of currently enrolled student nurses in a southeastern state's associate degree and baccalaureate degree nursing programs?* was planned. To answer this question, full-time faculty were asked to report their perception of applicant ethnicity and enrollment ethnicity as a percentage or report they did not know the ethnicity of students. For this survey question, all responses added to a sum of 100%. An assumption for this research question was that full-time faculty would be knowledgeable enough to report ethnicity data accurately. However, 50% of the respondents reported not knowing applicant ethnic diversity and 38% did not know

enrolled student nurse ethnicity. Participants of three ADN programs and one BSN program reported not knowing prelicensure student enrollment ethnicity and data was not available for these programs. Incomplete surveys were received from participants of one ADN program and three BSN programs and were not included in the ethnicity analysis. A high standard deviation for European-American ethnicity was present for one ADN program (SD = 42.14) and one BSN program (SD = 38.80). This high standard deviation suggests full-time faculty reported data with a wide percentage variation of student nurse ethnicity. Given these circumstances it was determined that the data was not reliable enough for descriptive or correlational statistical analysis. In view of these facts, a literature review of ethnicity data is presented to demonstrate the importance of researching the ethnic disparity of student nurses.

National League of Nursing (NLN, 2010) reported a 27% aggregate minority student nurse population nationally. This national aggregate data is not representative of the population of minority student nurses as reported by the SREB for the southeastern state under study. The Institute of Medicine (IOM, 2010) report recommended data collection at the state or regional level to accurately assess professional health care workforce characteristics. The NLN (2011a) national survey reported baccalaureate student nurse ethnicity as 14% African-American, 6.5% Hispanic, 7.4 Asian, and .8% American Indian; and associate student nurse ethnicity was reported as 13.9% African-American, 7.8% Hispanic, 6.3 Asian, and 1% American Indian. With approval, I extracted data reported by the Southern Regional Education Board (SREB, 2007) to

provide comparison data between student nurse ethnic diversity to the general population of the state as reported by the U. S. Census Bureau for the southeastern state under study. A comparison of ethnic characteristics between the general population estimate (United States Census Bureau, 2008) and student nurses (SREB, 2009) for the southeastern state under study do reflect a racial disparity. The general population ethnic estimates were 51.3% female and 66% European-American (United States Census Bureau, 2008) for the southeastern state under study, while the student nurse population was reported as 90% female and 77% European-American (SREB, 2009). The African-American population estimate was 29%, while only 16% are enrolled in nursing programs (SREB, 2009). The Technical College System (2006) Office Report listed minorities as representing 36% of all associate degree student enrollment in 2005, while the SREB reported only 19% African-American, 3% Asian, 5% Hispanic, 1% Native American Indian/Alaskan and 3% other race were enrolled in associate degree registered nurse education programs in the southeastern state under study.

Through these reports it is evident that an ethnic disparity exists between the population and student nurses in the southeastern state under study. It is not evident whether gatekeeping action has an untoward effect on the diversity of student nurses. This aspect is discussed in more detail in chapter 5 under the recommendations for future research. The remaining findings are presented separately by each research question in the sections that follow.

Research Question 1: Admission Criteria

What admission criteria are used to screen associate and baccalaureate degree nursing programs applicants in the southeastern state under study? Public online published data were extracted from nursing student handbooks and academic bulletins from 14 associate degree and 13 baccalaureate degree nursing education program websites. These documents explain admission requirements for student selection. Confidentiality of information for each program was maintained. One baccalaureate program posted inconsistent information on the homepage. The Nursing Student Handbook was dated 2009-2010; while the Academic Bulletin was dated 2010-2011. The admission criteria listed in the academic bulletin (2010-2011) was considered the most current information and used to collect data. No identification data is presented to protect confidentiality.

Admission criteria were compiled on an Excel spreadsheet. A one (1) was entered if the admission criteria appeared on published documents and a zero (0) if it was not. If an admission criterion was not on the admission check list (Appendix G and H) it was added to the list. Data for each program were then tabulated. Criteria were summed to determine the total number of criteria for each program. To ensure accuracy, this procedure was repeated with 92% accuracy. However, this data retrieval method could be strengthened through an interrater reliability analysis. To assist reader interpretation of the findings, data were organized into five categories: cognitive criteria, curricular criteria, professional criteria, time-limited criteria, and other criteria in Table 14.

Table 14

Frequency Distribution of Nurse Education Admission Criteria in a Southeastern State

| Admission Criteria | Program | |
|---|---------------------------|-----------------------|
| | Baccalaureate <i>f</i> | Associate <i>f</i> |
| Cognitive criteria (8) | | |
| GPA | 13 | 14 |
| “C” or better course grades | 13 | 14 |
| SAT™/ACT® | 13 | 9 |
| Prenursing Admission Testing | 3 | 8 |
| Science GPA | 4 | 3 |
| Aptitude testing (reading, writing, math) | 2 | 11 |
| Limit to repeat admission testing | 0 | 3 |
| Placement testing reading score | 0 | 3 |
| Curricular Criteria (10) | | |
| Required course completion/credits | 13 | 10 |
| Progression requirements | 10 | 11 |
| Information session | 0 | 13 |
| Number of times a student can apply | 7 | 10 |
| Specific high school courses | 4 | 5 |
| Program faculty advisement | 3 | 5 |
| First qualified, first admitted | 2 | 6 |
| Priority merit placement | 1 | 6 |
| Science courses at the same institution | 0 | 1 |
| Academic forgiveness | 0 | 1 |
| Professional (6) | | |
| Interview | 3 | 1 |
| Essay | 2 | 2 |
| Personal references | 3 | 1 |
| Writing ability | 1 | 1 |
| Communication skills | 1 | 0 |
| Submit application in person | 0 | 1 |
| Time-Limit Requirement (4) | | |
| Required courses | 3 | 11 |
| College aptitude testing | 0 | 6 |
| Placement testing/ repeat testing | 0 | 4 |
| Attendance to information session | 0 | 2 |
| Other (7) | | |
| Health care experience | 2 | 5 |
| Residency (County of residence) | 1 | 6 |
| Motivation | 1 | 0 |
| Multiple admission options | 4 | 6 |
| Checklist completion | 0 | 2 |
| Age requirement | 0 | 4 |
| Weighted or point system | 0 | 6 |

Note. GPA = Grade Point Average, SAT = Scholastic Aptitude Test, ACT = American College Testing

A total of 35 unique admission criteria were used by nurse education programs in the southeastern state under study. All education programs shared common admission practice that included dual admission (university admission followed by nursing program admission) and high school transcripts. Since admission to the university and verification of high school graduation constitutes a standard admission procedure it was not considered a criteria used for selection to a nursing program. Baccalaureate admission criteria findings are presented followed by associate degree admission criteria. Further interpretation of admission data findings are described in chapter 5.

Baccalaureate admission criteria. For baccalaureate prelicensure registered nurse education programs, 22 unique admission criteria were identified. All baccalaureate programs required GPA, SAT or ACT, and “C” or better in course grades. Prenursing admission testing was required in three programs. In descending order, other cognitive admission requirements for baccalaureate programs were science GPA and aptitude testing. Curricular criteria, in descending order, for baccalaureate degree programs were specific course or course credit completion, followed by progression requirements (course failures in required courses), specific high school courses (such as biology, chemistry, or algebra), faculty advisement, open enrollment selection (first qualified-first admitted), and priority merit placement (high level achievement for specific requirements initiated an automatic admission). A student could achieve priority merit placement depending on specific achievements, such as a GPA of 3.2, or the maximum points on a point weighting system.

Professional requirements for baccalaureate degree programs included interview, written essay, personal references (usually two), writing ability, and communication skills. Students submit a written essay to state their desire and intent for a nursing career choice. The written essay also serves to evaluate student's writing ability. Time-limits were placed on completed course work. Three baccalaureate programs required Science, Mathematics, or English courses to be completed within 5 years. This means any student who successfully completed a required course one day over the 5 year limit would repeat this course to be eligible for admission.

Other admission criteria for baccalaureate degree program did not easily place under cognitive, curricular, professional or time-limited categories so an "other" category reports these findings. In descending order, these requirements were multiple admission options, health care experience (working as a Certified Nursing Assistant, Emergency Medical Technician, or Paramedic), residency (state or county that the university serves has preference for selection), and motivation. Baccalaureate programs did not list in documents an age requirement, weighted point system selection, or checklist completion as admission criteria.

Associate degree admission criteria. Associate degree nurse education programs all required achievement testing (SAT, ACT, COMPASS, or ASSET testing), GPA, and course grade of "C" or better. Other cognitive admission requirements, in descending order, were prenursing admission testing, science GPA, placement testing reading score, and a limit to the number of times prenursing testing can be repeated.

In descending order, curricular requirements for associate degree programs were attendance to an information session; enforcing progression requirements (allowing only one or two course failures); required course or course credit completion; open enrollment (first applied, first qualified, first admitted); specific high school course completion (biology, chemistry or algebra); faculty advisement; academic forgiveness (permitting a student to have poor freshman performance removed from transcripts); and information session (a one or two hour session to explain the admission process to a nursing program). Associate degree program professional requirements, in descending order were essay (written essay of intent for professional nursing), interview, personal references, writing ability, and submission of the application along with a checklist in person. Associate degree programs did not have a requirement for communication skills.

Time-limitation was used extensively by associate degree programs. A 5 year time-limited requirement was required for Mathematics, Sciences, English or Computer courses by five programs, 7 years by one program and 10 years by five programs. This means even if a student successfully passed required English, Mathematics, Science, or Computer course more than 5, 7, or 10 years ago, the course would have to be repeated to be eligible for admission. Other time-limited requirements were placed on SAT or ACT testing. One program placed a 10 year limit, three programs placed a 5 year limit, and one program placed a 4-year limit. This time-limit required students to repeat SAT or ACT test to be eligible for admission. Other time-limited requirements were placed on prenursing standardized testing and attendance to information session. Other programs offered multiple admission options, gave preference to local or state residency, or

required health care experience (Certified Nursing Assistant, Emergency Medical Technician, or Paramedic). None of the baccalaureate programs listed an age limit or completion of an admission checklist, while associate degree programs did list a required age of 18 and older as well as completion of an admission process checklist.

Frequency of admission criteria used. Specific admission criteria for associate degree programs are listed from highest frequency to lowest frequency in Table 15. The total admission criteria by program included 13 baccalaureate and 14 associate degree programs.

Table 15

Frequency of Admission Criteria used for Student Selection in a Southeastern State

| Number of Admission Criteria | Frequency by Program | |
|------------------------------|---|---|
| | Baccalaureate (<i>n</i> = 13) (<i>f</i>) (%) | Associate (<i>n</i> = 14) (<i>f</i>) (%) |
| 20 - 25 | 0 (0) | 6 (43) |
| 13 - 17 | 2 (15) | 5 (36) |
| 8 - 12 | 11 (85) | 2 (14) |
| 3 - 7 | 0 (0) | 1 (7) |
| Total | 13 (100) | 14 (100) |

Admission criteria for baccalaureate degree programs ranged from eight to 13 criteria, while associate degree programs had a wider range of criteria (3 to 22 criteria) for admission selection of students. The mean admission criteria for associate and baccalaureate degree programs are reported in Table 16.

Table 16

Mean Nurse Education Admission Criteria by Program in a Southeastern State

| Degree Level | <i>N</i> | <i>M</i> | <i>SD</i> | Std. Error Mean |
|---------------|----------|----------|-----------|-----------------|
| Associate | 34 | 17.12 | 3.952 | .678 |
| Baccalaureate | 34 | 10.56 | 2.596 | .445 |

The admission criteria mean for associate degree programs ($M = 17.12$) was higher than baccalaureate degree programs ($M = 10.56$). An independent t test was performed on this interval variable to determine if a significant difference existed between associate and baccalaureate degree admission criteria see Table 17.

Table 17

Comparison of Admission Criteria of Associate and Baccalaureate Degree Programs in a Southeastern State

| Admission Criteria | t Test for Equality of Means | | | | | |
|--------------------|--------------------------------|--------|------|-------|----------------------|-------|
| | F | $Sig.$ | t | df | $Sig.$ (2-tailed) | |
| ADM_CMPX | Equal variances assumed | 4.139 | .046 | 8.088 | 66 | .000* |
| | Equal variances not assumed | | | 8.088 | 57 | .000* |

Note. * $p > .05$, ADM_CMPX = sum of admission criteria per program.

Unequal variance was found with admission complexity ($F_{(66)} = 4.139$; $p = .04$) between associate and baccalaureate degree groups. A statistical difference ($p < .05$) was found for complex admission criteria between associate and baccalaureate programs ($t_{(57)} = 8.088$; $p = .000$) in the southeastern state under study.

The complexity of admission criteria was the total number of criteria used by each program. The higher the number of criteria used the higher the complexity. The sum of criteria for each program related to participant was use in the correlational analysis required for research question 4. The findings for research question 2 are discussed next.

Research Question 2: Teaching Philosophy

What adult teaching philosophy is most prevalent among full-time faculty teaching in associate and baccalaureate degree nursing programs a southeastern state?

The adult teaching philosophy variables of liberal, behaviorist, humanistic, progressive, and radical were scored using the Philosophy of Adult Education Inventory (Zinn, 2004).

The PAEI consists of 15 partial questions each with five replies of strong disagreement of 1 to a strong agreement of 7, for liberal, behaviorist, humanistic, progressive, or radical philosophies. The scores for each philosophy range from a low of 15 (strong disagreement) to a high of 105 (strong agreement). According to Zinn (2004), a score of

- 95 to 105 indicated the strongest agreement,
- 66 to 94 indicated a strong agreement,
- 55 to 65 indicated a neutral position,
- 26 to 54 indicated a disagreement, and
- 15 to 25 indicated a strong disagreement. (p. 191)

According to Zinn (2004), the highest score out of the five teaching philosophy indicated a teaching preference for that particular philosophy. This study identified and compared adult teaching philosophy preference of full-time baccalaureate ($n = 34$) and associate degree ($n = 34$) faculty.

Adult teaching philosophy preference of participants is listed by frequency and percent in Table 18. Adult teaching philosophy could not be determined for one baccalaureate full-time faculty. This participant had scores ranging from 22 to 39 for each philosophy indicating a disagreement with all philosophies (Zinn, 1983, 1990, 2004) and was not included in this analysis ($N = 67$).

Table 18

Comparison of Full-Time Faculty Teaching Philosophy Preference in a Southeastern State

| Philosophy | All responses <i>N (%)</i> | Baccalaureate <i>n (%)</i> | Associate <i>n (%)</i> |
|-------------|-------------------------------|-------------------------------|---------------------------|
| Liberal | 0 | 0 | 0 |
| Behaviorist | 28 (42) | 15 (46) | 13 (38) |
| Humanistic | 30 (45) | 13 (39) | 17 (50) |
| Progressive | 8 (12) | 4 (12) | 4 (12) |
| Radical | 1 (1) | 1 (3) | 0 |
| Total | 67 (100%) | 33 (100%) | 34 (100%) |

Participant scores were very similar between behaviorist and humanistic ($n = 9$), progressive and humanistic ($n = 2$), behaviorist, humanistic, and radical ($n = 2$), liberal, behaviorist, and humanistic ($n = 1$), and liberal and behaviorist ($n = 1$). The range of scores for the liberal philosophy was from 56 to 97, behaviorist from 60 to 100, progressive from 33 to 97, humanistic from 61-99, and radical 39 to 100. The frequency distribution of baccalaureate full-time faculty, in descending order, was behaviorist, humanistic, progressive, and radical. No participants indicated a preference for the liberal adult teaching philosophy.

The frequency distribution of adult teaching philosophies for the associate group, in descending order, were humanistic, behaviorist, and progressive. No associate degree full-time faculty scored high for the radical or liberal teaching philosophies. More baccalaureate faculty scored high and indicated a preference for the behaviorist philosophy, while more associate faculty scored high and indicated a preference for the humanistic philosophy. Neither baccalaureate nor associate degree faculty scored a preference for the liberal teaching philosophy.

Research Question 3: Correlational Analysis

Is there a significant relationship between complex admission criteria and primary teaching philosophy by type of nursing program?

H₀: There is no significant relationship between complex admission criteria and primary teaching philosophy.

H_A: There is a significant relationship between complex admission criteria and primary teaching philosophy.

Relationships were planned to be evaluated between associate and baccalaureate groups (a) five teaching philosophies and complex admission criteria; (b) complex admission criteria and applicant and enrolled student nurse ethnicity; (c) and five teaching philosophies and applicant and enrolled student nurse ethnicity. However, the ethnicity data was not reliable enough to analyze, therefore, the applicant and enrolled ethnicity variable was removed from this research question. The primary philosophy and the admission criteria were both analyzed using Lambda correlational analysis.

The PAEI score for each participant was determined using the formula developed by Zinn (2004) and computed on an Excel spreadsheet. The highest philosophy score was identified and designated as the participants primary philosophy and coded 1 = liberal, 2 = behaviorist, 3 = progressive, 4 = humanistic, and 5 = radical. This primary PAEI variable was categorical in nature and a nominal variable for analysis. Individual nurse education programs were evaluated for the sum of criteria used for admission selection. The data for the sum of admission criteria corresponding to each participant was entered manually to the PASW version 18 software. The admission criteria were

categorized into three groups of increasing complexity. The data was then coded as a 1 for a criteria sum between 7 to 12 criteria, a 2 for 13 to 19 criteria, and a 3 for 20 to 25 criteria. No program listed more than 25 criteria. Since complex admission criteria was an ordinal variable and PAEI was a nominal variable, cross tabulation analysis with Lambda analysis was completed to measure the strength of the relationship between these variables (White & Korotayev, 2003; Marion, 2004).

