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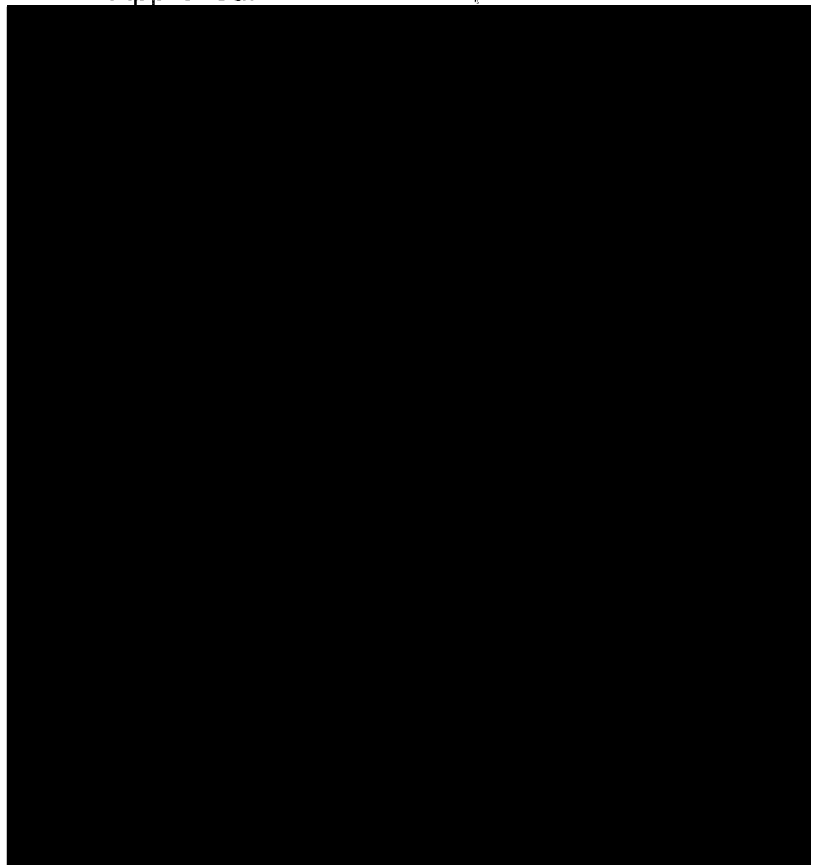
A PILOT STUDY OF ORGANIZATIONAL PERFORMANCE, PERFORMANCE
BARRIERS AND FACULTY ENGAGEMENT IN
THE NURSING EDUCATION UNIT

by

Yolanda Chapman Turner

A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved:



December 2009

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2009

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ABSTRACT

A PILOT STUDY OF ORGANIZATIONAL PERFORMANCE, PERFORMANCE BARRIERS AND FACULTY ENGAGEMENT IN THE NURSING EDUCATION UNIT

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This pilot study was driven by the problem of market disequilibrium and the subsequent overarching desire to identify and describe principles and processes taken by nursing education units to optimize market equilibrium for nursing service in response to cyclical market demands. Given the complexities of market responsiveness in conjunction with changes in healthcare delivery, health economics, population demographics, higher education and other contextual factors, it is essential for nursing education as a whole to be in a position to respond to demand. The purpose of this study was to investigate organizational performance, performance barriers and faculty engagement in the nursing education unit in response to market demands for nursing services. Systems Theory served as the theoretical framework for this study since it was essential to consider individual nursing education units as an organizational entity. Based on the review of the literature, it appears that this study was primary in investigating the relationship between organizational performance, performance barriers and faculty engagement in the nursing education unit as it relates to response to market demands for nursing services. This pilot study used an evaluative research design and a survey approach to identify and describe the

variables. The study relied on a researcher derived tool to measure organizational performance and performance barriers and an adaptation of an existing assessment instrument to measure faculty engagement in selected nursing education units. The findings were presented using statistical analysis congruent to the nature of the study. The results of the study were online with current literature, supportive of the research hypotheses and held substantive significance and rational correlations in regards to underlying theoretical frameworks and models. In this study, organizational performance through structure and function was maximized in the nursing education unit via an integration of programs offerings and flexibility well supported by resources and engaged faculty. The cursory assessment of organizational performance, performance barriers and faculty engagement in the nursing education unit provided more than anecdotal support of the value of market based program assessment and is worthy of further investigation.

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CHAPTER I

INTRODUCTION

The status of the nursing workforce is of ongoing concern not only to those of the nursing profession, but also of great interest to those agencies and organizations concerned with health care (Slomka & Fritzpatrick, 2001). It is anticipated that in the near future there will exist a nursing shortage unlike any other experienced before. This shortage, it is presumed, will not only affect the numbers (quantity) of nurses available, but the types (quality) of nurses available (Goodin, 2003). Nursing education is in a pivotal position to affect the status of the nursing workforce by addressing public demand for nursing services by preparing an appropriately trained and adequately numbered population of health care providers sensitive to the needs of the public (Aiken, 1995; Brewer, 1997). Nursing organizations, centers of nursing, public and private agencies such as Robert Wood Johnson Foundation (2002), Commonwealth Fund (2003), Florida Center for Nursing (2004), Association of Academic Health Centers (2007), New York State Board of Regents (2007) and others have identified contributing factors of the nursing workforce crises and made performance recommendations towards addressing this dual nursing shortage. Some identified factors, if addressed by nursing education, may bring about stability in maintaining an appropriate national nursing workforce.

Of primary concern is not only increasing the supply of entry level registered nurses by increasing the number of graduates from the nursing education unit, but also addressing market sensitive demands for nursing services. Central to the problem at hand is the issue that nursing education

research has provided little direction regarding performance paradigms by the nursing education unit to affect a dual market need that includes the availability and quality of nurses needed in the nursing workforce (Bartles & Bednash, 2005; White, 2001). To combat the problem of chronic nursing shortages, substantial attention needs to be given to organizational performance employed by nursing programs to respond to the market (Hathaway, 2001; Lindeman, 2000b). As well, consideration needs to be given to organizational subsystems like employee engagement and performance barriers that might affect the programs opportunity to respond. As it represents the prime portal towards entry into the profession, nursing education programs through diligent, considerable planning and well organized implementation can assist in achieving and maintaining an optimal nursing workforce that also takes into account the health and viability of the people (Baldwin, 2003; deTornyay, 1997).

The intensity of the growing nursing shortage is illustrated by the following reports: The Health Resources and Services Administration (HRSA) projects that without aggressive intervention the shortage of nurses will reach more than one million by 2020 (HRSA, 2006). The same is projected by the Bureau of Labor and Statistics (2007) by 2016. At present, the American Hospital Association (2007) and the National Center for Health Workforce Analysis (2004) report at or near 100,000 -116,000 vacancies (vacancy rate 7- 8%) each while community health centers submit vacancy rates of 9% and 10% for nurse practitioners and registered nurses respectively. In a 2007, U.S. Senate Appropriation Hearing, Armed Forces Health Care Delivery System echoed the

shortages faced by civilian counterparts reporting 15-30% shortages among the Army, Navy and Air Force in certain specialties. According to the Council on Physician and Nurse Supply (2008), more than 30,000 additional nurses are needed annually to meet the nation's healthcare needs. The situation appears grim with HRSA (2006) estimating that the US must graduate approximately 90% more nurses from US programs.

National authorities on the nursing workforce, have published articles and papers that despite the response to nursing deficits, the shortage is driven by changing societal demand and market forces (Aiken, 1995; Brewer, 1997; Buerhaus, Staiger, & Auerbach, 2000). Currently, there is no empirical evidence that the current shortage that began in 1998 has ended (Buerhaus, Donelan, Ulrich, Norman, & Dittus, 2006).

Findings derived from this pilot study may serve as a catalysis to more research geared to demonstrate beneficence in identifying systems, organizations and processes that, when addressed in strategic performance plans on a larger scale, may help to stabilize the nursing workforce. Effective plans that have programmed within them market sensitive indicators and consider interacting employee motivational factors will serve as buffers to drastic changes in the nursing workforce supply and demand. Foundational to the underlying importance of the question in this study laid the desired health outcomes of the nation. Since nursing is the largest provider of healthcare, the availability of sufficient numbers of well trained nurses is of primal importance in all levels of health intervention.

Although the nursing workforce shortage is a broad topic, the scope of this study was narrowed to organizational performances (response to national recommendations) performance barriers (challenges to response) and a specific organizational motivation factor (employee engagement). Despite the limited investigative nature of the study, the number of people affected by the nursing workforce shortage is massive, including all stakeholders of healthcare and nursing education. It is expected that this study may contribute to the examination of organizational performance optimal to addressing the nursing workforce shortage.

Problem Statement

This pilot study was driven by the problem of market disequilibrium. There exists in the current health care market an increase in the aggregate demand for nursing services and a decrease in the aggregate supply of nurses. The nursing workforce shortage produced by these conditions is expected to be resistant to past resolutions. Efforts must be made to stabilize the market so that equilibrium exists between the aggregate supply of nurses and the aggregate demand for nursing services.

In reaction to increasing public health demands, paradigm shifts in organizational performance both on the agency and individual level in the nursing education unit can provide a more favorable response to the market demand for nursing services. The responsiveness of nursing education to changes in health care needs is based on a system of supply and demand. As with basic macroeconomics, nursing education supplies the nurses necessary to meet the

demand for nursing services. As the need for nursing services increase, the need for nursing education to produce more nurses increases. As the need for nursing services decrease, a similar response for a decrease in nurses is true. As with basic economics, the goal of the nursing education organization is to maintain system equilibrium and to do so require the ability to perform and respond to public demand.

Purpose

The purpose of this pilot study was to investigate organizational performance, performance barriers and faculty engagement in the nursing education unit in response to market demands for nursing services. To be in a position to respond to the need for an adequate number of specifically trained and more diverse workforce, nursing must make a deliberate attempt to address workforce issues (Dumpe, Herman & Young, 1998). Meeting national nursing workforce demand, the nursing program can actively and purposefully attend to recruiting, enrolling, retaining and graduating the numbers and types of nurses that future trends indicate will be of high demand (Numerof, 1997). Results of the study may be beneficial in laying the foundation for assessing program outcomes, performance and effectiveness in response to market demands. Findings may also be helpful in determining or identifying "best practices" that might serve as a benchmark for other nursing programs.

The fundamental nature of the proposed research took a positivist perspective. It served to identify and describe organizational factors of individual performance (employee engagement) and organizational performance (market

supply/demand) and barriers to performance in selected nursing programs in response to demand for nursing services. No effort however was made to predict any factors or their specific effect. The goal was only to capture what tendencies and variability that were identified. As congruent with the positivist approach, the study aimed to quantify findings of the research questions. The study consisted of a national survey instrument and data collection on a researcher derived tool. A greater detail of the research design is presented in Chapter Three.

Theoretical Basis for the Study

The proposed questions did not test theory; rather, the questions and its basic arrangement of ideas (framework) may be classified as descriptive. Examples of descriptive questions include: "What constitutes organizational performance of a nursing education program?" "What degree of employee engagement is identified in nursing education unit"? "What are the performance barriers facing the nursing education unit to responding to demand"? This pilot study investigated the role and importance of employee engagement, performance barriers and organizational performance of selected nursing education programs in light of market demand. Since the study addressed the performance of the nursing education unit and nursing education is a component or subsystem of nursing workforce economics, the use of systems theory with a focus on the economic market was warranted as a theoretical guide.

Systems Theory

Systems theory provides a model for classifying and evaluating a variety of concepts (Walonick, 2004) including nursing (Daubenmire & King, 1973). It

implies a relationship among and between internal and external processes of a system, and that this relationship has an effect on the state of the system. The basic dynamics of a system is characterized by a cyclical pattern that occurs when the system maintains or improves its state by the process of input, throughput and output of energy (Bahg, 1990). Figure 1 depicts the relationship Bertalanffy proposed between input, throughput and output (see Figure 1).

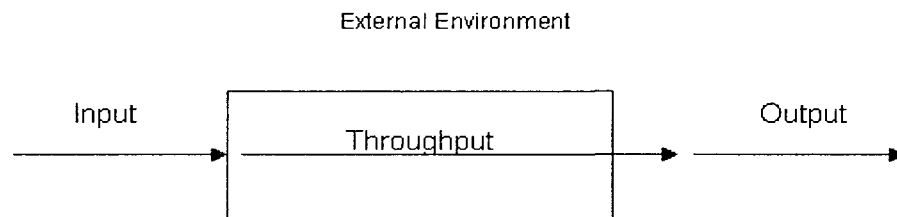


Figure 1. Simplified Systems Model. A depiction of internal and external process and the relationship between input, throughput and output in an open system.

Retrieved from: <http://www.freshbrainz.com/2009/02/familiar-part-3-general-system-theory.html>

In this study, national recommendations of nursing stakeholders represented the nursing workforce demands of the consumer for nursing services and subsequently the intended output of the nursing education unit. Using systems theory as the theoretical model, the larger system was identified as the nursing workforce market and the subsystems as the performance of the nursing education unit. Systems theory criteria were also used to focus on both functional and structural conditions and relationships necessary for effective performance. In this study, system theory provided a logical framework for the viewing the structural and functional demands of then nursing education unit in adjusting output of graduates from market sensitive programs, engaging faculty

and addressing barriers to meeting those demands. The nursing education unit as a system consciously strives for enrollment paradigms that are integrated and adaptive to both internal and external environments in an effort to maintain a state of structural and functional stability. As a part of organizational performance, the nursing education unit adapts its goals to market demands regarding the quantity and quality of nurses desired. Figure 2 depicts the relationship proposed between input, throughput and output and stakeholder recommendations for nursing education goals.

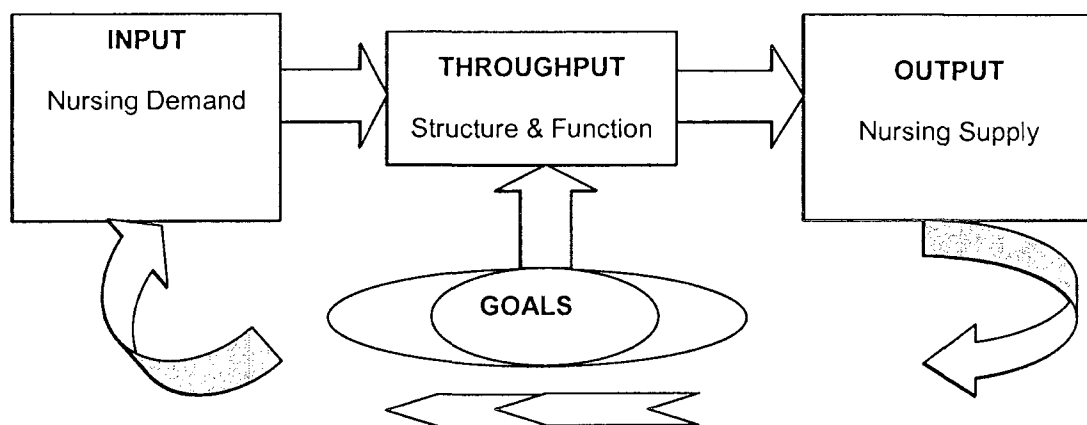


Figure 2. Conceptual Systems Model for Performance of the Nursing Education Unit with Feedback Loop. Depicts relationship between market forces for supply and demand for nursing services as a function of input, output and throughput. Throughput is based on the structure/function of the nursing education unit whose goals are meeting recommendations by nursing workforce stakeholders.

Social Marketing and Forecasting Theories

The adaptation of structure and function of a system to market demands is the hallmark of social systems. Social system models represent an appropriate market system that chimes in to demonstrate the suitability of its theoretic use in

this study. The intent of social system models in health care is to improve health and social condition of the public. According to the Department of Health and Human Services, the market must be considered and performance planning should take in account the demands of consumers at the core of data collection, program development and program delivery. McKenzie and Smeltzer (2001) epitomizes market systems approach as an analysis of the understanding what is needed, setting goals and objectives, developing a specific intervention to meet the needs, implementing the program and evaluating the results. The basic elements include consumer and organizational factors and attention to the market in planning efforts. Neiger, Thackeray, Barnes and Mckenzie (2003) position social marketing as a long term tool that will require a “shift in professional preparation curricula” that values “consumer input and participant empowerment” and will serve as a planning framework that is “theory-driven and consumer focused”. A prime example of a market model representative of systems theory that acknowledges both opportunities and challenges in addressing issues of the nursing workforce is the Nursing Workforce Model by Dumpe, Herman and Young (1998). The Nursing Workforce Model integrates influences that affect the supply and demand of nurses. It includes labor needs, resources, education level and skill set demanded by the public.

This study built upon the framework of systems theory provided by market response and structural-functional movement. In doing so, the study maintained the following premise: that in meeting its recommended goals, the nursing education unit as a system consciously strives for a system of performance by

the agency and individual that is integrated and adaptive to both internal and external environments in an effort to maintain a state of structural and functional stability. A more in-depth review of Systems Theory and a subsequent appraisal of the Nursing Workforce Model are presented in Chapter Two.

Research Questions

The research questions addressed in this pilot study were:

1. What is the organizational performance of the nursing education unit in response to market demands for nursing services?
2. What is the faculty engagement of the nursing education unit?
3. What are the performance barriers of the nursing education unit in response to market demands for nursing services?

Definition of Terms

For the purpose of this study, the theoretical and operational definitions were:

Theoretical Definition: Nursing Education Unit - Institutions that provide entry level education leading to licensure as a RN and/or provide education leading to advanced nursing degrees in the United States (Dumpe, Herman & Young, 1998).

Operational Definition: Nursing Education Unit - Institutions that provide entry level education leading to licensure as a RN and/or provide education leading to advanced nursing degrees in the United States. Pilot institutions were selected from the Southern Regional Education Board and accredited by the National League for Nursing.

Theoretical Definition: Organizational Performance - The actual output or results of an organization as measured against its intended output, goals and objectives (Dumpe, Herman, & Young, 1998).

Operational Definition: Organizational Performance – Response of the nursing education unit to public demand and national recommendations by nursing workforce stakeholders for nursing services. Responding to market demands is the intended goal of the nursing education unit and provides the structure for the Demand Assessment and Recommendation Evaluation (DARE Tool). The “organizational performance” section of the DARE tool was used to measure organizational performance.

Theoretical Definition: Employee Engagement - A heightened connection between employees and their work, their organization or the people they work for or with. It is a bond necessary to improve organizational outcomes (US Merit Systems Protection Board, 2008).

Operational Definition: Faculty Engagement - A heightened connection between nursing faculty and their work, their organization or the people they work for or with. Faculty engagement was measured using the U.S. Merit Systems Protection Board Merit Principles Engagement Scale.

Theoretical Definition: Nursing Services refers to the treatment and management of illness and preservation of health generated by functions and distinct activities of licensed nurses rendered to an authorized consumer (Dumpe, Herman, & Young, 1998).

Theoretical Definition: Market Demands: In microeconomic theory, market demand is any one of a variety of different systems whereby persons are willing and able to exchange goods and services forming part of the economy (Dumpe, Herman, & Young, 1998).

Theoretical Definition: Performance Barriers: Obstacles and challenges, tangible or intangible, that prohibit, hinder or in some way reduce an organization's performance in meeting its intended outputs, goals and objectives (Beckhard & Harris, 1987).

Operational Definition: Performance Barriers: Obstacles and challenges perceived by the nursing faculty to prohibit hinder or reduce the nursing education unit's ability to respond to market demands for nursing services. Performance barriers are assessed in the Section Two of the Demand Assessment and Recommendation Evaluation (DARE) Tool.

Assumptions

The following assumptions applied to this study:

1. The nursing education system is a rational system that strives for equilibrium in the nursing workforce.
2. The performance goal of the nursing education systems is to prepare an appropriately trained and adequately numbered population of nurses sensitive to market demands for nursing services.
3. Organizational performance objectives for the nursing education unit are represented by and congruent to stakeholder recommendations and can be identified, assigned value and weighted in a practical sense.

4. Organizational performances meet prescribed goals of the nursing education system.
5. There are institutional factors that may limit market related performance of the nursing education unit including but not limited to accreditation.
6. The engagement of nursing faculty to the nursing education unit is congruent to the engagement of other employees to their organizations.

Limitations and Scope

Published, peer-reviewed literature have not considered the ways in which performance and innovations of nursing programs might be utilized to research methods for instituting an overall stabilized nursing workforce. Because this research is not designed to investigate or control the larger problem of the crises of the nursing workforce shortage generated by disequilibrium of demand for nursing services and supply of nurses, it was necessary to view the organizational performance of the nursing education unit as a subsystem and faculty engagement/performance barriers as smaller subsets. Because each nursing education unit is unique, and bias is a possibility, the scope of the research was narrow and limited to selected nursing education units in general and individual programs specifically. The selection of nursing education units in and of themselves further limited the study in terms of program specific characteristics such as accreditation.

Program assessment has a subjective component that was captured and used in this study. The subjective component of program assessment enables a deeper understanding of the population under investigation (Rubinson &

Neutens, 1987). This study derived data from objective survey methods and subjective respondent comments. Factors that may affect the results of the survey included the arrangement/format of the survey instrument and the respondent's ability to navigate the survey. While standard efforts were made to garner participation, response was low and sample size presented a concern regarding limitations. Although selecting a pilot sample from the desired population of study limits and threatens the possibilities of statistical generalization, there were some possibilities of analytical generalization (Rubinson & Neutens, 1987). Yet another limitation was that operational definitions could be open to criticism, since a conglomeration of literature was used to derive survey questions, the results may not measure pure constructs.

Significance of the Study

The problem addressed in this study was market disequilibrium between demand for nursing services and the aggregate supply of nurses. Ultimately, this study was driven by the overarching desire to identify and describe principles and processes taken by nursing education units to optimize market equilibrium for nursing service in response to cyclical market demands. The study provided a means for the synthesis of organizational performance on the agency and individual level towards the application of programmed change based on social need. An analysis of organizational performance, agency and individual, may eventually permit identification of principles associated with equalizing nursing workforce supply and demand. In practice, nursing education systems may use organizational factors like employee engagement and identify performance

barriers to affect the programs opportunity to assess current response to market demand, develop strategic plans to address needs and evaluate outcomes and goals. This study demonstrated significance for social reasons. Findings derived from the study may assist in identifying systems, organizations and processes that when addressed in strategic performance plans on a larger scale may help to stabilize the nursing workforce and assist in ensuring a larger degree of access to quality health care to the public. Although specific research regarding employee engagement, performance barriers and organizational performance of workforce stability in nursing education programs was not identified, relevant research in the areas of organizational performance, performance barriers and employee engagement are known. This literature is discussed in Chapter Two.

