

NURSE EDUCATOR ATTITUDES TOWARD PEOPLE WITH DISABILITY IN THE  
SOUTHEASTERN UNITED STATES

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## **Abstract**

The purpose of this quantitative study was to assess the attitudes of nurse educators toward people with disability. This study also compared the relationship between nurse educator attitudes toward disability and their definition of disability. Furthermore, the research investigated the influence of age and professional years of experience on the nurse educator's attitude toward people with disability. Prior research shows that nurses and nursing students have negative attitudes toward people with disability and there is a gap in research on the attitudes of nurse educators. In addition, the literature suggests a link exists between educator attitude and student attitude development. If the nurse educator has a negative attitude toward people with disability, it will influence the developing attitude of the student nurse. The subjects, 126 nurse educators from Baccalaureate programs in the Southeast, completed the World Health Organization's (WHO) multidimensional Attitudes to Disability Scale (ADS) and provided disability model preference, professional experience, and demographic data using a web-based survey. Demographic results showed that nurses had an average age of 53 years, an average of 29 years as a nurse, and 13 years as an educator. Results indicated that nurses had generally positive explicit attitudes toward people with disability and preferred ~~for~~ a bio-psychosocial view of disability as defined in the International Classification of Function, Disability, and Health (ICF). The data showed no relationship existed between attitude and definition of disability or attitude and the age and years of experience as a nurse educator. A Principle Component

Analysis (PCA) performed on the ADS resulted in reordering and renaming of the subscales to enhance its use with nurse educators. The original ADS subscales, inclusion, discrimination, gains, and prospects were changed to belonging, discrimination, gains, and opportunity.

*Keywords:* people with disability, nurse educator, attitude, ADS, Attitudes to Disability Scale, ICF, International Classification of Function, Disability, and Health

## **List of Abbreviations**

AACN American Association of Colleges of Nursing

ADA Americans with Disability Act

ADS Attitudes to Disability Scale

ANA American Nurses Association

ANOVA Analysis of variance

ATDP Attitudes Towards Disabled People

BSN Bachelor of Science in Nursing

CCNE Commission on Collegiate Nursing Education

DA-IAT Disability Attitude Implicit Association Test

ICF International Classification of Function, Disability, and Health

IOM Institute of Medicine

MSN Masters in Science in Nursing

NLN National League for Nursing

PDD Preferred definition of disability

PCA Principle component analysis

RN Registered nurse

SPSS Statistical Package for the Social Sciences

USDHHS United States Department of Health and Human Services

WHO World Health Organization

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## Chapter I - Introduction

People with disabilities are among society's most marginalized due to a failure of inclusion and accommodation of their individual differences (United Nations, 2010). This problem is an obstacle to the provision of adequate health services for people with disability. In recognition of this, the United States Department of Health and Human Services (USDHHS) published the Surgeon General's *Call to Action to Improve the Health and Wellness of Persons with Disabilities*. This document, in alignment with Healthy People 2010, outlines gaps in the health and wellness of people with disability and cites the need for health care providers to see and treat people with disability as whole persons. One strategy to accomplish this goal is the "adoption of evidence-based training curricula focused on persons with disabilities in professional and other service provider training and continuing education" (USDHHS, 2005, p. 30). Lam et al. (2010) identified that health care providers lack disability-specific knowledge, have discomfort with working with people with disabilities, and hold negative attitudes and misperceptions about disability, which create barriers to obtaining healthcare services. Health care providers must be educated about the causes, consequences and treatments of disabling conditions as well as the stigmatizing views that people with disabilities must endure, so attitudes about health and disability change to a more holistic outlook (Carmona & McCabe, 2005; Shakespeare et al., 2009).

The absence of universally accepted terms to describe and discuss disability complicates how disability related issues are studied and reported, creating barriers to understanding both disability and how interventions can be implemented (The Institute of Medicine [IOM], 2007). Disability, developed as a birth condition or acquired through a traumatic injury or chronic

condition, may be visible or invisible, temporary or long term, severe or inconsequential, static or progressive, and present in a host of other ways that make one definition difficult. While no definition of disability has been agreed upon, a broad definition that incorporates both medical and social perspectives will maximize the participation of people with disability and further an appreciation for social, attitudinal, and physical environments and personal attributes (Iezzoni & Freedman, 2008). Healthcare providers commonly view disability from a medical viewpoint that overlooks the social aspects of the individual. A bio-psychosocial view of disability is a positive conceptual framework for nursing education, practice, and research, as it increases the awareness of the multiple dimensions of disability (Kearny and Pryor, 2003).

Multiple agencies have cited a need for improvements in disability education and these must consider the impact of negative attitudes as a contributing factor to health care barriers (Carmona & McCabe, 2005; National Council on Disability, 2009; WHO, 2011). The nurse educator is responsible for preparing students to maintain the profession's core values and responsibilities and this includes the ability to plan and provide care and to advocate for people with disabilities. All students enter their education with established attitudes that will change with new knowledge, associations, and experiences, and the educator influences this attitude development (Brillhart, Jay & Wyers, 1990). The following concept, "The attitudes and values that student nurses develop and take with them into the clinical area are fostered and nurtured by the nurse educators", charges the nurse educator with a great responsibility (Haigh & Johnson, 2007, p. 8).

Researchers have studied health care providers' attitudes to disability. Few of these studies targeted nurse educators and those examined the educator's attitude toward nursing

students with disability and the student's ability to perform as a nurse. A literature review concluded nurse educators' explicit attitudes toward nursing students with disability were generally positive, though these findings were in conflict with the reports of nursing students with disabilities (Aaberg, 2012). In addition, Aaberg (2012) established that the implicit attitudes of nurse educators were negative. This inconsistency in the research warrants further investigation into the attitudes of nurse educators toward people with disability.

### **Significance of Study**

The incidence of disability is widespread, attitudes toward disability are perceived as negative, and improvements in disability education are needed. As negative attitudes toward disability are identified as barriers to care, nurse educators must consider how they define disability, how they feel about and associate with people with disabilities and how they develop, present and assess the learning of disability related curriculum. This increased attention has the potential to improve instruction, to reduce discrepancies in the care of people with disability, and foster a holistic view of all patients. Deficiencies identified in disability education require improvement (USDHHS, 2005). A survey of nursing curriculum related to disability found the instruction to be based in medical viewpoints and that nurse educators relied on textbooks for information, though these same texts lacked disability content (Smeltzer et al., 2005). There is a need for curriculum development that integrates the care of people with disability into nursing education at all levels with further evaluation on the impact of this curriculum on nursing care for people with disability. Due to the limited information about the attitudes of nurse educators toward people with disability and discrepancies in prior research, an evaluation of nurse educator attitudes toward disability is indicated.

## **Purpose of Study**

The purpose of this study is to add knowledge to the literature about nurse educator attitudes toward people with disability with an examination of the relationship between attitudes to disability, definition of disability, the age of the educator, and years of experience as a nurse and nurse educator. In addition, identification of factors such as previous experience and knowledge of disability education knowledge may show relationship to the nurse educator attitudes toward people with disability. Results will aid in identification of negative attitudes held by nursing educators and will have implications which may influence the delivery of disability curriculum. Increased awareness about disability education deficiencies and attitudes will facilitate educators and their institutions to identify and reduce negative attitudes in educators and students through improvements in the nursing curriculum related to disability content.

This study measures explicit attitudes using an instrument developed by the World Health Organization (WHO) in 2010 and examines for factors that may influence the nurse educator's attitude toward people with disability. These include the educator's definition of disability, age, and years of experience as a nurse and nurse educator. A search of the literature failed to identify prior research addressing these attributes of nurse educators. The first factor to be evaluated relates to defining disability. Disability, a difficult concept to define, it is generally described in three models, as a personal problem and medical issue, as a societal problem and political issue, or as an integration of both personal and societal factors as a bio-psychosocial issue. This study, using the definitions for disability use these frameworks: the medical model, the social model, and the bio-psychosocial model examines the nurse educator's definition of disability.

A second potential influence on attitudes of nurse educators toward people with disability is their personal and professional associations, experiences, and prior knowledge of disability (Sahin & Akyol, 2010; Satchidanand et al., 2012). In nursing and other health care professional education, there is evidence that early and frequent interactions with people with disability result in the development of positive attitudes (Au & Man, 2006; Sahin & Akyol, 2010; Tervo, Palmer, & Redinius, 2004). These interactions, occurring socially through family or with work or school experiences, establish an awareness of the issues people with disability experience, reduce pity, create awareness and develop positive attitudes (Au & Mann, 2006; Sahin & Akyol, 2010). Once the data is collected, it will be analyzed to answer four research questions.

### **Research Questions**

The questions considered in this study are:

RQ1: What are the attitudes of nurse educators toward people with disability?

RQ2: How do nurse educators describe disability?

RQ3: Does a relationship exist between the attitudes of nurse educators toward people with disability and their definition of disability?

RQ4: Is there a relationship between attitudes of nurse educators toward disability and their age, years as a registered nurse, and years as a nurse educator?

### **Summary**

Health care providers, including nurses, create barriers to the care of people with disability because they lack disability-specific knowledge and hold negative attitudes. The attitude of the nurse educator affects the delivery of disability curriculum and the students' developing attitude. Because, effective disability education depends on the educator's attitude and there is a gap in the research related to nurse educator attitudes toward people with



disability, this study will examine for nurse educator attitudes toward disability and examine for potentially influencing factors. Changes in disability education, with an awareness of attitude development, will shape nursing student attitudes and improve nursing care for people with disability. The importance of this study is to increase knowledge of how nurse educator's view disability and to identify factors that contribute to attitudes toward people with disability.

### **Definition of Terms**

*American Association for Colleges of Nursing (AACN):* The AACN is a national nursing organization dedicated to advancing baccalaureate and graduate nursing education in the United States.