Table 19 presents the primary philosophy in relationship to the three groups of admission complexity. One participant indicated disagreement with all philosophies and was not included in the analysis ($N = 67$).

Table 19

Cross-tabulation between Primary Teaching Philosophy and Complex Admission Criteria

| Primary Adult Teaching Philosophy | Admission Complexity | | | Total |
|-----------------------------------|----------------------|----------|----------|-------|
| | 7 to 12 | 13 to 19 | 20 to 25 | |
| Behaviorist | 10 (36%) | 14 (50%) | 4 (14%) | 28 |
| Progressive | 3 (36%) | 3 (36%) | 2 (28%) | 8 |
| Humanistic | 13 (43%) | 13 (43%) | 4 (14%) | 30 |
| Radical | 1(100%) | 0 | 0 | 1 |
| Total | 27 | 30 | 10 | 67 |

The full-time faculty scored highest in the humanistic philosophy ($n = 30$) followed by the behaviorist ($n = 28$), progressive ($n = 8$), and radical ($n = 1$) philosophies. Twenty-seven participants taught at higher education institutions that used less than 12 admission criteria, while 30 taught at institutions with 13 to 19 admission criteria. Only ten of the participants taught at institutions that used more than 20 admission criteria to select students.

Ordinal and nominal data were analyzed using bivariate cross-tabulation with Lambda analysis to identify if any relationship existed between philosophies and

complex admission criteria variables. Table 20 presents the correlational analysis of these variables.

Table 20

Lambda Correlational Analysis of Primary Teaching Philosophy and Complex Admission Criteria

| | | <i>Value</i> | <i>Asymp. Standard Error</i> | <i>Significance (two-tailed)</i> |
|--------|----------------------|--------------|----------------------------------|--------------------------------------|
| Lambda | Symmetric | .027 | .130 | .837 |
| | Pri_PA EI Dependent | .027 | .158 | .866 |
| | Three_ADMC Dependent | .027 | .153 | .862 |

Note. * $p > .05$, Pri_PA EI = participant's highest adult philosophy score; Three_ADMC = three levels of admission complexity; Asymp. = Asymptotic.

No statistically significant relationship was found between the primary adult teaching philosophy of full-time faculty and the complexity of admission criteria, so the null hypothesis is not rejected. H_0 : There is no significant relationship between complex admission criteria and primary teaching philosophy. The final research question collected data to describe gatekeeping as it exists in nursing education.

Research Question 4: Gatekeeping

What gatekeeping activities influence the admission criterion used to select highly qualified student nurses? Five questions on the survey were related to gatekeeping as developed from the literature review: (1) limited admission policy, (2) the student selection process, (3) the competitiveness of admission to a nurse education program, (4) factors that influence admission decisions, and (5) prioritization of admission criteria that hinder qualified student admission. The findings for the responses to these questions are presented in the sections that follow.

Limited admission. Participants were asked if there was a limit to the number of student nurses enrolled in the nurse education program where they teach. A dichotomous yes or no answer was required. Table 21 displays the frequency of the responses.

Table 21

Limited Enrollment for Nurse Education Programs in a Southeastern State

| Responses | <i>f</i> | % |
|-----------|----------|-----|
| Yes | 59 | 87 |
| No | 9 | 13 |
| Total | 68 | 100 |

For the purpose of this research, gatekeeping occurred when admission criteria were used to limit qualified student access to a nursing education. A majority of the participants (87%) reported there was a limit to the number of students selected and enrolled to nursing education. Another question evaluated how student selection was completed as related to gatekeeping practice.

Selection process. In descending order, Table 22 presents the admission processes used to select prelicensure registered student nurses.

Table 22

Process for Admission Selection of Student Nurses in a Southeastern State

| Response | Response Count | Response Percent |
|--|----------------|------------------|
| Weighted or point selection | 24 | 35.3% |
| Nursing department group or committee | 19 | 27.9% |
| First qualified, first applied, first selected | 13 | 19.1% |
| Nursing department individual | 5 | 7.4% |
| Admission department personnel | 2 | 2.9% |
| Other: (Combinations) | 9 | 7.4% |
| Total | 68 | 100 % |

Participants reported a weighted or point system (35%) was used for admission selection and 27.9% reported that a nursing department group or committee selected students for admission. The remaining participants reported a first qualified, first applied, and first selected admission selection process; a nursing department individual made the decision; or an admission department individual made the selection based on criteria. Nine (7.4%) participants documented in the other category.

The general theme for seven responses for the other category was a combination of processes, such as: (a) a point system combined with a first qualified, first accepted process, (b) a weighted point system combined with a committee selection, or (c) a weighted point system combined with an individual selection process. A weighted point system was documented for an additional 9 responses for a total of 33% of the programs. One participant reported an admission selection based on policy and procedure. This participant wrote: “[Admission] Guided by policy: Applications are turned in to the Department Chair. Students must have a C or better in 7 required courses. The students are then ranked by GPA and the top 40 are selected.” Another participant explained students were selected by “Clearly stated application criteria- GPA, TEAs scores, etc.” Another evaluation of gatekeeping involved the competitive nature of student nurse selection.

Competitive admission to nursing program. Chapter 2 literature review on gatekeeping theory guided the collection of the data for the survey question that asked about the competitive nature of student nurse admission. Using a Likert scale, participants rated how competitive the admission process was to their respective nurse

education program. One participant did not answer this question and reduced the population size to 67 for analysis. Table 23 presents the frequency of these results.

Table 23

Degree of Competitiveness of Admission to a Nurse Education Programs in a Southeastern State

| Degree of Competitiveness | Admission Selection (<i>N</i> = 67) (<i>f</i>) (%) |
|---------------------------|---|
| Extremely competitive | 24 (35) |
| Very competitive | 26 (38) |
| Competitive | 10 (15) |
| Somewhat competitive | 6 (10) |
| Not competitive | 1 (2) |
| Total | 67 (100) |

More than two-thirds of the participants described admission to nurse education as an extremely competitive (35%) and very competitive (38%) admission process. Only one participant reported the admission process as not competitive. Competitive admission is one way to characterize gatekeeping, while another was to ask what factors influenced admission decisions.

Factor influence on admission decisions. Participants were asked to rank the influence of six factors (ACC = Accreditation agency, EMP = Empirical evidence, PTP = Personal teaching philosophy, EXP = Previous faculty experience with students, CLIN = Clinical agency, NCLEX = National Licensure exam) on admission decisions. These factors influencing gatekeeping were selected from the literature review. Participants reported each factor's influence using a Likert scale (*0 = no influence, 4 = moderate influence to 7 = highest influence*). Factor influence on admission criteria is presented Table 24.

Table 24

Factors Influencing the Admission Criteria used for Nurse Education Program Admission in a Southeastern State

| Rating | Factor | | | | | |
|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|---------------------------|
| | ACC (N = 68) f(%) | EMP (N = 66) f(%) | PTP (N = 67) f(%) | EXP (N = 68) f(%) | CLIN (N = 67) f(%) | NCLEX (N = 66) f(%) |
| Highest Influence | 8 (12) | 16 (24) | 4 (6) | 7 (10) | 2 (3) | 23 (35) |
| Higher Influence | 15 (21) | 17 (26) | 10 (15) | 13 (19) | 11 (16) | 17 (26) |
| High Influence | 5 (7) | 4 (6) | 4 (6) | 7 (10) | 6 (9) | 4 (6) |
| Moderate | 16 (24) | 10 (15) | 13 (19) | 22 (33) | 19 (29) | 10 (15) |
| Low Influence | 6 (9) | 3 (4) | 4 (6) | 5 (7) | 6 (9) | 3 (4) |
| Lower Influence | 2 (3) | 4 (6) | 5 (7) | 4 (6) | 3 (4) | 1 (2) |
| Lowest Influence | 6 (9) | 4 (6) | 7 (10) | 4 (6) | 10 (15) | 2 (3) |
| No Influence | 10 (15) | 8 (13) | 20 (31) | 6 (9) | 10 (15) | 6 (9) |
| Total | 68 (100) | 66 (100) | 67 (100) | 68 (100) | 67 (100) | 66 (100) |

Note. Bold = highlights the highest rating, ACC = Accreditation agency, EMP = Empirical evidence, PTP = Personal teaching philosophy, EXP = Previous faculty experience with students, CLIN = Clinical agency, NCLEX = National Licensure exam.

National Council Licensure Examination (NCLEX) first time pass rate was reported as having the highest influence on decisions about admission requirements. Accreditation agency, empirical evidence, and clinical agency requirements were rated as having a higher influence, while personal teaching philosophy was ranked as having the lowest influence. Participants were then asked to prioritize the top five criteria that limited qualified student admission. Gatekeeping is used to stratify qualified students according to preset admission criteria. A question on the survey identified admission criteria related to stratification of qualified students.

Prioritization of admission criteria. Participants were asked to prioritize the top five criteria out of 11 selected admission criteria (GPA = Grade Point Average, PRETEST = standardized testing before application, PCW = course prerequisites, CCR =

courses completed, PCF = previous course failure, SGPA = science GPA, TCC = time of course completion, SCGPA = specific course GPA, PGPA = previous college GPA, Essay = written essay, and HST = High School transcript) that controlled qualified student admission to a nursing program. Table 25 reports the findings of this data.

Table 25

Prioritization of Admission Criteria used to Select Student Nurses in a Southeastern State

| Priority Choice | Admission Criteria | | | | | | | | | | |
|-----------------|--------------------------|-------------------------------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|-----------------------------|---------------------------|----------------------------|--------------------------|
| | GPA (N = 49) f (%) | PRE-TEST (N = 44) f (%) | PCW (N = 44) f (%) | CCR (N = 43) f (%) | PCF (N = 37) f (%) | SGPA (N = 28) f (%) | TCC (N = 15) f (%) | SC-GPA (N = 14) f (%) | PGPA (N = 12) f (%) | ESSAY (N = 12) f (%) | HST (N = 10) f (%) |
| First | 17 (35) | 10 (23) | 14 (32) | 5 (12) | 3 (8) | 11 (39) | 0 (0) | 3 (21) | 1 (8) | 1 (8) | 2 (20) |
| Second | 12 (25) | 13 (30) | 9 (20) | 11 (26) | 5 (14) | 5 (18) | 2 (13) | 4 (30) | 2 (16) | 1 (8) | 2 (20) |
| Third | 11 (22) | 12 (27) | 4 (9) | 13 (29) | 6 (16) | 3 (11) | 2 (13) | 2 (14) | 4 (34) | 1 (8) | 2 (20) |
| Fourth | 5 (10) | 6 (14) | 12 (28) | 6 (14) | 10 (27) | 7 (25) | 4 (27) | 2 (14) | 2 (17) | 2 (17) | 3 (30) |
| Fifth | 4 (8) | 3 (6) | 5 (11) | 8 (19) | 13 (35) | 2 (7) | 7 (47) | 3 (21) | 3 (25) | 7 (59) | 1 (10) |
| Total | 49 (100) | 44 (100) | 44 (100) | 43 (100) | 37 (100) | 28 (100) | 15 (100) | 14 (100) | 12 (100) | 12 (100) | 10 (100) |

Note. **Bold** = highest frequency, GPA = Grade point average, PRETEST = standardized testing before application, PCW = course prerequisites, CCR = courses completed, PCF = previous course failure, SGPA = science GPA, TCC = time of course completion, SCGPA = specific course GPA, PGPA = previous college GPA, Essay = written essay, and HST = High School transcript.

The highest factors to control qualified student admission to nursing programs was listed as Grade Point Average, prerequisite course work, and science GPA. A nursing pretest and a standardized nurse admission test to determine readiness for nursing curriculum were prioritized as the second highest factor to limit admission. Previous course failure was prioritized as the fourth, as well as the fifth highest factor to control qualified student admission. Grade point average, pretesting, previous course work attained, previous course credit, required course credits, and science GPA accounted for the majority of all responses, while a written student essay and high school transcripts had the lowest response and lowest prioritization to restrict qualified student admission.

The literature review on gatekeeping theory guided the collection of the data to characterize gatekeeping activities in nursing education. For the purpose of this research, gatekeeping occurred when admission criteria were used to limit qualified student access to a nursing education. A weighted or point system was used for admission selection by a third of the participants, followed by selection made by a nursing department group or committee. More than two-thirds of the participants described nurse education admission as an extremely competitive (35%) and very competitive (38%) admission process. National Council Licensure Examination (NCLEX) pass rates was reported as having the highest influence on admission decisions, while personal teaching philosophy was ranked as lowest. GPA (35%) and course prerequisites (32%) were the highest factors used to control qualified student admission. Nurse admission pretest, a standardized test, was given the second highest priority; while coursework completed was rated as a third priority. Previous course failure was prioritized as the fourth and fifth priority. The largest selected responses that controlled qualified student admission were GPA, nursing pretest, previous course work, coursework completed, and science GPA.

Summary

Findings from this descriptive, cross-sectional survey using a purposive sample of 385 full-time faculty from associate and baccalaureate degree programs in the southeastern state studied yielded a usable survey return rate of 18% ($N = 68$). This survey was completed on the Internet. No surveys were requested by the participants for electronic or paper format. Participant and program confidentiality was maintained, after receiving Walden University IRB approval 06-15-10-0287751, with the use of unique

identifies known only by me. Data were manually entered and analyzed by me. Group means were used as a comparison using independent *t* test bivariate correlational analysis for ordinal and nominal data was completed using cross tabulation with Lambda analysis to determine the strength of the relationships between variables of adult teaching philosophy and complex admission criteria. Important findings are briefly summarized.

Participants were predominantly female, European-American, older than 50 years of age, with a masters degree, 30 years of nursing experience, and a position as nursing instructor with up to nine years of teaching experience. Fifty percent of participants were unaware of applicant ethnicity and 38% were unaware of enrolled student ethnicity. Data related to ethnicity were not considered reliable enough for data analysis.

A total of 35 admission criteria were identified for nurse education programs in the southeastern state under study. The number of admission criteria ranged from a low of seven to a high of 25 within the various programs. Baccalaureate and associate degree nurse education programs shared common criteria of cumulative grade point average, and “C” or better in course grades. Baccalaureate programs differed from associate degree program as 85% of baccalaureate degree programs used from eight to 12 criteria while 43% of associate degree programs required 20 to 25 criteria. One baccalaureate degree program used motivation and communication skill to select students. Associate degree programs differed from baccalaureate degree programs with the implementation of (a) a time-limit of 5, 7, or 10 years placed on how recent a mathematics or science course is completed, (b) a limit to the number of times a pretest assessment is completed, (c) a specific reading score requirement on the admission pretest, (d) required attendance to an

information session, (e) a required completion of an admission checklist to accompany the admission application, (d) a required submission of completed applications in person, (e) an age requirement, and (f) a weighted or point system for selection. An independent *t* test found significant differences between baccalaureate and associate degree program admission criteria.

The completed PAEI was scored to determine all five adult teaching philosophy scores for each participant to identify the preference for a particular teaching philosophy. The highest score on a philosophy indicated the participant's preference for a particular teaching philosophy. Fifteen participants (24%) had similar scores for more than one philosophy. Both baccalaureate and associate faculty preferred behavior and humanistic philosophies. Cross-tabulation with Lambda analysis found no significant relationships between behaviorists, progressive, humanistic, and radical primary teaching philosophy and complex admission criteria.

Literature review of social work gatekeeping theory guided this study to describe gatekeeping as it exists in nursing education. As defined for the purpose of this study, gatekeeping occurred when admission criteria were used to deny qualified students access to a nursing education. The review of literature in chapter 2 identified concepts of limited admission, influence from regulatory agencies, and the use of criteria to limit qualified student enrollment were associated with gatekeeping practices. The admission and diversity survey included questions to collect data on these concepts. Participants reported that enrollment to nursing education was limited to a particular number of seats. The National Council Licensure Examination (NCLEX) pass rate exerted the most

influence on admission requirements. Legislation mandates that first time registered nurse graduate pass rate can only be 5% lower than the national NCLEX score or a nurse program is placed on a probationary status. According to the responses, teaching philosophy was considered to exert the least influence on the determination of admission criterion for selection. Participants reported that GPA was the most limiting factor for admission to a nursing program. Based on the literature review of gatekeeping presented in chapter 2, the gatekeeping characteristics of nursing education is similar.

Admission criteria are used to select only the most qualified student based on cognitive criteria and student ranking on a preselected list. The highest ranking students are priority selected until all seats are filled. Those qualified but not ranked high enough are refused admission due to the limitation of student seats available as a result of faculty shortage, limited clinical placements, limited fiscal, and limited material resources (SREB, 2010).

The SREB (2010) data does support a lack of ethnic diversity in nursing education and with nursing faculty. Because this ethnic disparity exists, it can be conjectured that admission criteria may in some way influence the diversity of enrolled student nurses. Further study on the cause of ethnic disparity in nursing education is necessary to identify if minority students are applying to nursing programs and not selected or are applying, accepted, but not completing nursing education.