Summary

Because the nursing workforce can benefit from planned performance measures by nursing programs to address the problem of market disequilibrium, we can look at organizational performance of nursing education, performance barriers, and employee engagement as subsystems within the structure of the nursing workforce. There is an important empirical research issue of understanding what organizational factors, individually or in combination, are likely to have the greatest impact on performance goals and addressing supply and demand issues regarding the nursing workforce and ultimately public health. Fundamental to this study was the exploration of organizational performance paradigms that may affect response of the nursing education unit to disequilibrium in the nursing workforce market. It is necessary in the near future

to look at effective interventions to improve nursing programs and apply them to programs by governments, employers, and others to improve the overall nursing workforce and availability of nursing services. The findings of this study adds to the health services literature on administering and assessing strategic management plans; administering nursing education programs and research in healthcare workforce. In the next chapter, the review of the literature, there will be an exploration of the research and writings regarding employee engagement that may be used as a foundation for applying organizational paradigms to the nursing education unit.

In Chapter II, supporting literature will be presented to substantiate the significance of the problem of market disequilibrium for demand for nursing services/nursing supply. The literature will also identify factors that serve as organizational performance measures and performance barriers for the nursing education unit. The literature should also serve to justify the purpose and add credence to the significance of the stated problem. The literature under review is composed of factors identified as causes and solutions by various agencies and organizations to market disequilibrium and the subsequent nursing workforce shortage. Findings in the workforce literature were used to construct the instrument (Demand Assessment and Recommendation Evaluation DARE Tool) used to measure organizational performance and performance barriers of the nursing education unit and provide content validity. Although limited in number, the literature review includes some nursing research specific to the nursing shortage particularly in the area of enrollment, recruitment, and selection into the

profession. Also included in the literature review are writings found in professional research journals which addresses factors contributing to market disequilibrium of demand for nursing services and the supply of nurses.

CHAPTER II

REVIEW OF RELATED LITERATURE

What is known about organizational performance of the nursing education unit to market demand for nursing services, performance barriers and faculty engagement can be demonstrated via systems theory and supported by current knowledge and prior studies related to the problem of market disequilibrium. The literature review was a critical portion of support for the research question. In the review of the literature for this research, a more detailed review of systems theory was presented as a link to examining demand for nursing services. The goal of the literature examination continued with an involved process of review of current knowledge regarding performance recommendations and initiatives to resolve and/or address demand associated with the impending critical nursing workforce shortage gleaned from nursing organizations, governmental agencies, private organizations and others. Because Buerhaus, Donelan, Ulrich, Norman and Dittus (2006) suggested the current nursing workforce shortage began in 1998, the literature review spans more than a decade. Finally, the literature reviewed principles of employee engagement. As suggested by Beckhard and Harris (1987), the literature was used to elucidate the complexity of interactions between the systems (i.e. education, health care, and economics) and individuals as well as to provide a framework for invoking a model for organizational performance. The literature provided a clearer sense of direction of the study and a means for improving and enhancing nursing workforce needs. Alabama Virtual Library research engine and internet search engines including the Cumulative Index to Nursing and Allied Health Literature (CINAHL) providing full text

searches of magazines, journals, and publications were used in the literature review.

Systems Theory

There are a variety of system theories. The literature classifies systems theory as general systems theory, living system theory, dynamical systems theory, fuzzy systems theory, grey systems theory, large scale systems theory and pansystem theory. Although different, many authors have named their theories "systems theories", and to make matters more complex, some systems theories may not have the name "systems theory" at all i.e. synergetics, cybernetics, information theory, resource physics and dissipative structure theory.

In the review of the literature as it relates to general systems theory, it is important to note that many general system theories are also different; not only in content, but also in the authors understanding of systems. Chang-Gen Bahg (1990) outlined the basic viewpoint of major systems theories and identified several major general systems theories covering mathematics, logic, formal theory, methodology, metatheory, metalanguage and so forth. Bahg (1990) also classified the theories according to disciplines of biological science, psychological science, physical science, mathematics, cybernetics, information, social science and philosophy.

In reference to this research study, systems theories with a background in social science had greater use. An important aspect of social systems is the emphasis placed on the structure and function of the system whose primary

actions are pattern maintenance, integration, goal-attainment and adaptation. In general, modern social systems theories akin to operations research of Li and Qian, input-output analysis of Leontief, and socio-cultural systems of Parson and Buckley as identified by Bahg (1990), speak to techniques for the management of resources and are employed to explore and explain system structure and operations through analyzing consuming and producing sectors of the economy. Because contemporary systems theories continue to develop and span towards disciplines formerly absent from the original systems science movement, there is a need to research and develop more systems suitable for these fields to solve essential problems for humankind (Bahg, 1990). The following section discusses the model used in this study for assessing the problem of market disequilibrium and response of the nursing education system – the nursing workforce forecasting model.

In 1998, Dumpe, Herman and Young published a modified forecasting model for nursing workforce based on the assumption that (1) the market forces for the nursing services was congruent to market forces for any other good, and (2) that it was possible to forecast the nursing workforce. Throughout the Forecast Model of Nursing Workforce, Dumpe, Herman and Young (1998) identified systems that have the capacity to influence the prediction of the nursing workforce. These factors affect both the supply and demand side of an equilibrium equation. Supply factors influence the likelihood that nurses will be available for employment. Demand factors determine the number and type of nurses needed for employment. Supply factors act to increase or decrease the

aggregate supply of nurses while demand factors determine how much supply is desired. The variables identified by Dumpe, Herman and Young (1998), that have a predictive influence include (1) the healthcare delivery system, (2) the nursing education system, (3) the economic system, (4) demographics and (5) contextual factors (Dumpe, Herman, & Young, 1998). Through an appropriate assessment of the factors influencing supply and demand and the ability to forecast the nursing workforce, Dumpe, Herman and Young proposed that significant imbalances in the workforce could be avoided and the cost associated with a huge flux in a rapidly reforming healthcare market could be better controlled to prevent inefficiencies (Dumpe, Herman, & Young, 1998). This study placed particular attention on the organizational performance of the nursing education unit, performance barriers and the nursing faculty engagement in meeting workforce demand for adequate and appropriate supply of nurses.

Systems theory was applied in this study by following approach: The nursing education unit represents the organization in this study. It is a subsystem of the nursing education system which is intentionally organized to accomplish an overall goal of meeting public demand and national recommendations for an appropriately numbered and specifically trained nursing workforce. The nursing education unit has various inputs which are processed to produce certain outputs that together, accomplish the overall goal. There is ongoing feedback among these various parts to ensure they remain aligned to accomplish the overall goal of the organization. To explain, inputs to the nursing education units include resources such as students, facilities, money, technologies and faculty. These

inputs go through a process of planning and management where they're aligned, moved along and carefully coordinated, ultimately to achieve the goals set for the system. Outputs are tangible results produced by processes in the system in this case - entry level or advance practice nurses. Another kind of result is outcomes, or benefits for consumers e.g., enhanced quality of health care for the public and culturally competent nursing care. Performance evaluation, in the form of feedback, comes from employees who carry out processes in the organization and customers/clients using the products and services. Feedback also comes from the larger environment of the organization, i.e. influences from health care system, economic system, society, and other contextual influences. The nursing education unit, like other organizations has numerous subsystems, as well. Each subsystem has its own boundaries and includes various inputs, processes, outputs and outcomes geared to accomplish an overall goal for the subsystem. Common examples of subsystems in the nursing education unit are departments, programs, projects, teams, and processes. Most importantly, subsystems are made of people. Since organizational performance is based on agency and individual outcomes, the individual is foundational to hierarchy needed to accomplish the overall goal of the overall system and the more engaged the employee the more likely the employee will exceed performances requirements and expend discretionary effort to provide excellent performance. Barriers in the system exist as the cause of accounting for the difference between actual output or results of an organization and its intended output, goal and objective and are challenges to overcome or compensate. The following section will begin with a

background on performance barriers (challenges and trends) in the nursing education unit. Next, organizational performance is presented under the conditions of market demands and recommendations placed on the nursing education unit. Last, individual performance will be discussed in terms of employee (faculty) engagement.

Market Demand for Nursing Services

In microeconomic theory, market demand is any one of a variety of different systems whereby persons are willing and able to exchange goods and services forming part of the economy (Dumpe, Herman & Young, 1998). As an artifact of the health care market and the market for professional education, nursing education is a system of institutions solely responsible for providing education and training services distinct to the function and activities of licensed nurses (Kimball & O'Neil, 2001; Mailey, Charles, Piper, Hunt-McCool, Wilbrome-Davis, & Baigis, 2000).

Nursing Education System

Dumpe, Herman and Young (1998) in the description of their forecast model defined nursing education systems as institutions that provide education to become a registered nurse, receive a master's degree, or a doctorate. They identified that nursing education systems directly affect the aggregate supply of nurses by the number and types of programs available and the number of graduates. The assumption is made that as the number of programs offered by a nursing education system increases so will the supply of nurses. For the nursing workforce to reach a state of equilibrium, the nursing education system must

respond in kind to meet the demands of health care, economic, demographic and contextual systems for an appropriately trained and sufficiently numbered nursing workforce.

The nursing education unit represents the organization in this study. It is a subsystem of the nursing education system which is a subsystem of the education system. Unique to the nursing education unit are the demands of the current and merging health care system for nursing services. The health care system, in combination with economic and other social systems, require a basic and advanced registered nurse workforce with an education preparation related to the functions across many sectors in the management and provision of services to individuals, families and the population. The demands of these larger external systems represent the organizational performance requirements of the nursing education unit. In response to those needs, nursing education is challenged performance barriers obstacles affecting its capacity to supply. Supply obstacles for the nursing education system originate in demographics, enrollment management, curriculum, program availability, infrastructure and faculty (Dumpe, Herman, & Young, 1998; Joynt & Kimball, 2008). The next section presents some noted challenges to the nursing education unit for meeting nursing workforce demand.

Performance Barriers

In the first chapter, performance barriers were defined as obstacles and challenges, tangible or intangible, that prohibit, hinder or in some way reduce an organization's performance in meeting its intended outputs, goals and objectives

(Beckhard & Harris, 1987). While numerous studies have identified barriers to market response performance in various businesses, research reflecting nursing education performance systems was limited to survey and demographic data of trends in nursing education. Albeit studies of barriers to performance in nursing practice were numerous, the literature search revealed no specific research inquiry matches for performance barriers in nursing education. Matches, however, in the form of journal articles, were found for nursing program evaluations. A classic article by Watson and Herbener (1990) in the *Journal of Advanced Nursing* described the principles, concepts and issues in nursing education evaluation including models for evaluation. The nursing education unit program goals, according to Watson and Herbener should justify the existence of the nursing program within the university and community setting. Standard in its premise, the goal of the nursing education unit, past and present, is to embrace social marketing (Watson & Herbener, 1990).

In this study, the existence of the nursing education unit was justified by meeting market demands for an appropriately trained and adequately numbered population of nurses sensitive to public health needs for nursing services. Organization performance objectives for the nursing education unit are represented by and congruent to stakeholder recommendations. Organizational initiatives to realign goals, objectives, capital and resources are necessary to respond to exogenous market forces (Organizational Change, 2007). The reorientation to market demands and transition to the new market paradigm is not always a smooth transition. Some of the problems identified that befall the

nursing education unit and create performance barriers to meeting the demand for nursing services are outlined below:

Demographics

Like the general public, nursing education is challenged by issues of demographics. Sustainability of the nursing workforce is related to the age of the nurse upon entry into the profession (Bernard Hodes Group & Nursing Management, 2006). The aging of the student nurse is therefore a concern for nursing education. The average age of the nurse is increasing in a significantly larger proportion than in other occupations and new entrants are older (Auerbach, Buerhaus, & Staiger, 2000). Unless addressed, nursing may be experiencing a severe shortage at the time when health care is most needy and the population is aged and vulnerable. To maintain the viability of the profession, nursing must be challenged to recruit a younger workforce to stave a preventable nursing shortage as a result of an aging nursing population (Heller, Oros, & Durney-Crowley, 2000). On hand is the opposite scenario, students entering nursing are older and have more diverse educational and occupational experiences (Auerbach, Buerhaus, & Staiger, 2007). They enter with higher expectations and usually are employed and raising families (Heller, Oros, & Durney-Crowley, 2000). To respond to this change in demographics, nursing education is challenged to create programs flexible and sensitive to the needs of the chronologically mature student and to a more diverse one (Auerbach, Buerhaus, & Staiger, 2007).

As the cultural diversity of the population becomes more evident, the scenario for nursing however is different. Nursing continues to constitute predominately white middle-class females (HRSA, 2006). Even as disparities in health and access to care among minority populations increase, minorities are still underrepresented in nursing and under served in cultural competent nursing care, training and practice (The Sullivan Commission, 2004). The problem of diversifying nursing has been a major issue plaguing the profession. Sigma Theta Tau's former president Eleanor Sullivan (2002) stated the following:

Nursing, like many other professions, has been slow in preparing nurses reflective of our population...we have been unaware of the need for culturally sensitive patient care, and...less than welcoming to students different from the predominate population. The time to discontinue both is now...We must prepare ourselves, our colleagues and our students to live and work in a diverse world. (p. 2)

Professional Image

To confound matters, nursing has to compete for professional talent while plagued by an unfavorable image. Nursing's image is marred with statistical, stereotypical and unattractive portrayals. Nursing's image is considered a major deterrent in attracting new recruits. A major problem for nursing stems from its image as a profession for white females. Nursing is a 90% white female profession and has yielded little to the inclusion of men and minorities (Leonard, 2006). The problem facing the image of nursing is that its prominent population no longer considers nursing its prominent choice. The options have expanded

beyond traditionally feminine occupations of nurse, teacher or secretary. Nursing must compete for talent with other disciplines like medicine, engineering, and computer science (Johnson, 2000b).

Furthermore, the problem of image is also a problem of identity. There is still confusion and lack of understanding of the role of the nurse (Nevidjon & Erickson, 2001). As well, confusion exists about the levels of entry into the profession. Multiple entry levels cast nursing as a less than intellectual enterprise (Williams, 2004) and is a disincentive to attracting people to higher degree programs (Bednash, 2000, 2001). Nursing is failing to attract the traditional student in sufficient numbers.

Enrollment Management

Traditionally in academia, strategic enrollment management plans have primarily been designed as a comprehensive process to assist educational institutions achieve and maintain optimal recruitment, retention, and graduation rates as defined within the academic context of that institution. However, strategic enrollment management goes beyond admissions, recruitment and marketing to include the health and viability of the institution (Dolence, 1993, 1996). To expand upon Dolence in addressing the demand for nursing services, the nursing education unit is challenged by market forces outside of the context of academia and the vacuum of the institution. As it represents the prime portal towards entry into the profession, nursing education programs through diligent and considerable planning and management are vital in achieving and

maintaining an optimal nursing workforce that also takes into account the health and viability of the people.

Despite increasing nursing student enrollment by 7%, a 2005 American Association of Colleges of Nursing (AACN) report showed that many qualified students could not attend nursing schools. Nearly 43,000 qualified students were denied admission in entry level baccalaureate nursing programs. In a similar vein, the National League for Nursing (NLN, 2008) reported a denial of 147,000 qualified applicants for entry level baccalaureate, associate and diploma programs in 2005. Top reasons for rejection were insufficient faculty (71%) and full capacity (74%). The figures were not significantly better the next year with 40,285 denied due to insufficient resources - faculty (71.4%), clinical sites, classroom space, clinical preceptors and budget constraints (AACN, 2008).

Funding and Infrastructure

In addition to the enrollment and graduation paradigms, there exists a dearth of available funding and supporting infrastructure to meet the demand for nursing education brought on by the increasing student numbers. Incentives, relief programs and scholarships for nursing compete with other profession and like many of them are underfunded. Funding problems segway into problems with infrastructure (Korniewicz & Palmer, 1997). Nursing programs turning away qualified students report a lack of available clinical facilities and lack of classroom and laboratory space. Nursing education needs to consider alternative schedules and experiences, including virtual technology, in meeting the clinical educational needs of the student and the limitation in space (Lindeman, 2000a). In nursing

education, computer technology aids in increased access to data, distance learning modalities, and simulation laboratories. This new technological environment is expected to change the classroom from lecture based control to interdependent discussions (Anderson, n.d.).

Curriculum

In addition to funding and infrastructure dilemmas are issues to address curriculum needs. At present, the basic registered nurse education does not prepare the nurse for the breadth and depth of future roles (Numerof, 1997). To resolve the mismatch between basic nursing education preparation and healthcare demands, nursing schools must train nurses to meet the demands of society. To address the shift from acute care to preventive care and intense, complex acute care challenges, nursing education must equip the student nurse with knowledge of clinical epidemiology, biostatistics, and behavior science, as well as, skills in the management and organization of patient care at all levels of health (Heller, Oros, & Durney-Crowley, 2000; Korniewicz & Palmer, 1997). The nursing workforce need nurses trained in management and leadership related to workforce issues along with business, financial and personnel management, organizational theory and negotiation. Nursing education needs to move towards providing students content and skills in leadership, critical and analytical thinking, decision-making, problem-solving, conflict management, delegation and economic/financial analysis (Numerof, 1997). In addition, economic efficiency requires a range of skill and knowledge hence a collaborative environment. Healthcare providers must collaborate to meet economic constraints and the

holistic needs of the client and the population. Teams coordinated to provide such care are shown to be highly effective in improving clinical outcomes and reducing cost. Therefore, teaching methods in nursing education must address leadership, competence and continuing education to prepare the nurse for a role in collaborative practice (Malloch, 2000).

Faculty

While nursing education is challenged by multiple supply and process dilemmas, none are more pronounced than that of presented by the faculty. The nursing education unit is near crippled by a nursing faculty shortage. The shortage is related to multifaceted causes to include ageing, workload and clinical competition (NLN, 2006b, 2007). Faculty is retiring and resigning in numbers greater than they are replaced at time when adequate numbers are desired to meet nursing workforce needs (AACN, 2005). NLN reported in 2006 faculty vacancy rates of 7.9% in baccalaureate and higher programs and 5.6% faculty vacancy rates in associate degree programs both of which represent an increase (NLN, 2006b). The average nursing faculty at retirement is 62.5 years. The average ages of doctoral prepared nursing faculty are 59.1, 56.1, and 51.7 for professors, associate professors and assistant professor (masters 58.9, 55.2, 50.1 respectively) (AACN, 2008). In addition to the graying of the professoriate, are late entries in to academia (Hinshaw, 2001).

The faculty shortage is shored up by unrealistic job expectations, non-competitive salaries and lack of support (Brendto & Hegge, 2000). Higher compensation in the clinical and private sector is luring current and potential

nursing educators (Johnson, 2000a). According to a 2007 salary survey conducted by ADVANCE of Nurse practitioners, the average salary of master's prepared nurse practitioner is \$81,517; in contrast, the AACN reported \$66,588 for masters prepared faculty for the same year. Attention to improving nursing faculty salary reduces the loss of qualified faculty from the nursing education unit. In Mississippi, two years after proactive legislation, the Office of Nursing Workforce reported that for the first time in the state "career advancement" was the most frequently cited reason for nurse educator resignation and not salary (Mississippi Office of Nursing Workforce, 2008). Factors contributing to the nursing faculty shortage in addition to inadequate replacement, age, retirement (AACN 2003a, 2003b), include salary (Hinshaw, 2001), workplace dissatisfaction, racial discrimination (Allen, Epps, Guillory, Suh, & Bonous-Hammarth, 2000; Godfrey, 2005) and workload (Sarmiento, Laschinger, & Iwasiw, 2004)

The Southern Regional Education Board (SREB) conducted a survey which indicated that for the year 2000-2001, 144 nurse educators retired and 350 resigned their positions. During that same year, there were 432 full and part-time faculty positions vacant. For 2001-2006, SREB projected 784 retirements yet only 277 graduate students (masters and doctorate) were preparing for roles as nurse educators. The Southern Regional Board of Education (SREB) documents a serious shortage of nursing faculty in the area related to unfilled positions, projected retirements and a shortage of students preparing for the role of nurse educator (SREB, 2002). The result of the above statistics limited the number of nursing professionals in the academic pipeline.

Some reports provide similar grim assessments. The Association of Academic Health Centers (AACHC) released a survey data in 2007 that identified the nursing faculty shortage as the most severe threat to the nation's health professions education infrastructure followed by allied health, pharmacy and medicine. Ironically, nursing programs are turning away thousands of qualified master's applicants (3,048) and hundreds of qualified doctoral applicants(313) (all potential replacement faculty) due to a lack of faculty (AACN, 2008). In addition to numbers of faculty, there is a severe under-representation of minority faculty in nursing. For example, while African American's make up the largest representation of minority faculty, only 10% of all nursing faculty is a minority and 4.9% of all nurses in the United States are African American (BLS, 2007). Although the fastest growing minority group, similar statistics of under-representation hold true for Hispanic American nursing faculty. These figures are significant since in 2040, approximately 40% of the population in the U.S. will be members of racial and ethnic minorities (BLS, 2007). Table 1 provides a summary of challenges to the nursing education system.

Despite its internal struggle to address enrollment management, curriculum, faculty and the rest, the nursing education unit is not isolated. It does not exist in a vacuum. As part of the larger nursing education system, the nursing unit is saddled with the obligation to meet workforce demand i.e. an obligation to perform. The following section will discuss organization performance of the nursing education unit as it relates to meeting market demand.

Table 1

Market Sensitive Supply Challenges

Supply Challenge	Context of Nursing Education
Number of programs	Nurse educator programs
Types of programs	Faculty development and training
Number of graduates	Collaborations & partnerships
Faculty shortage	Innovations in education delivery
Supporting infrastructure	Flexibility of programs
Supporting resources	Recruitment of younger students
Retention programs	Alternate experiences
	Flexible schedules
	Diversity of students and faculty
	Mature student needs

Organizational Performance

In generic terms, organizational performance is the actual output or results of an organization as measured against its intended output, goals and objectives. Over the years scholars have addressed a number of different perspectives to organizational performance. Some theorist propose that organizations are better understood in the context of open social systems, with an interrelated segment in that change in one segment affects the other segments (Daft & Weick, 1984; Nadler & Tushman, 1999). Organizations are in a constant struggle to find appropriate strategies for the development of high performance (Beckhard &

Pritchard, 1992). It is a paradoxical condition because although organizations are intentionally organized to accomplish an overall, common goal or set of goals, the fundamental dimensions of every organization are built around competing values (Quinn, 1988). Goals may be explicit (deliberate and recognized) or implicit (operating unrecognized). Ideally, these features are carefully considered and established, usually during the strategic planning process and include vision, mission, values, strategic goals and strategies. Organizations usually follow several overall general approaches to reach their goals (McNamara, 1997). An organization's effectiveness depends upon recognition of competing systems and reaching appropriate balance. There are two types of factors that affect organizational performance; agency-level and individual level (Beckhard, 1972). Although the factors appear to work in concert, their causal paths are not agreed upon (Brewer & Selden, 2000). In this study, organizational performance of the nursing education unit, performance barriers and the engagement of nursing faculty interact with the environment of public need and public opinion in response to market demands for nursing services. The following section will discuss the agency level performance criteria for the nursing education systems as defined in this study – response of the nursing education unit to public demand and national recommendations by nursing workforce stakeholders for nursing services.