*Attitude:* Reflective of cognitive, affective, and behavioral experiences with attitude objects which are formed through evaluative knowledge and past experiences acquired in our lives that influence our judgments, decisions, verbal expressions, and our behaviors.

*Baccalaureate of Science in Nursing (BSN):* A four -year liberal arts nursing education with an in-depth focus on the physical and social sciences, nursing research, public and community health, nursing management, and the humanities.

*Bio-psychosocial model:* Disability is a complex phenomenon that is both a problem at the level of a person's body, and a complex and primarily social phenomena. This is also called the International Classification of Function (ICF).

*International Classification of Function (ICF):* A conceptual basis for the definition, measurement and policy formulations for health and disability providing a standardized description and planning and policy tool for decision-making.

*Medical model:* Disability is caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals.

*Nurse educator:* Full or part time nursing instructor or faculty member holding a MSN or doctoral degree and who teaches in a baccalaureate of science nursing degree program.

*Registered nurse (RN):* An individual who has graduated from a state-approved school of nursing, passed the NCLEX-RN Examination, and is licensed by a state board of nursing to provide patient care.

*Social model:* Social, physical, informational and institutional barriers are primary factors that increase disability by restricting participation.

## **Chapter II - Review of Literature**

This chapter reviews concepts related to disability, models of disability, and describes the study framework. In addition, it defines attitude and explores attitudes towards people with disability and the barriers experienced, particularly in healthcare and nursing. A discussion of attitudes toward disability in nursing and nursing education lays the foundation for an examination of the attitudes of nurse educators. The literature, identified through a search of Internet databases, reference lists, and library catalogues, provides the background for the proposed research study.

### **Disability**

More than one billion people around the world have a disability, with nearly 200 million of those experiencing significant functional difficulties (WHO, 2011). In the United States, more than 56.7million persons have disabilities and this number is rising due to an aging population, increased incidence of chronic illness, and improving survival rates (Brault, 2012; Iezzoni, & Groce, 2009). Most people will encounter disability at some point in time, directly or through the experiences of another (Iezzoni, 2010). People with disability often experience social and economic disadvantages that result in oppression and exclusion (Oliver & Barnes, 2012). For example, people in the United States living with disabilities have higher rates of poverty rates, lower levels of education, and lower rates of employment (Iezzoni, 2009; Brault, 2012). These inequalities and other violations of dignity are a great human rights concern (WHO & World Bank Group, 2011). Negative attitudes contribute to this problem and those with negative attitudes include policy makers, employers, educators, family members and health care providers. These attitudes are obstacles to the realization of basic life goals resulting in lost

opportunities to attain equal social, legal, economic, political and environmental conditions (United Nations General Assembly, 2007).

These inequities are prevalent in the provision of health care. Iezzoni (2010) reports that *Healthy People 2010*, the U.S. Surgeon General's 2005 *Call to action to improve the health and wellness of persons with disabilities*, and the National Council on Disability's 2009 report, *The Current State of Health Care for People with Disabilities*, all highlight disparities in routine screening and preventive services for people who have disabilities. One reason for this disparity is an "unconscious bias among health care professionals concerning persons with disabilities" (Iezzoni, 2010, p. 18). The problem relates to "accessibility and attitudinal barriers that interfere with the timely provision and completeness of physical examinations, diagnostic procedures, and screening and preventive services" (Minihan, 2011, p. 1171) which result in inequality of healthcare services (Iezzoni, 2010; Thompson, Emrich, & Moore, 2003; Godan, Brajtkovic, & Godan, 2008; National Council on Disability, 2009). Problems range from failures in communication and difficulties with accommodation to the practitioner's lack of knowledge about disability related issues. Providers are often unprepared to identify and treat the health and wellness concerns of people with disability and may not recognize their needs. These attitudes and behaviors marginalize people with disabilities.

There is no single definition of disability, as different definitions serve different functions and differ in emphasis and focus. Multiple definitions exist to determine benefits and provide protection such as the Social Security Administration, the American Medical Association, and the Americans with Disability Act(ADA) and many of these define disability in terms of disease, disorders, impairments, and limitations of the individual (Iezzoni & Freedman, 2008). "One's definition of disability influences the knowledge, attitudes, and skills that are viewed as

prerequisites for the optimal care of patients with disabilities” (Minihan, 2011 p.1172). Health care providers and educators must become knowledgeable about the numerous definitions of disability and how applied in practice. The following is a description of three prevailing disability models.

### **Medical Model**

The skeletal remains of a 45-year-old Neanderthal male with significant pelvic and spinal deformity indicate that early society must have included people with disability, his remains even suggest that early society supported people with disabilities as survival to this age would be uncommon for any person of this era (Bonmati et al., 2010). However, negative responses to impairment and exclusionary practices, documented throughout history have influenced how present Western civilization views disability (Barnes, 2012). The ancient Greeks and Romans with economies dependent on slavery and military conquest had low tolerance for those with imperfections as seen in historical writings and in Greek mythology where the perfection of gods and goddesses reigned (Oliver & Barnes, 2012). Early Judeo-Christian religions linked impairment with ungodliness and sin generating a fear of people with disabilities. In addition, feelings of piety and guilt with a desire for salvation prompted charitable acts toward people with disabilities that were ultimately oppressive as it robbed the individual of full status as a person (Barnes, 1997; Ryan & Thomas, 1987; Stainton, 2008).

Generally, people with disability remained an integral part of the group until the late nineteenth century. As civilizations adopted industrial economies, people with disability became a hindrance to the survival of the family especially for those living in poverty and as Western culture developed and embraced capitalism, true success relied on being independent and able-bodied (Kudlick, 2003). People with disability perceived as abnormal and reliant suffered

exclusion from the mainstream through institutionalization and segregation (Scotch, 2009). In addition, as medical science expanded, disability came to be viewed as an individual affliction, even a personal tragedy in need of normalization and rehabilitation with diagnosis and prescribed treatments or cures even when such interventions were not effective (Barnes, 1997).

This view of disability resulted in the medical model, with a focus on disease, trauma, or other condition or impairment (Carson, 2009). This concept evolved as knowledge of biological causes of impairments grew and strengthened medicine's importance in treating conditions to correct the problems of the afflicted (Iezzoni & Freedman, 2008; WHO, 2002). The medical model sees each person with disability as suffering and in need of a medical cure, so they may become normal and fit into society (Byron, Howell, Bradley, Bheenuck, Wickham, & Curran, 2006). This medicalization of disability, with a focus on the individuals need to overcome their disability, positions health care providers to decide what is best and to stay significantly involved in the lives of people with disability while setting them apart from others (Barnes, 2012; Iezzoni & Freedman, 2008; Oliver & Barnes, 2012). The WHO (2001) describes the medical model view of disability as, "a problem of the person, directly caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals" (p. 20). Proponents of this model assert that health care providers must intervene to fix or minimize the problem, assisting the person to make adjustments or change. Health care providers who adopt this approach, identify people by their disability generally defines them as abnormal. The United States Surgeon General reports that health care providers often focus on the disability and are unprepared to treat other conditions or other health and wellness concerns (USDHHS, 2005).

“Disability cannot simply be equated with impairment, and disability is far more than just a health issue” (Shakespeare, 2012, p.131). A strictly medical view of disability neglects to consider the complex interactions that occur between the individual and their environment, frequently resulting in a lack of service coordination that fails to meet the needs of the individual holistically (USDHHS, 2005). Health care education generally supports the medical model of disability, which teaches the treatment of patients based on their impairment rather than relevant health problem creating a barrier to care. The Surgeon General’s *Call to action* identified that health care providers receive insufficient education to meet the needs of people with disability and recommended the development of evidence-based curricula that take a bio-psychosocial view (USDHHS, 2005).

The medical model views disability as an individual deficit contributing to injustices such as poverty, environmental barriers and social exclusion (Shakespeare, Iezzoni & Groce, 2009). In addition, negative attitudes of others about people with disabilities influences how people with disabilities feel about themselves, creating poor opinions that prevent active participation in society (Carson, 2009; Telford, Kralik, & Koch, 2006). Some internalize the negative message that they are abnormal while others complain that health care providers treat them in a way that makes them passive recipients of care that increases their dependency on others (Carson, 2009; Goodall, 2005). It was these thoughts that prompted people with disability to band together to resist the oppression and discrimination that restricted their ability to participate fully in society; such resistance led to the development of the social model.

### **Social Model**

People with disabilities have challenged the medical model and attribute disability to the failure of society to integrate people with disability (Oliver & Barnes, 2012). In the 1970’s,

through the actions of people with disability, the social model of disability evolved. Activists shaped the disability rights movement through political action and public protest as they advocated for legal protection of their rights, protesting the social barriers and economic constructions that disable people (Anastasiou & Kauffman, 2011; Barnes, 2012; Oliver & Barnes, 2012; Scotch, 2009). Disability studies beginning in the mid 1980's developed as an interdisciplinary field that has altered the way in which disability is defined resulting in an approach to disability as a social category rather than an individual characteristic (Kudlick, 2003). The inquiry focused on attempts to find meaning in the way people are valued and viewed. Advocates of the social model fought for the acceptance of impairment as an aspect of human diversity and for recognition that problems for people with disability rose from unaccommodating physical environments, prejudice, hostile attitudes and social policies (Oliver & Barnes, 2012; Roush & Sharby, 2011; Shakespeare, 2012; WHO, 2002).

The social model of disability describes the problem as resulting from a complex collection of conditions created by the social environment that requires social changes and action to make environmental modifications that facilitate the full participation for all people with disabilities (WHO, 2001). Supporters believe it is the environment and the attitudes of others that create all disability (McDermott & Turk, 2011). The social model has changed the view of disability from a medical issue to a human rights concern, which has begun to affect policy changes to address the some of the various societal shortcomings experienced by people with disability.