Findings were analyzed and presented in chapter 4. Chapter 5 will interpret these findings in more detail and draw conclusions with recommendations for future research.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

The purpose of this study was to evaluate gatekeeping admission practices of nursing education programs and assess the relationship between faculty adult teaching philosophy (liberal, behaviorist, humanistic, progressive, and radical) and complex admission criteria used to limit qualified students to nurse education programs in a southeastern state. This cross-sectional design surveyed full-time nursing faculty teaching in registered nurse associate and baccalaureate degree education programs in a southeastern state.

An ethnic disparity exists in student nurses and registered nurses as 73% of the student nurse population (SREB, 2010) and 83% of the professional nursing population is European-American (HRSA 2008), while the general population of the state is 66% European-American. An initially proposed research question remained unanswered: *What is the ethnic background of associate degree and baccalaureate degree student nurses currently enrolled in nursing programs in a southeastern state?* The ethnicity data collected was too unreliable for statistical analysis and the research question was deleted. The lack of reliable ethnicity data also affected another research question. This question was originally written as: *What relationships exist between reported ethnicity, admission criteria, type of nursing program (associate or baccalaureate), and teaching philosophy?* This question was revised to: *Is there a significant relationship between complex admission criteria and primary teaching philosophy by type of nursing program?*

The research questions were reduced to four.

1. What admission criteria are used to screen applicants to associate and baccalaureate degree nursing programs in a southeastern state?
2. What adult teaching philosophy is most prevalent among full-time faculty teaching in associate and baccalaureate degree nursing programs in a southeastern state?
3. Is there a significant relationship between complex admission criteria and primary teaching philosophy by type of nursing program?

H_O: There is no significant relationship between complex admission criteria and primary teaching philosophy.

H_A: There is a significant relationship between complex admission criteria and primary teaching philosophy.

4. What gatekeeping activities influence the admission criterion used to select highly qualified student nurses?

The literature review revealed that the ethnic disparity of student nurses in higher education in the southeastern state is well documented (IOM 2010, NLN 2010a, SREB, 2009). This study was completed to fill the gaps on the adult teaching philosophy of nurse faculty, complex admission requirements, and gatekeeping practices that exist in nurse education literature and highlight the ethnic disparity that exists in nursing education.

The methodology in chapter 3 mapped the procedures used to answer the four research questions of this study. In chapter 4 the findings are reported, while data are

interpreted and conclusions drawn in chapter 5. Chapter 5 is concluded with recommendations for future research and a call for social change action.

Overview of the Study

The Admission and Diversity survey was developed from the literature review, evaluated by content experts; pilot tested, revised, and conducted following Walden University IRB approval, 06-15-10-0287751, to collect data. Nursing administrators from each program in the southeastern state under study verified full-time faculty to identify a purposeful sample. The participant pool included 385 possible participants. An invitation email and up to three reminder emails were sent to participants. Responses were received from 97 nursing faculty for a response rate of 25%. However, only 68 of the surveys (18%) met the inclusion criterion and used for data analysis. PASW 18 statistical software, a trademark of SPSS Inc., and Microsoft Excel 2007 were used to analyze data.

Nominal demographic variables of gender, age, ethnicity, registered nurse experience, nurse educator experience, education level, and teaching program were analyzed using descriptive statistics to characterized participants. Participants were asked to report the percentage of applicant and enrolled student nurse ethnicity to a sum of 100% or select a response of “do not know.” Data for applicant and enrolled prelicensure student nurse ethnicity was not reliable enough for analysis. This is discussed in detail later in this chapter.

Descriptive statistics characterized admission data. The variable, admission criteria, was an interval measure and an Independent *t* test analysis evaluated the

significance between associate and baccalaureate degree groups. The Philosophy of Adult Education Inventory (PAEI[®]) scored liberal, behaviorist, humanistic, progressive, and radical adult teaching philosophies (Zinn, 2004). The highest score indicated the adult teaching philosophy the participant associated with the most (Zinn, 2004).

To complete correlational analysis of primary teaching philosophy, it was necessary to code this variable categorically. The primary PAEI, a nominal variable, was the highest score for a particular philosophy and coded as 1 = liberal, 2 = behaviorist, 3 = progressive, 4 = humanistic, and 5 = radical. Admission criteria were summed by program. The complex admission variable was coded as an ordinal variable: a 1 was entered for criteria ranging from 7 to 12 criteria; a 2 was entered for criteria ranging from 13 to 19 criteria; or a 3 was entered for criteria ranging from 20 to 25 criteria. Cross-tabulation and Lambda statistical analysis were used to identify relationships between the nominal variables of preferred adult teaching philosophy and complex admission criteria to support or reject the null hypothesis in research question 3.

Gatekeeping for the purpose of this study was defined as admission criteria that limited qualified students enrollment to a nurse education program. Admission and Diversity survey questions sought to examine the use of gatekeeping as a practice in nursing admission and student selection. Gatekeeping was a nominal variable and descriptive statistics explored and characterized the use of this concept in student nurse admission practices. In the following section, an interpretation of the findings is presented as supported by previous literature or as a direct contribution to nursing education literature.

Interpretation of the Findings

Demographic data are presented and interpreted first followed by data related to each research question. Limitations, recommendations for future research, and social change are presented as separate sections later in the chapter. A chapter summary completes this section.

Demographic Profile

Participants ($N = 68$) were predominantly female (93%), age 50 years (67%) and older. In the latest HRSA (2008) *National Survey of Registered Nurses* report, the registered nurse profession is predominantly female and over the age of 50 years. AACN (2011) reported doctoral-prepared full-professors were an average age of 60.5 years; associate professors were age 57.1 years; and assistant professors were age 51.5 years. Associate degree masters prepared nursing faculty was younger for full-professors (age 57.7 years), associate professors (age 56.4 years), and assistant professors (age 50.9 years). A gain was reported in the male gender for registered nurses. An increased from 6.2% in 2004 to 9.6% in 2008 (HRSA, 2008). The male minority demographics in this study were 7%.

The ethnicity of full-time teaching faculty for this study was European-American (87%), African-American (6%), Hispanic (0%), mixed ethnicity (2%), and other (5%). The European-American data is similar to the recent data of 86% reported for the 2009/2010 school year (SREB, 2010). A higher African-American ethnicity of 13.2% was also reported in the SREB report. The European-American and African-American ethnicity of this study is more consistent with the HRSA (2008) national ethnic report of

83% European-American, 5.4% African American, but not with the reported ethnicity of Asian (5.5%) and Hispanic (3.6%) nurse education faculty. Data from this study and SREB (2010), demonstrate that nursing is still not reflective of the general population of the southeastern state under study (66.2% European-American, 27.9% African-American, and 5% Hispanic) (U. S. Census Bureau, 2010). The ethnic disparity between faculty and the general population is similar to Grossman et al. (1998) findings for Florida.

Grossman et al. (1998) reported 89.5% European-American 8.9% African-American, and 2.16% Hispanic ethnicity of faculty. No Hispanic ethnicity was reported by full-time faculty participants for this study. The lack of Hispanic ethnicity full-time nurse education faculty remains consistent with the SREB data for nursing faculty over the past three years from 2007 through 2010 (SREB, 2010).

The findings of this study represent an ethnic disparity of full-time faculty that has continued to exist over time (Carol, 1999). Based on previous research, faculty role models provide mentorship for students. This lack of minority role models hinders effective mentoring and self-identification for minority students as well as obstructs program success (Higgins, 2005). Without culturally effective role models, minority students will continue to perceive a nonsupportive learning environment in a European-American classroom (Clark, 2008; Grossman et al., 1998; Matheson & Bobay, 2007; Myrick & Tamlyn, 2007). Full-time faculty is older, nearing retirement age, and possesses a lot of experience.

Research Questions

This study was originally designed to describe applicant and enrolled student ethnicity and to identify relationships between admission criteria, adult teaching philosophy and applicant and enrolled student ethnic diversity in a southeastern state. Because of the lack of reliable ethnicity data, relationships between admission criteria and ethnic diversity were not analyzed. However, if faculty remains unaware of the ethnic disproportion in nursing education, social change will continue to remain elusive.

This study sought to identify relationships between admission criteria used to select students and ethnic diversity. Gatekeeping using specific admission criteria may be a possible deterrent to minority student application and enrollment to nursing programs (McNelis et al., 2010; Noone, 2008). Possible effects of admission criteria, such as: standardized testing, time limits imposed on standardized tests, and nurse pretesting on minority applicants remains unknown. Qualified students for baccalaureate and associate degree registered nurse education programs are defined and determined through agreed-upon admission criteria by faculty.

Research question 1: Admission criteria. “What admission criteria are used to screen applicants to associate and baccalaureate degree nursing programs in a southeastern state?” Information describing the admission process and listing the criteria used to identify qualified students for admission was extracted from 14 associate degree programs and 13 baccalaureate degree nursing education programs websites.

In 1977, Morgan published five admission criteria of (a) an age requirement of 17, (b) a high school graduate, (c) completion of the application and submitted by the

deadline date, (d) achieve the placement test score, and (e) meet a predetermined GPA (p. 65). Crow et al. (2004) surveyed nursing administrators and 11 admission criteria were identified: cumulative GPA, ACT[®] scores, high school GPA, SAT[™] scores, letters of reference, interviews, standardized entrance exam, faculty developed entrance exam, mathematics exam, reading comprehension, and critical thinking assessment (p. 176). For this study, completed in 2010, a total of 35 different admission criteria were identified for registered nurse education programs. To make 35 admission criteria manageable and understandable, categories of cognitive, curricular, professional, time-limited, and other were used.

- Cognitive criteria included (a) Grade Point Average (GPA), (b) SAT[™] or ACT[®], (c) “C” or better in course grades, (d) prenursing admission testing, (e) Science GPA, (f) placement testing for English and Mathematics, (g) limit to the number of times for repeat nursing admission testing, and (h) placement testing reading score.
- Curricular Criteria consisted of (a) required course completion or credits, (b) progression requirements, (c) information session, (d) restricting the number of times a student can apply, (e) specific high school courses, (f) faculty advisement, (g) open door policy (first qualified, first admitted), (h) priority merit placement, (i) science courses at the same institution, and (j) academic forgiveness.

- Professional admission criteria included (a) interview, (b) essay, (c) personal references, (d) writing ability, (e) communication skills, and (f) submit nursing application in person.
- Time-limited criteria consisted of either a 2, 5, 7, or 10 year requirement to repeat (a) required courses; (b) college aptitude testing for COMPASS, SAT™, or ACT®; (c) nurse entrance test; and (d) attendance to information sessions.
- Other criteria included (a) health care experience, (b) residency (county of residence), (c) motivation, (d) multiple admission options, (e) checklist completion, (f) age requirement, and (g) weighted or point system.

For this study, complexity was determined by the number of admission requirements, weighted point ratings, and other admission pathways. The more requirements used for the selection of students the higher the complexity (Daft & Bradshaw, 1980) of the admission process. Baccalaureate and associate degree criteria admission criteria are presented, using the aforementioned categories, accompanied by evidence or lack of evidence in the literature for its use and implications. Baccalaureate admission criteria are presented first followed by associate degree admission criteria.

Baccalaureate admission criteria. In this study, 23 distinct admission criteria were identified for all baccalaureate programs combined. Program admission criteria ranged from a low of eight to a high of 13 criteria used for student selection. Only three criteria across programs were standardized. Grade Point Average (GPA), SAT or ACT, and “C” or better in course grades was required by 100% of baccalaureate programs. In

previous literature researching GPA predictive value on success remains inconclusive.

GPA was identified for student success by Crow et al. (2004), Grossbach and Kuncel (2011), and Newton et al. (2007). SAT and ACT was found to predict success by Crow et al. (2004) and Grossbach and Kuncel (2011). However, GPA was not found to be predictive of student success in other studies (Sevcik, 2002; Wacks, 2005).

Helm (2008) and Rech and Harrington (2000) reported minority students scored lower on standardized test, such as the SAT and ACT, than European-Americans. Based on these findings, standardized tests were not recommended for admission selection by Helm (2008) and Rech and Harrington (2000). A prenursing admission test is another standardized test used for nursing admission selection. Newton et al. (2007) found this prenursing test contributed to student success. In this study, an admission criterion related to limiting the number of times this prenursing test could be repeated was identified. No literature was found related to this particular admission criterion. In this study, another cognitive admission requirement for baccalaureate programs was science GPA. Previous literature reported by Uyehara et al. (2007) found Pathophysiology science grades associated with student success in program.

In this study, curricular criteria for baccalaureate degree programs were: (a) specific course or course credit completion ($n = 13$); (b) progression requirements ($n = 10$) consisting of no course failures in required courses; (c) specific high school courses ($n = 7$) such as biology, chemistry, or algebra; (d) faculty advisement ($n = 3$); (e) first qualified-first admitted, open enrollment ($n = 2$); and (f) priority merit enrollment ($n = 1$) including an automatic admission for high level cognitive achievement on a point weight

system. No previous literature was identified for baccalaureate student success using these criteria. According to Muse (1993), open enrollment is usually a requirement of community colleges not universities. In the search of the literature, merit priority admission as a pathway to NCLEX-RN success is lacking research outcome publication.

Professional requirements for baccalaureate degree programs included an interview ($n = 3$); personal reference recommendations ($n = 3$), usually two references were required; personal written essay ($n = 2$); writing ability ($n = 1$); and communication skills ($n = 1$). Ethnic diversity improved in one program following the implementation of an interview (Trice & Foster, 2008) and McNelis et al. (2010) reported an interview was added as an admission requirement to achieve greater diversity. Ehrenfeld and Tabak (2000) expressed concern that interviews have a potential for bias.

Additionally in this study, baccalaureate programs imposed a time-limit on successfully passed required courses. A five year time-limit was required for Science, Mathematics, or English course work ($n = 3$), requiring students to retake courses already successfully completed. No literature was found to support a time-limit admission criterion imposed for science, mathematics, or other required courses for baccalaureate program or NCLEX-RN success.

Other admission criteria found in study included: multiple admission options ($n = 4$); health care experience ($n = 2$) working as a Certified Nursing Assistant, Emergency Medical Technician, or Paramedic; residency ($n = 1$) within the state or county that the university serves had preference for selection; and motivation ($n = 1$). Multiple admission options, especially advanced or accelerated programs exist in the literature

(Raines & Taglaireni 2008), however, no published student success outcomes were found related to multiple pathway options. No published literature was found on prior health care experience related to nurse program or NCLEX-RN success. However, based on faculty recommendations, McNelis et al. (2010) reported a faculty decision was made to include previous health care experience as an admission requirement. In this way, many students enroll with basic nursing skills that do not have to be taught. However no literature was found to support success with previous health experience. Baccalaureate nurse education programs did not publish an age requirement in online documents. This could be attributed to the fact that baccalaureate programs admit students as a second semester sophomore or junior students and age would not be a factor to consider for admission. Whereas students admitted directly to a community college nursing program from high school, age would be a consideration.

A weighted or point system selection or checklist completion was not listed as admission criteria in the online documents extracted from online documents from baccalaureate programs. However, 42.7% of the baccalaureate participants reported a weighted admission selection process was used for student selection. It appears that admission criterion for selection is not transparent enough to present all admission details on an online website.

McNelis et al. (2010) reported an admission criteria change from a sole criterion of GPA (100%); to a nursing GPA (30%), calculated from 31 required course credits; a critical, analytical, and science GPA (30%); an interview (30%), that included a submitted essay; and health care related service experience (10%) (p. 194). Although not

specifically stated, this selection breakdown of percentages gives the appearance of a weighted admission selection process. McNelis et al. (2010) provided no reported student outcome, program outcome, or NCLEX-RN outcome data for this change. Baccalaureate program admission criteria are diverse and numerous and serve as gatekeeping actions lacking the support of conclusive research evidence these criteria contribute to student success.

Associate degree admission criteria. In this study, all 14 associate degree registered nurse education programs required GPA, and course grade of “C” or better. Gilmore (2008), Kyle (2000), and Sandiford and Jackson (2003) reported cumulative GPA was found to contribute to student success. No literature was found to support a “C” or better coursework contributed to student success in associate programs. A grade of “C” or better on course work does ensure that all previous courses are completed with a passing grade prior to student admission to a nursing program. Other cognitive admission requirements were standardized achievement testing, either the COMPASS or ASSET testing ($n = 11$); SAT or ACT ($n = 9$); prenursing admission testing ($n = 8$); science GPA ($n = 3$); placement testing reading score ($n = 3$); and a limit to the number of times a prenursing test ($n = 3$) can be repeated. As with baccalaureate programs findings reported in the literature are inconclusive. ACT was found by Marshall (2006) and Gilmore (2008) to contribute to student program success, while Wacks (2005) found no relationship. Science GPA was attributed to student success in program from several studies (Gilmore, 2008; Higgins, 2005; Kyle, 2000), while Jeffreys (2006) did not find science GPA significant for success. Pretest scores in critical thinking were reported by

Wacks (2005) to contribute to program success. Higgins (2005) and Sandiford and Jackson (2003) reported preadmission reading ability contributed to student success. However, only 21% of the associate programs in this study used reading score as an admission criterion.