As mentioned previously, the goal of the nursing education system is to meet the public demand for an appropriately numbered and specifically trained workforce and organizational performance was assumed to meet prescribed

goals of the nursing education system by nursing stakeholders. The predictive factors presented in the Forecasting Model for Nursing Workforce by Dumpe, Herman and Young (1998) and recommendations by national stakeholders are congruent with the major factors impacting the current nursing workforce shortage and therefore reflect nursing workforce demands. Recall that the model addresses demands of health care delivery, economics, demographics and other social contextual factors.

Demands of the Healthcare Delivery System for Nursing Services

According to Dumpe, Herman and Young (1998), the health care delivery system is institutions and agencies that provide health services to a population. These institutions directly influence the demand for nurses through technology/services offered and the use of employee substitutes (using employees in positions other than traditionally educated for). Other direct demand influences by health institutions and agencies include the acuity of the client, the client care delivery area and the supply of other healthcare professionals (Dumpe, Herman, & Young, 1998). Perhaps the most challenging issue facing the health care delivery system is an unmet demand for specifically trained workforce. The health delivery system challenges nursing education to provide nurses who can deliver care in a changing environment to a varying number of clients. Growing diversity, an aging population, chronic diseases, increasing technology and biomedical advances require a nursing workforce in sufficient numbers that is knowledgeable, educated and skillful (Bartels & Bednash, 2005).

The literature suggests that nursing is unable to meet the workforce demand of the health care system primarily due to (1) an exodus of nurses due to retirement and departure from the profession and (2) a lack of young people entering nursing. In regards to the exodus of nurses from the profession, HRSA (2006) reports that the average age of the RN population is estimated to be 47 years old. It is suspected this number is elevated due to few young people entering the nursing profession. The growth rate of new entry into the profession was 7.9% in 2004 half of what it was in the 1992 and 1996, while it is predicted that only 82% of nurses work in the field of nursing. Fifty five percent of surveyed nurses report their intent to retire between 2011 and 2020. It is projected that if the current trend continues the number of RNs retiring from the workforce will exceed the number entering by the year 2016 (HRSA, 2006).

Researchers have demonstrated the link between education preparation and care longevity. Findings from a survey of 878 registered nurses in the State of Vermont reported nurses with a baccalaureate degree stated having enhanced career satisfaction in categories of autonomy and growth, and concluded that since baccalaureate nurses began their careers earlier, they also have longer careers in nursing. The participants also reported less job stress and physical demands as well as a positive response regarding job and organizational security than associate prepared registered nurses (Rambur, McIntosh, Palumbo, & Reinier, 2005). Table Two catalogues some challenges of the health delivery system and its demands on the nursing education unit.

Table 2

Market Sensitive Demands of the Health Delivery System

Health Delivery Demands	Context of Nursing Education
High acuity of care	Curriculum adaptations
Advanced health technology	Nursing education research
Advanced health services	Trend analysis
Varied care delivery areas	Grants/funding for nursing education
Supply of health professionals	Nursing education reform &
Chronic diseases	innovations
Globalization of health care	Provider of continuing education
Leadership and management	Advanced practice nursing training
Critical/analytical thinkers	Image of nursing

Demands of the Economic System for Nursing Services

Economic influences are those influences that determine what will be produced, for whom and how much. The economic system indirectly affects the demand for nurses by price controls of healthcare services and by direct reimbursement for nursing services (Dumpe, Herman, & Young, 1998). In 25 years, between 1970 and 1995, health care expenditures climbed from \$341 to \$3,6221 per person per capita or from \$73.2 billion to \$988.5 billion. During the same period of time, the gross domestic product devoted for health care doubled from 7.1% to 13.6% (Levit, et al., 1998). Health spending has been the result of changes in price for and volume of health care services used. In 2006, U.S.

health care spending rose to 2.1 trillion dollars or \$7026 per person accelerated in part by the impact of a drug prescription plan. The factors driving rising health care costs identified by the U.S. Congressional Budget Office include (1) inflation in the general economy, (2) inflation specific to health care, (3) growth in nation's population; and (4) changes in utilization and intensity of services provided fueled by technology and practice patterns of providers. The later is identified as the primary cause for growth (Catlin et al., 2008). Rising healthcare expenses have resulted in intense methods for cost reduction. Managed care and a preventative care are the hallmarks for cost-containment in healthcare. Managed care has become the means of addressing escalating medical costs (Lindeman, 2000b). "Managed care and other risk-based services have forced a shift from episodic care with an acute orientation to care management with a focus on population-based outcomes" (Heller, Oros, & Durney-Crowley, 2000). This shift has brought about a change in practice methods to respond with improved quality at a lower cost. Managed care greatly reduces the number and time clients spend in the acute care setting. Therefore, nurses in those settings expect to see a sicker more acute client with complex ailments staying for shorter times. Table 3 demonstrates the demands of economics on the nursing education unit.

Table 3

Market Sensitive Demands of the Economic System

Economic Demands	Context of Nursing Education
Reimbursement and price control	Curriculum innovations
Managed care	
Increased Complexity of Care	
Increased Variability in Care/Skills	
Multi-disciplinary Care Approach	
Integrated Services	

Another factor identified by Dumpe, Herman and Young (1998) on the forecasting tool was demographics. Demographic demands are age, race, growth and distribution of the population and epidemiology of illness requiring nursing care. The workforce need for nurses is expected to increase significantly due to demographic pressures that affect both supply and demand for nursing services including aging baby boomers (Mantese, Lowe, Hern-Shumpert, & Nowakowski, 2001). Changing demographics and increasing diversity are noted by many to have a great influence on nursing education and the nursing profession. Demographic and diversity changes commonly facing nursing include (1) an aging clientele, (2) an acute care clientele with more intense and complicated health problems, (3) an increasingly growing chronic care clientele, (4) a more culturally diverse clientele (5) a clientele that incorporates alternative treatment regimens and (6) a clientele with increasing needs for end of life and hospice care (Sorensen & Martin, 2000).

Because of demographic shifts, the demand for nursing services is not expected to lessen anytime soon. Society will continue to age related to the large number of Baby Boomers and increasing health technology. With a greater life expectancy, more acute and chronic illnesses are expected. Nursing must grow in proportion to the rising elderly population to maintain appropriate access to care (Sorensen, & Martin, 2000).

Chronic illness is of some great concern because of the lack of experience of health care providers in projecting the trajectory of many diseases (since people traditionally did not survive for long periods). Extended survival brings with it ethical concerns regarding advanced directives, organ donation and palliative care for chronically and terminally ill clients (Heller, Oros, & Durney-Crowley, 2000). Home-based hospice programs, new practice methods and scientific knowledge generation in regards to end-of life issues become top priority to the future of nursing (Heller, Oros, & Durney-Crowley, 2000).

As society continues to diversify, distributive justice and cultural sensitivity becomes a larger question. It is noted, disparities in morbidity and mortality have increased in the culturally diverse population sectors. Demands for culturally congruent care and the inclusion of “alternative” or “complementary” therapies into mainstream health care are expanding (Heller, Oros, & Durney-Crowley, 2000). In regards to alternative treatment regimens and cultural practices, nurses must become aware of the benefits and detriments to the client and society. Most recently, cultural issues in nursing education were addressed with a review of thirteen National League for Nursing accredited colleges and

universities from ten different states who were accredited under the diversity edict. The findings of the survey suggest that although baccalaureate schools of nursing were making an effort to address the issue of diversity, it was not apparent if the diversity initiatives designs were substantial enough to address the permanent problem of lack of diversity in the nursing profession (Leonard, 2006). A summary of demographic challenges are listed in Table 4.

Table 4

Market Sensitive Demands of Demographics

Demographic Demands	Context of Nursing Education
Aging clientele	Curriculum innovations
Diverse clientele	Diversity in nursing education
Population growth	
Population distribution	
Epidemiology of illness	
Culturally congruent care	
Alternative therapies	
Hospice/palliative care	

Demands of Contextual Factors for Nursing Services

Contextual factors of the Forecasting Model for Nursing Workforce include sociocultural traditions and values found in the philosophy and policies of the government or nation. Contextual influence on the supply and demand for nursing services is indirect and implicit yet politically driven (Dumpe, Herman, & Young, 1998). In the midst of health care reform policy, the American health

care system has experienced fundamental changes in all areas of care delivery. Health care payment systems are evolving toward a pay for performance model in an effort to enforce quality and cost control (Sochalski & Patrician, 1998). Provider demands, availability of resources, healthcare institutions, market supply and demand and healthcare consumers are the factors driving reform. The results of these factors are a political response for healthcare to provide measurable outcomes (Heller, Oros, & Durney-Crowley, 2000).

The Pew Health Professions (1995) predicted that by the end of the century, the education of health professionals will be based solely on addressing the needs of the American people. In particular, desired outcomes will incorporate providing the healthcare system with (1) more managed, efficient and integrated services; (2) more accountability for healthcare resources; (3) more responsiveness to the specific needs of the client and (4) a focus in preventive health practices. Relating political responsiveness to health education, deTornyay (1995) states that “the educator can no longer determine what or where to teach”. Market driven healthcare system subsequently alters the ways in which schools of health professions organize, structure and frame their programs of education, research and client care (deTornyay, 1995). An example to illustrate contextual influence on nursing education is the 2002 Delgado study which supported the benefit of baccalaureate degree nurses in regards to upholding codes of profession practice. According to the study, nurses who are disciplined by state licensure boards for practice act violations had a statistically significant likelihood of holding the associate degree as their

highest education preparation in nursing. An inference may be made that the public was safer with a more learned nurse. Perhaps the most significant study to support the argument for higher level nursing education and desired patient care outcomes was conducted in 2003 by Aiken, Clarke, Cheung, Sloane and Silber. They identified a strong link between patient care outcomes and educational mix of staff caring for surgical clients.

Table 5

Market Sensitive Demands of Contextual Factors

Contextual Demands	Context of Nursing Education
Governmental influence	Strategic enrollment management
Policy influence	Market sensitive planning
Social trends	Curriculum innovations
Changing paradigms	
Resource accountability	
Need based services	
Preventative health	

It was demonstrated that for every 10% increase in the proportion of nurses with a baccalaureate degree there was a 5% reduction in client mortality in common surgical procedures. Similar findings were demonstrated in rescue care outcomes establishing a link between practice staff education preparation and patient care outcomes (Hodges, Williams, & Carman, 2002). The research helps to support the need to identify education and training necessary to improve

public health outcomes and demonstrate the need to navigate in a political climate. Refer to Table 5 for a listing of contextual demands related to nursing education.

Recommendations for Nursing Education Unit

Assuming, organizational performance met prescribed goals of the nursing education system, predictive demands of the nursing workforce models represent, in theory, market demands required of the nursing education unit. According to Bartles and Bednash (2005), the discussion regarding the nursing workforce should not focus continually on the numbers of nurses available to provide care, rather than on the critically important knowledge and skills necessary to achieve these goals. The following recommendations are actual suggestions by national stakeholders regarding good and sensible responses to be taken by the nursing education units to help reach equilibrium in the nursing workforce. Recommendations made to the nursing education unit are varied and come from multiple sources. Regardless, they consist of suggestions to alter system input, throughput or both. Throughput recommendations make suggestions for changes in plans, processes and curriculum. Input recommendations include those related to students, funding, research and technology and faculty. Recommendations for changing input related to students incorporate a need to recruit, retain and graduate a larger and diverse population of nurses. For example, they include the recruitment of younger students (American Organization of Nurse Executives, 2000); recruitment of a culturally diverse population of nursing students (Meadows, 2000; Newel-Withrow &

Slusher, 2001); recruitment of second degree students, men and undeclared college majors and recruitment activities for K-12 initiatives (Thompson, Young, Heller, & Farrow, 2001). To facilitate recruitment measures, suggestions are also made to reposition nursing image to attract young people interested in science/technology and to implement and sustain marketing to support the image of nursing and recruitment of qualified students (National Council of State Boards of Nursing, 2001, 2002). To address education needs for practicing nurses, suggestions are made to development of life-long education programs for professional competency (Sigma Theta Tau International, 2006).

Considerations for funding inputs encourage nursing education to seek and secure federal funding for national reform and innovations in nursing education. In 2000, the Agency for Healthcare Research and Quality (AHRQ) requested provisions for funding loans and scholarships, funding for research and data collection and models for community collaboration to implement a comprehensive approach to address the nursing workforce. National stakeholders in nurse workforce encourage the use of federal programs such as designated workforce shortage programs to help maintain adequate resources for nursing education programs to meet workforce demands (AACN, 2003b). Nursing education is also encouraged to manage current resources by determining the cost effectiveness of existing programs and determine the need for new programs as well as enlist the support of legislators and higher education officials to help meet funding needs (SREB, 2001).

Research, technology and faculty inputs are addressed in recommendations that require and support investigations to enhance workforce capacity. They include the use of technological advances in education, research and data collection and supporting technology for distance learning (National Advisory Council on Nurse Education and Practice, 2003; U. S. Government Accountability Office, 2007). In regards to faculty, SREB (2001) and others made recommendations to address faculty roles, equitable compensation, preparation of faculty, funding nursing education research, faculty development, workload, promotion and tenure, strategies to retain faculty initiatives to recruit and retain minority faculty. Also included were collaborations for nurse educator training and campaigns to increase awareness of nurse educator preparation.

In May 2005, the Board of Governors of the National League for Nursing (NLN) released a position statement for nursing education programs to upgrade their design to meet the changing demand of health care, the learning needs of a diverse student population and accountability to the public. These changes, according to NLN should “emanate from evidence that substantiates the science of nursing education and provide the foundation for best educational practices”. Suggestions for throughput and process changes by NLN include those for program design, curriculum revision, program flexibility, program expansion, program progression, expanding clinical settings, social marketing, public accountability and community involvement/support. The call for programmed change in the nursing education is universal to the function of the nursing education unit and public need. It was identified by many others in prior reports

(U. S. Government Accountability Office, 2001; Joynt & Kimball, 2008), research (Levine, 2001) and most recently an in 2008 Robert Woods Johnson Foundation white paper. Refer to Table 6 for a listing of recommendations for the nursing education unit by some of the major stakeholders.

Table 6

Recommendations to the Nursing Education Unit

Stakeholder	Recommendations
Tri-Council	Long term workforce planning
2001	Equitable compensation
AACN	Staff development and continued competence
2001	Recruitment of younger and diverse students
2003a	Workforce modeling and research
2005	Enhance technology
NLN	Funding for faculty preparation
2002	Nursing education research
2005	Faculty development/mentoring;
2006a	Equitable workload and compensation
2007	Redesign promotion and tenure
	Program redesign

Table 6 (continued).

SREB	Diversity reflecting regional demographics
2001	Funding for nursing education programs
2002	Access Federal programs
	Enlist support of legislators
	Enlist support of partners and community
	Nurse educator core curriculum/competencies
	Expand nurse educator education
	Faculty retention
	Workforce analysis
	Needs assessment for new programs
	Cost/benefit analysis of existing programs
	Recruitment programs
National Advisory	Increase capacity
Council on Nurse	Expansion of clinical practice settings
Education	Diversity reflecting societal racial/ethnic composition
2003	Recruitment of second degree student and undeclared majors
	Recruitment activities for K-12 initiatives

Table 6 (continued).

Consensus	Expanding nursing education programs
Statement of	Flexibility in nursing education
Professional Nursing	Public awareness of nursing shortage
Organizations	Public awareness of nursing faculty shortage
(AACN,2008)	Federal support policies/funding
	Recruitment of minority student/faculty
	Use of federal programs/nurse corps
	Nursing workforce research/models
STTI American	Market towards science and technology
2006	Research effects of shortage on nurse faculty
	Research/evaluation systems for evidence based outcomes
	Collaboration and partnerships
	Strategic action to retain nurse educators
	Career incentives/recognition.

Table 6 (continued).

Academy of Nursing	Increase full time tenure track positions
2002	Curriculum in global nursing and health
	Distance learning
	Global dialogue regarding nursing workforce/education
	Global database of health issues/ health care research
Americans for Shortage Relief	Focus on recruitment and retention from a variety of racial/ethnic backgrounds
2008	Build capacity of nursing education programs
	Enhance nursing research

Employee Engagement

As indicated by Shortell and Kalunzy (1988), the provision of health care is characterized by considerable uncertainty, making it difficult to set meaningful goals. While organizational response is generally pervasive, health care has a number of distinctive elements that affect the process and efficacy of various strategies. Of these elements, the need to match service capacity to meet population needs presents a special challenge (Shortell et al., 1996). Through case studies, Grindle and Hilderbrand (1995) found that effective public sector performance, like health care, is more often driven by strong organizational systems and networks that consider the individual than focus on rules, regulations, procedures or pay. Remembering that there are two types of factors

that affect organizational performance; agency-level and individual level; this section will now consider the individual through employee engagement.

Employee engagement is a heightened connection between employees and their work, their organization or the people they work for or with that causes them to produce optimal results for the organization. It is a bond necessary, an extra effort needed beyond satisfaction, to improve organizational outcomes (U.S. Merit System Protection Board, 2008). Engaged employees find meaning and pride in their work, feel valued by their organization and are more likely to exceed minimum performance requirements (Vance, 2006). Historically, organizations considered the employee merely as an input necessary like any other for production of goods or services and based performance on tangible and financial assets. Today, intangible elements such as relationships are considered important for organizational success (Delaney & Huselid, 1996). Organizational management theories and research have changed the way organizations value the individual and have lead them to explore propellants to better employee performance. While not used as the framework for this study, suffice it to say the concept of engagement is rooted in scientific motivational theories of Maslow, Herzberg, Skinner and many others.

Basic themes related to employee engagement discussed in the literature are job satisfaction, commitment and discretionary effort. Job satisfaction is discussed as contentment with work benefits and work-life balance. Commitment is presented as rational commitment and emotional commitment. Similar to the satisfied employee, a rationally committed employee accepts the

personal benefits of their job (i.e. financial, professional, developmental) and therefore feels obligated to meet basic requirements. The emotionally committed, as the name suggests, have an emotional attachment. These employees derive pride and enjoyment from their organization and respond by giving increased discretionary effort. As the name applies, discretionary efforts are voluntary efforts, those beyond minimum outlined duties that the employee provides by choice (Corporate Leadership Council, 2004). The engaged employee is not only satisfied and rationally committed, but emotionally committed. These employees accept periods of low satisfaction and remain committed; but when the engagement is low initially, the same is not true and the employee will disengage physically or mentally (Erickson, 2004).

Findings from the literature suggest organizations benefit best in outcomes with engaged employees. Consider the following examples. A survey of over 35,000 U.S. workers in medium to large organizations through various sectors found a clear relationship in increased engagement to improved employee retention and better financial performance of the organization and that the engaged employee outperformed their less engaged counterparts (Towers Perrin, 2003). In a similar vein, a forty company multinational study also by Towers Perrin over three years as well found that companies with high employee engagement scores had operating margins that were greater than those of low engagement companies and the same trend was found for net profit margins (Kiviat, 2008). In 2001, the Gallup Organization tallied engagement scores, profitability, sales, employee retention and customer satisfaction for nearly 8,000

business units and found a positive correlation to high engagement and high performance (Harter, Schmidt, & Keyes, 2003). In health care, North Shore LIJ Health Systems demonstrated a one year retention rate of 96% (industry average 88%) after only one year of implementing engagement measures. North Shore also documented a rising patient satisfaction score along with employee engagement (Kiviat, 2008).

In a tight economy and tight labor market organizations seek to maximize employee output to get more out of employee resources. Increasing discretionary effort of employees is an excellent way to “do more with less”. An engaged employee allows for better organization survival during cutbacks and increased financial pressures (Jamrog, 2004). In addition to economic pressure, a wave of retirements is forecasted as the baby boomers continue to age. The Bureau of Labor Statistics (2007) estimate that by the year 2010 in the U. S. there could be as many as 7 to 10 million more jobs than there are employees and by 2015 the number rises to 21 to 40 million. These estimates make it clear that organizations are in a highly competitive labor market and need to attract and engage talented employees.

Under similar pressures as the private sector, the U. S. Federal Government conducted as part of the U.S. Merit Systems Protection Board (2008) a study to measure the level of employee engagement and agency performance outcomes. The study identified six themes primary in engaging employees including pride in work, satisfaction with leadership, opportunity to perform, satisfaction with recognition, prospect for future growth and a positive

environment. What the Federal government found was (1) about one-third of federal employees are fully engaged, nearly one half somewhat engaged and the remaining not engaged (2) engagement is influenced by leadership, level of responsibility, salary, education, race/ethnicity and agency and (3) there is a significant relationship between the average level of employee engagement and agency outcomes; intent to leave; sick leave use/time loss and equal opportunity complaints. As a result of the findings, the Merit Systems Protection Board recommended that Federal Agencies take steps to increase employee engagement in view of the significantly positive relationship found between engaged employees and desired agency outcomes (USMSPB, 2008).

Although no nursing research is available regarding the construct of employee engagement specific to faculty, there were studies that address the role of organizational structure and employee behavior. In a survey of 345 deans of nursing programs it was demonstrated that decentralization of the organizational structure was associated with increased job satisfaction (Frank, 1986). In terms of this study, it means increased decision-making and autonomy of the dean was of benefit to the organization. Similarly, Kennelly (1989) examined the relationship of organizational characteristics and faculty satisfaction. Findings indicated structure was positively related to faculty satisfaction. Both studies imply increased goal attainment and productivity of the organization to increase commitment of the employee. In contrast, a study on the risk receptivity of nursing deans and faculty to innovations in the organization, Yarcheski and Mahon (1986) presented findings that doctoral prepared faculty

demonstrated a decrease in performance and productivity and hence implied decreased benefit to the academic goals of the organization.

This study used the concept of employee engagement to measure the performance of the nursing faculty in addressing through the nursing education unit the demands of the nursing workforce. It is expected that the engagement of the nursing faculty has large impact on the overall performance of the nursing education unit. Engagement has been identified in the literature to have positive correlations to achieving agency performance outcomes. It is assumed, in this study, that the engagement of nursing faculty to the nursing education unit is congruent to the engagement of employees in other professions. Determining the predictive value of employee engagement of nursing faculty may lead to greater strides of the nursing education system in addressing nursing workforce demands.