An important attribute of the social model is the distinction between impairment, as a physical, sensory or cognitive difference and disability as societal exclusion, which prevents people with impairment from mainstream participation. "An impairment is any loss of normal



age-related structure and function of the body. Disability results from society's inability to facilitate a person with an impairment participating fully in all they want to do." (The Disability Partnership, 1999, p. 5). Impairments, both congenital and acquired affect how a person functions, while disability results from society's inability to help a person with an impairment to participate fully in all they want to do (The Disability Partnership, 1999; Barnes, 2012; Shakespeare, 2012). This distinction between disability and impairment does not deny that people with disabilities have limited functioning or that medical interventions are sometimes needed (Goodall, 1995; Oliver & Barnes, 2012; Shakespeare, 2012). In fact, disability, usually related to a health condition, gives people with disabilities greater health needs than those of the general population and denying this will have a negative impact on quality of life, as it will prevent the appropriate medical and support services (Shakespeare, 2012). The need for supportive health care services that do not limit participation in the activities of life has led to an integration of the medical and social models.

### **International Classification of Function, Disability, and Health**

Some disability activists have rejected the social model as dismissive of the realities of living with impairment, failing to recognize that while disability is not an illness; people with disability often do have greater health needs. They may require frequent medical intervention and rely on the assistance of others. The social and medical models are "at opposite ends of the spectrum of thinking about disability" (Kearney & Pryor, 2003, p. 163). An interface of the medical and social models recognizes that the needs of the individual originate in both personal and environmental factors. The WHO refined this concept of merging the social and medical model into a bio-psychosocial model through the development and adoption of the International Classification of Function, Disability and Health (ICF). The ICF defines disability as follows:

Disability is the umbrella term for impairments, activity limitations and participation restrictions, referring to the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors) (WHO & World Bank Group, 2011, p. 4).

The adoption of a bio-psychosocial perspective in the provision of health services develops a broader outlook when considering the lives of all people and improves attitudes toward disability (Boyles, Bailey, & Mossey, 2008; Kearney & Pryor, 2004; Scullion, 2010).

The medical model and the social model, two main approaches for classifying and measuring disability, integrated to form the ICF framework. The preamble to the United Nations Convention on the Rights of Persons with Disability (2007) states,

Disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others (pg. 2).

This aligns with the WHO description of disability as a multidimensional phenomenon resulting from the interaction between people and their physical and social environment (WHO/ Economic and Social Commission for Asia and the Pacific [ESCAP], 2008). The WHO (2011) specifies that disability is not an attribute of the person, but an interaction between a person with impairments and attitudinal and environmental barriers to create a bio-psychosocial approach. The ICF serves to enhance the understanding and measurement of disability by emphasizing the contexts of environmental and personal factors in which people with disabilities function and as a merger of the two attempts to view the person holistically from three different perspectives on health: biological, personal, and social (Solli & da Silva, 2012). Historically, nursing has used the medical model to view disability (Scullion, 2010). An understanding of how this model negatively affects people with disability and knowledge about the social model will provide a way for nurses to bridge the medical-social gap with a balanced approach that gives appropriate

weight to the different aspects of disability. Nursing education, using a bio-psychosocial focus, will create a shift in care that promotes improved and appropriate health care interventions. The ICF is the conceptual framework for this study.

### **Conceptual Framework**

The ICF, developed by the WHO in 1980 and revised in 2001, provides a conceptual basis for the definition, measurement and policy formulations for health and disability providing a standardized description and planning and policy tool for decision-making. In addition, it is a means to measure how people with and without impairments are able to function in society (WHO, 2002). Its design stresses health and functioning, shifting the emphasis from a person's disability to their level of health. ICF, based on a bio-psychosocial model of functioning and disability, takes a multidimensional view at the level of the body, the person and society to synthesize the medical and social models of disability (WHO, 2008).

The aims of the ICF are multi-purpose. These include providing a scientific way to study health and health related states, outcomes, and influencing factors. It establishes a common language to describe such states to improve communication between different people such as health care workers, policy makers, and the public, including people with disabilities. The standardization of vocabulary enables the comparison of data worldwide between countries, health care disciplines, and services over time. In addition, the ICF enables a systematic coding process that is useful in a variety of ways such as quality assurance and outcome evaluation (WHO, 2001). Most relevant to this study, the ICF promotes a holistic approach when viewing people with a health condition. The health and health related states apply to not just people with disabilities, but to all people, making the ICF applicable to everyone.

The model identifies a health condition to consist of two parts, with each part divided into two components (See figure 1). Part 1 is the Functioning and Disability, which includes Body Functions and Structures, Activities and Participation. The Contextual Factors are comprised of environmental and personal factors. Body functions and structures relate to physiological functions and anatomical body parts. Activity involves completing tasks and participation is one's involvement in life. The contextual factors are comprised of environmental factors such as attitudes of society, legal constructs or physical characteristics of architecture or climate and terrain, while personal factors are intrinsic including gender, race, habits, lifestyle and other features that influence how an individual experiences disability. Functioning, described in three levels, the body or body part, the whole person, and the whole person in the social context is equally defined as a disability when there are impairments, activity limitations or restrictions in participation (WHO, 2002). Figure 1 depicts the ICF model and the relationships among its parts.

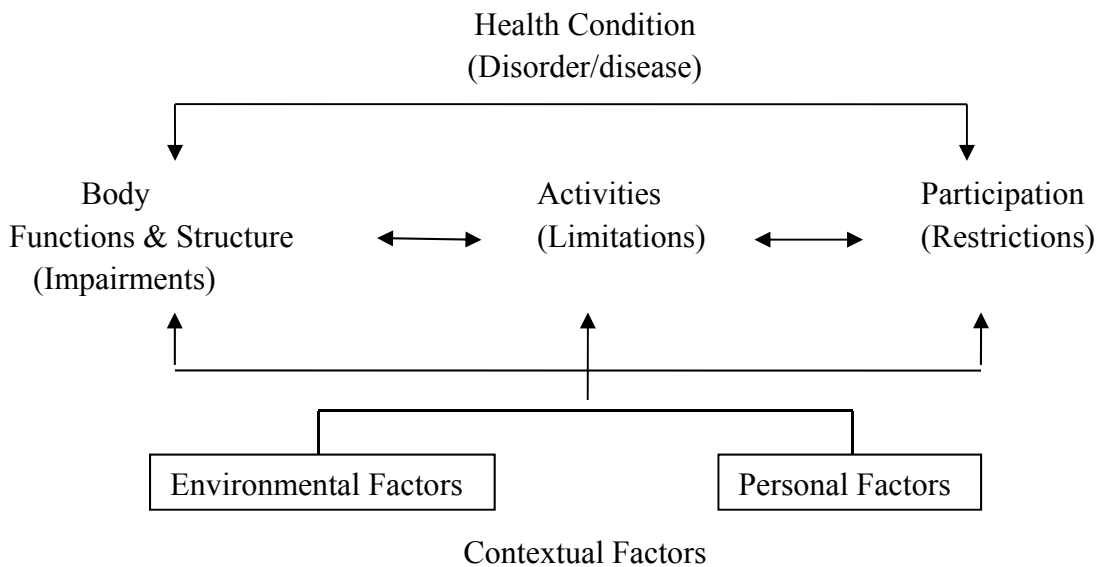


Figure 1. International Classification of Functioning, Disability, and Health, World Health Organization, 2002.

The ICF diagram (Figure 1) shows that disability and function result from interactions between **health conditions**, such as diseases, disorders and injuries or other circumstances related to aging, stress, pregnancy or genetic predisposition and **contextual factors**. The contextual factors consist of external **environmental factors** such as social attitudes, architectural characteristics, legal and social structures, as well as climate, terrain and internal **personal factors**, which include gender, age, coping styles, social background, education, profession, past and current experience, behavior pattern, character and other factors that influence how disability is experienced by the individual (WHO, 2002). In addition, the diagram identifies that dysfunction may occur at one or more level: impairments, activity limitations, and participation restrictions involving the person at the level of body or body part, the whole person and the whole person in a social context. Life experiences are reflected in a person's participation, activities, body functions and structures and when health conditions alter the integrity of these experiences, impairment occurs which may

result in some degree of disability. The inclusion of contextual factors enables the ability to extend the functioning levels of people by making it possible to identify both barriers and facilitators. All components of the ICF are interrelated and change in one area has the potential to have an impact one or more of the other areas. The ICF model applies equally to impairments of any nature: physical, cognitive, psychological, or any combination of the three.

The ICF model uses an interactional approach between the medical and social model to focus on the different ways in which the interface between health conditions and contextual factors would improve circumstances of people with disability. It is important to note that this classification system does not classify people but describes each person's situation from within an array of health or health-related domains and the description, based within the context of environmental and personal factors made to benefit the needs of the person (WHO, 2001). Health care providers, nurses included, can use this information to apply the ICF and enhance the quality of clinical teamwork and nursing practice to communicate with other health care professionals in a common language (Boldt et al., 2010).

There are opponents to the ICF model that specify practical application and too broad a definition of disability as obstacles to success. Masala and Petretto (2008) judged that the ICF's classification approach prevents the translation of the concept into practical usage as it does a more successful job of classifying functional and structural limitations, but provides a less detailed classification of activities, participation and environmental factors resulting in the promotion of functioning as an individual responsibility. Clarification of functioning and its link with environment, personal, and socio-environmental characteristics will to decrease disablement. McDermott and Turk (2011), in an effort to clarify how people with disabilities are counted, describe the ICF as a "functional model", with "a broad and indistinct definition" (p. 2)

of disability which can both over and under represent functional limitations and abilities that makes participation and environment difficult to identify and quantify. From this viewpoint, the model continues to place disability within the individual using measurements related to restrictions of an individual's body and social participation. In addition, the framework, with a focus on how health conditions affect the individual's personal capacities, neglects to evaluate the disabling tendencies of the government, physical environments or cultural circumstances (Oliver & Barnes, 2012). Others report similar concerns that the defining concept of the ICF is the health condition, prioritizing the biological factors and failing to address the personal factors in a meaningful way (Conti-Becker, 2009).