In this study, curricular requirements for associate degree programs included attendance to an information session ($n = 13$). This information session explains the nursing admission process in a one or two hour period. Mandatory information session is a matter of associate degree program policy and serves as a gatekeeping mechanism to control and pass information to a large group of students. The mandatory information session identified in this study was required by all associate degree programs. However, no literature was found reporting mandatory information sessions and a contribution to student success. Baccalaureate programs do not use an information session. Students are individually advised by faculty. This admission criterion may be considered as a gatekeeping action. If a mandatory information session is not attended the gate is effectively closed as the student is unable to obtain an application or meet with an advisor.

In this study, other curricular requirements included enforcing progression requirements ($n = 11$) and permitting only one to two required course failures ($n = 11$). The published literature remains inconclusive on the success of students who have had more than one course failure. Kyle (2000) and Marshall (2006) reported no significance difference between students who had repeated courses and students without repeat courses for program or NCLEX-RN success, however, Marshall stressed that repeat

courses did have an effect on success. Required course credit completion ($n = 10$); number of times a student can apply ($n = 10$); open enrollment ($n = 6$), a first applied, first qualified, first admitted policy; priority merit placement ($n = 6$); specific high school course completion ($n = 5$) such as: biology, chemistry or algebra; faculty advisement ($n = 5$); academic forgiveness ($n = 1$), a policy to permit a student to remove a prior semester poor performance; and science courses at the same institution ($n = 1$) were other admission requirements that literature on these subjects and success in program or NCLEX-RN licensure exam could be found.

In this study, associate degree program professional requirements were a written essay ($n = 2$), an essay of intent for a professional nursing career; an interview ($n = 1$); personal references ($n = 1$), usually two; writing ability ($n = 1$); and submission of the application or checklist ($n = 1$) in person. Communication skill, although a requirement for baccalaureate programs, was not required by associate degree programs. No literature was found that supported the use of a written essay or proof of writing ability contributed to success in associate degree nurse education programs or NCLEX-RN. The submission of an application or application checklist in person is a matter of policy, but effectively closes the gate and hinders access to programs for out of state students or students travelling long distances from campus. Associate degree programs, like baccalaureate degree nursing programs, use admission criteria which are diverse and numerous and serve as gatekeeping actions. Conclusive research evidence is lacking to support the use of these criteria for student success in program or NCLEX-RN.

From the findings presented, admission criterion are numerous, complex with multiple path options, and inconsistently applied (McNelis et al., 2010) to determine and select qualified students for nursing admission. Kyle (2000), Marshall (2006), and Sandiford and Jackson (2003) reported student success was correlated with GPA, while Sevcik (2002) and Wacks (2005) did not achieve similar findings. Student success was correlated with SAT (Maggio et al., 2005), while Marshall (2006) found success correlated with ACT scores. Helm (2008) and Rech and Harrington (2000) concluded that ACT scores should not be used to select African-American men. Preadmission reading scores were found significant to student success and recommended by Higgins (2005) and Sandiford and Jackson (2003), however only three associate programs and no baccalaureate programs used reading scores as an admission criterion. Mathematics (Higgins, 2005) and science scores (Higgins, 2005; Kyle, 2000), critical thinking scores (Wacks, 2005), and interviews (McNelis et al., 2010; Trice & Foster, 2008) contributed to student success. Although nursing programs use course repetition as a limiting factor for nursing student admission, Marshall (2006) and Kyle (2000) found no significance between course repetition and program or NCLEX-RN[®] success. What remains unknown is the relationship between admission criteria and the selection of qualified minority student to a nursing education. Carol (1999) believed admission policies were outdated and admission decisions were unintentionally exclusionary toward minority students. Research remains to be completed on the effect of admission criteria and ethnicity of students. Faculty make admission decisions (McNelis et al., 2010; Siktberg

& Dillard, 2001) based on personal beliefs and experience. Adult teaching philosophy of faculty was evaluated in this study.

Research question 2: Adult teaching philosophy. “What adult teaching philosophy is most prevalent among full-time faculty teaching in associate and baccalaureate degree nursing programs in a southeastern state?” No published research literature was found on the adult teaching philosophy preference of nurse education faculty. Other studies were completed on other disciplines such as: agricultural faculty (Boone et al., 2002; Gularte, 2007), seminary professors (West, 2008), rehabilitation faculty (O’Brian, 2001), and workforce and entrepreneurial instructors (Powell, 2006).

The Philosophy of Adult Education Inventory (PAEI[®]) was used to determine liberal, behaviorist, progressive, humanistic, and radical adult teaching philosophy of nurse education faculty. The scoring for a particular philosophy ranges from 15 to 105. According to Zinn (1983, 1990, 2004) a score of

105 - 95 indicated a strong agreement with that particular philosophy,

94-66 was an agreement,

65-56 was a neutral score (neither agreeing nor disagreeing),

55-26 was a disagreement and a low score of

25 - 15 was a strong disagreement with a particular philosophy. (p. 191)

According to Zinn (2004), the PAEI[®] fosters inquiry into one’s adult teaching values and beliefs. Understanding one’s adult teaching philosophy may assist faculty to become more effective at adult education.

All five of the adult teaching philosophies have value and merit (Zinn, 2004).

There is no right or wrong adult education philosophy only the teaching philosophy preferred by the individual. Zinn (2004) cautioned the liberal and radical philosophies go against the mainstream of American education, which is the behaviorist philosophy. Faculty who identify with liberal or the radical philosophies may experience discord, conflict, and discouragement in the organizational workplace, because these philosophies are so dissimilar. Identifying prevalent adult teaching philosophy of nurse education faculty may help to understand how faculty influence, determine, and implement admission criteria to select and enroll qualified student nurses.

In this study, the baccalaureate level the faculty's teaching philosophy preference was behaviorist followed by humanist; while the associate faculty preferred humanistic over behaviorist. According to Elias and Merriam (2005), the behaviorist philosophy places the educator as the instructional authority. Rules to direct student behavior and learning are explicitly stated as learning objectives (Elias & Merriam, 2005). This description is reflective of the edict and professional responsibility for nurse education faculty to protect the public's health by educating and graduating competent nurses (Klein, 2006). The humanistic adult education philosophy is dedicated to the growth and development of the whole person. The humanistic philosophy is opposite the behaviorist philosophy as it is more learner-centered with aspects of more independent learning (Boone et al., 2002; Powell, 2006). The teacher is a facilitator promoting learning through a nondirective approach.

Baccalaureate education selects and enrolls more traditional students (Jeffries, 2004) and a behaviorist philosophy with a pedagogical approach would be a better fit with this student group. The humanistic was the preferred philosophy for associate degree faculty. Associate degree programs select and admit more nontraditional students and an andrological approach would be better suited for these adult learners (Jeffreys, 2004). Another interesting finding was one related to gender.

When compared to other studies on adult teaching philosophy, this research study produced different findings related to gender. The participants of this study were mostly female, while other studies, such as Gularte (2007), Boone et al. (2002), O'Brian (2001), and Powell (2006), were conducted with a majority of male instructors as participants. Agricultural faculty teaching preference was studied by Gularte (2007) and Boone et al. (2002). Gularte's (2007) study included all male, white, age 40-49 years with over 10 years of teaching experience, who preferred the progressive philosophy. Participants in Boone's et al. (2002) study were also predominantly male, an average age of 44 years, with up to 18 years of teaching experience. Boone et al. (2002) reported participants preferred the progressive philosophy. O'Brian (2001) completed a study on rehabilitation educators. The participants were mostly male, white, and older than age 50 years, with an average of 16.3 years of teaching experience. O'Brian (2001) reported the majority of rehabilitation educators preferred the progressive philosophy. Powell (2006) studied workforce and entrepreneurship instructors. Powell reported entrepreneurship instructors were mostly male had a preference for the progressive philosophy, while workforce education instructors were mostly female and preferred the behaviorist philosophy. West

(2008) reported different findings for seminary professors who were mostly male, older than 50, with an average of 16.3 years of teaching experience. In West's study, the male educators preferred the behaviorist philosophy and the radical philosophy. The aspect of gender as related to teaching philosophy requires further investigation.

Research question 3: Correlational analysis. "Is there a significant relationship between complex admission criteria and primary teaching philosophy by type of nursing program?" The hypothesis for this question was:

H_O: There is no significant relationship between complex admission criteria and primary teaching philosophy.

H_A: There is a significant relationship between complex admission criteria and primary teaching philosophy.

A primary philosophy was determined for each participant as a categorical variable. The complexity of admission criteria was an ordinal variable, organized into three groups of increasing complexity 1 = 7 to 12 criteria, 2 = 13 to 19 criteria, or 3 = 20 to 25 criteria. No program listed more than 25 criteria. Since the variable of primary PAEI was nominal and complex admission was an ordinal variable, a cross-tab analysis, *Lambda*, was completed. Cross-tabulation assists with the basic evaluation of data for analysis (White & Korotayev, 2003). *Lambda* is used to identify relationships between nominal variables (Marion, 2004). *Lambda* analysis does not imply a cause or effect relationship (White & Korotayev, 2003).

The alternate hypothesis was rejected. No relationship was found between preferred adult teaching philosophy and the complexity of admission criteria. No

published literature describing a relationship between admission criteria and faculty teaching philosophy was found. Zinn (2004) stated most educators have a clear philosophical orientation, however 18% of the participants in this study had similar scores between two philosophies, the behaviorist and humanistic (n = 9) philosophies, the progressive and humanistic (n = 2) philosophies, and the liberal and behaviorist (n = 1). The behaviorist and humanistic philosophies are very dissimilar with an assumption that similar scores between these two philosophies would not occur (Zinn, 2004). Therefore, it would be unlikely for high scores to exist for participants between the behaviorist and humanistic philosophies or liberal and radical philosophies. Typical expected combinations are liberal and behaviorist, progressive and humanistic, progressive and radical, or humanistic and radical (Zinn, 2004). This study identified similar scores between three philosophies: the behaviorist, humanistic, and radical (n = 2) philosophies; and the liberal, behaviorist, and humanistic (n = 1) philosophies. This finding is similar to West (2008) and O'Brian (2001) who reported mixed philosophy results for participants. However, Zinn (2004) recommended faculty with three or more similar scores for teaching philosophy to clarify their teaching beliefs and values to identify if any contradictions exist in their teaching style. Knowing adult teaching philosophy can assist faculty to understand how they fit within the philosophy of the organization, make decisions related to admission and selection of qualified students.

Research question 4: Gatekeeping. “What gatekeeping factors influence the admission criterion used to select highly qualified student nurses?” For the purpose of this research, gatekeeping occurred when admission criteria were used to limit qualified

student access to a nursing education. Five questions on the survey were related to gatekeeping: (1) the existence of a limited admission policy, (2) the student selection process, (3) the competitiveness rating of admission selection, (4) identifying factors that influence faculty decisions about which admission requirements to use, and (5) the prioritization of admission criteria that hinder qualified student admission. The finding for gatekeeping as related to each of these questions is presented next.

Limited admission. In this study, participants were asked if there was a limit to the number of student nurses enrolled in the prelicensure nursing program. A yes or no dichotomous answer was required. A majority of the participants (87%) reported a limit to the number of students selected and enrolled to nurse education. Recent data from the SREB (2010), reported 1,151 qualified students were refused admission to nurse education programs for the 2009-2010 school year in the southeastern state under study. Within three years, the number of qualified students turned away from nursing programs has doubled, as over 67,563 qualified students were denied admission to nurse education (AACN, 2011).

The number of student nurses admitted to nursing programs are limited due to a (a) lack of faculty, (b) lack of clinical sites for student nurse experiential learning, (c) lack of qualified applicants, (d) lack of institutional resources (SREB 2005, 2007, 2010), and (e) lack of adequate funds to hire faculty (SREB 2007, 2010). According to Karen (1990) gatekeeping actions are implemented to control access due to insufficient resources. A characteristic of gatekeeping, due to limited resources, was substantiated from this research study's data.

Selection process. Karen (1990) developed a theoretical model of gatekeeping that included the following constructs: (a) an organizational field, (b) a classification struggle, (c) standard operating procedures and (d) outcomes (pp. 233-236). This model of gatekeeping can be explained through an admission selection process whereby the organizational field is the admission criteria; the classification struggle is minority admission and laws affecting admission practices; the standard operating procedure is the process used to select students; and the outcome is student selection. The participants were asked to select one admission process response from a list of five options. A sixth option, “other,” permitted participants to list an admission practice that was not included in the responses. Data from the “other” response was reviewed by me for themes.

In this study, a weighted or point system (35%) was characterized as the gatekeeping function used the most for admission selection of qualified students. A review of the literature, identified a weighted point system is used to assign points to various admission criteria (Kilgore, 2003; Trice & Foster, 2008). McNelis et al. (2010), although not explicitly stated, reported a weighted scoring system for admission selection. The points are summed and qualified students are rank ordered for selection.

A nursing department group or committee (27.9%) was the second most gatekeeping option used to select qualified students. Other processes, identified in this study, used to select students were a first qualified, first applied, and first selected admission process; a nursing department individual completed the admission selection; or an individual from the admission department made the selection based on predetermined criteria. Kilgore (2003) explained that the gatekeeper established the requirements to

first deny access to unqualified students. Kilgore further explained, for elite college admission, students are in high competition and are therefore ranked using predefined criteria which stratify qualified students for selection to a limited number of seats. According to Kilgore (2003), all applicants are evaluated, rank ordered, and only those students deemed to have potential to succeed (those with highest ranked scores) are considered competitive enough for selection and admission to elite colleges. Kilgore (2003) also alluded to the competitive nature of admission as a gatekeeping process. Nurse education admission was evaluated for competitiveness another characteristic of gatekeeping. The effect of predetermined admission criteria and the competitive nature of the admission process may serve to deter minority students from applying to nursing programs. This indicates a need for social action to evaluate gatekeeping admission effects on this population.

Competitive admission to nursing program. One question on the Admission and Diversity survey collected data on the perceived competitive nature of student nurse admission. More than two-thirds of the participants described admission to the nurse education program where they taught as extremely competitive (35%) or very competitive (38%) process. The competitive nature of admission supports the characterization of gatekeeping in nursing education. Kilgore (2003) described the role of competition to gain access to elite colleges as a gatekeeping activity. Other aspects of gatekeeping are governed and influenced by external factors and forces.

Factor influence on admission decisions. On the Admission and Diversity survey, participants were asked to rank, from lowest to highest influence, the effect of

accreditation agency standards, empirical evidence, clinical agency requirements, NCLEX-RN first pass rate, faculty experience with students, and personal teaching philosophy on program admission decisions. These factors were selected from social work literature review (Gibbs & Blakely, 2000) as presented in chapter 2. As a minimum the only literature found on nurse education gatekeeping was from Merrylees (2002).

In this study, National Council Licensure Examination (NCLEX) pass rate was reported as having the “highest influence” on decisions made for admission requirements. The Board of Nursing for the southeastern state in this study enforces a deficient first time graduates NCLEX pass rate on nursing programs. This deficient pass rate is defined as the program’s pass rate that is more than 5 percent below the national pass rate for first-time NCLEX test takers (South Carolina Legislature, 2010, 91-3 section, para. K). For example, if the published national NCLEX-RN score is 88.6% for first time passers the lowest pass score accepted is 83.6%. If a program’s first time test taker pass rate is below 83.6% the program is considered deficient. The State Board of Nursing has the power to rescind approval status for a nurse education program that produces deficient first time pass rate for test takers. Accreditation agency, empirical evidence, and clinical agency requirements were rated as having a “higher influence”, while personal teaching philosophy was ranked as having the “lowest influence.” Gibbs and Blakely (2000) explained that hierarchical control systems, such as accreditation agency and legislation mandate professional licensure standards, force faculty to employ gatekeeping actions. Madden (2000) explained that protection of the general public is a faculty responsibility and gatekeeping is a means to protect the public from incompetent caregivers (KLEIN,

2006). However, it is possible for this requirement to be taken to an extreme and effect the selection of minority students. To further examine gatekeeping, participants were asked to prioritize the top five criteria that limited qualified student admission.

Prioritization of admission criteria. From the literature review, a question on the Admission and Diversity survey asked the participants to prioritize the top five criteria out of 11 selected admission criteria that controlled qualified student admission to a nursing program. The 11 criteria were: Grade Point Average, standardized pre-nurse test, course prerequisites, courses completed, previous course failure, science GPA, time of course completion, specific course GPA, previous college GPA, essay, and high school courses or grades. Since literature is lacking on gatekeeping practices in the nursing education literature, social work literature (Gibbs & Blakely, 2000; Moore & Jenkins, 2000; Royce, 2000) served as the basis for reporting these findings.

The highest factors used to control qualified student admission to nursing programs in this study were Grade Point Average, prerequisite course work, and science GPA. In previous literature, Royce (2000) reported GPA as a gatekeeping measure to create high admission standards to select students. A standardized nurse preadmission test used to determine student readiness for nursing curriculum was prioritized as the second highest factor to limit admission of qualified students. Admission indicators for success, according to Moore and Jenkins (2000), are GPA requirement, standardized test scores, completion of prerequisite courses, autobiographical statements, and references. Previously it was stated that standardized testing is a deterrent for minority admission, therefore the effect of these findings on minority application and enrollment remains

unknown. Previous course failures were prioritized as the fourth and fifth highest factor to control qualified student admission, while a written student essay and high school transcripts had a lower prioritization to stratify qualified nursing students. In the sections that follow, the summary of findings, limitations, implications for social change, recommendations for action, and further research recommendations are presented. The chapter ends with a conclusion of the study.