Summary

Overwhelmingly, researchers have demonstrated the realization that equilibrium and stability are not options for organization that want to be effective (Beckhard & Harris, 1987). To be an effective system according to Shortell and Kaluzny (1988), the system must address many indicators to access individual and group level performance and find balance and coherence in internal and external positions (Quinn, 1988). A major challenge for the nursing education system is to identify effectiveness in organizational and individual systems. To move an organization into the future in an increasingly complex operating environment, the nursing education system must address the problem of market

disequilibrium and hence the mismatch between demand for nursing services and supply of nurses. If addressed, the implications for the organization are the organization itself, its parts and their relations, will simultaneously change. The connectedness of these systems has important implication for the nursing workforce. It is noteworthy to mention that failure of performance in one level of a system will have a pervasive negative effect throughout the entire system (Shortell & Kaluzny, 1988).

As stated prior, the purpose of this study was to investigate organizational performance, performance barriers and faculty engagement in the nursing education unit in response to market demands for nursing services. The nursing education system must be in a position to respond to the need for an adequate number of specifically trained and more diverse workforce by meeting national nursing workforce demand through active and purposeful programming, problem solving and employee engagement. The literature has provided a variety of perspectives on organizational performance, performance barriers and faculty engagement that may be considered with determining the response of the nursing education system to demands for health care.

Many sources were identified in the literature regarding performance barriers and challenges of the nursing education unit in meeting demand for nursing services. Research reflecting nursing education performance was limited to survey and demographic trends. No specific research inquiry matches for performance barriers in nursing education were identified. Research was available for nursing program evaluations and demonstrated a link between

education preparation and care longevity (Rambur, McIntosh, Palumbo, & Reinier, 2005) and educational preparation and desired patient outcomes (Aiken, Clarke, Cheung, Sloane, & Silber, 2003; Hodges, Williams, & Carman, 2002).

Findings from the literature regarding employee engagement described organizational benefit from engaged employees including improved employee retention (Frank, Finnegan, & Taylor, 2004) and financial performance (Towers Perrin, 2003), increased profit margins (Kiviat, 2008), high organizational performance (Harter, Schmidt, & Keyes, 2003) and patient satisfaction (Jamrog, 2004). Employee engagement was influenced by leadership, level of responsibility, salary, education, race/ethnicity and agency (USMSPB, 2008). No nursing research was available regarding the construct of employee engagement specific to nursing faculty. However, studies were available regarding nursing faculty that addressed the role of organizational structure and employee behavior in job satisfaction (Frank, 1986; Yarcheski & Mahon, 1986).

The findings of this study adds to nursing literature on assessing nursing education program outcomes and examining performance barriers in nursing education related to market demand. In addition, the study supplements literature related to the nursing workforce research and faculty engagement. In the next chapter, research methodology, research design, sampling, instrumentation and data analysis are presented.

CHAPTER III

METHODOLOGY

The thrust of this pilot research was to describe the nature of market demands placed on the nursing education unit for providing an adequately numbered and appropriately trained workforce and the performance of the unit on meeting those demands. More research is needed to develop administrative and organizational models for addressing the problem of market disequilibrium between the aggregate supply of nurses and the demand for nursing services. An exploration of pertinent organizational performance demands and performance barriers were revealed in the review of literature. The organizational performance and performance barriers were identified as those represented in nursing workforce model and as those recognized by national stakeholders. Also under investigation was the role of faculty engagement in meeting workforce demands of the nursing education unit for nursing services. In this chapter, methodological components of this study are presented.

Research Design

The purpose of this study was to investigate organizational performance, performance barriers and faculty engagement in the nursing education unit in response to market demands for nursing services. It is anticipated that a study of this nature would be beneficial in helping lay a foundation for assessing program outcomes, policy, performance and effectiveness in response to market demands for nursing services. As such, this study is considered evaluation research. Evaluative research is a systematic appraisal using the methods of social research for the purpose of generating knowledge and understanding that can be

used for deciding policy and practice (Savin, 2000). It is an applied form of research that provides utilitarian answers to practical questions for decision makers (1) who is benefiting from the program or service, (2) is the program cost effective, (3) should the intervention or program be continued, (4) is the program achieving its intended goals and (5) in what areas does the program need to be improved (Clarke, 2001).

The prime intention of evaluative research is to have an impact on policy making be it at the level of the work unit, community or government. Focus is on a particular program, product, method, procedure, event or policy and may use quantitative, qualitative or a combination of both to achieve research aims (Koch, 1994). Although the fundamental approach of this study was to investigate and describe, the design remains evaluative. Evaluation research is distinguished not by the method or approach but by the purpose or intent of the research. Within health care, evaluation research is commonly conducted to document need, recognize factors that influence service implementation, identify resources availability, evaluate outcomes and determine plans (Ingersoll, 1996).

In regards to design, research designs may be classified as pre-experimental, experimental, quasi-experimental and ex post facto (Nunnally, 1978). This study used a pre-experimental design. It did not contain control groups or randomly assessed subjects. It did not contain a large sample of respondents and as such threats to internal validity, although addressed, may not be adequately controlled; consequently, causal conclusions are not possible. However pre-experimental designs, such as this study, provide rich information

for planning a more extensive study as they represent pieces of the ideal model - true experimental designs (Shavelson, 1996).

Research Questions

The research questions addressed in this study were:

1. What is the organizational performance of the nursing education unit in response to market demands for nursing services?
2. What is the faculty engagement of the nursing education unit?
3. What are the performance barriers of the nursing education unit in response to market demands for nursing services?

Research Hypotheses

According to Polit and Hungler (1999), most quantitative research is based on hypothesis though only a minority of the hypothesis is stated up front. Prediction in the design is encouraged initially at the start of the research. The research question is a statement of the specific query desired to answer the research problem. The research question guides the types of data collected. The research hypothesis, however, makes specific prediction regarding the answers to the research question. Hypotheses may be classified as simple, complex, directional, non-directional, statistical and research. The use of hypothesis in quantitative studies induces critical thinking and enhances understanding and interpretation of the data (Polit & Hungler, 1999).

The research hypotheses in this study were:

1. Nursing education units with high organizational performance to demand will have engaged faculty.

2. Nursing education units with high organizational performance to demand will have low performance barriers.
3. Nursing education units with engaged faculty will have low performance barriers.

Research Approach

A survey approach was used to conduct this evaluative study. According to Gillis and Jackson (2002) surveys, associated with a positivist perspective, are appropriate for descriptive and correlational studies. Surveys identify and describe variables at one point in time and allow exploration of prevalence and relationships among a population without manipulation. Since the survey approach is used primarily for pre-experimental or comparison group designs, much of nursing research fall into this design category. The survey may be used to measure many variables simultaneously. Surveys are also appropriate for investigating phenomena and measuring the relationship between identified variables. Considered economical and timely, surveys have the ability to identify attributes of a population and provide accurate data on a wide range of phenomena. Surveys may be conducted via questionnaires, interviews or both. In survey research, the pilot study is used for assessing a sample of respondents on open-ended or fixed choice format on a small scale. While surveys are commonly used in research, there are limitations. Validity may be difficult to establish on the measurements as respondent are prone to interject personal attributes into the survey or may not fully understand the question being asked. At times, it may prove difficult to make clear causal inferences from surveys since

they represent self reports. Surveys are also plagued by the cross-sectional stagnation and are poor at measuring changes over time (Gillis & Jackson, 2002).

The survey used in this study was constructed from two instruments: The U.S. Merit Systems Protection Board Merit Principles Survey Engagement Scale (2007) and Demand Assessment and Recommendation Evaluation (DARE Tool). Faculty engagement was addressed by the use of the U.S. Merit Systems Protection Board Merit Principles Engagement Scale. The Demand Assessment and Recommendation Evaluation Tool developed for this research provided a framework to analyze the nursing educational unit organizational performance in response to market demand of the nursing workforce and stakeholder recommendations and commonly identified performance barriers to response. The final section of the survey included demographic questions and opportunities for respondents to comment. Both are discussed in the instruments section.

Setting and Sample

According to Polit and Hungler (1999), the “overriding consideration in assessing a sample ... is its representativeness” (p. 279). Sampling is used primarily in quantitative studies and refers to the selection of a target population about which the researcher wants to investigate. Sampling designs either involve random selection (probability sampling) or nonrandom selection (non-probability sampling) methods. Although random sampling has the least bias and the lowest margin of error, most researchers in nursing, as well other disciplines, want to infuse some perspective into sampling and therefore primarily

use non-probability samples; and while non-probability sampling may be problematic for most quantitative studies, it is acceptable for pilot studies (Polit & Hungler, 1999).

This study used purposive non-probability sampling in that the researcher uses judgment based on knowledge of the issues and design of the study in the selection of the population. The target population met eligibility or inclusion criteria specific to the study. Eligibility criteria were defined by cost, practical concerns, ability to participate and design considerations. In regards to sample size, as with the case for pilot studies, a small sample is exempt from requirements connected to effect size i.e. power analyses (Polit & Hungler, 1999).

Although there are hundreds of nursing programs in the United States offering a variety of entry levels and advance nursing education, the sampling plan for this pilot study was limited to a population of programs offering entry level registered nursing options based in institutions of secondary and higher education located in Southern Regional Education Board (SREB) areas accredited by the National League for Nursing Accrediting Commission (NLNAC) and their full time faculty. As described in Chapter One, background of the problem, many recommendations have been made not only by professional organizations, but also state and national agencies. Most of the recommendations are directed at entry level registered nurse programs. The Southern Regional Education has been extremely proactive in addressing nursing workforce issues and has made recommendations to schools under its

jurisdiction, these schools were selected. A review of SREB website (SREB.org) contains a history of involvement of the SREB in graduate nursing education in 1948 expanding to addressing capacity in all nursing education levels in 1963. The SREB collaborates with the Division of Nursing of the Bureau of Health Professions in the U.S. Department of Health and Human Services. Specific to this study, the SREB published through its Council on College Education for Nursing a report on the nursing faculty shortage in 2002 and just recently in 2007 a report on the benefits of addressing the nursing shortage. In addition, nursing programs are accredited by one or both of the two national accrediting organizations: schools accredited by the NLNAC were selected. However, in the selection of NLNAC schools, it is noted that the representativeness of all entry level program types were possible in addition to advance practice program types. Based on aforementioned criteria, further specification resulted in selection of nursing education units in the six SREB states that offered all entry level programs (associate, baccalaureate and diploma levels). The directors, chairs or deans of all programs (172) meeting the eligibility criteria were contacted and offered an opportunity to participate in the study. Three calls for participants were made through electronic requests over a period of four weeks. Ten “delivery failures” and three “out of office” replies were noted on the first call. On the last call for participants, a total of 18 interested programs had responded. Letters were sent to each of the interested leaders of the nursing education unit including a template letter for participation from the institution on two occasions ten business days apart (Appendix G). Of the responding programs, only five

submitted permission from their institution to participate in the study as required by Institutional Review Board (IRB) standards. Two of the five programs did not submit all components of the assessment due to delay in faculty response and workload after four weeks of receiving survey instruments. Of the accessible programs, three participated fully based on practical concerns, and design considerations. Fifty-one full time faculty were represented by the three nursing education units.

Collection of the data occurred in the following manner: data collection employed a set of self-administered and researcher directed surveys. Surveys were mailed to the participating nursing education units. Section One of the DARE Tool, provided to the population of selected nursing programs, included explanation of the purpose of the survey, deadline, anonymity and instruction on completion. Section One had 107 items and was expected to take less than two hours to complete. This instrument was completed by a representative of the nursing education unit with intimate knowledge of process, projects and plans of the organization typically the dean, director, department head, chair, etc. To lessen misinterpretation of the questions, the researcher assisted/interviewed the program representative and provided guidance in the completion of the survey. The MSPB Engagement Scale and Section Two of the DARE Tool were administered to faculty by the program representative at the institution with the same degree of anonymity and instructions. This tool had 16 items and predicted to take five to seven minutes to administer. Section Two of the DARE Tool provided to the faculty of selected nursing programs explanation of the

purpose of the survey, deadline, anonymity and instruction on completion. This section had 49 questions and was predicted to take 10 - 15 minutes to administer. Section Two of the DARE tool also provided an opportunity for faculty respondents to comment “off-line” to facilitate probing for subjective information desired in a program assessment.

Surveys of both the nursing education unit and the nursing faculty were supplemented by a demographic component that was completed as well in the former manner. Once all data were collected from the nursing education unit (unit and faculty data), the completed survey was returned to the researcher via mail for coding and computation. Protection of human subjects was addressed by approval from the University of Southern Mississippi Institutional Review Board. The study was granted Category I, Exemption under Subpart A, Section 46.101, 45CFR46. Consent was assumed for all participants completing the survey and included disclosure of confidentiality and voluntary withdrawal from the study at any time. Respondents were instructed to request feedback on the study if desired by contacting the researcher (Appendix A).

Research Instruments

The survey used in this study was constructed from two instruments: The U.S. Merit Systems Protection Board Merit Principles Survey Engagement Scale (2007) and Demand Assessment and Recommendation Evaluation (DARE Tool). Faculty engagement was addressed by the use of the U.S. Merit Systems Protection Board Merit Principles Engagement Scale. The Demand Assessment and Recommendation Evaluation Tool developed for this research provided a

framework to analyze the nursing educational unit organizational performance and performance barriers toward market demand for nursing services as identified in nursing workforce literature and via stakeholder recommendations.

Faculty Engagement

The U.S. Merit Systems Protection Board Merit Principles Survey was developed to assess employee perception of organizational performance and to explore how agencies manage their employees to achieve organizational goals. The survey assesses the perspectives of supervisory and nonsupervisory employees regarding working conditions, job satisfaction and quality of coworkers and leaders (USMSPB, 2007). The latest MSPB survey has 36,926 respondents representing a sample of 1.8 million full time permanent federal employees. The MSPB 2007 specifically explored the performance of the Federal workforce in terms of success in achieving agency mission and accomplishments, assembling a well qualified workforce, overcoming barriers to success and preserving success through rewards, recognition and retention.

The MSPB Engagement Scale is an instrument derived from the 2005 Merit Principles Survey (USMSPB, 2007) to determine issues important to engaging Federal employees (Appendix B). These issues were identified as (1) pride in one's work; (2) satisfaction with leadership; (3) opportunity to perform well at work; (4) satisfaction with the recognition received; (5) prospect for future personal and professional growth, and (6) a positive work environment with some focus on teamwork. Sixteen questions from the MPS 2005 were identified to measure employee attitudes toward the six aforementioned themes. The sum

total of the 16 questions form the engagement scale used to represent the level of employee engagement. The levels of engagement are engaged, somewhat engaged, or not engaged.

Each of the 16 questions of the MSPB Engagement Scale is assigned a point scale ranging from 1-5 (strongly disagree with a value of 1 to strongly agree with a value of 5). The maximum engagement score is 80 (5x16) and the minimum engagement score is 16 (1x16). An employee is classified as “engage” if the sum score is 64. Other classifications are as follows: “not engaged” less than 48 and “somewhat engage” greater than 48 but less than 64.

The method used to develop the MSPB Engagement Scale involved factor analysis of the MSPB 2005 survey and a review of professional literature regarding employee engagement. The scale was considered to have internal consistency to the extent that the questions were highly inter-correlated suggesting that the items were measuring the same thing and received a similar pattern of response. The reliability for the MSPB Engagement Scale was measured with Cronbach’s coefficient alpha. In this case the alpha score reflects actual variation across respondents or error. The MSPB Engagement Scale has a Cronbach’s alpha of 0.926 - meaning that it is 92% reliable in measuring the degree to which the questions actually reflects what was intended. For validity of the MSPB Engagement Scale, a review of literature was obtained to determine whether the items contained in the scale were appropriate. To ensure acceptable levels of construct validity the scale was tested in direction and degree to the relationships on the MSPB 2005 Survey by which a positive

correlation between pay and reward and negative correlation with training were demonstrated with employee engagement. Finally external correlations, measured by the coefficient of correlation (Pearson Correlation) and statistical significance (p -value), were highly significant i.e. accountability, use of leave days, EEO complaints and lost time rate (USMSPB, 2008). The MSPB Engagement Scale was used to measure faculty engagement in this study. The assessment of faculty engagement was limited to the nursing education unit and the next level organization.

Organizational Performance

As with the Forecasting Model for the Nursing Workforce presented by Dumpe, Herman and Young (1998), the recommended supply factors related to the nursing education unit are those factors that influence the likelihood that nurses will be available and the demand factors are those factors that are driven by the health care delivery, economic, demographics and contextual perspectives. Although numerous recommendations were made by nursing professional organizations, governmental and private agencies and various others concerning the nursing workforce shortage, in particular the demand for nursing services, specific themes held the responsibility of the nursing education unit. These action themes include (1) the provision or revision of programs to increase the number of nursing programs and number of graduates by expanding capacity of and access to the nursing program (2) strategies to redesign or emphasis a portion of the nursing curriculum to meet specific societal demand and factors that determine the type of nurses needed for employment and (3) a

process for planning, reporting, evaluation and research/database maintenance specific to the nursing educational unit. Understanding the background to organizational performance of the nursing education unit was a critical portion of support for the research question, instrument development and data collection.

Access to nursing programs. The provision or revision of nursing programs to respond to market demands for nursing services consisted of recommendations to improve access of the student to nursing education programs and control/maintain capacity throughout the programmed course of study. Relevant in the literature was a focus to improve access, expand admission capacity, and increase recruitment and retention of students. Integral strategic enrollment goals were grounded in interest in improving the image of nursing and increasing cultural diversity. Other factors for improving access and expanding programs included the availability of (1) resources and infrastructure, (2) qualified faculty, (3) flexible programs/courses, (4) program types (e.g. mobility programs, accelerated programs), (5) partnerships with agencies (6) policy support and funding, (7) and appropriate technology.

Curriculum design. Redesign of the curriculum to improve core courses in both the undergraduate and graduate programs was one of the recommendation themes from nursing stakeholders to address the specific education or skill sets needed in the nursing workforce. This thematic category included the expansion or emphasis on cultural competency, leadership skills, and specific clinical skills (i.e. chronic diseases, geriatrics) to develop a curriculum congruent to competency needs/demands. Included in this category were quality issues in

the nursing workforce to increase higher educational preparation (advance practice nurses including the nurse educator) and to provide a means for continuing education and retraining (NLN, 2007; AAN, 2002).

Strategic Planning

The last category or theme identified addressed the need of the nursing education unit to plan toward meeting demand for nursing services.

Recommendations included plans for addressing access and capacity of the nursing education unit (Americans for Shortage Relief, 2008; National Advisory Council on Nurse Education, 2003) as well as issues related to curriculum design (NLN, 2007; AAN, 2002). The nursing education unit was urged to maintain a database of outcomes/trends and to use evaluation and research evidence to support strategic enrollment planning.

The Demand Assessment and Recommendation Evaluation Tool (DARE Tool), a researcher developed tool, was used to assess the organizational performance of the nursing education unit in response to the demand for nursing services. The nursing unit assessment is one of the most important means of directing the right organizational practices to meet the demands for nursing professionals. The assessment is a process designed to provide feedback from nursing programs about program efforts to address the nursing workforce issues. The Demand Assessment and Recommendation Evaluation Tool (DARE Tool) was used to categorized and describe relevant organizational performance in the response by the nursing education unit to the aforementioned themes and recommendations reviewed in Chapter II.

The DARE Tool is composed of two assessments. The first is an assessment directed towards the nursing education unit organizational performance in responding to demand for nursing services. This assessment was completed for the unit by an authority of the nursing education unit with intimate knowledge of the organization. The first assessment was comprised of eleven sections which address the thematic categories: access/capacity, curriculum design and planning. The assessment examined the ability of the program to respond to demand for nursing services as identified in the nursing literature. Included in the organizational performance assessment were queries into program offerings, program flexibility, education outreach, curriculum, advance practice, diversity, enrollment, retention, nursing image, resources and planning (Appendix C).

The sections of the organizational performance assessment are described as follows: Section one, program offerings, addressed the availability of entry-level programs offered by the nursing education unit including generic, bridge and diploma programs. Section two, program flexibility, provided an opportunity to assess the degree which nursing programs are available beyond traditional hours of operation and traditional models of delivery. Outreach education services for established registered nurses and foreign trained nurses were covered in continuing education offerings, workforce re-training and education outreach in section three.

Demands for specific market needs related to the quality (type) of skills and training desired by consumers of nursing service are accessed via

curriculum offerings in section four and advanced practice programs in section five. Elements of the curriculum offering assessment allowed a scale for the extent in which curriculum topics specific to stakeholder recommendations and market demands for nursing services were addressed by the nursing education unit. Curriculum offering might have been be in integrated into the curriculum, offered as an individual module, offered as a free standing course or offered as an entire tract/program. Components of social marketing are assessed section six and seven, diversity and the image of nursing. Strategic enrollment management was evaluated via retention in section eight and recruitment in section nine. Resources including personnel, infrastructure and partnerships reviewed in section ten.

Elements of long term planning are addressed under the “planning” component in section eleven. Included in the planning section of the assessment was a measure of the degree in which response to market demand for nursing services was considered on the previous ten sections. Program offerings, program flexibility, education outreach, curriculum, diversity, enrollment, retention, nursing image, and resources were appraised as to where they lie on a planning continuum of identification, committee assignment, policy statement, action plan, plan implementation and plan evaluation.

With the exception of section four “curriculum offerings” and section eleven “planning”, organizational performance questions for the remaining nine sections of the organizational performance assessment of DARE Tool were presented in “presence-absence” format. Presence-absence questions

requested respondents to mark which items listed apply to their experience. During analysis of each section, a “total experience” descriptive index was created by describing and simply listing the frequency by which responses were selected. “Curriculum offerings and “planning” sections were Likert-type questions. Likert-type questions requested the respondent to indicate the degree of their experience with a statement. Responses to these sections were recorded as they were appraised by the respondent on the continuum of experience under each section and for each item respectively. The DARE Tool was designed in modules and with differing question types, varying composite scales and duplication of response keys to increase data collection and decrease the tendency for response bias.

The method used to develop the assessment for organizational performance of the DARE Tool involved a review of professional literature. The review of the literature was used to determine what was known about market demand for nursing services and evaluation of organizational performance. After sources were identified and retrieved, they were carefully critiqued to determine research merit. Content analysis of recommendations and challenges from a number of authors and sources suggested guidelines for evaluating organizational performance of the nursing education unit to market demands in particular the themes associated with the revision of programs, curriculum redesign and planning. A preponderance of duplication among sources supported a claim for internal consistency (a measurement of reliability), content and construct validity (a measurement of validity) to the extent that the items

were derived from multiple sources of peer reviewed literature and national and state reports. In addition, using Delphi technique, a panel of three subject matter experts, over a period of three months, separately completed an assessment of the DARE Tool rendering judgment concerning inclusion/exclusion of items and homogeneity of content and subparts. Each cooperating expert completed two reviews of the DARE Tool resulting in a consensus opinion regarding content, instrument stability, equivalence and internal consistency supportive of instrument reliability and validity.