As with most conceptual frameworks, there are limitations and strengths. The ICF is a theoretical framework based on a bio-psychosocial philosophy of care created as a universal model to guide intervention, research, policy development, program evaluation and understanding of disability. In health care, the ICF serves as a tool that can change the view of disability. Use of this bio-psychosocial model can inform about the inequities that people with disabilities face and promote holistic care. The WHO (2011) *World report on disability* concluded that attitudes and misconceptions of health care providers remain a barrier to people with disability and recommends education and training to improve attitudes and strengthen the advocacy role.

Mueller, Boldt, Grill, Strobl, and Sticki (2008) propose that the ICF categories are highly relevant to nursing and link with the goals of nursing intervention. At the conceptual level, the ICF can help increase the consciousness of nurses to view impairment in a broader sense that includes the consideration of a person's associated restrictions and impairments and adds an increased awareness of social, cultural, and political dimensions of disability (Kearney & Pryor,

2004). Nurses can use the ICF model to broaden their outlook to improve the assessment and delivery of health care as they consider an individual's personal and environmental contextual factors, such as functional impairments, participation, and activities (van Achterberg et al., 2005). The ICF, "used as a framework when planning nursing care, writing up a nursing care plan, writing up a patient's notes or when giving handover" may be especially useful when preparing for the discharge into the community (Kearney & Pryor, 2004, p. 167).

It is important for nurses to understand the differences between the disability models and by incorporating the ICF into nursing education, it enables teaching and learning from a biopsychosocial perspective that considers the patient holistically as a valuable member of a society, who is influenced by all aspects of their environment, including the attitudes of others. (Kearney & Pryor, 2004). Nurse educators who teach the ICF model have the potential to change the focus to a social understanding of disability. The ICF is a multidimensional model with dynamic interactions between its components and is the theoretical framework for this study.

### **Attitudes**

Like disability, the term attitude is difficult to define. Early definitions proposed a linkage between attitudes and some consistent and observable behavior. Attitude researchers have determined that attitudes are more complex and have adopted a broader definition. For this study, the definition of attitude is "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 2007, p.1). This definition incorporates three central features: evaluation, attitude object, and tendency.

Encounters with some object produce evaluations of differing intensity, personal involvement and relevance. As the mind reacts to experiences, it establishes an inner tendency, which gives rise to judgments, emotions and behaviors resulting in an attitude (Eagly & Chaiken, 2007).



Attitudes are multidimensional and subject to change. Eagly and Chaiken (2007) report the formation of attitudes through affective, cognitive, or behavioral processes that establish associations linked to the attitude object. Disagreement exists about the whether the affective component, or feeling and emotional aspect, is a necessity in attitude development or if attitudes may be formed in its absence, with cognition or behavior. Attitudes occurring within the mind of the individual, represent an inner tendency that is subject to the individual's past experiences that create an affinity to respond in a certain manner to a given object, person or situation. What is clear is that attitude change relies on a change in inner tendency based on prior evaluations and the creation of new evaluations, which then guide new behaviors (Bohner & Dickel, 2011; Cross, 2005; Fazio, 2007; Schwarz, 2007). Developing new evaluations, which include beliefs and thoughts, feelings and emotions, and intentions and overt behavior can occur through educational experiences.

Attitudes may be explicitly stated or remain implicit, existing outside of the individual's conscience. Explicit attitudes are subject to social desirability, adopted to make one look good. Implicit attitudes, thought to be a better indicator of attitude, exist outside of the person's awareness and are more difficult to determine (Greenwald & Banaji, 1995). The attitude of the teacher may influence the attitude and behavior of the student. When new information is learned, an inconsistency forms in that a person's "knowledge, opinion, belief about the environment, about oneself, or one's behavior" known as cognitive dissonance (Festinger, 1957, p. 3) This inconsistency between beliefs and actions forces a person to reevaluate their beliefs toward a more desired conclusion such as a change in attitude and behavior (Gawronski, 2012).

The attitude of the educator may influence the attitudes and behaviors of the student. Gagné (1984) proposed that learning occurs within five domains, one of which is attitude.

Students approach new situations with differences in motor skills, verbal information, intellectual skills, cognitive strategies, and attitudes, and effective instruction must take these into account (Gagné, 1972). Conditions for attitude learning are not well described and are different from the other categories, though Gagné stressed the human modeling is essential to attitude learning and is more than simple observation. People will shift their attitudes to match the attitudes of people in their immediate situation to facilitate rapport and positive interpersonal relationships, especially for someone they consider significant such as a teacher or considered an expert (Brillhart et al., 1990; Friedkin, 2010; Kawakami et al., 2012).

In addition to the educator fostering change, group members frequently adopt the attitudes and behaviors of other group members, again often influenced by those they consider significant or by a majority opinion (Festinger, 1957; Friedkin, 2010). Group dynamics and social structure plays into the change of attitude at the group level where, with interpersonal influences, the attitudes of the group change through discussion and reflection (Friedkin, 2010). Therefore, the educator who facilitates group discussions and reflection will affect the attitude of the students as a group. Attitudes are complex entities that are sometimes undetermined by individuals themselves. However, evidence supports that attitudes can change. Educators are in a position to inspire a positive effect on their students' attitudes and behaviors towards people with disability through the introduction of new concepts, teaching strategies and modeled behavior.

### **Healthcare Professionals and People with Disability**

Prior research studies support that most healthcare professional define disability from a medical viewpoint (Chenowith, Pryor, Jeon, & Hall-Pullin, 2004; McDermott & Turk, 2011; USDHHS, 2005). In the United States, people with disabilities experience health disparities related to factors such as poor or lacking health care coverage with limited benefits, physical

and communication barriers to access, inadequate disability research, insufficient monitoring and enforcement of the Americans with Disability Act in health care settings (Iezzoni,2009).

However, the greatest barrier to appropriate and effective care is the lack appropriate training for health care practitioners on disability competency issues as individuals experience discriminative behavior and inadequate care from health professionals due to stereotypes and wrong assumptions (National Council on Disability, 2009; Sahin & Akyol, 2010).

Three main issues are identified for health care providers related to caring for people with disability: a “lack of disability-specific knowledge; discomfort with working with people with disabilities; and attitudes and misperceptions about disability” (Lam et al., 2010. p. 1). A deficit in any one or combination of these critically interrelated factors results in significant barriers to care. People with disability experience barriers to quality healthcare. This is due to attitudes as well as inadequate knowledge and skills (Minihan, 2011; Satchidanand et al., 2012; Shakespeare, Iezzoni & Groce, 2009; USDHHS, 2005; WHO, 2011). The medical model, with a focus on cure, is a common guide the delivery of care of people with disability. This approach to people with disability promotes negative attitudes that create disparities and perpetuates barriers to care (Scullion, 2010; Seccombe, 2007a). As a result, people with disabilities often do not receive health promotion, disease prevention, preventative health screenings, sexuality and reproductive health services, dental care, and mental health services (Iezzoni, 2009; Smeltzer, 2007; WHO & World Bank, 2011). This exclusion is a considerable form of discrimination against people with disabilities.

Satchidanand et al. (2012) performed a literature review of the attitudes of health care students and professionals toward people with physical disability in an effort to understand barriers to care and to guide educational strategies for health care students and professionals.

Twenty-two studies were evaluated and with findings that attitudes were generally positive, though fear, discomfort, inadequate knowledge and lack of experience related to disability contributed to barriers in care. Studies specific to the attitudes of nurses and nursing students suggest they hold more negative attitudes than other health care professional and students (Au & Man, 2006; Cervasio & Fatata, 2013; Dorji & Solomon, 2009; Matziou, et al., 2009; Tervo et al., 2004). Undergraduate healthcare professionals, nursing students in particular, require an education that will develop an understanding of disability that promotes the development of positive attitudes toward people with disabilities (Byron & Dieppe, 2000). Given the number of people with disability, the deficiencies in health care education, and the greater negativity of nursing students, disability education in nursing is an area that benefits from further examination.

### **Nursing Education and Attitudes Toward Disability**

The American Nurses Association (ANA) is committed to the elimination of discrimination in the education and practice of nursing and places a great deal of weight on the overall attitude of the nurse. “Prejudice which involves thoughts, attitudes, insensitivity, and ignorance can lead to discrimination, which may be based on differences due to age, ability, gender, race, ethnicity, religion, sexual orientation, or any other characteristic by which people differ” (ANA, 1998, p. 1). The first provision of ANA’s *Code of Ethics* states, that regardless of the nature of health problem, “The nurse in all professional relationships practices with compassion and respect for the inherent dignity, worth, and uniqueness of every individual, unrestricted by considerations of social or economic status, personal attributes or the nature of health problems” (2001, p. 3). Nurses have a professional obligation to adopt an attitude that communicates acceptance and tolerance.

Research related to attitudes toward people with disability reported that prior experience, supported experiences and close contact people with disability (personal and professional) and education about issues with disability were identified as recurrent positive influences on attitudes toward people with disability (Satchidanand et al., 2012; Seccombe, 2007a; ten Klooster et al., 2009). The inclusion of practical experience and contact in the educational experience will increase the student's awareness of the experiences of the person with disability and the more personal the association, the more positive the attitude (Thompson et al., 2003). Nurse educators have a significant effect on the development of student nurses' attitudes and values during their education, which are taken into the clinical practice (Haigh & Johnson, 2007; Seccombe, 2007b). The educator must instruct to the expected learning outcomes and include attitude development. Teaching about attitude requires the educator be aware of cognitive, behavioral, and emotional components of their own attitude, in this case toward people with disability. To promote positive attitudes, nurse educators must be knowledgeable about disability and disability models and have an understanding of the experiences of people with disability (Sahin & Akyol, 2010; Scullion, 2010; Smeltzer, 2007). Nurses develop attitudes toward people with disability that directly influence how they provide care and these attitudes are formed by the way in which disability is defined, the degree of personal experience and contact with people with disability, and the depth of disability related curriculum in their education (Byron et al., 2006; Satchidanand et al., 2012). The educator who is knowledgeable in their teaching and exhibits a positive attitude when in the class and clinical environment when discussing or interacting with people with disabilities will affect the future delivery of equitable care.