Summary of the Findings

A persistent racial disparity between the general population (51.3% female and 66% European-American) and enrolled student nurses (90% female and 77% European-American) exists in the southeastern state under study. SREB reported the enrolled student nurse ethnicity for the 2009/2010 school year as 78% European-American, 17% African-American, 2.4 % Asian, 2% Hispanic, and 0.6% American-Indian for baccalaureate programs; and 73% European-American, 21.4% African-American, 2% Asian, 2% Hispanic, 0.4% American Indian, and 1.2% Hawaiian for associate degree programs.

Morgan (1977) identified five nursing admission criteria. Twenty-seven years later, Crow et al. (2004) reported 11 criteria. In 2008, I identified 22 distinct admission criteria for associate and baccalaureate nursing programs in a southeastern state. Two years later, 35 different admission criteria (including weighted, leveling, or ranked admission criterion) were identified in this study. Baccalaureate programs used fewer admission criteria to select students ($n = 34$; $M = 10.56$) than associate programs ($n = 33$; $M = 17.36$). Independent t test analysis of the variable admission complexity was

significant between programs ($t_{(57)} = 8.088; p = .000$). Multiple studies of admission criteria as predictors for success have been completed (Coleman, 2006; Ehrenfeld & Tabak, 2000; Higgins, 2005; Kyle, 2000; Maggio et al., 2005; Marshall, 2006; Rech & Harrington, 2000; Sandiford & Jackson, 2003; Wacks, 2005). However, published results remain inconclusive for which admission criterion selects the student most likely to succeed (McNelis et al., 2010; Roberts, 2002). Increased control over the selection of student nurses could intensify gatekeeping actions and continue to produce “a particular type of student” (Karen, 1990, p. 227) instead of diversifying professional nursing.

Research on faculty teaching perceptions or teaching philosophy has been conducted (Boone et al., 2002; Greer, 2007; Hanson & Stenvig, 2008; McDaniels, 1983; Papes, 1998; Powell, 2006; Rossetti & Fox, 2009; Ehrenfeld & Tabak, 2000; Zinn, 1983). The research is deficient for adult teaching philosophy of nurse education faculty. To fill this gap in nursing education research, the PAEI was used in this study. Data was collected to determine the primary adult teaching philosophy of full-time faculty teaching in the southeastern state. Baccalaureate adult teaching philosophy of full-time faculty were liberal ($n = 0$), behaviorist ($n = 15$), humanistic ($n = 13$), progressive ($n = 4$), and radical ($n = 1$) with one participant with scores ranging from 20 to 30 for each philosophy indicating no preference (Zinn, 2004). The associate degree faculty group were liberal ($n = 0$), behaviorist ($n = 13$), humanistic ($n = 17$), progressive ($n = 4$), and radical ($n = 0$).

Gatekeeping, as a theoretical concept, is not readily found in nursing education literature. For this study, gatekeeping was determined to exist because limits were imposed and qualified students were denied admission to a nursing education through a

competitive admission process based on predefined criteria. Gatekeeping, although not well identified or published in nursing education literature, is a practice that limits enrollment through selective and complex admission procedures. According to the National League for Nursing, nursing programs are defined as *highly selective* [emphasis added] if only a third of all applicants were selected to a nursing program. The NLN (2009) national survey of nursing education programs reported 67% of associate degree programs as being highly selective for student enrollment, while 43% of the BSN programs met that distinction. According to the NLN (2009), in the 2006/2007 school year, nearly 40% of all qualified applicants were not admitted to nursing programs. The AACN (2007) reported 30,709 qualified student nurse applicants were refused admission; and three years later, for the 2009/2010 school year 67,563 qualified student nurse applicants were refused admission (AACN, 2011). Admission criteria, as determined by faculty, used as highly selective criteria deny admission of qualified students to nurse education characterizing gatekeeping activities. Gatekeeping serves to perpetuate the nursing shortage. However, the effect of gatekeeping on student diversity remains elusive and may be related to the limitations identified with this study.

Limitations

This study was a nonexperimental research design (Creswell, 2009; Johnson & Christensen, 2004), and, as such, lacks the scientific rigor to provide empirical evidence of causation (Cook & Cook, 2008). Surveys are known to yield low response rates (Fink, 2006). Low response rates limit the reliability and validity of conclusions (Fink, 2006;

Trochim, 2006). Nonrespondents may have had different views (Trochim, 2006) from responders but were not included in this study.

Although the Admission and Diversity survey was reviewed by content experts and pilot tested to strengthen face and content validity (Trochim, 2006), the concept of gatekeeping has not been studied or well documented in nurse education literature. Therefore, the five questions related to gatekeeping could have held some construct validity issues. Bias language on the part of the researcher (Trochim, 2006) can interfere with accurate measurement of the variable gatekeeping. Therefore unrealized threats to content validity may have existed.

Confounding variables may not be realized and may have an influence on the conclusion validity of this study. For example, the PAEI was developed to help educators identify their adult philosophy preference. It has not been used in past research for the identification of relationships or correlational analysis. Scores on multiple philosophies were similar for 15 participants (24%). According to Zinn (1983) the radical philosophy goes against behaviorist philosophy, the mainstream of American education. Faculty who identify with liberal or the radical philosophies may experience discord, conflict, and discouragement in the organizational workplace, because of dissimilar philosophical views. In this study, these dissimilar philosophies had closely related scores, the behaviorist and humanistic ($n = 9$), behaviorist, humanistic, and radical ($n = 2$), and liberal, behaviorist, and humanistic ($n = 1$). The PAEI may not have been sensitive enough to identify a strong distinction of primary teaching philosophy for nurse education faculty.

For the collection of admission criteria, one program posted conflicting admission documents on the Internet. It is difficult to know if other posted Internet information was correct or in the process of revision during this study. Interrater reliability would have strengthened the reliability of extracted data from the Internet.

Other limitations for this study include the purposeful sample of full-time faculty that may have affected conclusion validity (Trochim, 2006). The data from this study are not generalizable to the general population of full time faculty teaching nursing in associate or baccalaureate degree programs. Ethnicity data for students applying to nurse education was reported as unknown by 50% of the respondents and 38% were unaware of enrolled student nurse ethnicity. Ethnicity data could not be evaluated due to incomplete surveys, reported lack of knowledge about ethnicity, and disparate reporting of ethnicity. All of these facts pose a threat to the conclusion validity of this study.

Lastly, there could be a social threat (Trochim, 2006) to the validity and reliability of this study. I am a member of the nurse educator listserv and although I do not have a familiar relationship with members, I have communicated with others associated with this group. Additionally, I have worked or am in a working relationship with some of the participants of this study. Although I am not in a supervisory role, I took great care not to exert any undue influence to complete the survey. However, the participants may have perceived a need to help me with my studies and responded to the survey differently than they might have if they were unknown to me. Their participation could introduce a threat to conclusion validity in a way that was not anticipated. In spite of these limitations, important implications for social change are a consideration.

Implication for Social Change

In this study, I surveyed nursing educators and critically evaluated data from full-time faculty in an attempt to assess student nurse applicant and enrolled ethnicity, admission criteria used to identify and select qualified students, adult teaching philosophy of faculty, and describe gatekeeping characteristics in nursing education. Grumbach and Mendoza (2008) highlighted the need for diversity in health care professions as a crucial public policy concern and explored possible causes that contribute to cultural disparity in nursing. Although the SREB (2005, 2007, 2010) continues to report ethnic disparity within student nurse higher education populations, full-time nurse faculty were unable to report or chose not to report specific data for student nurse ethnicity. The lack of ability to report ethnicity data thwarts the call for greater ethnic diversity from the NLN (2008, 2011a), the NLNAC (2008b), the Institute of Medicine (2010), the AACN (2008a, 2009, 2010), and the Sullivan Commission (2004). Accreditation agencies (NLNAC, CCNE) and State Boards of Nursing must turn attention to how well nursing education programs are addressing ethnic disparity in the student nurse population. These agencies must move past a position statement toward action to demonstrate a continued commitment for diversity in professional nursing. Ethnic diversity in nursing education influences professional nursing and ultimately provides culturally competent care to the general population. The goal of these accreditation agencies should be to ensure appropriate care is provided to the general population through an accurate monitoring of ethnic diversity in nursing education. Other methods of data collection will need to be implemented to control for student fear of bias with selection and enrollment. Ethnicity for applicants

needs to be collected accurately to determine if the cultural disparity begins before application, during application, or after enrollment. Future research will need to be conducted to determine at what point the ethnic disparity begins in nursing education.

A total of 35 different admission criteria were identified from baccalaureate and associate degree programs. Only two of the 35 distinct criteria were standard across programs. All programs evaluated students according to GPA and required a “C” or better for all course grades. Review of the literature by McNelis et al. (2010) found empirical evidence reported on admission criteria and student success to be inconclusive for selecting the best and the brightest student. Therefore the statement that no college or university actually has a good process in place to select the student most likely to succeed to graduation (Karen, 1990) holds true for nurse education. When comparing admission criteria used to select students, 79% of associate degree programs use (13 to 25 criteria) while only 15% of baccalaureate programs use this number of criteria. Associate degree programs utilize multiple time-limited criteria forcing students to retake courses they have already passed successfully. Repetition of a successfully completed course places a financial burden on students, especially minority students, as well as contributes to applicant discouragement (NLN, 2008). No statistically significant empirical evidence could be found to support course repetition as an indicator of program or NCLEX-RN success. Complex admission criteria are a means by which to control student access to a limit major and contribute to gatekeeping actions.

Due to limited human, material, institutional, and fiscal resources, nurse education limits access and earned a distinction of being a highly selective limited major (NLN,

2011b). Although gatekeeping is lacking in nurse education literature, this study identified the characteristics of gatekeeping as it exists in nursing education. Gatekeeping, for the purpose of this study, occurred when qualified students were denied access to a nursing education. A selective distinction (NLN, 2008) and controlled access through gatekeeping action may have an influence on the ethnicity of student nurses. This study was unable to fully analyze this premise. Future research on the disparity of ethnicity for student nurses to identify a cause and effect is recommended. Findings from this study support the need for social change in nursing education admission policies to ensure that gatekeeping practices do not transform nurse education into an elitist social stratification that excludes qualified minority students access to a nursing education and contributes to a European-American majority. Social change needs to be based on an appreciation of each individual's diverse ethnic background, personal value, social interconnectedness, and health interrelationships to create a healthy professional work environment (Moody et al., 2007) to provide culturally competent nursing care to the general population.

Recommendations for Action

A consistent withdrawal of state supported funds to public universities has occurred in since 2008. Due to a lack of human, material, fiscal, and institutional resources (SREB, 2005, 2007, 2010), higher education faculty place a limit on student enrollment for registered nurse education programs that results from gatekeeping activities. The goal is to select the best and brightest student capable of success given fiscal budget constraints and a lack of human and material resources. Nurse education

faculty determines which admission criteria are used to select this limited number of qualified students (McNelis et al., 2010; Siktberg & Dillard, 2001) while refusing admission to other qualified students.

Predetermined admission criteria are a matter of institutional program policy and guides student selection (McNelis et al., 2010; Siktberg & Dillard, 2001; Zinn, 1983). These admission criteria become *keepers of the gate* [emphasis added] to control access to nurse education programs. Although nurse education uses gatekeeping actions, gatekeeping is not a concept readily understood or found in nurse education literature. The characteristics of gatekeeping found in this study and used in nursing education are concepts to be addressed in nursing literature, as well as future research.

To enact social change, regulating agencies must first acknowledge that ethnic disparity exists and understand that this problem originates at a macro organizational level that extends to a micro individual level. In order to provide safe, effective, and culturally competent care to constituents, financial and diverse human resources must be made available to affect a change in the ethnic mix of student nurses. To accomplish this, nursing education needs to embrace social change that liberates nursing education from years of forced “oppressive socialization” (Scarry, 1999, p. 423).

At higher education, nurse administrators must assess whether current admission policies unfairly hinders admission of minority students. Qualitative measures such as interview (McNelis et al., 2010; Trice & Foster, 2008) may actually provide minority students a greater chance of being selected rather than quantitative cognitive measures, such as standardized testing. A call for social change through written position statements

may not be enough. Action is needed within nursing education to study the role of gatekeeping actions in relationship to social justice.

Accurate collection of applicant and enrolled ethnicity is imperative in order to meaningfully respond to the ethnic disparity of nurse education programs in this southeastern state. This collection of ethnicity data is similar to any employer, who collects applicant ethnicity information to demonstrate equal opportunity employer status. Collecting ethnicity admission data can shed light on whether the ethnic disparity reported (SREB, 2010) for student nurse minorities is a result of a lack of minorities seeking a nursing education or due to attrition. In other words, meaningful data related to the retention of minority students is reliant upon accurate collection of applicant ethnicity that can be compared to enrolled and graduate ethnicity. If bias on the admission application is perceived as a hindrance to selection, the ethnic or racial data can be collected separate from the application and obtained without identifiers using a postage paid return envelope or online survey report that assures anonymity.

Current nurse education literature is completed on a population of 80 to 90% European-American and is not generalizable to minority students (Coleman, 2006; Evans, 2008; Hopkins, 2008; Johnson & Robson, 1999; Newton et al., 2007; Sand-Jecklin & Schaffer, 2006; Uyehara et al., 2007). Research also appears to be limited on identification of minority student strengths and factors that contribute to their success in nurse education and on NCLEX-RN (Amaro et al., 2006; Meder, 1997). More recommendations for research are offered in the following section.

Recommendations for Further Research

Replication of this study is recommended with more reliable collection of applicant and enrolled student nurse ethnicity data. In light of the return rate and findings with the PAEI, further investigation of the PAEI may warrant an individualized focus or study of its own. The PAEI may be better suited as an individualized approach for teaching philosophy identification rather than used for analysis of relationships. Previous PAEI research findings highlight gender differences (Boone et al., 2002; Gulate, 2007, O'Brian 2001; Powell, 2006). Gender differences identified with specific teaching philosophies using the PAEI might be a consideration for future research. A qualitative study could investigate if the PAEI actually produces a reflection of teaching style by participants and contributes to teaching philosophy change.

It was beyond this study to analyze cause and affect relationships between complex admission criteria and applicant student ethnicity or complex admission criteria and enrolled student ethnicity with the effect of gatekeeping. This study characterized gatekeeping practices in nurse education. Further research should incorporate gatekeeping theory as it relates to the implementation of admission criteria and the effect on selected student's ethnic diversity in a causal relationship.

Oppressive group behavior has been studied in clinical nursing; however, minimal literature related to oppression in nursing education as it relates to gatekeeping has been studied. Future research is recommended on Freire's model of oppression and gatekeeping practices. Recommendations for research are not enough. Nurse education literature is lacking in research of adult teaching philosophy, student nurse diversity,

admission criteria, and gatekeeping. Therefore, I plan to disseminate the results of this study in journals such as *Nursing Education*, *Transcultural Nursing*, and *Journal of Social, Behavioral and Health Sciences*.

Conclusion

Gatekeeping in the literature is associated with elite college admission (Karen, 1990). With gatekeeping action in place, nurse education is considered a highly selective major (NLN, 2011b) and could be viewed as elitist. Hence, admission requirements as gatekeeping actions will continue to control and limit access to well qualified students.

According to the NLN (2009) nearly 40% of all qualified applicants were not admitted to nursing programs for the 2006-2007 school year. For the same year, the AACN (2007) reported 30,709 qualified nursing applicants were refused admission to baccalaureate degree programs. According to the NLN (2011b) report, 45.5% of qualified students were rejected from associate degree programs and 36.9% were rejected from baccalaureate programs. In the latest AACN (2011) report, 67,563 qualified students were refused admission to undergraduate programs; with another 10,223 qualified students refused admission to master's degree programs, and 1,202 refused doctoral program admission due to a lack of faculty. These details are divergent from the IOM recommendation to double the number of doctoral prepared faculty within eight years (by 2020). Without social change, a lack of human (nurse education faculty), fiscal (withdrawal of state education funds), and institutional (higher learning and clinical sites) resources will continue to fuel controlled access to a nurse education. Increased gatekeeping actions may create a "particular type of student" (Karen, 1990, p. 227) and

registered nursing workforce homogeneity will continue. Nurses will be knowledgeable about cultural health care variances but incapable of providing culturally competent care to the general population. To better serve the public at large and meet the cultural health needs of the general population, a transformation of nursing admission practices is necessary.

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Appendix A: Permission to use PAEI

From: Lorraine M. Zinn [llozinn@ecentral.com]
Sent: Wednesday, March 18, 2009 12:36 PM
To: Mary Jarmulowicz
Subject: Re: Philosophy of adult education inventory
Attachments: PAEI_Order_07-07.doc

Dear Ms. Jarmulowicz,

This sounds like an interesting study, though I'm not quite sure what you mean by "the type and number of nursing student admission requirements" for the nursing school. It could be a good application of the Philosophy of Adult Education Inventory to identify some relationship between adult educators and learners. I would be interested in reading a synopsis of your research proposal when it is available.