Performance Barriers

The DARE Tool was composed of two assessments. The first assessment reviewed organizational performance in response to demand for nursing services. The second assessment, performance barriers, queried challenges facing the nursing education unit in meeting demands for nursing services. Operationally, performance barriers were defined in chapter two as obstacles and challenges perceived by the nursing faculty to prohibit, hinder or reduce the nursing education unit's ability to respond to market demands for nursing services. Performance barriers were assessed in Part II of the Demand Assessment and Recommendation Evaluation (DARE) Tool. Part II used trends identified in the review of the literature specific to performance barriers to assess the perception of the nursing faculty of obstacles and challenges to responding to demand for nursing services. This part of the DARE Tool assessed the perspectives of nursing faculty to issues of enrollment management, age and cultural demographics, professional image, funding/infrastructure, curriculum and

faculty. It was the goal of Part II of the DARE Tool to specifically explore performance barriers of the nursing education unit in terms of limiting success of the unit in achieving its performance goal of preparing an appropriately trained and adequately numbered population of nurses sensitive to market demands for nursing services (Appendix D).

The performance barrier assessment derived from the literature determined the importance regarding performance barriers as obstacles to organizational performance. After an analysis of barriers identified in the literature, 49 questions were developed to measure faculty perception of performance barriers on the aforementioned themes. The sum total of the 49 questions from the performance barrier assessment used to represent the level of performance barriers. The levels of performance barriers were presented on a continuum from low performance barriers to high performance barriers.

Each of the 49 questions of section two "performance barriers" of the DARE Tool was assigned a point scale ranging from 1-5 (strongly disagree with a value of 1 to strongly agree with a value of 5). The maximum performance barrier score was 245 (5x49) and the minimum performance barrier score was 49 (1x49).

The method used to develop Part II (performance barriers) of the DARE Tool involved a review of professional literature regarding nursing workforce, demand for nursing services and barriers to organization performance. According to Gillis and Jackson (2002), content validity may be supported by evidence such as literature view, opinion of experts and the use of the theoretical

framework (p. 429). The tool was considered to have internal consistency and content validity to the extent that the questions are derived from multiple sources of peer reviewed literature and national and state reports regarding demand for nursing and nursing services. After sources were identified and retrieved, they were carefully critiqued to determine research merit. Content analysis resulted in a preponderance of duplication among sources and supports a claim for internal consistency and content validity. As part of the DARE Tool, performance barriers were assessed by subject matter experts in nursing education and nursing leadership resulting in a consensus opinion on this variable. Respondents marked items gleaned from nursing literature as barriers to responding to demands for nursing service. An analysis of the “total experience of performance barriers” was created as outlined above. The results of the performance barrier assessments were represented on a high/low performance barrier continuum.

Demographic Data

The final part of the DARE Tool, “demographics”, provided profiles of the agency and individual respondent. For the agency, demographic information requested reflected other program performance indicators such as graduation rate, attrition rate, admission rate, NCLEX pass rate, accreditation standing, and student, faculty/staff, employer/community satisfaction survey scores. Profile information solicited also included number of faculty, number of students, number of minority faculty, number of male faculty, percentage of minority students, percentage of male students, average admitting class size, average size of graduating class, faculty student class ratio and faculty student clinical ratio

(Appendix E). Demographic profiles for faculty included level of organizational responsibility, level of education; program assignment, years of faculty experience, tenure status, salary, retirement eligibility; intent to leave, performance rating, gender, age, and race/ethnicity (Appendix F).

Instrument Design

The method used to develop the DARE Tool involved analysis and review of professional literature regarding the nursing workforce market and recommendations of nursing stakeholder concerning the nursing workforce shortage. The results from this analysis and review determined the items contained in the tool. The assessment elements of the DARE Tool were examined and reported on by subject matter experts and compared to recommendations of professional organizations and governmental agencies. The resulting tool was used to measure components of organizational performance and performance barriers on an ordinal scale. Scoring of the DARE Tool occurred in an organized manner using rules for measuring attributes determined in advance of data collection. Since no instrument yield perfect measurement, efforts were taken to reduce error in applying the measurement and the object being measured. In this study, efforts were taken to maintain consistency and reliability in data collection by (1) providing standard guidelines for respondents (2) using standard guidelines in coding (3) reducing response bias via tool design and format, (4) providing instruction and direction to improve instrument clarity and (5) determining consensus in item sampling. In addition, to validate the program assessment process as an intervention, certain intermediate

(performance) outcomes were analyzed including enrollment rates; graduation rates and National Council Licensure Examination (NCLEX) pass rates. The survey questions were developed to determine criterion-related validity between organizational performance, performance barriers and well documented intermediate performance outcomes. A high correlation of scores between the variables and performance criteria further supported instrument validity.

Data Analysis

Appropriate to the nature and design of the study, descriptive statistics was used in data analysis. Descriptive statistics may be used to directly answer research questions and are most likely used on small samples (Polit & Hungler, 1999). Inferences from a small sample are not adequate to draw conclusions and generalize about the larger population.

Data were organized, coded and analyzed using computer software to perform statistical analysis. Univariate and bivariate descriptive statistics were analyzed and scored on an ordinal scale of measurement. Univariate descriptive statistics application encompassed measures of central tendency, variability, distribution and standardized data including mode, median, mean, range, standard deviation, variance, proportions and percentages. Bivariate descriptive statistics included two dimensional frequency distribution and analysis of variance procedures for measurement of differences between and among variables. Faculty engagement and performance barriers were expressed on a continuum, while organizational performance was expressed as a summation of experience.

Findings from this study cannot be generalized to nursing education units other than those in the pilot sample. However, according to Shalvelson (1996), relationships between two or more variables may be predicted even in absences of theory or prior research. In this case, "a formal hypothesis cannot be stated, but a less formal prediction based on an educated guess can be made" (p.6). Although hypotheses were presented, they represented an "educated guess" of the researcher and were not presented for testing. While inferential relationships between all variables was not be possible, correlation analysis between "faculty engagement" and "performance barriers" were presented for participating education units faculty populations. In addition, the survey collected subjective data and provided a richer and fuller understanding and individuality of the nursing education unit under assessment. Subjective data collected was classified under the themes in which comment was sought. These were "faculty engagement" and "performance barriers". Manually, a tally was recorded for each variable receiving comment and reported antidotal in summary where indicated. No attempt was made toward qualitative data analysis as was not the nature of the study.

Summary

The third chapter described the methodology, design, sampling, instruments and analysis of the study. Research questions and hypotheses, designed to address the purpose of the study, were explored using an evaluative approach and a non-experimental design. The methodological steps allowed for an approach to utilize multiple data collection tools to which to investigate

organizational performance, performance barriers and faculty engagement in terms of agency and individual effort of the nursing education unit in meeting market demands for nursing services. Faculty engagement was addressed by the U.S. Merit Systems Protection Board Merit Principles Engagement Scale. The Demand Assessment and Recommendation Evaluation Tool, developed for this research, were used to measure organizational performance and performance barriers. This study used a purposive non-probability sampling plan to limit the population to programs offering all entry level registered nursing options based in institutions of secondary and higher education located in Southern Regional Education Board (SREB) areas accredited by the National League for Nursing Accrediting Commission (NLNAC) and their full time faculty. Data was collected using a compilation of measures of the aforementioned variables, respondent comments, as well as demographical and archival data. The purpose, methodology and design of the study dictated how data was collected, analyzed and interpreted. Statistics appropriate to the nature of the study were expressed in the form of continuums or summations. What is a “correct” and “appropriate” interpretation is determined in part by the researcher’s theoretical frame of reference (Shalvelson, 1996). The fourth chapter presents the results of the statistical analyses used for data collection.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to empirically investigate organizational performance, organizational barriers and faculty engagement in the nursing education unit in response to market demands for nursing services as an approach to understand the problem of market disequilibrium between demand for nursing services and the supply of nurses. Chapter three described the research design, sampling, instrumentation and approach for data analysis. This chapter continues and elaborates on the data analysis process. Information presented in this chapter will cover the process by which the data was collected, measured and analyzed. Data analyses proceeds in accordance to the research questions and the underlying conceptual framework of the study. The result is a description of the study and information regarding salient features of the findings of the Merit Systems Protection Board Engagement Scale and the Demand Assessment and Recommendation Evaluation Tool.

Research Tools

The survey used in this study was constructed from two instruments: The U.S. Merit Systems Protection Board Merit Principles Survey Engagement Scale (2007) and Demand Assessment and Recommendation Evaluation (DARE Tool). After IRB approval, the assessment packet including the MSPB Engagement Scale and DARE Tool was sent to nursing education units representing programs offering entry level registered nursing options based in institutions of secondary and higher education located in SREB areas accredited by the National League for Nursing Accrediting Commission (NLNAC). Faculty engagement was

addressed by the use of the U.S. Merit Systems Protection Board Merit Principles Engagement Scale. The Demand Assessment and Recommendation Evaluation Tool developed for this research provided a framework to analyze the nursing educational unit organizational performance in response to market demand of the nursing workforce and stakeholder recommendations and commonly identified performance barriers to response. The final section of the survey included demographic questions and opportunities for respondents to comment. No adjustments or revisions were made to standardized research instruments i.e. MSPB Engagement Scale. Data collection for all instruments met specified collection criteria and occurred in the manner specified in Chapter Three. Mainly, Section One of the DARE Tool was completed by the dean or director of each nursing education unit and the MSPB Engagement Scale and Section Two of the DARE Tool were completed by full time nursing faculty.

Data Analysis

Guidelines exist as to what analysis to perform according to the variables in the study, their role, and number and the design of the study. In this study, analysis of the variables of organizational performance, performance barriers and faculty engagement were conducted. Appropriate to the nature and design of the study, descriptive statistics was used in data analysis to directly answer research questions. Statistical analysis of the research questions occurred in two following steps (1) coding the data and (2) data analysis providing a summary description of the situation under study. Because summarizing data often results in the loss of identity between the subject and the data, efforts were made in data entry to

pair data linking organizational performances with unit demographics as well as data linking performance barriers and faculty engagement with individual faculty demographics. Vigilance and scrutiny was used in coding and computation by continuously checking the original data sheets with data entered in the computer as well as comparing manual computations to computer results.

Frequency distributions showing the distributions of scores on the values for the entire population and selected groups including cumulative frequencies were calculated as the primary means to organize, summarize and present data. Where data was missing or null (0), both valid percentage and cumulative percentage were computed; and in items were non-selection an option, case summaries contain both valid case and missing case percentages. In addition to arranging data in frequency distributions, computations describing specific features of central tendency (mean and mean of means) and variability (range and standard deviation) were made. Central tendency and variability allowed an analysis of scores most representative of the distribution and its inconsistency. Standard error and confidence intervals for alpha .05 were calculated for relationships between engagement and select faculty demographics to determine errors of estimation for those particular distributions.

Although inferential statistics were not used to address the research question as inferences from a small sample are not adequate to draw conclusions and generalize about the larger population, research hypotheses were approached using analysis of variance models to compare means statistically. One Way Analysis of Variance (ANOVA) was calculated between

groups and within groups and presented to provide information regarding patterns of variation using sum of squares, degrees of freedom, mean square, source variation (F statistic) and significance. Fitting to design, like the research questions, research hypotheses resulting from this study cannot be generalized to nursing education units other than those in the pilot sample. Data on variables for organizational performance, performance barriers and faculty engagement as defined and measured in this study, were measured on an ordinal scale. Descriptive statistics, as well as summative indexes for program assessment categories are presented in the text were indicated and is presented here in conjunction with the research questions and hypotheses.

Research Question One: Organizational Performance

Question One asked what is the organizational performance of the nursing education unit in response to market demands for nursing services. The Demand Assessment and Recommendation Evaluation Tool (DARE) questions dealt with performance of the nursing education unit in response to market demand for nursing services. For this study, the nursing education units were institutions that provide entry level education leading to licensure as a RN and/or provide education leading to advanced nursing degrees in the United States.

Organizational performances were defined as the response of the nursing education unit to public demand and national recommendations by nursing workforce stakeholders for nursing services and were considered the prescribed goals of the nursing education system. The “organizational performance” section of the DARE tool (Part One) was used to measure organizational performance.

Frequencies for responses were collected on each item of the DARE Part One according to themes identified in the literature. These action themes include (1) the provision or revision of programs to increase the number of nursing programs and number of graduates by expanding capacity of and access to the nursing program (2) strategies to redesign or emphasis a portion of the nursing curriculum to meet specific societal demand and factors that determine the type of nurses needed for employment and (3) a process for planning, reporting, evaluation and research/database maintenance specific to the nursing educational unit.

Under the theme of provision or revision of programs, all nursing education units reported flexibility of programs and expansion of programs via multiple program offerings. Reporting nursing education units offered multiple entry levels with one unit reporting entry level options offering associates degree, baccalaureate, and bridge/mobility programs. Nursing education units located in a community college offered entry level associates and mobility programs for licensed practical nurses while the units located in institutions of higher education offered baccalaureate entry level. One nursing unit offered advance practice masters degrees. The nursing education unit offering advance degrees, also offered greater program flexibility selecting options with distance education program, second degree and accelerated programs and flexible clinical. No nursing education unit reported offering continuing education, workforce retraining and education outreach i.e. certification programs and refresher programs.

Also under the theme of provision or revision of programs, the image of nursing was addressed with career exploration programs, image of nursing campaigns, introduction to nursing courses, K12 and community outreach; two units reported marketing campaigns with 3 or 4 projects each. Increasing diversity was not addressed by one nursing education unit however this unit had the most diverse student and faculty population. The others reported equally programs to increase male and minority diversity and had images of males and minorities on marketing tools. Efforts to increase enrollment was uniformly addressed by all nursing education units placing efforts on 3-4 projects each. Improving resources was heavily addressed by two units 6-7 interventions while the other unit having been recently renovated addressed one intervention – faculty mentoring. Retention of students represented the largest total effort of the nursing education units. Units report 6-8 interventions ongoing to improve student retention. All report student support services including tutoring and mentoring services; academic advisement by nursing faculty, nursing student organizations and nursing scholarships. Table 7 presents the response frequencies of the nursing education units related to provision or revision of programs.

With the theme of curriculum design, the intent was redesign of the curriculum to improve core courses to address the specific education or skill sets needed in the nursing workforce. Changes in the curriculum were reported on the

Table 7

Provision/Revision of Programs Response Frequency Percentages by Nursing Education Units

Measure	Percent		
	Unit 1	Unit 2	Unit 3
Entry level program offerings	40.0%	80.0%	40.0%
Advanced education	0%	16.6%	0%
Program flexibility	10.0%	40.0%	10.0%
Increasing diversity	37.5%	0%	37.5%
Improving image of nursing	80.0%	20.0%	60.0%
Student retention	88.8%	66.6%	77.7%
Increasing enrollment	40.0%	30.0%	40.0%
Improving resources	9.0%	63.6%	54.5%
Continuing education	0%	0%	0%

level of highest implementation as “not offered”, “integrated”, “module”, “course” or “program offering” and are summarized in Table 8. Curricular recommendations regarding chronic care nursing, nursing of vulnerable populations, spirituality in nursing and holistic nursing were reported as integrated items only by all the nursing units. Geriatric nursing, transcultural nursing, nursing informatics and nursing leadership were reported as independent courses in at least one nursing education unit. Nursing research was reported as an independent course in two nursing education units. One unit

offered advance practice programs/tracts in nursing education and nursing leadership.

Table 8

Curriculum Design Adaptation Frequencies of the Nursing Education Unit by Levels of Implementation

Recommendation	Frequency				
	Not offered	Integrated	Module	Course	Program
Nursing educator	0	2	0	0	1
Geriatric nursing	0	2	0	1	0
Chronic care nursing	0	3	0	0	0
Vulnerable populations	0	3	0	0	0
Transcultural nursing	0	2	0	1	0
Spirituality in nursing	0	3	0	0	0
Holistic nursing	0	3	0	0	0
Telehealth	1	2	0	0	0
Nursing informatics	1	1	0	1	0
Rural health nursing	1	2	0	0	0
Nursing leadership	0	1	0	1	1
Nursing research	0	1	0	2	0

Note. N=3

Of the possible cumulative score (48) for response to the twelve items of curriculum offerings, the nursing education unit that reported all options for curriculum adaptations on the lowest level of implementation, the integrated

level, received the lowest score (12), while the nursing education unit reporting higher adaptations i.e. advance practice programs received the highest score (25) having the most program and course offerings.

The last category or theme identified addressed the need of the nursing education unit to plan toward meeting demand for nursing services. Planning items were scaled as a non-agenda item, agenda item, committee assignment, mission/policy, action plan, program implementation and program evaluation. Nursing units selected the highest level of implementation for each item. All nursing education units reported multiple planning projects receiving planning scores of 40, 52 and 40 compared to possible 78 cumulative total in the category. Planning projects included issues in diversity, image, workforce shortage, nursing educator training, enrollment planning, program offerings and flexibility; continuing education, curriculum, student retention, resources and infrastructure, faculty retention, faculty engagement and faculty recruitment. As it relates to levels of implementation, 12.8% of the thirty-nine plan responses were reported as non-agenda items; 10.2% agenda items; 2.5% committee items; 25.6% mission statements; 20.1% action plans; 23.1% implemented plans and 7.6% plan evaluation and outcome research. Thirty-eight percent of planning was in the developmental stages of agenda item, committee item or mission statement. More than half of the plans were more developed into action plans, program/plan implementation and plan/outcomes evaluation. Although passed the developmental planning levels, no written action plans were reported for

Table 9

Planning Frequencies of the Nursing Education Unit by Levels of Implementation

Item	Frequency						
	Nagen	Agen	Comm	Miss	Plan	Impl	Eval
Diversity	0	0	0	3	0	0	0
Image	2	0	0	1	0	0	0
Workforce	1	0	0	1	1	0	0
Nsg Educator	0	0	1	0	1	1	0
Enrollment	0	1	0	2	0	0	0
Offerings	0	0	0	1	0	1	1
Flexibility	0	1	0	0	1	0	1
Continue Ed	2	1	0	0	0	0	0
Curriculum	0	0	0	0	0	2	1
Retention	0	0	0	1	0	2	0
Resources	0	0	0	1	2	1	0
Faculty engage	0	0	0	0	1	2	0
Faculty recruit	0	1	0	0	2	0	0

Note. N=3; Nagen = non agenda item; Agen = agenda item; comm = committee; miss = mission; plan = plan; Impl = implementation; Eval = evaluation

addressing diversity, image of nursing, enrollment, and continuing education. No action was reported on plans established for addressing the nursing workforce and faculty recruitment. Plans were being implemented for increasing nursing educator, program offerings, curriculum, student retention, increasing resources

and retaining nursing faculty. Plans were being evaluated for desired outcomes for program offerings, program flexibility and curriculum. The most effort was spent on curriculum planning. Table 9 represents planning frequencies of the nursing education unit by level of implementation.

Research Question Two: Faculty Engagement

Question Two asked what was the faculty engagement of the nursing education unit? The MSPB Board Engagement Scale questions dealt with employee engagement. Employee engagement was defined as heightened connection between employees and their work, their organization or the people they work for or with. For the purposes of this study, faculty engagement was defined as a heightened connection between nursing faculty and their work, their organization or the people they work for or with. Faculty engagement was measured using the Employee Engagement Scale. An employee was classified as “engaged” if the sum score was 64. Other classifications were as follows: “not engaged” less than 48 and “somewhat engaged” greater than 48 but less than 64.

The average nursing faculty in the study was “somewhat engaged” with a mean engagement score of 61.9 with a range of 39-79 and a standard deviation of 11.1. Individually, engagement of the nursing faculty seems to trend toward the higher side of the engagement scale. The greatest number of faculty (47.1%) fell into the “engaged” category. Next, 41.2% of the faculty was “somewhat engaged” and only 11.7% of the faculty was “not engaged”. The distribution of each of the six engagement categories of pride in ones work or work place, satisfaction with leadership, opportunity to perform well at work, satisfaction with

recognition received, prospect for future personal and professional growth, positive work environment with some focus on team work had mean scores greater than 3.0 on a 5 point progressive Likert-type scale indicating some degree of agreement to each. Similar to the employee engagement results in U.S. Merit Systems Protection Board Report (2008), nursing faculty engagement was influenced by the organization. In comparison with the average U.S. Department of Education employee (engaged 27.7; somewhat 49.5, not engaged 22.8, average score 55.45) and the average U.S. Department of Health and

Table 10

Descriptive Statistics of Faculty Engagement by Category

Category	Min	Max	Mean	Std.D
Pride in one's work place	2.5	5.0	4.04	.59
Satisfaction with leadership	2.0	5.0	3.88	.85
Opportunity to perform well at work	2.5	5.0	3.92	.71
Satisfaction with the recognition received	1.0	5.0	3.57	1.16
Prospect for future personal and professional growth	2.0	5.0	3.83	.92
Positive work environment with some focus on teamwork	2.0	5.0	3.83	.80

Note. N=34

Human Services employee (engaged 36.6; somewhat 45.7; not engaged 17.7; average score 58.24) nursing faculty in this study were more engaged.

Table 10 presents the six faculty engagement categories.

The category “pride in one’s workplace” had the greatest mean score of 4.04 indicating an agreement with items in the category. These items were ... my organization is successful at accomplishing its mission; my work units produces high quality graduates and service programs; the work I do is meaningful for me and I would recommend my organization as a place to work. The category “satisfaction with the recognition” received the lowest mean with 3.57. Items in the category were “recognition and rewards are based on performance in my work unit” and “I am satisfied with the recognition and rewards I receive for my work.” Of the 16 individual items, “the work I do is meaningful for me” received the highest score with a mean of 4.44 and “I have the resources to do my job well” the lowest mean at 3.36.

A one way analysis of variance (ANOVA) was computed between engagement and selected faculty demographics for an assessment of association between and within groups. It described, statistically, the levels of faculty engagement based on levels of programs assignment. As level the of program assignment increased in the nursing education unit, levels of employee engagement increased. Faculty assigned to technical programs presented the lowest mean engagement. Engagement increased with faculty assigned to undergraduate programs, and engagement was highest for faculty assigned to advance practice/master level programs. All faculty in graduate programs were engaged while faculty in technical and undergraduate programs were on average “somewhat” engaged. An ANOVA of program assignment groups produced an F-

statistic (2, 29) of 3.2 and was not significant at .056 for between and within group distributions.