Educators are in a position to affect their students' attitudes and behaviors towards people with disability through the introduction of new concepts, teaching strategies, and modeled

behavior with educational instruction or curriculum that focuses on disability awareness (Byron et al., 2006; Donahue et al., 2011; Kearney & Pryor, 2004; Oermann, 1995; Sahin & Akyol, 2010; Satchidanand et al., 2012; Scullion, 2010). The student enters their nursing education with established attitudes, memories, and experiences related to disability. New evaluations, formed in response to additional information and experiences in the context of this new setting, will construct new attitudes to guide the student's behavior. Educators may inadvertently promote negative attitudes toward people with disability or structure their teaching to develop positive attitudes

### **Curriculum**

Nursing education does a poor job teaching about the care of people with disabilities as disability related content in the curriculum and textbooks is inadequate, lacking attention to specific types of disability, models of disability, self-care, and health promotion (Smeltzer et al., 2010; Smeltzer, Avery & Haynor, 2012). Nurse educators need to incorporate disability studies into curriculum including current perspectives, input from persons with disability and educational strategies to support student development (Byron et al., 2006; Seccombe, 2007b; Smeltzer, 2007). However, educators report that a lack of interest or experience, time constraints, the need to teach more important content, and preparation for the NCLEX prevent this instruction (Smeltzer, Dolen, Robinson-Smith, & Zimmerman, 2005; Smeltzer, Robinson-Smith, Dolen, Duffin, & Al-Maqbali, 2010).

Smeltzer et al. (2005), in a survey of nursing curricula, found that instruction is usually based in medicalized ideas that may result in negative attitude towards people with disability that contribute to barriers to care. The curriculum, of 234 nursing schools in the United States, was evaluated for disability-related content. The results showed inadequate attention to disability in

the curricula and inadequate exposure to persons with disabilities during education and training (Smeltzer et al., 2005). Greater than 90% of the 234 schools surveyed reported using textbooks for disability education yet an examination of nursing texts revealed an absence of disability related content. Improvements in disability education must include an understanding that people are differently disabled with unique needs, not all problems have a medical solution, health needs may not be related to the impairments and preconceptions about disabled people may result in the omission of comprehensive care (Byron et al., 2006). This awareness, achieved by early contact with people with disabilities and appropriate educational strategies, requires a disability curriculum inclusive of psychosocial aspects rather than a purely biomedical position (Sahin & Akyol, 2010). These curricular strategies should start early in the program and be presented repeatedly in a variety of circumstances that encourages students to participate in real and simulated situations that increase exposure to various people in different situations (Byron et al., 2006; Sahin & Akyol, 2010). While the medical profession has begun to research and implement curriculum changes related to disability, nursing literature lacks evidence of such considerations.

There is inadequate attention in nursing education to disability, models of disability, and exposure to persons with disability that must be addressed if care is to improve (Sahin & Akyol, 2010; Smeltzer, 2007). Education that integrates disability across all courses in the curriculum and includes objectives targeting specific concepts produces improvements in understanding and attitude (Hahn, 2003). The American Association of Colleges of Nursing (AACN) (2008) has developed *The Essentials of Baccalaureate Education for Professional Nursing Practice* to provide a framework for the development of baccalaureate nursing curriculum. The AACN delineates practice-focused outcomes for graduate nurses that integrate the knowledge, skills, and attitudes as described in nine “Essentials” that will enable nursing practice within complex

healthcare systems. Nursing faculty are responsible for transforming student knowledge into the practice of nursing through the introduction of nursing science and theories in a competency based approach to provide patient centered care that identifies, respects, and addresses patient differences and needs. Specific educational strategies include the development of perceptual abilities (formation) that lead to a way of learning to use knowledge to change how the student responds to people especially those who are who are vulnerable (Benner, Sutphen, Leonard, & Day, 2010). This involves a process that keeps students focused on the patient's experience by helping the student to integrate knowledge, clinical skills and ethical comportment into their practice and relies on the educator's ability to incorporate strategies that prepare the student to recognize the patient as a person first. Therefore, nurse educators must examine the curriculum and incorporate the necessary changes. The development and implementation of disability awareness curriculum should be included in the classroom and clinical environment and be promoted by the educator as a means to improve attitudes and reduce discrimination.

Nursing literature lacks educational strategies to promote disability awareness and to increase the comfort levels of those caring for people with disability (Thompson et al., 2003). Medical schools and other schools of health professional have recognized that existence of curriculum shortcomings and have published strategies to remedy the problem. Some recommend the advancement of the rights of people with disability early in the curriculum, as it may deter the development of negative attitudes (Tervo et al., 2004). Other constructive strategies included in undergraduate medical education utilized standardized patients with disability to simulate the performance of skills and increase confidence while enabling the assessment of these skills (Long-Bellil et al., 2011). One experiential learning modules required residents to make a single home visit to a family with a disabled child to give added insight



otherwise not found in typical hospital training (Sharma, LaLinde, & Brosco, 2006). Another curriculum intervention used a specific disability (impairment) as a demographic characteristic, a medical condition or as a secondary consideration for the student to consider in the focus of providing care using a “bio psychosocial context” to increase student’s consideration of the person from a clinical perspective (Graham, Brown, Zhen, & McDermott, 2009). Minihan et al., (2011) provide an extensive overview to approach disability education using the domains of knowledge, attitude and skill.

An overall theme within these strategies involved teaching the student to view the patient as an individual while meeting medical and health needs. Many courses in health care education medicalize disability and fail to take a holistic view of health resulting in health care providers who ignore the human rights of people with disabilities (Shakespeare, 2009). Education about disabilities must include knowledge about models of disability, as this will increase the nurse’s ability to challenge discrimination and negative attitudes toward disability (Scullion, 2010).

### **Models of Disability in Nursing Education**

A single definition of disability is difficult and numerous definitions exist depending on the situation. Two models, which view disability as either a medical problem in need of intervention or a social problem enacted on people with impairments, are dichotomous. The medical model evolved as diagnostic tools developed and enabled physicians to recognize biological causes for impairments while the social model views disability as a socially created problem. This social view is often difficult for health care providers to adopt as they see health needs as an important aspect in the life of many people with disability (WHO, 2011). While the medical model tends to isolate the individual by putting responsibility on them to achieve “normal” levels of function or appearance, people with disability in fact often need of continuous

or frequent medical interventions for either primary or secondary health issues (Shakespeare, 2012).

A comprehensive education about the complexities of living with physical, cognitive, sensory, and/or emotional impairment is necessary for the graduate nurse to effectively care for and advocate for people with disability. The educator must be knowledgeable about these same issues in order to mentor the student. The Disability Partnership (1999) identified the top six issues that people with disabilities thought healthcare professionals should be able to do:

- Understand that people with long-term conditions are often experts on their own medical problems and lifestyle issues
- Recognize that different disabled people have different needs, identities and preferences
- Recognize that not all problems have a medical solution
- See the person as capable of making rational life decisions
- Recognize the danger of excluding other diagnoses based on preconceptions about people with impairment
- Demonstrate an awareness of the communication needs of people with hearing, speech, visual or learning impairments (p.4)

These six statements relate the same need and desire of anybody else. Nurses must be prepared to advocate for people with disability and have an increased awareness of how society contributes to discrimination when disability accepted as an abnormal state. Appropriate disability education will promote nursing care to empower the patient rather than deny capabilities. An integrative review that explored 65 papers on disability in multidisciplinary health and nursing literature determined nurses lacked knowledge about the socio-political aspects of disability and concluded that adopting a social perspective would inform about stigma and oppression (Boyles et al., 2008). Nurses who view disability from a broad perspective, not just the medical issues but the social, political, and cultural aspects of disability will understand the complexity of being a person with disability.

Nursing views disability from a largely medical model and nursing programs that use disability models in the curriculum report a tendency toward using the medical model rather than social or bio-psychosocial models (Smeltzer, 2005). Nursing education can provide information and experiences that teach nursing students the differences between the models and present a framework that increases the consideration of patients as individuals (Kearney & Pryor, 2004; Seccombe, 2007a). The incorporation of the social and bio-psychosocial models of disability into nursing curriculum, in conjunction with early contact with patients with disability, effective educational strategies and realistic information on attitudes about the disability is thought to promote disability equality and social advocacy. Advancing these factors in nursing education will contribute to positive attitudes toward people with disability, challenge discrimination in the provision of healthcare and better meet the needs of all people, including those with disability (Goodall, 1995; Sahin & Akyol, 2010; Scullion, 2010; Seccombe, 2007a; Smeltzer, 2005; Tervo et al., 2004).

### **Research and Nurse Educator Attitudes Toward People with Disability**

Few studies have examined the nurse educator's attitudes toward people with disability (Aaberg, 2010; Brillhart, Jay, & Wyers, 1990; Ney, 2004; Trawick, 1990). Of the four identified, three were performed ten or more years ago, using unidimensional instruments developed 20 or more years ago. All studies were conducted in the United States and all, but one, were dissertation studies. Summaries of these studies are as follows.

Brillhart, Jay, and Wyers (1990) used the Attitude Toward Disabled Persons (ATDP) questionnaire, developed by Yuker, Block and Young in 1970, to measure and compare attitudes of current nursing students, recent graduates, nursing faculty, registered nurses, and disabled individuals. The ATDP is scored using a numerical range from -90 to 90 with a score above zero

indicating a positive attitude. Nurse educators had the least positive attitude toward people with disability with a mean of 38, followed by new graduates at 41. Working registered nurses had a mean of 47 and beginning nursing students had a mean of 46. While Nurse educators scored in the positive range, they held the lowest score while the people with disability held the most positive attitudes with a mean of 86.