Yes, I am happy to grant permission to use the PAEI for your study. I do require that you use the PAEI in its entirety without making any changes. The PAEI is usually distributed primarily in booklet form. I am attaching a fact sheet in case you are not familiar with the booklet. However, I have created a separate version of the instrument for research purposes, separating the instrument (along with instructions for administration and scoring) from the interpretive material. I suggest that the researcher offer the interpretive section as a follow-up, if that is feasible.

Rather than a per-instrument fee, I usually request a flat \$50 courtesy fee for use of the PAEI for research. I am willing to communicate with you by e-mail and/or telephone if I can be of assistance as you progress with your study.

Sincerely,

Lorraine M. Zinn, Ph.D.
Lifelong Learning Options
420 South 12th Street, Suite 107
Quincy, IL 62301-4304 USA
Phone: 217-221-5466
Fax: 217-228-5504
lifelong.order@ecentral.com
llozinn@ecentral.com

Subject: RE: [Fwd: Permission requested]
Date: Wed, Nov 30, 2011 01:19 CST
From: Lifelong Learning Options <lifelong.order@ecentral.com>
To: Mary Jarmulowicz <mjarm001@waldenu.edu>

Hello, Ms. Jarmulowicz,

Congratulations on completing your research and getting through the written dissertation.

Yes, you have my permission to include the version of the Philosophy of Adult Education Inventory that you used for your research in the appendix of your dissertation. Do you need this permission in any other form than this e-mail?

I would appreciate a copy of your abstract when you have a chance.

I wish you the best going through the oral defense and in the future.

Sincerely,

Lorraine M Zinn, PhD
Lifelong Learning Options
420 South 12th Street, #107
Quincy, IL 62301-4304 USA
Phone: 217-221-5466
FAX: 217-228-5504
Lifelong.order@ecentral.com

Appendix B: Permission to use SREB Data

From: Eula Aiken
 [mailto:eula.aiken(&sreb.orq]
 Sent: Mon 2/1/2010 10:21 AM
 To: JARMULOWICZ, MARY
 Subject: RE: Contact through the SREB web site

I forgot to say you are more than welcome to use the Excel reports. I have the 2009 spreadsheet that I will send to you shortly. It has not been posted.

Eula Aiken, Ph.D.
 Executive Director
 SREB Council on Collegiate
 Education for Nursing 592 10th
 Street NW
 Atlanta, GA 30318-5776
 Phone: (404) 879-5567
 FAX: (404) 872-1477

Original Message-----

From: jarmulow@uscb.edu
 (<mailto:jarmulow@uscb.edu>] Sent:
 Sunday, January 31, 2010 12:08 PM To:
 Eula Aiken
 Subject: Contact through the SREB web site

Eula, we met at the annual meeting in 2008. I am in the midst of writing my dissertation proposal and would like to know if the Nurse Educator Consortium manages a list of names of only South Carolina full-time nursing faculty and administrators and would be able to release that information for me to survey this sample. I am researching diversity, faculty teaching philosophy, admission criteria and gatekeeping practices in South Carolina nursing education. Also, I have found the excel spread sheet reports on diversity data very informative. I would like permission to use this data and present diversity data for South Carolina over a four year period. Thank you for your attention to this request. Mary Ann Jarmulowicz843 208 8111 (wk) Mary Ann Jarmulowicz

This message has been sent through <http://www.sreb.org>
<https://web.mail.sc.edulexchange/JARMULOW/Sent%20Items/RE:%20Contact%20throu...> 3/14/2010

Appendix C: Cover Letter/Email Invitation

Subj: Teaching Philosophy and Nursing Education

Dear _____,

I am Mary Ann Jarmulowicz and I am conducting research as a Ph. D. in Education candidate at Walden University to investigate whether any relationships exist among faculty adult teaching philosophy, admission requirements, and the selection of South Carolina nursing students.

I invite you to participate in a survey. The survey is about:

- Admission process used to select nursing students
- Faculty teaching philosophy as measured by the Philosophy of Adult Education Inventory.
- Nursing student diversity

I would like you to complete two separate surveys, an **Admission and Diversity Survey** and the **Philosophy of Adult Education Inventory**. Together, the surveys should take approximately 30 to 35 minutes to complete. The Philosophy of Adult Education Inventory is designed to help you identify your prevalent teaching philosophy. Upon completing the survey you will receive your teaching philosophy scores and an explanation of what these scores mean. Your highest score reflects the philosophy that is closest to your own beliefs; your lowest score reflects a philosophy that is least like yours. It assists you to reflect on your own beliefs about adult education. It is up to you to decide how your beliefs may influence your decisions and actions as an educator for the educational setting in which you work. Confidentiality is assured as I am the only individual viewing and analyzing the data and communicating with you.

Your participation is strictly voluntary. If you choose to participate please click on the link below it will take you to the survey and the consent screen. If you prefer a pencil and paper survey, this option can be made available to you as well as an electronically completed survey. Please return email mjarm001@waldenu.edu to request either of these two options.

Please complete the online survey by _____ (date).

****Instructions to complete the survey****

Step one: Go to: http://_____

Step two: In order to prepare for the survey, please note that you will be asked two questions concerning current student diversity. You may want to have this data available to complete these questions.

Step three: Complete the survey. When you access the link above you will complete both surveys as one. I ask you to please complete the survey by **day of the week, date.**

Step four: You will receive the results of the Philosophy of Adult Education Inventory with accompanying explanation of the results.

I am looking forward to your input. Please let me know if you have questions.

Sincerely yours,

Mary Ann Jarmulowicz RN, MSN, BC-GNP, Ph. D. candidate
Walden University
mjarm001@waldenu.edu

Appendix D: Email PAEI Results/What Your PAEI© Score Means

Dear, (Name of participant),

Subj: Teaching Philosophy and Nursing Education

Thank you for your participation in the adult teaching philosophy inventory. The results of your teaching philosophy are Liberal __, Behaviorist __, Humanistic __, Progressive __, and Radical __.

The attachment includes more information about adult teaching philosophies to assist you with the interpretation of the results. A score of:

95 – 105 indicated a strong agreement with that particular philosophy,

66 – 94 was an agreement,

56 – 65 was a neutral score (neither agreeing nor disagreeing),

26 – 55 was a disagreement and a low score of

15 – 25 was a strong disagreement with a particular philosophy.

(Zinn, 1983, p. 191)

Your highest score reflects the philosophy that is closest to your own beliefs; your lowest score reflects a philosophy that is least like yours. For example, a score of 95-105 indicates that you strongly agree with that philosophy; a score of 15-25 indicates that you strongly disagree with a given philosophy (Zinn, 1983). If you find your scores fairly equal among all of the philosophies, or spread among three or more, you may want to spend some time learning more about adult teaching philosophy and your teaching beliefs and values.

If you have any further questions or need more clarification please let me know by email or by phone.

Warmest regards,

Mary Ann

Mary Ann Jarmulowicz Ph.D. candidate, RN, MSN
Walden University
6814 Sunset Circle North
Beaufort, SC 29906
mjarm001@waldenu.edu

Each of your scores reflects a particular philosophy of adult education, as follows:

L = Liberal (Arts) Adult Education

(Education for Intellectual Development)

B = Behavioral Adult Education

(Education for Competence, Compliance)

P = Progressive Adult Education

(Education for Practical Problem-Solving)

H = Humanistic Adult Education

(Education for Self-Actualization)

R = Radical Adult Education

(Education for Major Social Change)

On the next two pages, you will find brief descriptions of these five philosophies of adult education. You may want to write your score for each philosophy above the column that describes it. Your highest score reflects the philosophy that is closest to your own beliefs; your lowest score reflects a philosophy that is least like yours. For example, a score of 95-105 indicates that you strongly agree with that philosophy; a score of 15-25 indicates that you strongly disagree with a given philosophy. If you find your scores fairly equal among all of the philosophies, or spread among three or more, you may want to spend some time clarifying your beliefs and values and looking for possible contradictions among them.

Most educators have a clear primary philosophical orientation, or share two that are stronger than others. Typical combinations are: liberal and behaviorist, progressive

and humanistic, progressive and radical, or humanistic and radical philosophies. On the other hand, it is quite unlikely that you would have high scores in both liberal and radical, or behaviorist and humanistic philosophies. These philosophies have key underlying assumptions that are inherently contradictory. (for example, the primary purpose of behaviorist education is to ensure compliance with expectations or standards set by others, whereas the humanistic education is intended to enhance individual self development—which may or may not meet anyone else’s expectations or standards.)

There is no “right” or “wrong” philosophy of education. The Philosophy of Adult Education Inventory is designed to reflect back to you some of your own beliefs, not to make judgments about those beliefs. It is up to you to decide how your beliefs may influence your decisions and actions as an educator, and how your personal educational philosophy may be well suited, or perhaps not the best match, for the educational setting in which you work.

FIVE PHILOSOPHIES OF ADULT EDUCATION

| YOUR FINAL SCORES | L = LIBERAL (ARTS) ADULT EDUCATION | B = BEHAVIORAL ADULT EDUCATION | P = PROGRESSIVE ADULT EDUCATION | H = HUMANISTIC ADULT EDUCATION | R = RADICAL ADULT EDUCATION |
|---------------------|---|--|--|---|--|
| PURPOSE(S) | To develop intellectual powers of the mind; to make a person literate in the broadest sense—intellectually, morally, spiritually, and aesthetically. | To promote skill development and behavioral change; ensure compliance with standards and societal expectations. | To promote societal well-being; enhance individual effectiveness in society; to give learners practical knowledge and problem-solving skills. | To enhance personal growth and development; to facilitate self-actualization | To bring about through education fundamental social, political, and economic changes in society. |
| LEARNER(S) | “Renaissance person”; cultured’ always a learner’ seeks knowledge, conceptual and theoretical understanding. | Learner takes an active role in learning, practicing new behavior and receiving feedback strong environmental influence. | Learner needs, interests and experiences are key elements in learning; people have unlimited potential to be developed through education | Learner is highly motivated and self-directed; assumes responsibility for learning. | Equality with teacher in learning process personal autonomy; people create and change history and culture by combining reflection with action. |
| TEACHER | The “expert”; transmitter of knowledge; authoritative; clearly directs learning process. | Manager; controller’ predicts and directs learning outcomes. | Organizer; guides learning through experiences that are educative; stimulates, instigates and evaluates learning process | Facilitator; helper; partner; promotes but does not direct learning | Coordinator suggests but does not determine direction for learning equality between the teacher and learner. |
| CONCEPTS/ KEY WORDS | Liberal arts; learning for its own sake; rational, intellectual education; general, comprehensive education; traditional knowledge; classical humanism. | Competency-based; mastery learning; standards based; behavioral objectives, trial and error, feedback. Reinforcement | Problem solving; experience-based education; democratic ideals; lifelong learning; pragmatic knowledge; needs assessment; social responsibility. | Experiential learning; freedom; individuality; self-directedness; interactive; openness; authenticity; self-actualization; empowerment; feelings. | Consciousness raising praxis; noncompulsory learning; autonomy; social action; empowerment; “deschooling”; social transformation. |
| METHODS | Lecture; dialectic; study groups; contemplation; critical reading and discussion. | Programmed instruction; contract learning; criterion-referenced testing; computer –aided instruction; skill training. | Problem solving; scientific method; activity curriculum; integrated curriculum; experimental method; project method; cooperative learning. | Experiential learning; group tasks; group discussion; team teaching; self directed learning; individualized learning; discovery method. | Dialogue; problem posing; critical reflection; maximum interaction; discussion groups; exposure to media and people in real life situations. |

(table continues)

| YOUR FINAL SCORES | L = LIBERAL (ARTS) ADULT EDUCATION | B = BEHAVIORAL ADULT EDUCATION | P = PROGRESSIVE ADULT EDUCATION | H = HUMANISTIC ADULT EDUCATION | R = RADICAL ADULT EDUCATION |
|-------------------------|---|---|--|---|--|
| PEOPLE/ PRACTICES | Socrates, Aristotle, Plato, Adler, Rousseau, Piaget, Houle, Great Books Society, Paideia Proposal, Center for the Study of Liberal Education, Elderhostel, Chautauqua. | Watson, Skinner, Thorndike, Steinberg, Tyler, APL, vocational training, teacher certification, military, religious indoctrination. | Spencer, Dewey, Bergevin, Brameld, Sheats, Lindeman, Benne, Blakely, ABE. ESL. Citizenship education, community schools, cooperative extension, university without walls. | Rogers, Maslow, Knowles, tough, McKenzie, encounter groups, group dynamics, self- directed learning projects, human relations training, Esalen Institute. | Holt, Kozol, Freire, Illich, Shor, Ohliger, Perelman, Freedom Schools, Freire's literacy training; free schools Social Acton Theatre. |

Note: Used with permission "Exploring your philosophical orientation," L.M. Zinn, 2004,. In M. W. Galbraith (Ed.), *Adult learning methods: A guide for effective instruction*,(pp. 39-74, Malabar, FL: Krieger Publishing Company.

Appendix E: Admission and Diversity/PAEI Survey

Admission and Diversity Survey

1. Admission Criteria and Diversity Survey

Statement of Consent

You were chosen to participate in this study, because of your expertise in teaching student nurses, determining admission standards, and selecting students for enrollment in nursing education. You are being asked to complete an online researcher developed survey and the Philosophy of Adult Education Inventory (PAEI©) delivered by SurveyMonkey. The PAEI is an inventory of adult teaching philosophy and assists faculty to identify the teaching philosophy they associate with the most.

Benefit for participating: The Philosophy of Adult Education Inventory is designed to help you identify your prevalent teaching philosophy. Your highest score reflects the philosophy that is closest to your own beliefs; your lowest score reflects a philosophy that is least like yours. It assists you to reflect on your own beliefs about adult education. It is up to you to decide how your beliefs may influence your decisions and actions as an educator for the educational setting in which you work.

What you are asked to do: This online survey should take 30 to 35 minutes to complete. On the survey, instructions are provided for each group of questions. Please read the instructions and question carefully. Likert scale questions should be answered with a response that best describes your opinion or knowledge of the subject. An "other" response is included so you may further clarify or enhance answers.

Confidentiality: The data will be downloaded to a secure password protected computer. If hard copies of a pen and paper and emailed electronic are requested by the participants, these returned surveys will be maintained in a locked file cabinet. Data will be entered and reviewed only by the researcher. The interpretation of the PAEI© scores and an electronic copy of the research results will be emailed to you after completing the survey. You will receive information on the scores of each teaching philosophy and how to interpret your scores. Confidentiality will be maintained throughout the study and though any written reports. No identifying information (name, SSN, address) is asked on the survey or should be offered by you the participant. Your participation is strictly voluntary and you may exit the survey at any time or not answer questions you feel are too personal.

Risk: Minimal stress associated with novice computer users using online survey technology can be expected. If you are concerned about your information in an online format, please be aware that SurveyMonkey provides multiple security measures to protect information collected online. More information about this software can be found at SurveyMonkey. Firewall and intrusion software are maintained on the computer used for data storage.

How the data will be used: The results of the study will be used for scholarly purposes only, professional conference presentation, articles in professional journals, or presentations to state organizations, legislatures or associations. No connections will be made public identifying particular respondents, the nursing program, or teaching institutions. Only summative data will be published for associate and baccalaureate degree programs.

Contact: You may contact the researcher, Mary Ann Jarmulowicz, with any questions you may have at email mjarm001@waldenu.edu or telephone at 843 379 0823 (home) or 843 208 8111 (work). If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 1210. Walden University's approval number for this study is 06-15-10-0287751 and it expires on June 14, 2011.

*** 1. By entering your email address, you confirm that you have read the above information and understand the study well enough to give your consent to participate.**

Enter your email address here:

Admission and Diversity Survey

2. Begin Survey

To answer the following questions, consider the prelicensure (generic) registered nursing educational program where you teach and the currently enrolled group of students.

Contact: If you have any questions or experience technical difficulties please contact Mary Ann Jarmulowicz at mjarm001@waldenu.edu or telephone at 843 379 0823 (home) or 843 208 8111 (work).

*** 2. Do you have an influence on the determination of admission requirements for prelicensure (generic) nursing students?**

yes

no

*** 3. Is there a limit to the number nursing students enrolled to the prelicensure (generic) registered nursing program?**

Yes

No

Admission and Diversity Survey

3. Default Section

*** 4. Prelicensure (generic) nursing student selection for registered nursing education program is made by:**

- a first qualified, first applied, first selected process
- admission department personnel
- a nursing department individual
- a nursing department group or committee
- a point or weighted selection
- Other:

*** 5. How much influence (0 = no influence or no opinion, 1 = lowest influence to 7 = highest influence) do the following factors or agencies have on determining prelicensure student registered nursing admission requirements?**

| | No influence | Lowest influence | | | Moderate influence | | | Highest influence | N/A |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Accreditation agency (NLN, CCNE) | <input type="radio"/> |
| Empirical evidence for the education practice | <input type="radio"/> |
| Personal teaching philosophy about learning | <input type="radio"/> |
| Previous events or occurrences with students | <input type="radio"/> |
| Clinical agency requirements | <input type="radio"/> |
| NCLEX pass rates | <input type="radio"/> |

Admission and Diversity Survey

4. Admissions

6. Prioritize the following list. Choose the top five admission criteria that you believe restricts or controls the access of qualified prelicensure nursing student's admission to a registered nursing program.

| | First choice | Second choice | Third choice | Fourth choice | Fifth choice |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Previous college GPA | <input type="radio"/> |
| Prerequisite course grades | <input type="radio"/> |
| Standardized testing (e.g. TEAS, COMPASS, SAT, ACT) | <input type="radio"/> |
| Prerequisite course credit completed | <input type="radio"/> |
| Cumulative GPA | <input type="radio"/> |
| Written essay | <input type="radio"/> |
| Science GPA | <input type="radio"/> |
| High School Transcript | <input type="radio"/> |
| Previous course failures | <input type="radio"/> |
| Specific course GPA | <input type="radio"/> |
| Date of previous course credit completion | <input type="radio"/> |

Other (please specify)

*** 7. What terminology best describes the selection process for admission to the prelicensure registered nursing program?**

- Extremely competitive or selective
- Very competitive or selective
- Competitive or selective
- Somewhat competitive or selective
- Not competitive or selective at all
- Unable to describe

Please comment:

Admission and Diversity Survey

5. Ethnic Diversity

For the following two questions, enter your best approximation in whole number percent. The results should add up to 100. If you do not know enter 100 in the space provided for the "I do not know" selection.