Table 11

Descriptive Statistics of Faculty Engagement by Program Assignment

Assignment	N	Mean	Std. Deviation	Std. Error
Technical	7	54.1	9.1	3.4
Undergraduate	21	62.9	11.5	2.5
Graduate	4	70.5	8.2	4.1
Total	32	61.9	11.4	2.0

Note. N=32; "engaged" 64 or greater; "not engaged" less than 48; "somewhat engaged" greater than 48 but less than 64.

While not statistically significant, other associations were noted. There are differences in the level of engagement based on the level of education. The higher the faculty education level the more likely the faculty will engage. Faculty holding doctorates presented an average engagement score of 68.5 while faculty with holding masters degrees averaged 61.0 on engagement. Findings are similar with organization responsibility and institution type. Nursing administrators and program coordinators (M=63) were more engaged than nursing instructors (M=60). Finally the institution type where the faculty worked was responsible for differences in level of engagement. In the study, faculty in four year colleges with graduate programs (M=64) and without graduate programs (M=62) engaged at higher degrees than faculty in 2 year programs (M=54)

suggesting faculty employed in nursing units with advanced offerings were more engaged than faculty in programs with less advance practice offerings.

Salary findings had the highest mean engagement (64) with average salaries. Average salaries were denoted by faculty who considered their salary as average compared to their coworkers. This faculty was more engaged than those who considered comparatively higher (M=57) or lower salaries (M=53). Comparisons of group means of recent faculty performance rating were similar to salary findings in that faculty with average performance ratings scored higher on engagement than faculty with higher ratings. Findings in retirement eligibility and intent to leave were reverse in engagement. Faculty who were eligible for retirement had a mean engagement score of 54, which was lower than those ineligible for retirement with a mean score of 63. Mean intent to leave scores were 70 for those with a low intent to leave, 56 for moderate intent, and 48 for high intent. Respondents answering undetermined had a mean intent to leave score of 54. The connection was that those with low intent to leave are engaged, and as intent to leave increases engagement decreases. There were some differences in the level of engagement in gender, age and race. Males, minorities and faculty ages 25-34 and 55-65 were engaged. Faculty respondents indicating majority status had mean engagement scores of 58 and minority 74. Males averaged 74 and females 61. Group mean scores were 64, 62, 61, and 65 for ages 25-34, 35-44, 45-54 and 55-65 respectively.

Research Question Three: Performance Barriers

Question Three asked what were the performance barriers of the nursing education unit in response to market demand for nursing services? Table 12 displays the finding identified by nursing faculty as performance barriers of the nursing education unit. The Demand Assessment and Recommendation Evaluation Tool (DARE) questions dealt with performance of the nursing education unit in response to market demand for nursing services and the perceptions of performance barriers by nursing faculty to meeting performance objectives. Again, for this study, the nursing education units were institutions that provide entry level education leading to licensure as a RN and/or provide education leading to advanced nursing degrees in the United States. Nursing faculty were full time nursing faculty of these participating nursing units.

Table 12

Performance Barriers Response Frequencies and Percentages

Performance Barrier	Frequency	Percent
Academic Advising	21	61.7%
High School Outreach	19	55.9%
Scholarship Funding	25	73.5%
Competition	24	64.7%
Qualified Students	25	73.6%
Cost of Tuition/Fees	22	64.7%

Table 12 (continued).

Financial Aid	26	76.5%
Understanding Opportunities	17	50.0%
Levels of Entry	18	52.9%
Qualified Full Time Faculty	24	70.6%
Qualified Part Time Faculty	18	53.0%
Program Flexibility	18	52.9%
Education Outreach	20	58.8%
Recruitment/Marketing	21	61.8%
Budget Constraints	19	55.9%
Clinical Space/Resources	28	82.4%
Classroom Space	19	61.8%
Laboratory Space	25	73.5%
Educational Resources	20	58.9%
Student Life Factors	25	73.5%
Student Retention	22	64.7%

Note. N=34; Items identified as barriers receive scores of 4 or 5 on a progressive 5-point Likert scale where 4= agree and 5= strongly agree that the item affect the nursing units ability to respond to demand for nursing services.

Performance barriers were defined as obstacles and challenges, tangible or intangible, that prohibit, hinder or in some way reduce an organization's performance in meeting its intended outputs, goals and objectives.

Performance barriers in this study were perceived by the full time nursing faculty to prohibit, hinder or reduce the nursing education unit ability to respond to

market demands for nursing services. Performance barriers were assessed in Section Two of the Demand Assessment and Recommendation Evaluation (DARE) Tool. In this study, performance barriers seemed to trend toward the higher side of the scale demonstrating multiple challenges to the nursing education unit. One hundred percent of the faculty reported performance barriers existing in their programs. Individual barrier scores generated on the faculty ranged from 65 – 183 compared to the base range of 49-245 and an average of 153.4. The average cumulative barrier scores for the nursing education units were 166.7, 146.9 and 163.4. Of the 49 items, faculty identified 21 (42%) as barriers. “Scholarship funding” and “clinical space/resources” had the highest mean score of 4.03 each and represented the most selected barriers followed by “student personal life factors” (M=3.97) and “financial aid” (M=3.91). The least selected as barriers were “interview requirements” (M=2.35), “reference requirements” (M=2.41), “prerequisite medical training requirements (M=2.47)” and “competition with other majors” (M=2.47).

As it related to literature derived themes of performance barriers, individual items assessed faculty perception on the identified aforementioned themes of (1) enrollment management, (2) age and cultural demographics, (3) professional image, (4) funding/infrastructure, (5) curriculum and (6) faculty. “Enrollment management barriers” were identified by nursing faculty in pre-nursing academic advisement; scholarship funding; competition with other nursing programs; qualified students; tuition/fees; financial aid; recruitment/marketing and student retention. “Student personal life factors” were

identified under the age and cultural demographics theme. Under the theme of “professional image”, high school outreach; community/professional education outreach; understanding opportunities in nursing; multiple levels of entry were considered barriers. “Funding/infrastructure” barriers were program flexibility; budget constraints; clinical/resources; classroom space; laboratory space and educational resources. No “curriculum” barriers were identified and “faculty” barriers included a lack of qualified full time and part time faculty.

Although statistical significance was not established, a comparison of mean performance barrier scores for faculty demographic groups were computed and noted against the mean performance barrier score (153.4). An inverse association existed between performance barriers and levels of responsibility, educational preparation, performance rating, program assignment, salary and institution type. Nursing education unit administrators reported less performance barriers (M=134.3) than coordinators (M=156.5) and instructors (M=155.4). Performance barriers scores were also lower with faculty teaching graduate level (M=117.7) than undergraduate (M=154.0) and technical (M=166.7) levels. Nursing faculty with doctorates (M=143.2) were lower than those with masters (M=153.5); faculty with excellent performance ratings (M=142.9) lower than good (M=154.8) and average (M=159.7); faculty who considered their salaries above average (M=151.4) as compared to their coworkers than average (M=152.1) and below average (M=153.5); and those teaching at institutions of higher learning (M=149.9) lower than those teaching at the community college (M=160.6).

A converse association was noted with retirement eligibility and intent to leave. Faculty who reported retirement eligibility also reported higher performance barriers (M=157.0) compared to those who were not retirement eligible (M=149.4). The same was the case for those intending to leave the nursing education unit. Those with a high intent to leave (M=177.0) indicated more performance barriers than those with a moderate intent (M=157.2) or low intent (M=145.2). Faculty respondents indicating majority status had mean performance barrier scores of 159.4 and minority 121.0; males averaged 164.5 and females 151.561. Average group scores were 125.7, 158.5, 150.2, and 158.3 for ages 25-34, 35-44, 45-54 and 55-65 respectively.

Demographic Data

The final part of the DARE Tool, "demographics", provided profiles of the nursing education unit and the nursing faculty. Unit demographics included information regarding program performance indicators, performance survey reports and unit profiles. Faculty demographic information addressed level of organizational responsibility, education level, program assignment, tenure, salary, retirement eligibility, performance, intent to leave and profile.

Unit demographics. Of the participating nursing education units, one was a community college offering entry level associated degree (LPN-ADN and ADN) programs, one a four year college offering baccalaureate (ADN-BSN and BSN) programs and one a four year college offering baccalaureate (ADN-BSN, BSN) and master degree programs. The number of full time faculty in the nursing education units ranged from 7 to 35 and part-time/adjunct faculty ranged from 7-

12. Fifty-one faculty were represented by the three units including 2 male faculty and 16 minority faculty. The nursing student body size ranged 75-475 students with the total number of students represented being 648 (10.2% minority and 4.8% male). The nursing education units admitted 48-120 students per admit term and admitting 55% - 95% of all qualified students who applied. They graduated 27 – 90 students per graduation term. The maximum class/faculty ratio was 40:1 for one nursing education unit while the others were 20:1; clinical/instructor ratio was 8:1 throughout. Nursing units tracked customer satisfaction through annual survey reports. All respondents were in good standing with their accrediting bodies and had good or outstanding satisfaction surveys from students and community. One nursing unit did not perform faculty/staff satisfaction surveys; the others reported average or outstanding assessments.

Indicators for entry level graduation rate, first year attrition rate, admission rate (ratio of number of students admitted and the number of qualified applicants and National Council Licensure Examination (NCLEX) scores are presented in Table 13. The performance measures represent local, regional and national indicators tracked by the unit. It is noted... the nursing education units graduate 66.6% of the students admitted with 94.7% NCLEX pass rate losing more than one third of the population the majority of which (82%) the first nursing year.

Table 13

Descriptive Statistics of Demographical Performance Rates of the Nursing Education Unit.

Indicator	N	Min	Max	Mean	SD
Graduation	3	58.3	74.8	66.6	8.25
Attrition	3	20.0	36.6	27.433	8.84
Admission	3	55	95	78.17	21.10
NCLEX	3	92	100	94.67	4.62

Note: graduation rate = entry level graduation rate; attrition = first year attrition rate; admission = admission rate (ratio of number of students admitted and the number of qualified applicants); NCLEX = pass rate on the National Council Licensure Examination

Faculty demographics. Part two of the DARE Tool was completed by 34 of the 51 full time faculty (67%). Demographics of the responding nursing faculty is reported in valid percentage as not all faculty responded to each question. The population of faculty was predominately white female with the following minority reports - 6% male gender and 20% racial minority. Over half (52%) of the faculty was 44-64 years old and no faculty reported age over 65 years or under the 25 years. Four held doctorate degrees (12%), 28 held master's degrees (87%). No baccalaureates were reported as highest degree held. Thirteen percent of the faculty identified primary level of organizational responsibilities as administrators, 27% course coordinators/managers, 60% instructors. Twenty-two percent were primarily assigned to technical programs, 65% baccalaureate programs and 12% masters programs. In regards to salary, 84% reported an average or above average salary as compared to their co-workers. Although 91% of the nursing

faculty reported performance ratings of good or outstanding and only 39% were eligible to retire, almost half (47%) reported moderate to high intent to leave. Interesting enough, no faculty indicated tenured status. Table 14 summarizes the findings.

Table 14

Selected Faculty Demographic Response Frequencies and Valid Percentages

Demographic	N ^a	Frequency	Valid Percent
Average-Above Average	31	26	84%
Salary			
Good-Outstanding	32	29	91%
Performance Rating			
Retirement Eligible	31	12	39%
Moderate to High Intent to	32	15	47%
Leave			
Not Tenured	23	23	100%

Note. N=34

N^a= number of responses

Respondent Comments

In addition, the survey collected subjective data and provided a richer and fuller understanding and individuality of the nursing education unit under assessment. Subjective data collected was classified under the themes in which comment was sought on Part Two of the DARE Tool - "performance barriers." Manually, a tally was recorded for each variable receiving comment. One

comment was made regarding professional image; eight comments were made regarding enrollment management, four regarding funding and infrastructures and four regarding engagement. Respondent comments were received from all nursing education units and reported antidotal in full in Table 15. No attempt was made toward qualitative data analysis as is not the nature of the study.

Table 15

Respondent Comments

Funding and Infrastructure

We have suffered from rising tuition cost and decreased funding/higher education budget cuts.

We face loss of qualified students due to a lack of scholarship funding

Our college is small and has a small vision! We are told that we do not have enough money to pay the salaries to recruit highly qualified nursing faculty, have the resources and equipment we need, etc.

The program does not have the financial support to move into the 21st Century.

Professional Image

We have five RN schools in our community – one diploma, two ASN, and two BSN. This is extremely confusing for the public.

Table 15 (continued).

Enrollment Management

Multiple ADN programs are located within a 50 mile radius increasing competition for students. Students often fail to see the NEED for a BSN education when they take the same boards, earn much the same salary and have less than half the debt upon graduation.

There is a lot of competition for nursing students in the region. Our admissions criteria are not as strict because we are enrollment driven to keep our doors open.

We have many community colleges recruiting our students. When the student graduate from a community college, they are making the same salary as a BSN nurse; there is no motivation to go to a BSN program. Salaries need to increase with educational preparation for the jobs.

This school of nursing lacks strength in admissions criteria.

We tend to admit students that were not successful on pre-admissions testing at other colleges/universities.

We do not interview our students.

Students are arriving to schools of nursing without critical thinking skills.

The majority of the time when students fail it is because life hits them "in the face".

Table 15 (continued).

Engagement

Leadership at the President and VP Student Services is a barrier; there is not a spirit of cooperation and teamwork beyond the nursing program.

We have a problem with the President and VPs leadership, not our director.

Our program is in transitioning from an integrated curriculum to team taught-paradigm. Senior faculty not accepting transition has created strife with the program.

We do not have tenure.

Research Hypotheses

Research hypothesis one. Hypothesis One proposed nursing education units with high organizational performance to demand will have engaged faculty. Because of differences in scales among sections in Part One of the DARE Tool, organizational performance was represented by sections for planning and curriculum as a summary of response items on an ordinal scale. Means engagement scores of the individual nursing education units were compared to mean planning and curriculum scores. The results reflected nursing units with higher organizational performance scores on curriculum and planning also had the highest engagement score.

Research hypothesis two. Hypothesis Two proposed nursing education units with high organizational performance to demand will have low performance barriers. Again due to scale differences, planning and curriculum represented

organizational performance scores. These scores were compared to the means performance barrier scores of the nursing education unit. The maximum performance barrier score was 245 (5x49) and the minimum performance barrier score is 49 (1x49). Nursing units with high organizational performance had the lowest performance barriers.

Research hypothesis three. Hypothesis Three proposed nursing education units with engaged faculty will have low performance barriers. The mean engagement scores of the nursing education units were compared to the mean performance barrier scores. Nursing units with highest engagement scores also had the lowest performance barriers. Nursing faculty who were engaged had lower barrier scores (M=145.6) than faculty who were somewhat engaged (M=157.8) and not engaged (M=168.8).

Demographic performance indicators also corresponded to the above trends. It is noted that graduation rate was higher in nursing education units with higher engagement scores. The reverse was the case with first year attrition rates and performance barriers. Nursing education units with higher faculty engagement scores had lower performance barrier scores and lower attrition rates. All nursing education units were above national average and met state standards on NCLEX scores. Table 16 displays the comparisons of mean scores identified between organizational performance, faculty engagement and performance barriers.

Table 16

Descriptive Case Summary on Organizational Performance, Performance Barriers and Faculty Engagement

Research Variables							
Unit	Engage	Barrier	Organizational Performance				
			Research Indicators		Demographic Indicators		
			Curriculum	Planning	Graduate	Attrition	NCLEX
1	62.2	166.7	13	40	58.3	36.6	100
2	64.3	146.9	25	52	74.8	20.0	92
3	54.1	163.4	12	40	66.7	25.7	92

Note. Engage = total mean faculty engagement; barrier = total mean score for performance barriers; curriculum = total score for organizational performance on curriculum; planning = total score for organizational performance on planning; demographic performance indicators of graduation rate, attrition rate and NCLEX scores are included for comparison.

Summary

The fourth chapter described results and analysis of the United States Merit Systems Protection Board Engagement Scale and the Demand Assessment and Recommendation Evaluation Tool and provided an additional understanding of the organization performance of the nursing education unit as it relate to response to demand for nursing services. Research questions were evaluated along with hypothesis, and data was described using descriptive and parametric statistics.

The results of the analyses described the variables of organizational performance, performance barriers and faculty engagement under study in the

proposed research questions. Although a pilot study, for the most part, the results of the research provided support of the probability that there could be significant relationships as proposed in the research hypothesis. It is important to note however that relationships express the degree to which variables are related and do not mean that one variable caused the other (Munro, 2001). Due to the population size and the variance of responses, it is believed that findings cannot be relied upon as an accurate indicator for relationships on a larger population. Because there was some concordance in the statistical analysis, proposed relationships may be accepted for the pilot sample only. The next chapter provides a brief summary of the study as it relates to the larger body of literature and the conceptual framework of Systems Theory. Social impact and recommendations for future research are discussed.

CHAPTER V

SUMMARY

The fundamental rationale for this study was driven by the overarching desire to identify and describe principles relevant to the process of optimizing organizational performance within the nursing education unit in response to cyclical market demands associated with the nursing workforce. This pilot study approached the problem of market disequilibrium concerning an increase in the aggregate demand for nursing services and a decrease in the aggregate supply of nurses. Given the complexities of market responsiveness in conjunction with changes in healthcare delivery, health economics, population demographics, higher education and other contextual factors, it is essential for nursing education as a whole to be in a position to respond to demand for nursing services. Due to a lack of empirical studies on organizational constructs that apply to the response of the nursing education unit to demand for nursing services, an attempt to understand the depth of the nursing education unit performance was made. The purpose of this study was to investigate organizational performance, organizational barriers and faculty engagement in the nursing education unit in response to market demands for nursing services.

The perspective of the investigation was directed by the positivist nature of study to quantify findings of the research questions and supported by the theoretical framework of Systems Theory. The Nursing Workforce Model by Dumpe, Herman and Young (1998) further supported influences of the nursing education unit on the nursing workforce market. Both were instrumental in maintaining the premise: that in meeting its recommended goals, the nursing

education unit as a system consciously strives for a system of performance by the agency and individual that is integrated and adaptive to both internal and external environments in an effort to maintain a state of structural and functional stability. Because nursing education programs were viewed as a subsystem of the larger nursing workforce entity, the literature on nursing workforce and organization systems provided the framework of this study.

This study used an evaluative research design to systematically appraise and describe the response of the nursing education unit to the problem of market disequilibrium with the intent to generate knowledge and understanding that can be used for deciding policy and practice e.g. "Is the program achieving its intended goals"? Although the nursing market disequilibrium is a broad topic, the scope of this study was narrowed to a pilot investigation of organizational performances, performance barriers and faculty engagement. Assumptions were drawn regarding the rationality of the nursing education system in striving towards market equilibrium between demand for nursing services and supply of nurses as a goal of the organization. Furthermore, it was assumed that stakeholder recommendations were congruent to organizational goals of the nursing education unit to prepare an appropriately trained and adequately numbered population of nurses sensitive to market demands for nursing services. It was also assumed that institutional factors had an influence on the performance of the nursing education unit.

The research questions were non-experimental and classified as descriptive. Questions arose from the imposition of the nursing education unit on

the framework of systems theory as follows: If the nursing education unit is a subsystem of the nursing education system and is intentionally organized to accomplish an overall goal of meeting demand for nursing services (output) using various inputs and throughput, then Question One asked, "What is the organizational performance of the nursing education unit in response to market demands for nursing services"? If organizational performance is dependent on individual performance (input), then Question Two asked, "What is the faculty engagement of the nursing education unit"? And finally, if barriers in the system exist as the cause accounting for the difference between actual output of an organization and its intended output, then Question Three asked, "What are the performance barriers of the nursing education unit in response to market demands for nursing services"? The study also hypothesized on the relationship between the variables.

This study used purposive non-probability sampling in that the researcher used judgment based on knowledge of the issues and design of the study in the selection of the population. Consistent with the study design, sampling planned for a pilot study exclude the need for power analysis. The target pilot population encompassed programs in states offering all entry level registered nursing options based in institutions of secondary and higher education located in SREB areas accredited by the National League for Nursing (NLN) and their full time faculty. Of the accessible programs, three were selected based on practical concerns, design considerations and the ability to participate fully.

Data collection design followed a survey approach to identify and describe the variables. The study relied on a researcher derived tool to measure organizational performance and performance barriers (DARE Tool) and an existing assessment instrument to measure faculty engagement (MSPB Engagement Scale) in participating nursing education units. This study derived data from objective survey methods and provided opportunity for respondent comments.

The MSPB Engagement Scale derived from the 2005 U.S. Merit Principles Survey (USMSPB, 2007) demonstrated internal consistency (reliability) with highly inter-correlated questions supported by literature review. The scale had a Cronbach's alpha of 0.926 (92.6%). For validity, the MSPB Engagement Scale was supported with a review of literature to determine item appropriateness (content validity). The scale was also tested for criterion validity in correlation to relationships on the MSPB 2005 Survey between pay, reward and training and with external correlations, measured by the coefficient of correlation (Pearson Correlation), between accountability, leave, complaints and time.

The DARE Tool, designed by the researcher, demonstrated internal consistency (reliability) with highly inter-correlated questions via a preponderance of duplication among literature sources. Content and construct validity were supported to the extent that the items are derived from multiple sources of peer reviewed literature and national and state reports. Delphi technique supported reliability and validity of the tool via consensus regarding homogeneity of content and subparts, instrument stability, equivalence and internal consistency.

Observed external correlations between organizational performance and demographic performance indicators were also noted in study findings.

The pre-experimental design of this study presented limitations characteristic of pilot surveys employing a newly developed tool. First, the study did not contain control groups or randomly assessed subjects therefore generalization toward the larger population was not possible. Next, it did not contain a large sample of respondents consequently causal conclusions are not possible. The study also had limitations in that the survey approach causes cross-sectional stagnation and was prone to respondent bias. Finally, with the DARE Tool, a threat to reliability existed as the tool has not undergone a statistical determination of internal consistency. Although no approach is exact and no tool infallible, standard acceptable design and an appropriate psychometric assessment were employed and documented in the spirit of academic rigor.

Guidelines appropriate to the nature and design of the study were used to organize, code and analyze the data. Univariate and bivariate statistical analysis of the research questions provided results in descriptive and summative form. Caution was taken to pair variables and demographic data on the individual and agency levels and to systematically assess coding and computations. Frequency distributions were used as the primary means to organize summarize and present data; and measures of central tendency and variance allowed an analysis of scores most representative of the pilot sample. Inferential statistics were not used to address the research question as

inferences from a small sample are not adequate to draw conclusions and generalize about the larger population. However, research hypotheses were approached using analysis of variance models to compare means between and among selected groups statistically. Data on variables for organizational performance, performance barriers and faculty engagement as defined were measured on an ordinal scale. Where considered, standard error and confidence intervals were calculated for alpha .05. Subjective data collected were classified under the themes in which comment was sought.