Traweek (1990), using the Issues in Disability Scale developed in 1987, measured the attitudes of 34 Bachelor of Science in Nursing (BSN) educators and BSN students. Possible scores ranged from 55 to 385 with 155 neutral score and a score greater than 156 a positive attitude. Nurse educators scored 231.97 and students scored 225.15, indicating the educators had positive attitudes that were slightly better than the students' attitudes.

The study by Ney (2004) using a survey developed by Bolton (1994) examined the attitudes of nurse educators toward nursing students with disabilities, using 26 registered nursing programs in Alabama, 12 of which were BSN programs. The scores ranged from 19 to 95, with a score less than 43 indicating a positive attitude, a score ranging from 44 to 70 indicating an uncertain attitude, and a score greater than 71 indicating a negative attitude. The mean score for faculty who teach in an associate degree program was 36.61 and the mean score for faculty in the bachelor degree programs was 34.11. While all held positive attitudes toward nursing students with disabilities, the 140 BSN educators were more positive than the 158 educators teaching in associate degree programs.

A more recent study by Aaberg (2010) measured implicit attitudes of 132 nurse educators toward people with visible disabilities by using the Project Implicit Disability Attitude Implicit Association Test (DA-IAT). Explicit attitudes are those that are expressed openly. Problems with explicit attitudes are that they are subject to social desirability (Greenwald & Banaji, 1995).

Implicit attitudes are those held subconsciously. Results showed that nurse educators had significant bias toward people with disability. The DA-IAT is a web based test that measures the strength of associations between relating concepts (images a person with and without a physical disability) and evaluations ( good, bad) or stereotypes (able-bodied“ or “disabled”). The instrument may be accessed by anyone at no cost. Results showed that nurse educators preferred able-bodied people and did so at a rate greater than participants in the general population.

These studies of attitudes among nursing faculty toward people with disability reveal a complex situation. Nurse educators’ reported generally positive attitudes toward people with disability and yet according to people and nursing students with disability, an atmosphere of negativity and discouragement exists (Aaberg, 2010; Carroll, 2004; Marks, 2007). In addition, results of the most recent research, which focused on the implicit attitudes of nurse educators, was clearly negative (Aaberg, 2010). The findings of the implicit study contradict the results of the other studies that measured explicit attitudes.

### **Research Questions**

Several issues become clear following this exploration of the literature. The first is that no one definition of disability exists and viewpoints vary when describing disability. In addition, there are conflicting results in the research related to the attitudes of nurses, nursing students and nurse educators toward disability. Other findings were that an individual’s view of disability, their prior experience with people with disability, and the amount and type of disability education they had influenced their attitude toward people with disability. In addition, there is a deficiency in research about the attitudes of nurse educators. Identifying the attitudes of nurse educators as well as correlating demographics can be used to improve curriculum and have a positive influence the attitude of the student toward people with disability. This study will

examine the attitudes of nurse educators toward people with disability and evaluate for contributing factors.

The study will answer the following questions.

RQ1: What are the attitudes of nurse educators toward people with disability?

RQ2: How do nurse educators define disability?

RQ3: Is there a difference between how disability is defined and nurse educator attitudes toward people with disability?

RQ4: Is there a relationship between attitudes of nurse educators toward disability and their age, years as a registered nurse, and years as a nurse educator?

### **Problem Statement**

People with disabilities face multiple barriers that limit their ability to live a full life. Since the signing of the ADA, in 1990, there has been an increased effort to improve the participation of people with disability in everyday life, though health care providers continue to focus on the person's disability rather than the person them-self. Lam (2010) identified that health care providers lack disability-specific knowledge, have discomfort with working with people with disabilities and hold negative attitudes and misperceptions about disability, which create barriers to obtaining healthcare services. Few educational programs for health care professionals address disability issues in their curriculum and "the absence of professional training on disability competency issues for healthcare practitioners is one of the most significant barriers preventing people with disabilities from receiving appropriate and effective health care" (National Council on Disability, 2009, p. 1). In addition, people with disabilities report that health care providers often exhibit a negative attitude when providing services and care.

There is a movement to promote better attitudes in health care providers, including nurses, through improvements in disability education. The Surgeon General's *Call to Action to Improve the Health and Wellness of Persons with Disabilities*, in an effort to improve the health status of people with disabilities, identified the goal for health care providers to "have the knowledge and tools to screen, diagnose and treat the whole person with a disability with dignity" (USDHHS, 2005, p. 22). While most health care providers view disability from a strictly medical standpoint, the integration of a broader bio-psychosocial approach in nursing education to caring for people with disability will improve both attitudes toward people with disability and healthcare outcomes.

This problem calls for an investigation into the attitudes of nurse educators toward people, how nurse educators define disability from a model perspective, and any associations between these variables and age and years' experience as a nurse and nurse educator. Results of the proposed research may enhance disability awareness in nursing education.

### **Chapter III - Methodology**

This study aimed to build on prior disability research by exploring the attitudes of nurse educators toward people with disability. It considered the possible impact of how nurse educators view disability, their experience with people with disabilities, knowledge about disability education and curriculum, and other demographics that may influence attitudes. Participants consisted of educators teaching in BSN programs in the southeastern United States, following identification through the AACN and individual institution website. Data collection occurred using an electronically administered survey. The survey questionnaire was distributed via to participants' professional email address using Qualtrics, an online survey tool, and included an attitude scale developed by the WHO, questions related to disability definitions, and demographic questions. The results of the survey were downloaded to SPSS for analysis.

#### **Participants**

The sample, from the southeastern United States, was comprised of full or part time nursing instructors and faculty teaching in baccalaureate nursing programs in the southeastern United States. The BSN degree was selected as the degree of choice because it is viewed by many leading nursing organizations as the minimum level required for entry into practice. The BSN is preferred over the Associate's Degree in Nursing due to the necessity of a broad knowledge base to understand the complexities of the current healthcare environment (AACN, 2008; Benner et al., 2010; Smith, 2009). The American Association of Colleges of Nursing (AACN) asserts that a baccalaureate education is the minimum level required to enter professional nursing practice to acquire the necessary knowledge, skills, and attitudes for effective practice in the complex and changing environment. The AACN's *Essentials of Baccalaureate Nursing Education* (2008), consisting of nine essential outcomes expected of



baccalaureate nursing graduates, serves as the framework for curriculum development and a guide for nurse educators. Essential VIII focuses on an education that develops professionalism and professional values, which “are foundational to the practice of nursing” and includes recognition of “the impact of attitudes, values, and expectations on the care of the very young, frail older adults, and other vulnerable populations” (AACN, 2008, p. 27-28). Nursing education must incorporate competencies for students to provide culturally competent care. Recruitment of nurse educators for this study took place from eleven southeastern United States accredited by the Commission on Collegiate Nursing Education (CCNE) through the AACN.

The CCNE is a nationally recognized accrediting agency established in 1998 whose mission is to ensure the quality and integrity of baccalaureate and graduate education programs in preparation of effective nurses. The AACN website provides a listing of CCNE accredited colleges with links to each college’s nursing program website. The majority of these sites include a faculty directory with individual email addresses. The states selected for this study are those located in the Southern Association of Colleges and Schools region and include Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, North Carolina, Virginia, Tennessee and Kentucky. These states combined have a minimum 140 accredited BSN programs with 4,998 potential instructors and professors identified by accessing the institutions through links on the CCNE web page and a manual count of both part time and full time faculty and instructors from each institution’s directory. Institutions lacking an online directory and those offering only online instruction were excluded. The inclusion criteria for study participants were as follows: (a) nurse educators teaching in BSN programs (b) educated with a Masters in Science in Nursing (MSN) or a related Doctoral degree (c) read and write in English (d) opt to complete the self-administered online instrument (e) aged 19 or older. Those excluded were any individual

who was not a nurse educator or who taught solely online, in an associate degree, or diploma level nursing program.

## **Materials and Procedure**

Questionnaire. The survey consisted of various demographic questions and an attitude toward disability scale. The survey, devised by the researcher, included some questions used with permission from other instruments (Alghazo, 2008; Byron et al., 2006; Powers, Green, & THE WHOQOL-DIS Group, 2010). Responses, including multiple choice options and Likert scale measures, provided data to make comparisons. The survey instrument consisted of five sections. The first aspect of the survey was an attitude scale to determine the participant's attitude toward disability, using the Attitudes to Disability Scale (ADS). The following explains the decision process for using the ADS.

Assessing attitudes toward disability is a complex but worthwhile problem as the knowledge helps us to understand the underlying problem of negative attitudes. Finding out how a person thinks, feels, and acts in conjunction with other variables, both situational and personal, may help explain, predict and facilitate changes in attitudes toward disability thereby reducing barriers. A variety of methods has evolved to measure attitudes including observation, interview, opinion survey, association techniques, and physiological methods. Researchers have been studying the attitudes toward people with disability for more than sixty years resulting in a number of survey instruments designed to measure attitudes and selecting a suitable instrument requires an examination of the necessary and desired attributes that result in a reliable and valid instrument (Findler, Vilchinsky, & Werner, 2007). An exploration of existing instruments failed to identify a single current and valid instrument that has served to corroborate data across

different studies. This section examines key elements to consider in attitude measurement, an overview of some of the more commonly used instruments and a detailed description of the scale selected for use in this study.

When selecting an instrument to measure attitudes the researcher must consider whether to use a direct or indirect approach. Direct measurement, where study participants are aware of the process, includes the use of opinion surveys, questionnaires and socio-metric techniques. Direct measures are at risk for errors that result in poor validity. Respondent sensitization occurs when, in the moment, the respondent reacts to the survey differently than they would if not as focused on the subject surveyed. Also in some situations, the participant may react to the instrument by purposefully adapting the answers to “help” the researcher or to present them self in a more positive light. Indirect methods, where the participant is not aware of the process, are thought to reveal underlying psychosocial beliefs, and these instruments include physiological responses, behavioral observations, projected responses, and disguised procedures (Antonak & Livneh, 1995). Indirect methods, less commonly used, present challenges such as expense and potential ethical abuse (Antonak & Livneh, 2000).