8. To the best of your knowledge, please enter a percentage of ethnic diversity (the ethnic mix) for the most recent applicants to the prelicensure (generic) registered nursing program?

| | |
|-------------------|----------------------|
| European American | <input type="text"/> |
| African American | <input type="text"/> |
| Hispanic | <input type="text"/> |
| American Indian | <input type="text"/> |
| Asian | <input type="text"/> |
| Mixed ethnicity | <input type="text"/> |
| Other | <input type="text"/> |
| I do not know | <input type="text"/> |

9. To the best of your knowledge, please enter a percentage of the ethnic diversity (ethnic mix) for the most recently enrolled students to the prelicensure (generic) registered nursing program.

| | |
|-------------------|----------------------|
| European American | <input type="text"/> |
| African American | <input type="text"/> |
| Hispanic | <input type="text"/> |
| American Indian | <input type="text"/> |
| Asian | <input type="text"/> |
| Mixed ethnicity | <input type="text"/> |
| Other | <input type="text"/> |
| I do not know | <input type="text"/> |

Admission and Diversity Survey

6. Philosophy of Adult Education Inventory

Instructions for Completion

Each of the fifteen (15) items on the Inventory begins with an incomplete sentence, followed by five different options that might complete the sentence. To the right of each option is a scale from 1 to 7.

To complete the inventory, read each sentence stem and each optional phrase that completes it. On the 1 - 7 scale choose the number that most closely indicates how you feel about each option. The scale goes from 1 (strongly disagree) to 7 (strongly agree), with a neutral point (4) is you don't have any opinion or aren't sure about a particular option.

Continue through all the items, reading the sentence stem and indicating how strongly you agree or disagree with each of the options. Please respond to every option, even if you feel neutral about it. THERE ARE NO RIGHT OR WRONG ANSWERS.

As you go through the Inventory, respond according to what you most frequently or most likely do. If it helps you to respond more easily you may want to focus on a specific course that you teach. If you do focus on a particular course, choose one that you feel most comfortable teaching—one that you think best reflects your preferred style of teaching. HAVE FUN!

10. IN PLANNING AN EDUCATIONAL ACTIVITY, I AM MOST LIKELY TO:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Identify, in conjunction with learners, significant social, cultural, and/or political issues and plan learning activities around them. | <input type="radio"/> |
| Clearly identify the results I want and construct a program [class workshop] that will achieve those results. | <input type="radio"/> |
| Begin with a lesson plan that organizes what I plan to teach, when, and how. | <input type="radio"/> |
| Assess learners' needs and develop valid learning activities based on those needs. | <input type="radio"/> |
| Consider the areas of greatest interest to the learners and plan to deal with them regardless of what they may be. | <input type="radio"/> |

* 11. PEOPLE LEARN BEST:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| When the new knowledge is presented from a problem-solving approach. | <input type="radio"/> |
| When the learning activity is clearly structured and provides for practice and repetition. | <input type="radio"/> |
| Through discussion with other learners and a group coordinator. | <input type="radio"/> |
| When they are free to explore, without the constraints of a "system". | <input type="radio"/> |
| From an "expert" who knows what he or she is taking about. | <input type="radio"/> |

Admission and Diversity Survey

7. Philosophy of Adult Education Inventory

*** 12. THE PRIMARY PURPOSE OF ADULT EDUCATION IS:**

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| To facilitate personal development on the part of the learner. | <input type="radio"/> |
| To increase learners' awareness of the need for social change and to enable them to effect such change. | <input type="radio"/> |
| To develop conceptual and theoretical understanding. | <input type="radio"/> |
| To establish the learners' capacity to solve everyday problems. | <input type="radio"/> |
| To develop the learners' competency and mastery of specific knowledge and skills. | <input type="radio"/> |

*** 13. MOST OF WHAT PEOPLE KNOW:**

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Is a result of consciously pursuing their goals, solving problems as they go. | <input type="radio"/> |
| They have learned through critical or reflective thinking focused on important social, cultural, and political issues. | <input type="radio"/> |
| They have learned through a trial-and-feedback process. | <input type="radio"/> |
| They have gained through self-discovery rather than some "teaching" process. | <input type="radio"/> |
| They have acquired through a comprehensive educational process. | <input type="radio"/> |

Admission and Diversity Survey

8. Philosophy of Adult Education Inventory

* 14. DECISIONS ABOUT WHAT TO INCLUDE IN A LEARNING ACTIVITY:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Should be made mostly by the learner in consultation with a facilitator. | <input type="radio"/> |
| Should be based on what learners know and what the teacher believes they should know at the end of the activity. | <input type="radio"/> |
| Should be based on a consideration of key social, political, and/or cultural situations. | <input type="radio"/> |
| Should be based on a consideration of the learners' needs, interests, and problems. | <input type="radio"/> |
| Should be based on careful analysis by the teacher of the material to be covered and the concepts to be taught. | <input type="radio"/> |

* 15. GOOD ADULT EDUCATORS START PLANNING INSTRUCTION:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| By considering the specific outcomes they are looking for and the most efficient ways of producing them in learners. | <input type="radio"/> |
| By identifying everyday problems that can be solved as a result of the instruction. | <input type="radio"/> |
| By clarifying the content, concepts, and/or theoretical principles to be taught. | <input type="radio"/> |
| By clarifying key social, cultural, and/or political issues that affect the lives of the learners. | <input type="radio"/> |
| By asking learners to identify what they want to learn and how they want to learn it. | <input type="radio"/> |

Admission and Diversity Survey

9. Philosophy of Adult Education Inventory

*** 16. AS AN ADULT EDUCATOR, I AM MOST SUCCESSFUL IN SITUATIONS:**

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| That is unstructured and flexible enough to follow learners' interests. | <input type="radio"/> |
| That is fairly structured, with clear learning objectives and built-in feedback to the learners. | <input type="radio"/> |
| Where I can focus on practical skills and knowledge that can be put to use in solving problems. | <input type="radio"/> |
| Where the scope of the new material is fairly clear and the subject matter is logically organized. | <input type="radio"/> |
| Where the learners have some awareness of social and/or political issues and are willing to explore the impact of such issues on their daily lives. | <input type="radio"/> |

*** 17. IN PLANNING AN EDUCATIONAL ACTIVITY, I TRY TO CREATE:**

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The real world— problems and all— and to develop learners' capacities for dealing with it. | <input type="radio"/> |
| A setting in which learners are encouraged to examine their beliefs and values and to raise critical questions. | <input type="radio"/> |
| A controlled environment that attracts and holds the learners, moving them systematically towards the objective. | <input type="radio"/> |
| A clear outline of the content and the concepts to be taught. | <input type="radio"/> |
| A supportive climate that facilitates self-discovery and interaction. | <input type="radio"/> |

Admission and Diversity Survey

10. Philosophy of Adult Education Inventory

* 18. THE LEARNERS' FEELINGS DURING THE LEARNING PROCESS:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Must be brought to the surface in order for learners to become truly involved in their learning. | <input type="radio"/> |
| Provide energy that can be focused on problems or questions. | <input type="radio"/> |
| Will probably have a great deal to do with the way they approach their learning. | <input type="radio"/> |
| Are used by the skillful adult educator to accomplish the learning objective(s). | <input type="radio"/> |
| Are likely to get in the way of teaching and learning by diverting the learners' attention. | <input type="radio"/> |

* 19. THE TEACHING METHODS I PREFER TO USE:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Focus on problem-solving and present real challenges to the learner. | <input type="radio"/> |
| Emphasize practice and feedback to the learner. | <input type="radio"/> |
| Are mostly non-directive, encouraging the learner to take responsibility for his/her own learning. | <input type="radio"/> |
| Involve learners in dialog and critical examination of controversial issues. | <input type="radio"/> |
| Are determined primarily by the subject or content to be covered. | <input type="radio"/> |

Admission and Diversity Survey

11. Philosophy of Adult Education Inventory

*** 20. WHEN LEARNERS ARE UNINTERESTED IN A SUBJECT, IT IS PROBABLY BECAUSE:**

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| They do not realize how serious the consequences of not understanding or not learning the subject may be. | <input type="radio"/> |
| They do not see any benefit for their daily lives. | <input type="radio"/> |
| The teacher does not know enough about the subject or is unable to make it interesting to the learner. | <input type="radio"/> |
| They are not getting adequate practice or feedback during the learning process. | <input type="radio"/> |
| They are not ready to learn it or it is not a high priority for them personally. | <input type="radio"/> |

*** 21. DIFFERENCES AMONG ADULT LEARNERS:**

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Are relatively unimportant as long as the learners gain a common base of understanding through the learning experience. | <input type="radio"/> |
| Enable them to learn best on their own time and in their own way(s). | <input type="radio"/> |
| Are primarily due to differences in their life experiences and will usually lead them to make different applications of new knowledge and skills to their own situations. | <input type="radio"/> |
| Arise from their particular cultural and social situations and should not be minimized even as they recognize common needs and problems. | <input type="radio"/> |
| Will not interfere with their learning if each learner is given adequate opportunity for practice and reinforcement. | <input type="radio"/> |

Admission and Diversity Survey

12. Philosophy of Adult Inventory

* 22. EVALUATION OF LEARNING OUTCOMES:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Is not of great importance and may not be possible, because the impact of learning may not be evident until much later. | <input type="radio"/> |
| Should be built into the system, so that learners will continually receive feedback and can adjust their performance accordingly. | <input type="radio"/> |
| Is best done by the learners themselves, for their own purposes. | <input type="radio"/> |
| Lets me know how much learners have increased their conceptual understanding of new material. | <input type="radio"/> |
| Is best accomplished when the learner encounters a problem, either in the learning setting or in the real world, and successfully resolves it. | <input type="radio"/> |

* 23. MY PRIMARY ROLE AS A TEACHER OF ADULTS IS TO:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Guide learners through structured learning activities with well-directed feedback. | <input type="radio"/> |
| Systematically lead learners in acquiring new information and understanding underlying theories and concepts. | <input type="radio"/> |
| Help learners identify and learn to solve problems better. | <input type="radio"/> |
| Increase learners' awareness of environmental and social and political issues and help them learn how to have an impact on these situations. | <input type="radio"/> |
| Facilitate, but not to direct, learning activities. | <input type="radio"/> |

* 24. IN THE END, IF LEARNERS HAVE NOT LEARNED WHAT WAS TAUGHT:

1 (Strongly disagree) 4 (Neutral) 7 (Strongly agree)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The teacher has not actually "taught". | <input type="radio"/> |
| They need to repeat the experience, or a portion of it. | <input type="radio"/> |
| They may have learned something else that they consider just as interesting or useful. | <input type="radio"/> |
| They do not recognize how learning will enable them to significantly influence social change. | <input type="radio"/> |
| It is probably because they are unable to make practical application of new knowledge to problems in their daily lives. | <input type="radio"/> |

Admission and Diversity Survey**13. Demographic Information**

The following questions are optional, however the data will help to describe the participants as a group.

25. I am:

female

male

Other (please specify)

26. My age of this survey is:

70 and older

65 to 69

60 to 64

55 to 59

50 to 54

45 to 49

40 to 44

35 to 39

30 to 34

25 to 29

20 to 24

Admission and Diversity Survey**27. The ethnic group I associate myself with the most is:**

- European American
- African American
- Hispanic
- American Indian
- Asian
- Mixed ethnicity
- Other

Other (please specify)

28. I have been a registered nurse for _____ years

- 40+
- 35 to 39
- 30 to 34
- 25 to 29
- 20 to 24
- 15 to 19
- 10 to 14
- 5 to 9
- 0 to 4

Admission and Diversity Survey**29. I have been a nurse educator for _____ years**

- 40+
- 35 to 39
- 30 to 34
- 25 to 29
- 20 to 24
- 15 to 19
- 10 to 14
- 5 to 9
- 0 to 4

30. The highest degree I hold is:

- Ph.D. in Nursing
- Ph.D. in another discipline
- DNP
- Masters Degree in Nursing
- Baccalaureate in Nursing
- Other Degree not listed

Please specify

*** 31. I teach student nurses at the**

- Associate degree level
- Baccalaureate degree level
- Other

Please specify

Admission and Diversity Survey*** 32. My job title is**

- Chair
- Dean
- Director
- Instructor
- Associate Professor
- Assistant Professor
- Adjunct
- Other

Please specify

Appendix F: PAEI Scoring

After completing the Inventory, go back to your responses and find the small letter in parenthesis to the far right of each rating scale. This is a code letter for scoring the Inventory.

First, transfer each of your numbers on the rating scale to the Scoring Matrix on the next page. For item #1, if you circled a 5 for option (h) write the number 5 in the box for 1(h). Item #1 has five different responses: h, c, a, d, f. Record all five of your responses for item # 1, then go on to # 2 and continue to 15. When you finish, there will be numbers in every other square in the Matrix (like a checkerboard).

| Item | a | v | c | w | d | x | f | y | h | z |
|--------------|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| Sub Total | | | | | | | | | | |

Now, add all the numbers by columns, from top to bottom, so that you have ten separate subtotals. None of these subtotals should be higher than 56; nor should any be

lower than 7. For your FINAL SCORE, add the subtotals from the columns as shown in the box below.

FINAL SCORE

$$a + v = L \underline{\hspace{2cm}}$$

$$c + w = B \underline{\hspace{2cm}}$$

$$d + x = P \underline{\hspace{2cm}}$$

$$f + y = H \underline{\hspace{2cm}}$$

$$h + z = R \underline{\hspace{2cm}}$$

Note: Final score should be no higher than 105; nor lower than 15.