Organizational performance was addressed by assessing the nursing education unit performance to themes of program access, curriculum design and program planning. Under these themes, all nursing education units reported response to demand for nursing services. While efforts to improve enrollment, flexibility, expansion, image, diversity, faculty and resources were reported, retention of students represented the largest total effort of the nursing education units under the theme of program access. With the theme of curriculum design, whereas special topics related to population demographics and nursing service demand were integrated into the curriculum, few were developed further into modules, independent courses or advance practice programs. No nursing education unit reported addressing continued education for established nurses. Similar to curriculum development, nursing units reporting planning towards meeting demand for nursing service did so with much of the planning at the lower level of development. Curriculum planning was identified as the most developed, implemented and evaluated plan by the nursing education units.

In regards to faculty engagement, the average nursing faculty in the study was “somewhat engaged” however the greatest number of faculty were “engaged”. The nursing faculty took pride in their workplace and found the work meaningful though not quite satisfied with the recognition received or the resources available to perform. The degree of faculty engagement varied with agency and individual demographic assessments. Faculty engagement increased with program assignment, education level, organizational responsibility and in institutes of higher learning and decreased with eligibility for retirement and intent to leave. Engagement was higher in faculty with average performance ratings and salaries. Differences in the level of engagement were also associated with gender, age and race.

Performance barriers trended high demonstrating multiple challenges to the nursing education unit. One hundred percent of the faculty reported performance barriers existing in their programs identified under themes of enrollment management, demographics, professional image, funding/infrastructure, curriculum and faculty. Scholarship funding, clinical space/resources, student personal life factors and financial aid were distinctly identified as performance barriers affecting the nursing education unit’s ability to respond to demand for nursing services. Components of the application process (interview requirements, reference requirements, prerequisite medical training requirements) and competition with other majors were least likely identified as barriers. Like engagement, performance barriers varied with demographic assessment. An inverse association existed between performance barriers and

levels of responsibility, educational preparation, performance rating, program assignment, salary and institution type; and a converse association was noted with retirement eligibility and intent to leave.

Of the participating nursing education units, one was located in a 2-year college and two in a 4-year college. Program offerings included entry level nursing programs (LPN-ADN, ADN, ADN-BSN and BSN) and master degree programs. Fifty-one faculty were represented by the three nursing education units with a total nursing student body of 648. All respondents were in good standing with their accrediting bodies and surveyed stakeholders. The nursing education units graduated two-thirds of the students admitted with 94.7% NCLEX pass rate. The population of faculty was predominately white female between the ages of 44-64 years old. The majority of the faculty held masters degrees. Faculty held roles of administrators, coordinators/managers and instructor assigned to technical, baccalaureate and masters programs. They reported an average or above average salary as compared to their co-workers and received good performance ratings. More than one-third were eligible to retire and nearly one-half intended to leave. No faculty indicated tenured status. Faculty comments were sought and received from all nursing education units.

Although not presented for testing, hypotheses regarding organizational performance, performance barriers and faculty engagement were proposed for the study. Hypothesis One proposed nursing education units with high organizational performance to demand will have engaged faculty. Hypothesis Two proposed nursing education units with high organizational performance to

demand will have low performance barriers. Hypothesis Three proposed nursing education units with engaged faculty will have low performance barriers. They are reported as follows: nursing units with higher organizational performance scores on curriculum and planning also had the highest engagement score; nursing units with high organizational performance score had the lowest performance barriers scores; and nursing units with highest engagement scores also had the lowest performance barriers scores.

Interpretation of Findings

When considering factors related to organizational performance, performances barriers and faculty engagement, the results of the study were online with current literature and supportive of the research hypotheses. Although findings did not have statistical significance, relationships noted did have substantive significance and rational correlations in regards to theoretical framework of Systems Theory and the Nursing Workforce Model underlying the study. The cursory assessment of organizational performance, performance barriers and faculty engagement in the nursing education unit provide more than anecdotal support that market response can be evaluated to determine the reaction to demands for nursing services by the nursing education unit. The following interpretation lends intrinsic meaning to the data analyzed and is presented as it bears on the research questions and hypothesis.

Organizational Performance

Throughout the Forecast Model of Nursing Workforce, Dumpe, Herman and Young (1998) identified systems that have the capacity to influence the

prediction of the nursing workforce. As a subsystem of the healthcare system, the nursing education system provides education to become a registered nurse, receive a master's degree, or a doctorate. The structure and function of the nursing education system, in particular the nursing education unit, have the capacity to influence the problem of market disequilibrium. Organizational performance of the nursing education unit in response to demand for an appropriately numbered and adequately trained workforce depends on its structure and function.

Associated degree nursing programs are structured to produce a large number of nurses in the least amount of time. Associate degree programs offer entry level programs that are more affordable and may be completed in less time than baccalaureate programs. These programs are appealing to the nontraditional student and others looking to readily begin or change careers. The popularity of associate degree programs have made this option effective in responding to the critical market supply challenge - the need for greater number of nurses. Thus, associated degree program responded to produce numbers of nurses demanded by the market, but not necessarily socially sensitive numbers.

Baccalaureate and higher programs due to structure and function, however, were more apt to address market sensitive supply requirements for specific type of nurses. Baccalaureate entry level programs offered recommended curriculum adaptations and program offerings at greater frequencies and higher levels than their associate degree counterpart. By offering greater numbers and types of programs, curricular recommendations

concerning changing population demographics (geriatrics, culture, spirituality, vulnerable populations) technology/research (informatics, research) and care delivery (chronic, holistic) were better attended. Higher degree entry level programs had more resources and supporting infrastructures not only to offer more programs, but also to offer more flexibility. These programs also responded stronger in planning towards meeting recommended actions to address demand for nursing services. Higher level programs were the sole source for advance practice nurses including nurse researchers and educators.

In this study, structure and function were maximized in one nursing unit. The nursing education unit possessed an integration of the structure and functions of the associate degree and baccalaureate degree programs as well as offered master's degree in nursing education and nurse practitioner. The nursing education unit that housed multiple entry level degree programs and advanced nursing programs performed better overall compare to the others. It represented the highest potential for affecting the nursing workforce in addressing the issues related to social marketing and the problem of market disequilibrium.

Faculty Engagement

Aforementioned, organizational performance is based on agency and individual outcomes. The individual is foundational to the hierarchy needed to accomplish the overall goal of the overall system. The more engaged the employee, the more likely the employee will exceed performances requirements and expend discretionary effort to provide excellent performance. As expected, engagement of the nursing faculty had an impact on overall performance of the

nursing education unit. Nursing education units in the study with high faculty engagement scores also had higher organizational performance. Findings from the study mimic the literature supporting the benefit of satisfied employees to organizational outcomes (Frank, 1986; Kennelly, 1989) and the influence of the organization on engagement (U.S. Merit Systems Protection Board, 2005). It is not unlike the findings of Sarmiento, Laschinger and Iwasiw (2004) where a higher level of faculty empowerment was associated with lower levels of burnout and greater work satisfaction. Faculty engagement interpreted through systems theory presents multiple perspectives. When influenced by function and structure (throughput), faculty engagement increased based on organizational responsibility and program assignment in that faculty with higher organizational authority and higher level academic assignments were engaged and hence more committed to the organization. From the input perspective, faculty engagement is a product of human resources as it was higher in faculty with doctorate degrees and lower in those intending to resign or retire. Consideration of faculty engagement as a throughput of the nursing education system is essential to establishing management practices to meet organizational goal and performance objectives. While goals towards market demand for nursing services may seem at times elusive, the commitment of a well qualified faculty is instrumental in a robust response to help meet public health needs. In a broader perspective, the connectedness of the agency and the individual in the study become symbiotic - faculty engaged with organizations they consider high performers and

organizations achieve high performance with faculty who are engaged.

Performance Barriers

Continuing along the theoretical premise, the nursing education unit, like other systems, has boundaries and includes various inputs, processes, outputs and outcomes geared to accomplish an overall goal. Barriers in the system exist as the cause reducing the nursing education unit's ability to respond to market demands for nursing services and accounting for the difference between actual output and intended output. Throughput barriers tend to occur in plans, processes and curriculum. Input barriers plague resources related to students, funding, research, technology and faculty. The nursing education unit must address system barriers and consciously strive for enrollment paradigms that are integrated and adaptive to both internal and external environments in an effort to maintain a state of structural and functional stability.

In the study, nursing faculty identified the influence of external and internal environmental factors strongly as performance barriers to the nursing education unit. Primarily, external performance barriers identified were student focused insofar as the availability of sufficient financing, academic preparation and the presence of interfering life factors that prevented or hampered student enrollment and retention. However, internal performance barriers were resources related and entailed deficiencies in clinical/class/laboratory space and full and part-time faculty that limited the expansion of program enrollment and offerings. Both internal and external performance barrier affected the number and type of nurses the unit was capable of producing.

Implications for Social Change

Significance of Study

The problem addressed in this study was market disequilibrium. Ultimately, this study was driven by the overarching desire to identify and describe principles and processes taken by nursing education units to optimize market equilibrium for nursing service in response to cyclical market demands. The study provided a means for the synthesis of organizational performance on the agency and individual level towards the application of programmed change based on social need. An analysis of organizational performance, agency and individual may eventually permit identification of principles associated with equalizing nursing workforce supply and demand. In practice, nursing education systems may use program assessment and organizational factors like employee engagement to affect the unit's opportunity to respond to market demand, develop strategic plans to address needs and evaluate outcomes and goals. For social reasons aforementioned, this study demonstrated significance for findings derived serve as catalysis to more research geared to demonstrate beneficence in identifying systems, organizations and processes that when addressed in strategic performance plans on a larger scale may help to stabilize the nursing workforce and assist in ensuring a larger degree of access to quality health care to the public.

Paradigms for Change

The study used systems theory, more specifically a socio-economic system model, as a theoretical framework. As it is the intent of social system models in health care to improve health and social condition of the public, it is also the nature of economic system to consciously strive for a state of equilibrium. Paradigms for change exist in the fusion of intent and nature of socio-economic system. For the nursing education unit, responding to the social market would mean preparing an appropriately trained and adequately numbered population of nurses sensitive to the needs of the public. To implement a social marketing program, onus is on the nursing education unit to adapt to societal change as well as provide a framework for invoking a model for organizational performance assessment, planning and implementation to achieve goals.

Social Impact

A litany of implications were presented throughout the study focusing on organizational performance, faculty engagement and performance barriers in an effort to (1) combat a chronic nursing shortage and maintain an optimal nursing workforce, (2) address market demands for nursing services through application of program change developed from strategic enrollment management plans and (3) evaluate performance outcomes and goals and identify best practices for bench marking. All implications concluded with utilization of a socio-economic systems model including social marketing to address demand for nursing services in an effort to safeguard public health.

Recommendations for Action

Assess the performance of the nursing education unit in regards to recommendations of nursing stakeholders

To optimized performance, and to foster response to societal need for healthcare, it is necessary to examine the nursing education systems for inputs, processes and throughput directed towards meeting demand for nursing services. Organizational systems that incorporate assessment, planning and evaluation provide a logical framework to apply evidence based programs geared toward stabilizing the nursing workforce. To implement a social marketing program, the duty would be on the nursing education unit to follow and implement the assessment recommendations, address deficits in faculty engagement and meet challenges present by performance barriers. As evident in the data analyses, the process of conducting an assessment of the performance of the nursing education unit is in itself a strategy. It is evident that when considering organization performance, those programs considering and implementing recommendation based plans are higher performing. However, it is difficult to be completely confident in such a statement without the benefit of further research. As such, program assessment is indeed a contributor to enrollment management and social marketing interventions.

Fill the gap between planning, implementation and evaluation

Although nursing education units reported response to recommendations to address market disequilibrium, many mission, vision and policy statements remained unrealized. No nursing education unit reported offering continuing

education, workforce retraining and education outreach to the established registered nurse. No faculty was designated for non-degree programs. Market sensitive recommendations involving demographics, diversity, image of nursing, nurse educator and workforce demand were less often addressed in planning and less often developed into action plans. By addressing gaps in planning, gaps in curriculum would also be addressed. Like planning, market sensitive recommendations for curriculum, e.g. transcultural and geriatric nursing were less often addressed and developed.

Establish a link between faculty engagement and organizational performance

By establishing a link between engagement and organizational performance, energy and attention can be refocused to engage in optimal organizational policies and procedures and optimize response to demand. It is important to identify levels of engagement of nursing faculty in different roles and the approach needed to establish, increase and maintain engagement. Efforts should be made by the nursing organization to ensure job fit from recruitment, selection, assignment, supervision, communication and valuing. To stimulate commitment, effective evidence based management techniques must be used to retain engaged faculty. To engage employees, agencies must have a robust system in place to plan work and set expectations, monitor employee performance, determine what training and development employees require, assess employee performance, and reward outstanding performance. Agencies would ensure that managers are properly trained to provide the appropriate guidance and feedback to employee during these different

performance management phases (USMSPB, 2008). Nursing education is no exception.

Identify actual barriers and distinguish from perceived barriers

The research revealed interesting anomalies about the perception of the nursing faculty and performance of the nursing education unit. Specifically, nursing faculty reported barriers related to the number of qualified applicants when the nursing education unit reported turning away qualified applicants with each admit term. Considering the link between faculty engagement and performance barriers, the discrepancy warrants investigation of faculty perception of barriers and clarification by the nursing unit of any inconsistencies. It is possible that the fewer barriers perceived the nursing faculty, the more they will engage and commit to the nursing education unit. The anomaly also leads to questions concerning nursing faculty perception of unit policies and plans e.g. the legitimacy of admissions policies. A study by Grubbs (1989) surveyed whether nursing schools lowered educational standards during periods of decreased enrollment and found that despite decreasing enrollments, the majority of the 98 schools maintained academics standards. Follow-up research regarding academic policies in lieu of market influence is warranted.

Choose collaboration over competition

Although implemented as part of the greater health care system, the nursing education units have their own character and idiosyncrasies; as such nursing education units may be considered largely semi-autonomous organizational subsystems. However, the effectiveness of the entire system is

dependent on, its parts and their relations. Connectedness in the systems has important implications for the nursing workforce. In the study, nursing faculty identified other nursing education units over other disciplines as competition for qualified students. As cited by Chang-Gen Bahg (1990), traditionalist like Blau argued that systems require both effective coordination and effective problem solving to discharge their functions. With this in mind, nursing education program management should consider the whole system before undertaking any significant interventions and should collaborate with other units to fill the gaps between demand for nursing service and supply. Nursing education units have the potential to supplement and complement each other in meeting educational needs. Truly comprehensive market responsive strategies are necessary to build upon existing evidence-based public health paradigms such as those recommendations by health care authorities and nursing workforce models.

Recommendations for Further Study

The ultimate utilization of nursing research is to facilitate innovative change that will lead to improved client outcomes and to validate existing processes, procedure and interventions (Gillis & Jackson, 2002). For this study, the goal would be to facilitate optimal response to demand for nursing services by the nursing education unit. With today's economic restraints and public demand for accountability, it is critical that nursing education demonstrate relevant evidence based services and outcomes. The findings reported in this study are important because they expand the understanding of organizational constructs as they relate to the response of the nursing education unit to market

demand for nursing services. Because previous research has rarely focused on the organization factors in a health care subsystem, the only way to understand the relationships and impact of the organization factors on the performance of the nursing education unit is to conduct additional research. As supported by the literature on the nursing workforce shortage, additional research would be warranted to fully examine how the nursing education system responds effectively to meet demand for nursing services. Ultimately, future research should be directed toward the goal of acquiring a greater knowledge base for developing models for assessing optimal performance equilibrium responsive to societal demand.

This study was a pilot sample and limited to only those nursing education units affiliated with SREB and accredited by NLN. As such, the small number of participants produced great challenges in achieving statistical significance for any measure. However, because the study was affable to the research utilization process and has a potential to narrow the research-practice gap through investigating a relevant problem, it is suggested that the study should be replicated on a larger scale to include all nursing education programs in the SREB area and beyond regardless of accreditor and institutional setting. The inclusion of additional nursing education units would allow for a more complete examination of the response of the nursing education system and more instrument development and testing yielding a higher scientific merit.

The principal tools used in the nursing education unit to perform toward goals of meeting public demand for nursing services are those on enrollment

management and trend surveillance. This research provided an indication that consideration of organization paradigms and systems should be incorporated in public health strategy. The results supported the literature, and assuming the literature is correct, more needs to be done to investigate the nursing education unit performance in terms of the degree to which goals, objectives and recommendations are successfully met.

Conclusion

Systems theory implies a relationship among and between components of a system, a relationship, which in and of itself has an effect on the system. Nursing education, as a part of the larger economic system for health care, is a dynamic system which strives to maintain or improve its state of equilibrium. Equilibrium and stability are not options for organizations that want to be effective (Beckhard & Harris, 1987). As a part of that system, nursing education must adapt and adjust to approach market equilibrium not only to maintain economic health but also public health. Due to an encroaching critical shortage of more than one million nurses, maintaining equilibrium between the supply and demand of nursing service is of ongoing concern to stakeholders in health care. Nursing shortages have the potential to negatively affect individual and public health. Nursing education is in a pivotal position to affect the status of the nursing workforce by addressing market disequilibrium by preparing an appropriately trained and adequately numbered population of health care providers sensitive to the needs of the public. By addressing recommendations by health care stakeholders as prescribed goals of the nursing education system, stability of the

nursing workforce is possible. Goals are maintained in the nursing education system through the maintenance of a state of structural and functional stability in order to manage input, throughput and output. Workforce needs may be actively and purposefully attended to by recruiting, enrolling, retaining, training and graduating the numbers and types of nurses that future trends indicate will be of high demand. The nursing education unit must remain adaptive to both internal and external environments. An adaptive nursing education unit address not only agency related performance indications, but individual effort such as engagement. Adaptability of the nursing education unit also includes overcoming challenges and barriers to organizational performance. Reorientation and transition to a new market paradigm is not always a smooth transition. How the nursing education unit responds to ongoing feedback among and between internal and external environments will determine attainment of overall performance objectives. Though only theoretically attainable, system equilibrium must be approached through intentional collaboration, purposeful programming and active problem solving.

APPENDIX A
INSTITUTIONAL REVIEW BOARD REQUIREMENTS
INFORMATION AND CONSENT FORM

This study aims to ascertain the performance of the nursing education unit in response to market demands for nursing services.

You are invited to participate in a research study of selected nursing program in SREB areas. You were selected as a possible participant because of your established nursing program and unique profile.

I ask that you read this form and if needed, contact me with any question you may have before agreeing to be in the study.

Background Information:

The purpose of this study is to investigate organizational performance, performance barriers and faculty engagement in the nursing education unit in response to market demands for nursing services. This study is being conducted by; Yolanda Turner, a doctoral candidate at The University of Southern Mississippi.

Procedures:

If you agree to participate in the study, I would ask you to fill out the attached survey and return it by mail.

Risks and Benefits of Participation in the Study:

Your participation will provide important information about an area of nursing education organization and the nursing workforce that is rarely studied. It is hoped that the information you provide may help nursing programs to identify those practices that have the strongest effect on program performance in addressing the nursing workforce. As a result of your participation a summary of the research finding and data will be available upon request.

Confidentiality:

The records of this survey will be kept private. Any sort of report that might be published will not include any information that will make it possible to identify a subject. Research records will be kept secured and only the researcher will have access to the records.

Voluntary Nature of the Study:

Your decision whether or not to participate will not affect your current or future relations with The University of Southern Mississippi or any other cooperating institutions. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contact and Questions:

The researcher conducting this study is Yolanda Turner whose advisor is Patsy Anderson, PhD. If you have any questions, you may contact them by email (yfturner@mchsi.com) or panderson@usm.edu ; or Yolanda Turner by phone (251.454.5668). The submission of the completed survey will serve as indication of your consent to participate.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.



THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

118 College Drive #5147
 Hattiesburg, MS 39406-0001
 Tel: 601.266.6820
 Fax: 601.266.5509
 www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
 Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 29072304

PROJECT TITLE: **Approaching Equilibrium: A Pilot Study of Organizations' Performance and Faculty Engagement**

PROPOSED PROJECT DATES: 06/01/09 to 09/01/09

PROJECT TYPE: **Dissertation or Thesis**

PRINCIPAL INVESTIGATORS: Yolanda Turner

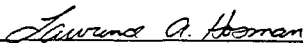
COLLEGE/DIVISION: **College of Health**

DEPARTMENT: **Nursing**

FUNDING AGENCY: **N/A**

HSPRC COMMITTEE ACTION: **Exempt Approval**

PERIOD OF APPROVAL: **07/27/09 to 07/26/10**



 Lawrence A. Hosman, Ph.D.
 HSPRC Chair

7-31-09

 Date

HUMAN SUBJECTS REVIEW FORM
UNIVERSITY OF SOUTHERN MISSISSIPPI
(SUBMIT THIS FORM IN DUPLICATE)

Protocol # 2907230Y
(office use only)

Name Yolanda Turner Phone 251.639.9133

E-Mail Address yfturner@mchsi.com

Mailing Address 1470 Hunters Court Mobile AL 36695
(address to receive information regarding this application)

College/Division Health Dept Nursing

Department Box # PO 5095 Phone 601.266.5445

Proposed Project Dates: From June 1, 2009 To September 1, 2009
(specific month, day and year of the beginning and ending dates of full project, not just data collection)

Title Approaching equilibrium: A pilot Study of organizations performance and faculty engagement
in the nursing education unit

Funding Agencies or Research Sponsors na

Grant Number (when applicable) na

New Project
 Dissertation or Thesis
 Renewal or Continuation: Protocol # _____

Change in Previously Approved Project: Protocol # _____

Yolanda Turner 7/23/09
Principal Investigator Date

Shula P. Davis July 23, 2009
Advisor Date

Shula P. Davis July 23, 2009
Department Chair Date

RECOMMENDATION OF HSPRC MEMBER

Category I, Exempt under Subpart A, Section 46.101 (B) (2), 45CFR46.
 Category II, Expedited Review, Subpart A, Section 46.110 and Subparagraph ().
 Category III, Full Committee Review.

[Signature] 7-23-2009
HSPRC College/Division Member DATE

Lawrence A. Homan 7-31-09
HSPRC Chair DATE

APPENDIX B

THE MSPB EMPLOYEE ENGAGEMENT SCALE

The MSPB Employee Engagement Scale

The purpose of this survey is to gather your opinions about working in your nursing education program. Survey results will identify and provide information on employee engagement.

Completion of the survey is voluntary. Your individual responses to this survey are strictly confidential, so please do not identify yourself. There are several ways that you are guaranteed anonymity and confidentiality of your answers. Your responses will be combined with other so that only results for groups of nursing programs will be reported.