Other important components of a reliable attitude evaluation include dimensionality and socio-demographics. There are three dimensions of attitude, either positive or negative, cognition, affect and behavior. Research efforts should include a complex view of how the respondents think, feel, and act with regard to people with disability. Multidimensionality is important to both the construction of an instrument and the identification of potential interventions to affect changes in attitude (Findler, Vilchinsky, & Werner, 2007). To further clarify the attitude toward disability and make correlations, attitude research should investigate

the relationships between attitude and sociodemographic factors such as age, gender, and educational level and situational variables like social context (Antonak and Livneh, 2000). It is therefore necessary to include a demographic assessment in the research. Additional considerations when choosing the instrument depend on the research situation such as cost, time and availability of respondents as well access to the scale, competence and level of motivation (Antonak & Livneh, 2000). Several literature reviews performed over the years described numerous methods to measure attitudes and evaluate the validity and reliability of the instruments, some of which were specific to health care provision (Lam et al., 2010; Satchidanand et al., 2012). Lam et al. (2010) identified seven validated survey instruments used for measuring attitudes of healthcare students and professionals towards patients with physical disability. All of these instruments were at least twenty years old, used dated terminology and did not reflect changes that have occurred in both society or legislative and public policy concerning people with disabilities. The two most commonly used instruments identified both Lam et al. (2010) and Satchidanand et al. (2012) were those developed by Yuker in 1960 and Antonak in 1982. Yuker's Attitudes Towards Disabled People (ATDP), with the original Form O (1960) and the improved versions, forms A and B (1962), was the most widely used and tested, possessing content and construct validity (Yuker, 1970). This is a unidimensional instrument using a Likert scale to measure attitudes toward disability in a very general way. Antonak's Scale of Attitudes Towards Disabled People, first developed in 1982 and revised in 1992, is a multidimensional Likert scale design. Though historically popular, the researcher rejected both instruments from use in this study for the reasons identified above.

Further search of the literature identified four additional and more current instruments to consider. One method of attitude assessment is the computer based Disability Attitudes Implicit

Association Test (Greenwald, McGhee, & Schwartz, 1998) developed to measure unconscious attitudes toward persons with disabilities using a series of words and images for the respondent to categorize into either the “able-bodied” or “disabled” category or the “good” or “bad” category as quickly as possible. The speed of the response theoretically measures the strength of association between the concepts. Vicki Ann Aaberg (2010) used this instrument in a mixed methods study to determine the attitudes of nursing faculty toward nursing students with visible disabilities and determined that nurse educators have a strong preference for able-bodied individuals. While there is large support for the validity of the method, it has its opponents, citing problems with the instrument including a scarcity of studies showing links between IAT scores and actual behavior as well as inability to gain access to published data sets and a weakness in the data obtained (Blanton et al., 2009). The Disability Attitudes in Health Care developed to measure attitudes toward providing health care to patients with disability, correlates with the ATDP and showed internal consistency and criterion validity (Chadd & Pangilinan, 2011). However, the questions, narrowly focused for medical students, were not suitable for use by other health professions. The third instrument, Findler et al.’s (2007) Multidimensional Attitudes Scale, is a relatively untested scale. It evaluates for five factors of attitude based in the aspects of cognition, affect and behavior using a social scenario vignette with a focus on gender and physical disabilities. This scale failed to meet the needs of this study due to the limited focus on physical disability and gender.

### **Attitudes to Disability Scale for People with Disabilities**

The ADS is a multidimensional Likert scale created for direct measurement to assess the personal attitudes of individuals with either physical or intellectual disabilities as well as their caregivers or relevant professionals. The WHO Quality of Life Group developed the instrument

to measure these attitudes and for the study of “population epidemiology, service development, and clinical intervention trials in which issues about attitudes such as in relation to stigma and discrimination are essential” (Power et al., 2010, p. 862). Historically, the medical and social models are the main approaches for classifying and measuring disability attitudes (WHO, 2001). The medical approach to studying disability occurs with regard to the impairment and function with the social approach characterized by the individual in terms of their environment (Power, et al. 2010). The WHO, by combining the views of people with disability and the perspective of non-disabled experts, sought to create a single cross-cultural attitude toward disability scale that takes into account the bio-psychosocial aspects of disability. While created with consideration of the three constructs of disability: affect, cognition, and behavior, the scale does not map to these.

Developers of the ADS used the WHO Quality of Life methodology to create a scale that assessed both the personal attitudes of individuals with either physical or intellectual disabilities as well as their caregivers or relevant professionals. This methodology used focus groups to identify questionnaire items that are then pilot studied and field-tested. The ADS instrument was developed internationally across 12 field centers using a focus group of people with both physical and intellectual disabilities, their caregivers and relevant professionals. This resulted in 38 themes related to attitudes toward disability that were then pilot tested using 1,400 adult respondents identified with both intellectual (491) and physical disabilities (909) from 15 different centers across the world. Statistical analysis included descriptive data analysis, scale correlations and internal reliability analysis, exploratory and confirmatory factor analysis, and item response theory resulted in a final scale of 16 items divide into four sub-scales.

This version of the ADS was field trial tested using a sample of 3,772 participants with either physical (2,614) or intellectual (1,158) disabilities from 14 national centers and necessary modifications yielded a psychometrically sound scale, with a Cronbach alpha of 0.76-0.80. The final version of the ADS (Field Trial Version) provides 16 individual scores, a set of four sub-scale scores of four items each and a single score based on a summation of all 16 items to reflect a participant's attitude toward people with disability. Domain scores are scaled in a negative direction with lower scores indicating a more positive attitude except for items 7, 8, 9, and 10, which are reverse scored. The first sub-scale of inclusion consists of items 1, 2, 5, and 6. Sub-scale 2 consists of items 3, 4, 11, and 12 focuses on issues related to discrimination. The third sub-scale (items 7, 8, 9, and 10) has a positive focus related to gains in relation to disability. The fourth (items 13, 14, 15, and 16) evaluates the impact of disability on hopes and prospects. Where an item may be missing the mean of the other items in the domains is substituted. Where more than two items are missing from the domain, the domain score should not be calculated. Where more than 20% of data is missing, the assessment should be discarded. Results will provide a rating of the participant's attitude to disability.

### **Defining Disability**

Disability has been defined in a variety of ways depending on the context used. For this study, the definition was based in three models of disability. Using medical, social, or bio-psychosocial model definitions to describe disability makes it possible to quantify the definition. The medical model approach focuses on impairment and limitations; the social, views the individual within their environment; and the bio-psychosocial approaches disability by combining the physical, emotional and environmental factors. Section two of the study survey consisted of a Likert scale to rate the degree of agreement with three statements relating to these

models of disability. Responses to these were then evaluated for a preference toward one model over the others.

To select definitions for the three models of disability, a review of the literature identified 15 possible definition statements, five for each model. A survey of experts in the field was conducted to determine the preferred definition for each model of disability for the final survey. Seven experts responded, three were doctoral prepared faculty at the University of Alabama, Program in Counselor Education, and had professional experience related to disability in the form of rehabilitation counseling. Four were doctoral prepared faculty at Tufts Medical School, University of Massachusetts Medical School, University at Buffalo, and Villanova University College of Nursing, and all have published articles focused on disability including disability related education of health care students, health care student attitudes toward disability, and nursing curriculum related to disability. Figure 2 shows the 15 definition options, with the final selection in bold.



Medical Model	Social Model	Bio-psychosocial model
People with disability rely heavily on health care professionals to overcome their impairments.	People are disabled because of discrimination, exclusion and oppression.	People are disabled because of negative interactions between their condition and their environment.
People are disabled by disease, injury or medical problems.	People are disabled when environments are not adapted to them, such as housing, education and employment.	People are disabled because of some condition that leads to a loss of function, a limitation in activity and/or restriction in participation.
Disability begins where health ends.	Societal attitudes cause disability, not the physical or cognitive impairments within the individual.	Disability is a universal human experience.
<b>Disability is caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals.</b>	<b>Social, physical, informational and institutional barriers are primary factors that increase disability by restricting participation.</b>	Disability is any lack of ability resulting from impairment to perform an activity in a manner considered normal for a human being.
Disability calls for medical or other treatment or intervention, to correct the problem with the individual.	Disability is caused by restrictions in a person's participation in educational, economic, social, cultural and political activities.	<b>Disability is a complex phenomenon that is both a problem at the level of a person's body, and a complex and primarily social phenomena.</b>

Figure 2. Definitions by Model

## **Demographic Data**

A series of survey questions were devoted to creating a representation of the respondents personal and professional experiences related to people with disability. Section 3 asked six questions linked to the participants' awareness and knowledge about their institution's disability related education. Section 4 reported personal experiences the participant has had with people with disability including aspects such as: (a) congenital or acquired (b) cognitive, physical, emotional, or sensory (c) knowledge of individual's conditions and life experiences including frequency of contact and degree of relationship (c) self-identification as a person with a disability. The last section established personal and professional demographic data (gender, race, marital status, faculty rank, terminal degree, years a nurse, years teaching, and state teaching).

## **Procedures**

The total number of nurse educators identified in eleven southeastern United States was 4,495. Sample size was calculated using G\*power. It was determined that 102 participants were needed for computing ANOVA or multiple regression analysis, based on a large effect size at .95 power. It was determined that a 15 percent return rate was typical of an online survey and consequently a sample of 680 was selected ( $102/.15=680$ ) (Sax, Gilmartin, & Bryant, 2003). The survey was distributed to 708 nurse educators using Qualtrics. Qualtrics is an online survey software platform that enables instrument development, the creation of a database, survey distribution, and data collection. Nineteen of the surveys were not deliverable for reasons undetermined and 21 participants emailed that they did not qualify for the study due to not teaching in BSN programs. Ultimately, 667 surveys were sent, 151 surveys were started, and 126 were completed that met the study criteria.