Appendix G: BSN Admission Criteria

| <i>Admission Criteria for Prelicensure Baccalaureate Registered Nursing Program</i> | | | | | | | | | | | | | |
|---|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Criterion | Baccalaureate Programs | | | | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J | K | L | M |
| G E D | | | | | | | | | | | | | |
| High School Grade Point Average (actual or factored) | | | | | | | | | | | | | |
| High School class ranking | | | | | | | | | | | | | |
| SAT™ scores | | | | | | | | | | | | | |
| ACT® scores | | | | | | | | | | | | | |
| COMPASS scores or Mathematical proficiency test | | | | | | | | | | | | | |
| ASSET scores | | | | | | | | | | | | | |
| Cumulative Grade Point Average (GPA) | | | | | | | | | | | | | |
| Calculated Required Nursing Courses Grade Point Average (Nursing GPA) | | | | | | | | | | | | | |
| Calculated Required Science Courses Grade Point Average (Science GPA) | | | | | | | | | | | | | |
| “C” or better for all coursework | | | | | | | | | | | | | |
| Standardized entrance assessment testing (ATI, HESI, NLN, etc.). | | | | | | | | | | | | | |
| Faculty generated entrance assessment testing | | | | | | | | | | | | | |
| A specific reading score or ability on a standardized or entrance assessment test. | | | | | | | | | | | | | |
| Age requirement | | | | | | | | | | | | | |
| Specific High School course completion (biology, chemistry, algebra, computer) | | | | | | | | | | | | | |
| A specific number of course credit completion before applying to nursing. | | | | | | | | | | | | | |
| Prerequisite required course completion. | | | | | | | | | | | | | |

(Table continues)

| <i>Admission Criteria for Prelicensure Baccalaureate Registered Nursing Program</i> | | | | | | | | | | | | | | |
|---|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Criterion | Baccalaureate Programs | | | | | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J | K | L | M | |
| Prenursing certificate completion | | | | | | | | | | | | | | |
| Nursing faculty or staff advisement/information session | | | | | | | | | | | | | | |
| A scoring system (merit placement /numerical rank/rank order/weighted admission) | | | | | | | | | | | | | | |
| Lottery selection | | | | | | | | | | | | | | |
| Open admission with first qualified, first admitted | | | | | | | | | | | | | | |
| Current certification or registration as a Nursing Assistant/EMT/Paramedic | | | | | | | | | | | | | | |
| Experience in nursing or other health related field | | | | | | | | | | | | | | |
| Employment as a Nursing Assistant | | | | | | | | | | | | | | |
| Physical exam or health clearance | | | | | | | | | | | | | | |
| Vaccinations | | | | | | | | | | | | | | |
| Blood titers | | | | | | | | | | | | | | |
| Interview | | | | | | | | | | | | | | |
| Reference letter(s)/Letters of recommendation | | | | | | | | | | | | | | |
| Personality testing | | | | | | | | | | | | | | |
| Résumé | | | | | | | | | | | | | | |
| A written essay | | | | | | | | | | | | | | |
| Criminal background check | | | | | | | | | | | | | | |
| Drug screen | | | | | | | | | | | | | | |
| Liability insurance | | | | | | | | | | | | | | |
| Certification in Cardiopulmonary Resuscitation time-limit placed on SAT™ or ACT® scores | | | | | | | | | | | | | | |
| Time-limit placed on COMPASS or ASSET scores | | | | | | | | | | | | | | |

(Table continues)

| <i>Admission Criteria for Prelicensure Baccalaureate Registered Nursing Program</i> | | | | | | | | | | | | | |
|--|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| | Baccalaureate Programs | | | | | | | | | | | | |
| Criterion | A | B | C | D | E | F | G | H | I | J | K | L | M |
| time-limit for specific courses (for example: general/math/sciences within 5/7/10 years) | | | | | | | | | | | | | |
| time-limit for standardized or faculty generated entrance tests (for example: ATI, HESI, NLN within 2 years) | | | | | | | | | | | | | |
| a limit to the number or types of courses that can be repeated | | | | | | | | | | | | | |
| A limit to the number of attempts for assessment testing (ATI, HESI, NLN, etc.) | | | | | | | | | | | | | |
| A limit to the number of trials for assessment testing (ATI, HESI, NLN, etc.) | | | | | | | | | | | | | |
| a limit to the number of times the student can apply to the program | | | | | | | | | | | | | |
| Other: | | | | | | | | | | | | | |
| <i>Note:</i> Adapted with permission from “Requirements and interventions used by BSN programs to promote and predict NCLEX-RN [®] success: A national study, by C. S. Crow, M. Handley, R. S. Morrison, and M. M. Shelton, 2004, <i>Journal of Professional Nursing</i> , 20(3), 174-186, Copyright © 2004 Elsevier Inc. | | | | | | | | | | | | | |

Appendix H: ADN Admission Criteria

| <i>Admission Criteria for Prelicensure Associate Degree Registered Nursing Program</i> | | | | | | | | | | | | | | |
|--|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Criterion | Associate Programs | | | | | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| G E D | | | | | | | | | | | | | | |
| High School Grade Point Average (actual or factored) | | | | | | | | | | | | | | |
| High School class ranking | | | | | | | | | | | | | | |
| SAT™ scores | | | | | | | | | | | | | | |
| ACT® scores | | | | | | | | | | | | | | |
| COMPASS scores or Mathematical proficiency test | | | | | | | | | | | | | | |
| ASSET scores | | | | | | | | | | | | | | |
| Cumulative Grade Point Average (GPA) | | | | | | | | | | | | | | |
| Calculated Required Nursing Courses Grade Point Average (Nursing GPA) | | | | | | | | | | | | | | |
| Calculated Required Science Courses Grade Point Average (Science GPA) | | | | | | | | | | | | | | |
| “C” or better for all coursework | | | | | | | | | | | | | | |
| Standardized entrance assessment testing (ATI, HESI, NLN, etc.). | | | | | | | | | | | | | | |
| Faculty generated entrance assessment testing | | | | | | | | | | | | | | |
| A specific reading score or ability on a standardized or entrance assessment test. | | | | | | | | | | | | | | |
| Age requirement | | | | | | | | | | | | | | |
| Specific High School course completion (biology, chemistry, algebra, computer) | | | | | | | | | | | | | | |
| A specific number of course credit completion before applying to nursing | | | | | | | | | | | | | | |

(Table Continues)

| <i>Admission Criteria for Prelicensure Associate Degree Registered Nursing Program</i> | | | | | | | | | | | | | | |
|--|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Associate Programs | | | | | | | | | | | | | |
| Criterion | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| Prerequisite required course completion. | | | | | | | | | | | | | | |
| Prenursing certificate completion | | | | | | | | | | | | | | |
| Nursing faculty or staff advisement/information session | | | | | | | | | | | | | | |
| A scoring system (merit placement /numerical rank/rank order/weighted admission) | | | | | | | | | | | | | | |
| Lottery selection | | | | | | | | | | | | | | |
| Open admission with first qualified, first admitted | | | | | | | | | | | | | | |
| Current certification or registration as a Nursing Assistant/EMT/Paramedic | | | | | | | | | | | | | | |
| Experience in nursing or other health related field | | | | | | | | | | | | | | |
| Employment as a Nursing Assistant | | | | | | | | | | | | | | |
| Physical exam or health clearance | | | | | | | | | | | | | | |
| Vaccinations | | | | | | | | | | | | | | |
| Blood titers | | | | | | | | | | | | | | |
| Interview | | | | | | | | | | | | | | |
| Reference letter(s)/Letters of recommendation | | | | | | | | | | | | | | |
| Personality testing | | | | | | | | | | | | | | |
| Résumé | | | | | | | | | | | | | | |
| A written essay | | | | | | | | | | | | | | |
| Criminal background check | | | | | | | | | | | | | | |
| Drug screen | | | | | | | | | | | | | | |
| Liability insurance | | | | | | | | | | | | | | |
| Cardiopulmonary Resuscitation Certification | | | | | | | | | | | | | | |
| Time-limit placed on SAT or ACT scores | | | | | | | | | | | | | | |

(Table Continues)

| <i>Admission Criteria for Prelicensure Associate Degree Registered Nursing Program</i> | | | | | | | | | | | | | | |
|--|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Associate Programs | | | | | | | | | | | | | |
| Criterion | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| Time-limit placed on COMPASS or ASSET scores | | | | | | | | | | | | | | |
| time-limit for specific courses (for example: general/math/sciences within 5/7/10 years) | | | | | | | | | | | | | | |
| time-limit for standardized or faculty generated entrance tests (for example: ATI, HESI, NLN within 2 years) | | | | | | | | | | | | | | |
| a limit to the number or types of courses that can be repeated | | | | | | | | | | | | | | |
| A limit to the number of attempts for assessment testing (ATI, HESI, NLN, etc.) | | | | | | | | | | | | | | |
| A limit to the number of trials for assessment testing (ATI, HESI, NLN, etc.) | | | | | | | | | | | | | | |
| a limit to the number of times the student can apply to the program | | | | | | | | | | | | | | |
| Other: | | | | | | | | | | | | | | |
| <p><i>Note:</i> Adapted with permission from “Requirements and interventions used by BSN programs to promote and predict NCLEX-RN[®] success: A national study” by. C. S. Crow, M. Handley, R. S. Morrison, and M. M. Shelton, 2004, <i>Journal of Professional Nursing</i>, 20(3), 174-186, Copyright © 2004 Elsevier Inc.</p> | | | | | | | | | | | | | | |

Appendix I: Email Reminder

Dear (Name of Participant)

Subj: Teaching Philosophy and Nursing Education

Two weeks ago you should have received an e-mail message from me, Mary Ann Jarmulowicz, asking you to participate in a survey to identify your prevalent teaching philosophy and complete an Admission and Diversity survey. If you have already completed the survey, I thank you for your participation and you should be receiving the results of your teaching philosophy soon. If you have not yet participated, this email serves as a reminder to complete the survey. Please remember your participation is voluntary. The closing date for the survey is _____(date). To facilitate the ease in completing the survey a link to the survey is provided here. (link to the survey)

The current response rate for this survey is quite low (will use if this is the case). As you might know, an adequate response rate is crucial to assure the collection of meaningful data. **If your teaching status has changed, if you have decided to withdraw from the study, or you are unable to meet the deadline, please contact me at mjarm001@waldenu.edu or telephone 843-597-3511 to remove your name from the list and reduce further contact with you.**

Warm regards,

Mary Ann
Mary Ann Jarmulowicz
Walden University
6814 Sunset Circle North
Beaufort, SC 29906
mjarm001@waldenu.edu

Appendix J: Walden University IRB Approval

From: IRB@waldenu.edu
Date: June 15, 2010 1:54:59 PM EDT
To: mjarm001@waldenu.edu
Cc: research@waldenu.edu,
Subject: Notification of Approval to Conduct Research-Mary Jarmulowicz
Reply-To: IRB@waldenu.edu

Dear Ms. Jarmulowicz,

This email is to serve as your notification that Walden University has approved BOTH your dissertation proposal and your application to the Institutional Review Board. As such, you are approved by Walden University to conduct research.

Please contact the Office of Student Research Support at research@waldenu.edu if you have any questions.

Congratulations!

Jenny Sherer
Operations Manager, Office of Research Integrity and Compliance

Leilani Endicott
IRB Chair, Walden University

Curriculum Vitae

Mary Ann Jarmulowicz RN, MSN, BC-GNP

CDR USN (Ret)

Academic Degrees: Georgetown University, Washington DC: Masters in Adult Health Nursing
Subspecialty: Gerontological Nursing.

California State University, Fullerton, CA; Bachelor of Science in Nursing,
Graduated with Honors.

University Maryland University College, European Division,
Bachelor of Science, Computer Studies

Academic Degree (in progress): Walden University, Ph. D. Education: Educational Technology

Professional Credentials: RN LICENSURE: South Carolina: R80484 (04/31/12)

Board Certification AANC: Certified Gerontological Nurse Practitioner (exp. 12/15)

Other Certifications: Basic Life Support for Professionals with AED (exp. 10/11)

Senior Fitness Specialist, Cooper Clinic, TX

Health Promotions Director, Cooper Clinic, TX

Professional Experience (military and civilian):

8/07 to Present: **Nursing Instructor, University of South Carolina, Beaufort, SC** (Instruction BSN)

Instructor course coordinator for Health Assessment, Gerontological Nursing, and Adult Health II in RN-BSN and prelicensure programs. Have assisted in Community Health Nursing, Pharmacology, and Biology A & P Laboratory. Student advisement for nursing program. Curriculum development. Program review. Simulation instruction.

Chairman: Nursing Curriculum committee 07-08

Simulation Coordinator 2011-2012

University Committee membership in QEP, Courses and Curricula, Library, Technology, Faculty Manual

- 4/04 to Present: **Owner: Beaufort Elder Care Planning Services**
 Providing consultation for care, nursing supervisor and assessment services as well as educational programs.
- 1/03 to 8/07: **Nursing Faculty, Permanent position, Division of Health Sciences, Technical College of the Lowcountry (4.5 years), Adjunct Faculty, SP 2008** (Instruction PN and ADN).
 Course Coordinator for NUR 134, Beginning Nursing Skills; Course Coordinator for NUR 167, Organizational Management for PNs and Course online coordinator NUR 201, Transition to RN. Instructor for the continuing education Certified Nursing Assistant program. Produced syllabi tailored to the course offered. Identified teaching/learning strategies for students. Developed lesson plans, created online lessons using computer education software. Provided clinical observation and training for CNA, LPN, ADN students.
 Committee membership on University Curriculum, Technology committees
 Chair of the Nursing Curriculum committee.
- 4/02 to 12/02: **Director of Resident Care, Summit Place of Beaufort, SC**
 Coordinated and evaluated clients for assisted living placement
- 11/99 to 4/11/02: **DHEC, Home Health Nursing, Port Royal, SC**
 Program Manager, In-Home Prevention Services for Seniors.
 Implemented a new state program in the Low Country Health District. Conducted Comprehensive Gerontological Assessments in the home. Identified problems, developed a plan of care and conducted training on chronic disease management to maximize the independence of elderly clients to help them remain at home. Average census was 100 active clients. Completed referrals to community agencies as necessary. Evaluated effectiveness of planning strategies and achieved positive outcomes.
- 7/99 -10/99: **Returned to the United States from Italy, unemployed, actively seeking employment**
- 10/98 - 6/99: **Director Wellness Center, Naval Hospital, Naples, Italy**

Facilitated a weeklong Conference for the Coopers Clinic and the Navy Environmental Health Command for over 10 instructors and 40 participants, provided CEUs and CMEs. Provided awareness training and counseling for cancer, tobacco use, men and women's health issues, nutrition, exercise, stress management. Provided hypertension and cholesterol screening, management and follow-up as a nurse practitioner. Coordinated health fairs and assisted physicians with Put Prevention Into Practice (PIIP). Provided tobacco cessation and follow up to over 400 individuals with a 30-35% success rate for 6 months. Used computer skills to define a data base program to follow the tobacco cessation program, to highlight health promotion facts on bulletin boards, and to develop a regional Breast Cancer Survey and a command Tobacco Use Survey.

3/96 - 2/97:

Student University Maryland University College, Computer Science
Red Cross Volunteer

4/93 – 2/96:

Head, Education and Training, Naval Hospital, Beaufort, SC

Nurse Practitioner, Internal Medicine Department, Naval Hospital, Beaufort, SC

Developed, and coordinated, training plans, and scheduled over 80 educational programs for a hospital with over 600 personnel. Planned curriculums, prepared lesson guides, and student assessments. Program and curriculum evaluation.

Gerontological Nurse Practitioner. Completed history and physical exams to include health maintenance, routine screening exams, pelvic exams, clinical breast exams, mini mental exams, functional health assessments and assessments for falls. Ordered and interpreted laboratory tests, developed treatment plans and established realistic health goals with clients. Assisted with Cardiac Stress Testing. Performed patient education for the management of chronic medical conditions and healthy life style choices.

9/90 – 3/93

Naval Hospital, Portsmouth, VA (Clinical Instructor, Nursing)

Clinical Instructor, Naval Hospital, Portsmouth, VA (1.5 years)

Oriented, taught and monitored new nursing graduates. Provided Continuing Education courses and programs, a Physical Assessment Continuing education course. Conducted clinical assessments with staff nurses and assisted in the development of nursing care planning specific to the special needs of ill older clients. Provided Nursing Home assessments and interventions to facilitate early discharge. Participated in multidisciplinary care planning and team evaluations. Member of the DePaul's Hospital Community Committee for the development and implementation of an educational Elder Health Care Center.

2/74 - 2/96 **US Navy. Active duty various clinical assignments.**

Primary Instructor for first Navy Emergency Medical Technician course 1981 to 1983

6/72 – 1/74 **Staff Nurse - Grove City Hospital, Grove City, PA**

(Medical/Surgical & Pediatric Nursing)

PRESENTATIONS:

- Walden University Winter Research Symposium, January 19, 2011, Poster Presentation: Registered Nurse Education Program's Admission Criteria and Selection Process: The Effect on South Carolina Student Nurse Cultural Diversity. Miami, FA
- National Gerontological Nurses Association, Annual Meeting, October 13-17, 2011, Poster Presentation: Beginning Nursing Students: Learning Strength Based Holistic Care in Long Term Care. Palm Springs, CA
- Presentation with Dr. Sue Ellen Johnson Ed D, RN: Beginning Nursing Students: Learning Strength-Based Holistic Assessment in Long Term Care. Drexel University Nursing Education Institute, Annual Meeting, June 21 – 24, 2010 Myrtle Beach
- Beta Tested the online Guided Care Nursing Course, for the Institute for John Hopkins Nursing from April 20 to May 29, 2009.

- USCB Student/Faculty Research Day, April 27, 2008 at USCB (1 University Blvd, Bluffton, SC),
Poster Presentation: Complex nursing admission criteria for quota control: A key for student success or a prescription for system failure?
- Annual meeting, October 5-7, 2008 the SREB Council on Collegiate Education for Nursing at the JW Marriott Hotel (3300 Lenox Road, NE, Atlanta, Georgia), poster presentation: Complex nursing admission criteria for quota control: A key for student success or a prescription for system failure?
- Annual meeting, October 5-7, 2008 the SREB Council on Collegiate Education for Nursing at the JW Marriott Hotel (3300 Lenox Road, NE, Atlanta, Georgia), poster presentation: Academic Tacit Knowledge: A Predictor of Undergraduate Nursing Student Success?
- SCETA Conference Presentation, Constructing and Instructing Effective Online Learning, February 2007
- Presenter, Wellness- The Mediterranean Perspective, Forge the Future Conference April 1999
- Presenter, Aging and Military Health Care, at the Shea Arentzen Conference March 1992

PUBLICATIONS:

Complex nursing admission criteria for quota control: A key for student success or a prescription for system failure? Knowledge Area Module 3: Principles of Organizational and Social Systems. Approved 9/2008, not published.

Academic Tacit Knowledge: A Predictor of Undergraduate Nursing Student Success? Core Knowledge Area Module Number II: Principles of Human Development. Approved 3/2008, not published.

The Interaction Between Humans and Computers to Achieve Learning. Core Knowledge Area Module Number 1: Principles of Societal Development. Approved 3/2007, not published.

Published Preventing Disease and Promoting Health after age 40, Care Magazine, April 2000.

AWARDS AND ACHIEVEMENTS:

Meritorious Service Medal

Navy and Marine Corps Commendation medal (two awards)

Navy and Marine Corps Achievement medal (two awards)

Alliance Member of the Year, awarded Oct 1994 from the Alliance for a Smoke Free South Carolina.

Nominated for a Community Health Promotion Award "Friends of Health Promotion" 1994 from the Center for Health Promotion South Carolina Department of Health and Environmental Control