To guide your interpretation and for the purposes of this survey, your:

Work Unit (Nursing Education Unit) is the group of people you work with on a regular basis and with whom you most identify. Your nursing education unit is larger than your section, level or division. It may contain more than one leader. If your nursing education unit is located on several sites consider only your immediate local site.

Organization refers to the next higher unit to which your education unit belongs. This may be a level between your education unit and your university. It may be your school of nursing or your college of nursing and includes both the graduate and undergraduate nursing programs.

SURVEY INSTRUCTIONS

- Using the response options provided, select the number that most closely indicates the extent to which you agree or disagree with each statement.
- If the responses do not provide a perfect fit for your situation, use your best judgment.
- There is no right or wrong answers, usually, the first response that comes to mind is the best choice.

Please respond to this survey promptly....Your participation is greatly appreciated.

The MSPB Employee Engagement Scale Questions

Key:

1 – Strongly Disagree

2 – Disagree

3- Neither Agree or Disagree

4- Agree

5- Strongly Agree

Pride in one's work or workplace

- _____ 1. My organization is successful at accomplishing its mission.
- _____ 2. My work unit produces high quality graduates and service programs.
- _____ 3. The work I do is meaningful for me.
- _____ 4. I would recommend my organization as a place to work

Satisfaction with leadership

- _____ 5. Overall, I am satisfied with my immediate leader.
- _____ 6. Overall, I am satisfied with leaders above my immediate leader.

Opportunity to perform well at work

- _____ 7. I know what is expected of me on the job.
- _____ 8. My job makes good use of my skills and abilities.
- _____ 9. I have the resources to do my job well.
- _____ 10. I have sufficient opportunities (such as challenging assignments or projects) to earn a high performance rating.

Satisfaction with the recognition received

- _____ 11. Recognition and rewards are based on performance in my work unit.
- _____ 12. I am satisfied with the recognition and rewards I receive for my work.

Prospect for future personal and professional growth

- _____ 13. I am given a real opportunity to improve my skills in my organization.

Positive work environment with some focus on teamwork

- _____ 14. I am treated with respect at work.
- _____ 15. My opinions count at work.
- _____ 16. A spirit of cooperation and teamwork exists in my work unit

APENDIX C

THE DEMAND ASSESSMENT AND RECOMMENDATION EVALUATION TOOL (DARE TOOL)

PART I: Organizational Performance

The Demand Assessment and Recommendation Evaluation Tool (DARE Tool)

PART I: Organizational Performance

The purpose of Part I of this survey is to gather information about your nursing education program and practices that reflect organizational performance in response to demand for nursing services. This survey should be completed by an authorized party of the nursing education unit with intimate knowledge of organizational policies, procedures and plans.

Completion of the survey is voluntary. Your program's responses to this survey are strictly confidential. Your responses will be combined with other so that only results for groups of nursing programs will be reported.

SURVEY INSTRUCTIONS

The organizational performance assessment is comprised of eleven sections which address thematic categories: access/capacity, curriculum design and planning. The assessment examines the program response to demand for nursing services as identified in the nursing literature and recommended by state and national stakeholders. Included in the organizational performance assessment are queries into program offerings, program flexibility, education outreach, curriculum, advance practice, diversity, enrollment, retention, nursing image, infrastructure/resources and planning.

- Where indicated, select all that apply to your nursing education unit
- Using the response options provided, in sections four (curriculum) and ten (planning), select the number that most closely indicates the extent to which you agree or disagree with each statement.
- If the responses do not provide a perfect fit for your situation, use your best judgment.
- There is no right or wrong answers, usually, the first response that comes to mind is the best choice.

Please respond to this survey promptly....Your participation is greatly appreciated.

The Demand Assessment and Recommendation Evaluation Tool (DARE Tool)

PART I: ORGANIZATIONAL PERFORMANCE – RESPONDING TO DEMAND

Program offerings (11) Select all that apply.

Entry level

LPN-ADN

ADN/Diploma

LPN-BSN

RN-BSN

BSN

Advanced practice

RN-MSN

MSN

BSN-PhD/DNS

PhD/DNS

Post Masters

Post Doctorate

Program flexibility (12) Select all that apply.

Evening Programs

Weekend Programs

Internet Only Programs

Distance Education Programs (may include online/grounded "hybrid" programs)

Flexible/Alternative Clinical Rotations

Dual Degree Programs

Second Degree Programs

Accelerated Programs

Self-Study/Self Paced Programs/Alternative Learning Style Programs

Continuous/Rolling Enrollment Programs

Continuing education, workforce re-training and education outreach (4). Select all that apply.

_____ CEU (continuing education unit) Offerings

_____ Refresher or Re-entry Program

_____ Certification Programs

_____ Programs for Foreign Trained Nurses

Curriculum offerings (12) (Please select the highest level of implementation).

Key:

0- not offered 1 – Integrated Item 2 – Module 3- Course 4- Program/tract

_____ Nursing Educator

_____ Geriatric Nursing

_____ Chronic Care Nursing

_____ Vulnerable Populations

Key:

0- not offered 1 – Integrated Item 2 – Module 3- Course 4- Program/tract

_____ Transcultural Nursing

_____ Spirituality Nursing

_____ Alternative/Complimentary/Holistic Nursing

_____ Telehealth/Telemedicine

Key:

0- not offered 1 – Integrated Item 2 – Module 3- Course 4- Program/tract

_____ Nursing Informatics

_____ Rural Health Nursing

_____ Nursing Leadership

_____ Nursing Research

Increasing diversity (8). Select all that apply.

- Minorities in Nursing Recruitment Program
- Men in Nursing Recruitment Program
- Minority Faculty Recruitment Program
- Images of Males and Minorities on Marketing Tools (website, brochures)
- Marketing Materials available in Languages other than English
- Location of Program in predominately Minority Area
- Recruitment Programs for Non-traditional Groups including the Disabled
- Quota based admissions policy for minorities (i.e. Top 10% of graduating class)

Improving the image of nursing (5). Select all that apply.

- Career Exploration Programs
- Image of Nursing Campaign
- Grade School (K12) Outreach
- Introduction/Survey Nursing Course
- Community Education

Student Retention (9). Select all that apply exclusively for nursing students

- Nursing Student Support Services
- Nursing Student Tutoring Services
- Nursing Student Mentoring Program
- Summer Remediation Programs
- Summer Jump Start/Prep Programs
- Nursing Student Organizations
- Academic Advisement by Nursing Faculty
- Nursing Scholarships
- Graduate Nursing Internships/Assistantships

Increasing Enrollment (10). Select all that apply.

- Early Decision/Early Acceptance Programs
- Dual Admission Programs (contract with community colleges or high schools)
- Recruitment Specialist on Staff
- Recruitment partnerships with feeder schools
- Training/consultation with High School advisors
- Freshman college year recruitment program
- Community/Industrial Partnership Programs
- Admission Process Assistance
- Deletion/modification of admission requirement(s)
- Pre-nursing Scholarship Funding
- Marketing campaign

Improving Resources (11). Select all that apply to activity in the past 3 yrs.

- Faculty Recruitment (full time tenure)
- Faculty Development Program
- New Faculty Mentoring Program
- Faculty Retention Incentive Program
- Clinical Partnerships
- Interface with Legislators
- Participation in Federal programs
- Expansion of Space
- Acquisition of Support Personnel
- Acquisition of Capital Equipment
- Acquisition of Technology

Planning (Please indicate highest level of implementation for each item) (8)

Key:

0 – Non-agenda Item	1 – Agenda Item	2 – Task Force/Committee
3- Mission/Goal/Policy	4- Action Plan	5- Program/Plan Implementation
6 -Outcomes Research/Plan Evaluation		

_____ Diversity in Nursing

_____ Image of Nursing

_____ Nursing Workforce Shortage

_____ Nursing Educator Training

_____ Enrollment Planning/Modification

Key:

0 – Non-agenda Item	1 – Agenda Item	2 – Task Force/Committee
3- Mission/Goal/Policy	4- Action Plan	5- Program/Plan Implementation
6 -Outcomes Research/Plan Evaluation		

_____ Program Offerings

_____ Program Flexibility

_____ Continuing Education/Education Outreach

_____ Curriculum

Key:

0 – Non-agenda Item	1 – Agenda Item	2 – Task Force/Committee
3- Mission/Goal/Policy	4- Action Plan	5- Program/Plan Implementation
6 -Outcomes Research/Plan Evaluation		

_____ Student Retention

_____ Resources/Infrastructure

_____ Faculty Retention/Engagement

_____ Faculty Recruitment

APPENDIX D

THE DEMAND ASSESSMENT AND RECOMMENDATION EVALUATION TOOL (DARE TOOL)

PART II: Performance Barriers

The Demand Assessment and Recommendation Evaluation Tool (DARE Tool)

PART II: Performance Barriers

The purpose of Part II of this survey is to gather faculty opinions about performance barriers that impact organizational performance in response to demand for nursing services. Part II should be completed by full time nursing faculty.

Completion of the survey is voluntary. Responses to this survey are strictly confidential. Your responses will be combined with others so that only results for groups of faculty will be reported.

SURVEY INSTRUCTIONS

Performance barriers are obstacles and challenges faced by the nursing education unit in responding to demand for nursing services. This part of the DARE Tool assesses the perceptions of nursing faculty to literature supported themes of (1) enrollment management, (2) professional image, (3) funding/infrastructure, (4) demographics, (5) curriculum and (6) faculty trends.

It is the goal of Part II of the DARE Tool to specifically explore performance barriers of the nursing education that limit the success of the unit in achieving its performance goals of preparing an appropriately trained and adequately numbered population of nurses sensitive to market demands for nursing services.

- Using the response options provided select the number that most closely indicates the extent to which you agree or disagree with each statement.
- If the responses do not provide a perfect fit for your situation, use your best judgment.
- There is no right or wrong answers; usually, the first response that comes to mind is the best choice; however, feel free to comment on either section if needed to better indicate your perspective.

Please respond to this survey promptly....Your participation is greatly appreciated.

The Demand Assessment and Recommendation Evaluation Tool

(DARE Tool)

Part II: PERFORMANCE BARRIERS

Key:

1 – Strongly Disagree

2 – Disagree

3- Neither Agree or Disagree

4- Agree

5- Strongly Agree

Which do you agree are challenges or barriers affecting **your** nursing agency's ability to respond to nursing workforce demand for nursing services? Please share your opinions and perceptions as desired below or on the back of this page.

_____ Standardized Testing Requirements for Program Entry

_____ Academic Advising in High School or Freshman College Year

_____ Admission Process

_____ Prerequisite Course/Academic Requirements

_____ Prerequisite Work Experience Requirements

_____ Prerequisite Medical Training Requirements

_____ Interview Requirements

_____ Reference Requirements

_____ Customer Service

_____ High School Outreach

_____ Scholarship Funding

_____ Program Offerings

_____ Nursing Curriculum

Comments:

Key:

1 – Strongly Disagree

2 – Disagree

3- Neither Agree or Disagree

4- Agree

5- Strongly Agree

Which do you agree are challenges or barriers affecting **your** nursing agency's ability to respond to nursing workforce demand for nursing services? Please share your opinions and perceptions as desired below or on the back of this page.

_____ Competition with Other Nursing Programs

_____ Competition with Other Majors

_____ Yield of Accepted Student Enrolling (No Show Students)

_____ Number of Qualified Students Applying

_____ Cost of Tuition and Fees

_____ Financial Aid

_____ College Reputation (Institutional Brand)

_____ Location of College

- _____ Type of College (i.e. public, private, HBCU)
 _____ Image of Nursing
 _____ Knowledge of Nursing Profession and Nursing as a Career
 _____ Understanding of Opportunities in Nursing
 _____ Multiple Levels of Entry (ADN, BSN, Diploma)
 _____ Qualified Full Time Faculty
 _____ Qualified Part Time Faculty/Clinical Only Faculty
 _____ Support Staff
 _____ Program Flexibility
 _____ Community and Professional Education Outreach

Comments:

Key:

- 1 – Strongly Disagree 2 – Disagree 3- Neither Agree or Disagree
 4- Agree 5- Strongly Agree

Which do you agree are challenges or barriers affecting **your** nursing agency's ability to respond to nursing workforce demand for nursing services? Please share your opinions and perceptions as desired below or on the back of this page.

- _____ Mandated Caps on Enrollment
 _____ Nursing Unit Reputation
 _____ Recruitment/Marketing
 _____ Budget Constraints (Stalled or Decreased Funding)
 _____ Leadership
 _____ Resource Management
 _____ Clinical Space/Resources
 _____ Classroom Space
 _____ Laboratory Space
 _____ Educational Resources
 _____ Planning/Outcome Management
 _____ Clinical/Cooperate Partnerships
 _____ Partnerships with Feeder Schools
 _____ Nursing Program Expansion
 _____ Student Personal Life Factors
 _____ Cultural/Racial Diversity
 _____ Gender Diversity
 _____ Student Retention

Comments:

APPENDIX E

RESPONDENT DEMOGRAPHICS: NURSING EDUCATION UNIT

Respondent Demographics: Nursing Education Unit

The purpose of this survey is to gather demographics on the nursing education unit.

Completion of the survey is voluntary. Your institutional responses to this survey are strictly confidential, so please do not identify your institution. There are several ways that you are guaranteed anonymity and confidentiality of your answers. Your answers will be returned directly to the researcher. This means that no one else will have access to your responses. Your responses will be combined with other so that only results for groups of nursing programs will be reported.

SURVEY INSTRUCTIONS

- Where available, use the response options provided, select the number that most closely indicates the extent to which each statement reflects your **entry level programs** i.e. A.D.N, Diploma or BSN programs.
- If the responses do not provide a perfect fit for your situation, use your best judgment.
- There is no right or wrong answers, usually, the first response that comes to mind is the best choice.

Please respond to this survey promptly....Your participation is greatly appreciated.

Respondent Demographics: Nursing Education Unit

Program Performance Indicators (Entry Level Programs)

Graduation Rate : _____

Attrition Rate : _____ (1st year nursing)

Admission Rate: _____ (number accepted/qualified applicants)

NCLEX Pass Rate: _____

Standing with Accrediting Bodies (lowest standing if multiple)

Good Probationary Under Appeal New Applicant

Student Satisfaction Survey Reports

Poor Fair Average Good Outstanding NA

Nursing Faculty/Staff Satisfaction Reports

Poor Fair Average Good Outstanding NA

Employer/Community Satisfaction Survey Reports

Poor Fair Average Good Outstanding NA

Profiles: Faculty and Students (Entry Level Programs)

Number of Faculty _____ Number Minority Faculty _____ Number Male Faculty _____

Number of Students _____ Percent Minority Students _____ Percent Male Students _____

Average Admitting Class Size _____ Average Size of Graduating Class _____

Faculty Student Class Ratio _____ Faculty Student Clinical Ratio _____

Institution Type:

_____ Community, Technical or Junior College

_____ University

APPENDIX F

RESPONDENT DEMOGRAPHICS: FACULTY

Respondent Demographics: Faculty

The purpose of this survey is to gather demographic data on the full time faculty respondent.

Completion of the survey is voluntary. Your individual responses to this survey are strictly confidential, so please do not identify yourself. Your responses will be combined with others so that only results for groups of nursing programs will be reported.

SURVEY INSTRUCTIONS

- Where available, use the response options provided, select the response that most closely indicates your perception.
- If the responses do not provide a perfect fit for your situation, use your best judgment.
- There is no right or wrong answers, usually, the first response that comes to mind is the best choice.

Please respond to this survey promptly....Your participation is greatly appreciated.

Respondent Demographics: Faculty

Level of organizational responsibility: (Select one)

Administrative Manager/Coordinator Non-supervisor

Highest Level of education:

Baccalaureate Masters Doctorate

Program assignment:(Select all that apply)

Technical Undergraduate Graduate Non-degree

Tenure:

Tenured Non-tenured

Salary: (compared to average of co-workers salary)

Below average Average Above Average

Retirement eligible:

Yes No

Intent to Leave:

Low Moderate High Undetermined

Most recent performance rating:

Poor Fair Average Good Outstanding

Gender: Female Male

Age: less than 25 25-34 35-44 45-54 55-65 greater than 65

Race/Ethnicity: Majority Minority

Engagement Score: _____ (Total from MSPB Engagement Scale)

APPENDIX G
CORRESPONDENCE

Call for Participants

Dear Nursing Administrator,

Are you interested in participating in a program assessment? Would you like to know how your program responds to national recommendations in meeting demand for nursing services? What about an evaluation of faculty engagement?

In a tight economy and tight labor market, organizations seek to maximize resources and performance. A major challenge for the nursing education system is to identify effectiveness in organizational and individual systems. The purpose of my research is to investigate organizational performance, performance barriers and faculty engagement of the nursing education unit in response to market demands for nursing services.

If you are interested in having your program participate in this study please reply. Assessments will begin this summer. This would be an excellent opportunity to supplement required program assessments and complement strategic planning.

Sincerely,

Yolanda Turner RN, MSN, PhD(c) University of Southern Mississippi

Call for Participants

Dear Nursing Administrator,

Are you interested in participating in a program assessment? Would you like to know how your program responds to national recommendations in meeting demand for nursing services? What about an evaluation of faculty engagement?

In a tight economy and tight labor market, organizations seek to maximize resources and performance. A major challenge for the nursing education system is to identify effectiveness in organizational and individual systems. The purpose of my research is to investigate organizational performance, performance barriers and faculty engagement of the nursing education unit in response to market demands for nursing services.

Both agency and individual effort are necessary for optimal performance. To address agency performance, the study assesses efforts of the nursing education unit to meet market demands for an adequately numbered and appropriately trained nursing workforce. These efforts include strategic enrollment management, recruiting, retention and salvage programs, resource management, strategic planning and social marketing. For individual effort, faculty engagement is measured using an established tool. The research (my dissertation) represents a culmination of study towards a doctoral degree in nursing with dual focus in nursing leadership and health policy.

There are no direct costs associated with the survey. The study represents a "point in time sampling" and is not a longitudinal study. Depending on the accessibility of data, your total time commitment may be less than 2 hours. Assessments will begin this summer. This would be an excellent opportunity to supplement required program assessments and complement strategic planning.

If you are interested in having your program participate in this study please reply. I will be in contact shortly after the call for participants is complete.

Sincerely,

Yolanda Turner RN, MSN, PhD(c) University of Southern Mississippi

Dear Nursing Administrator,

Thank you for your response to the call for participants. As mentioned prior, the purpose of the research is to investigate organizational performance, performance barriers and faculty engagement of the nursing education unit in response to market demands for nursing services.

Both agency and individual effort are necessary for optimal performance. To address agency performance, the study assesses efforts of the nursing education unit to meet market demands for an adequately numbered and appropriately trained nursing workforce. These efforts include strategic enrollment management, recruiting, retention and salvage programs, resource management, strategic planning and social marketing. For individual effort, faculty engagement is measured using an established tool. The research (my dissertation) represents a culmination of study towards a doctoral degree in nursing with dual focus in nursing leadership and health policy.

You were selected as a possible participant because of your established nursing program and unique profile. If you agree to participate in the study, you or your designee will be interviewed and assisted to complete an assessment survey and return it by fax, electronic or otherwise after appropriate IRB policies have been addressed.

Your participation will provide important information about an area of nursing education and nursing workforce that is rarely studied. It is hoped that the information you provide may help nursing programs to identify those practices that have the strongest effect on program performance in addressing nursing workforce demands. As a result of your participation a summary of the research findings and program specific data will be available upon request.

The records of this survey will be kept private. Any sort of report that might be published will not include any information that will make it possible to identify a subject or institution. Research records will be kept secured and only the researcher will have access to the records.

Your decision whether or not to participate will not affect your current or future relations with The University of Southern Mississippi or any other cooperating institutions. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

There are no direct costs associated with the survey. The study represents a "point in time sampling" and is not a longitudinal study. Depending on the accessibility of data, your total time commitment may be less than 2 hours. If you have already agreed to participate, you have been registered. I will be in contact shortly after the call for participants is complete.

Sincerely,

Yolanda Turner RN, MSN, PhD(c) University of Southern Mississippi

Nursing Administrator,

Thank you for enrolling your program in this study. As part of the IRB requirement and adherence with federal regulations, The University of Southern Mississippi requires a letter of approval from any organizations that will be involved with the research project. The letter must be on official letterhead and signed by an authorized official of the organization. Please submit the required documentation with your signature to begin the assessment process. I have attached a letter template for your convenience.

Please Address Envelopes to:

Yolanda Turner

1470 Hunters Court

Mobile, AL 36695

Sincere gratitude,

Yolanda Turner, PhD (c)

Institutional Review Board
The University of Southern Mississippi
118 College Drive #5147
Hattiesburg, MS 39406-0001

June 29, 2009

Chair,

In accordance with IRB policy and procedure, I am submitting approval and authorization for **(name of nursing program)** to participate in dissertation research conducted by Yolanda Turner, a doctoral candidate at The University of Southern Mississippi School of Nursing, whose advisor is Patsy Anderson, PhD.

The survey investigates organizational performance including faculty engagement and performance barriers in the nursing education unit in response to market demands for nursing services. The investigator has committed to confidentiality and open dialogue sufficient to affect my decision.

I am aware participation may be withdrawn at any time and the decision whether or not to participate will not affect current or future relations with the University of Southern Mississippi or any other cooperating institutions.

Cordially,

(Your Name, Title and Signature)

Dear Research Participant,

Please check with your mailroom for research packages. The package contains surveys for the nursing education unit to be completed by the director/dean or some other appointed authority. These items are on top in the package.

A rubber band holds the surveys to be completed by the nursing faculty. Please feel free to make more copies of the nursing faculty surveys if needed. If you are completing the survey for the unit, please complete the faculty survey as well.

Survey for the Nursing Education Unit includes:

Part I on the DARE Tool

Demographics Survey

Survey for the Nursing Faculty includes:

Part II of the DARE Tool

Faculty Engagement Scale

Demographics Survey

Feel free to call me at anytime during the process of completing the survey for the nursing education unit (251.545.5668). I will call you after the completed surveys are returned to validate any questionable items. Please return the completed surveys within 14 business days to:

Yolanda Turner

1470 Hunters Court

Mobile, AL 36695

Because of the paper method of data collection, more manpower will be spent scoring the raw data. However, I anticipate that results will not experience a prolonged delay. It is my plan to begin sending out individual reports to participants as soon as November. If you need something sooner, please let me know, and I will prioritize your report.

Thanks again for your contribution,

Yolanda Turner RN, MSN, MHA, PhD(c)

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- Aiken, L., Clarke, S., Cheung, R., Sloane, D., & Silber, J. (2003). Educational levels of hospital nurses and surgical patient mortality. *JAMA*, 290(12), 1617-1623.
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