Qualtrics enabled results to be down loaded to Statistical Package for the Social Sciences (SPSS) for statistical analysis. No names were associated with participation and participants were limited to self-

identification by state. The final number of participants was dependent on the number of qualifying candidates who completed the instrument. An email, sent to the educator provided a study introduction and letter of consent with a link to the survey developed using Qualtrics. Following Institutional Review Board (IRB), emails were sent to potential participants to introduce the study, provide a printable informed consent, and a link to the survey on Qualtrics. The survey took 10-15 minutes to complete depending on time spent on each component. By disregarding the email or logging off prior to survey completion, participants were able to decline participation. A privacy statement was included in the study introduction. Participants had three weeks to complete the survey in the setting and at a time of choice. Two reminders were sent (Fan & Yan, 2010) on days five and nine and the survey closed on day twenty-one. No incentives were provided.

## **Data Analysis**

The researcher, using responses to the survey instrument, sought to establish relationships between the dependent variables (four domains of attitudes towards disability: inclusion, discrimination, gains, and prospects) and the independent variables (definition of disability, personal and professional demographics, prior experience with people with disabilities and knowledge of disability-related curriculum). Of particular interest was any link between attitude and perceptions of disability by the participant from a disability model viewpoint. Both descriptive and inferential statistics were used to describe, organize, analyze, and evaluate the data. The complexity of the research questions required the use of multivariate procedures to understand the effects of the numerous independent variables on the dependent variables (Figure 3). All data analysis was completed by SPSS version 20, which acted as a data editor for the researcher, following selection of specific statistical commands for analysis.

Research Questions	Analysis
RQ1 What are the attitudes of nurse educators toward people with disability?	Descriptive statistics
RQ2 How do nurse educators describe disability?	Descriptive statistics
RQ3 Does a relationship exist between the attitudes of nurse educators toward people with disability and their definition of disability?	Simple ANOVA.
RQ4 Is there a relationship between attitudes of nurse educators toward disability and the age, years as a registered nurse, and years as a nurse educator?	Descriptive statistics. Multiple regression analysis for significant factors.

*Figure 3. Analytical Plan*

## **Chapter IV - Results**

The purpose of this study was to identify nurse educator attitudes toward people with disability and evaluate for associations with nurse educator definitions of disability, demographics, age, and professional experience. The ADS, an attitude toward disability survey instrument recently developed by the WHO, is relatively untested on specific populations and therefore a principal component analysis (PCA) was performed to establish goodness of fit when applied to nurse educators. This chapter reports the data analysis of the following four research questions using descriptive and tables and the PCA of the ADS.

RQ1: What are the attitudes of nurse educators toward people with disability?

RQ2: How do nurse educators define disability?

RQ3: Is there a difference between how disability is defined and nurse educator attitudes toward people with disability?

RQ4: Is there a relationship between attitudes of nurse educators toward disability and their age, years as a registered nurse, and years as a nurse educator?

### **Preliminary Analyses**

Eligible survey results included completion of the ADS, all three definitions of disability, and both responses to the years a registered nurse and years a nurse educator questions. Age responses were not required for inclusion. An additional requirement included being a registered nurse teaching in a baccalaureate level nursing program. Of the 140 surveys obtained, eight surveys were less than fifty percent complete. In addition, six respondents did not identify as a registered nurse. This reduced the final sample size to 126 and represents a 17.8% response rate.

### **Demographics**

Participant ages ranged from 31 to 71 with a mean of 52.9. Their individual level of expertise was based on years as an RN and years as a nurse educator as well as terminal degree and rank at institution. Years as a registered nurse ranged from seven to 50 with a mean of 29.7. Years as a nurse educator ranged from two to 35 with a mean of 13.7. Additional demographic information is detailed below. These results reflect good representation of the nurse educators from the eleven states surveyed.

<b>Demographic variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Valid surveys</b>	<b>126</b>	
<b>Education</b>		
Master of Science in Nursing	64	51%
Doctor of Philosophy	42	33%
Doctor of Education	5	4%
Certified Nurse Practitioner	1	1%
<b>Teaching Status</b>		
Full professor	8	6%
Associate Professor	25	25%
Assistant professor	50	40%
Instructor/lecturer	43	34%
<b>Gender</b>	<b>126</b>	
Female	115	91%
Male	11	9%

<b>Marital status</b>	<b>126</b>	
Married/partner	97	77%
Single	9	7%
Divorced/separated	15	12%
Widowed	5	4%
<b>Race</b>	<b>124</b>	
White	111	90%
Black	8	6%
Hispanic	2	2%
Asian	1	1%
Unidentified	2	2%
<b>Knows someone with disability</b>	<b>126</b>	
No	121	96%
Yes	5	4%
<b>Individuals known with a disability</b>		
Self	14	12%
Spouse/significant other	12	10%
Children	20	17%
Sibling(s)	19	15%
Significant friend/relative	79	66%

Coworker	41	34%
Employee/employer	6	5%
Neighbor/acquaintance	72	60%
other	20	17%
<b>Condition</b>		
congenital	124	
acquired	154	
<b>Type of impairment</b>		
cognitive	99	
physical	180	
emotional	86	
sensory	73	

*Research Question #1*

What are the attitudes of nurse educators toward people with disability?

Responses to the ADS established the attitudes of nurse educators toward disability. The ADS consists of sixteen items organized into four subscales: inclusion (relationships, inclusion, burden to society, burden to family), discrimination (ridicule, exploitation, irritation, ignorance), gains (emotional strength, maturity, achievement, determination), and prospects (sexuality, underestimation, optimism, future prospects). A 5-point Likert scale rated the attitude toward the



disability on a scale of 1, (strongly disagree) to 5 (strongly agree), and a score of 3 (uncertain). Lower mean scores indicated a more positive attitude with better inclusion, less discrimination, more gains and better prospects. A rating of 3 was “uncertain” and scores greater than 3 were increasingly negative. Three subscales, inclusion, discrimination and prospects were negative in focus and the subscale gains had a positive focus. To aid analysis, the gains subscale scores were reverse scored as advised by the ADS developer, Dr. Mick Power in 2010.

Tables 1 through 5 provide descriptive data including the mean statistics. Mean scores for each item ranged from 1.76 to 3.62. Mean scores greater than 2.8 to less than 3.2 were neutral. Overall, the majority of responses were positive (Q 5 through 10 and Q12 through 16). These responses indicated that the nurse educators viewed people with disability as not being a burden to their families or society and that people, resulting from their disability, gained emotional strength, maturity, achievement, and determination. Two responses in the inclusion subscale were neutral (Q1 and 2). These questions related to difficulties for people with disability to form new friendships and to get involved in society. Three responses in the discrimination subscale were negative (Q3, 4, and 11). Question three “People often make fun of disabilities”, question four “People with a disability are easier to take advantage of (exploit or treat badly) compared with other people”, and question 11, “People tend to become impatient with those with a disability” indicated discriminatory views of people with disability. Means scores for the subscales suggested nurse educators held a positive attitude in the gains, prospects, and inclusion subscales with a negative attitude in the discrimination subscale in the areas of ridicule, exploitation, and irritation.

Table 1 *RQ1. Descriptive Statistics of ADS Subscales*

	N	Minimum score	Maximum score	Mean score	SD
Inclusion	124	4	17	10.15	2.689
Discrimination	124	8	20	13.21	2.740
Gains	124	4	17	9.35	2.428
Prospects	123	4	12	6.21	1.911
Valid N	126				

Table 2 *RQ 1. Descriptive Statistics for Inclusion Subscale of ADS*

	N	Minimum score	Maximum score	Mean score	SD
Q1	126	1	5	3.03	1.050
Q2	125	1	5	3.04	.987
Q5	126	1	5	1.76	.834
Q6	125	1	5	2.38	.981
Valid N	124				

Table 3 *RQ 1. Descriptive Statistics for Discrimination Subscale of ADS*

	N	Minimum score	Maximum score	Mean score	SD
Q3	126	1	5	3.54	.969
Q4	126	1	5	3.29	.988
Q11	125	2	5	3.62	.820
Q12	125	1	5	2.80	1.000
Valid N	124				

Table 4 RQ 1. Descriptive Statistics for Gains Subscale of ADS

	N	Minimum score	Maximum score	Mean score	SD
Q7r	126	1	4	2.02	.693
Q8r	125	1	5	2.36	.856
Q9r	126	1	4	2.32	.797
Q10r	125	1	4	2.69	.723
Valid N	124				

Table 5 RQ 1. Descriptive Statistics for Prospects Subscale of ADS

	N	Minimum score	Maximum score	Mean score	SD
Q13	125	1	5	1.42	.637
Q14	124	1	4	1.62	.606
Q15	126	1	5	1.58	.842
Q16	126	1	4	1.63	.688
Valid N	123				

*Research question #2*

How do nurse educators define disability?

Nurse educators rated each of three statements to define disability from a model standpoint using a 7-point Likert scale that ranged from 1 (strongly disagree) to 7 (strongly agree) with 4 (neither agree nor disagree). The definition and corresponding model were:

1. Disability is caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals (medical model).
2. Social, physical, informational and institutional barriers are primary factors that increase disability by restricting participation (social model).

3. Disability is a complex phenomenon that is both a problem at the level of a person's body, and a complex and primarily social phenomena (bio-psychosocial model or ICF).

Initial analysis evaluated how the educators felt about each model. The data showed the overall view of each model and which definition/model was preferred (Table 6). Educators had agreed with all three models with a greater number showing agreement for the ICF (108) with lower numbers of agreement for the medical model (82) and social model (65). In addition, analysis of each participant's responses demonstrated the preferred definition of disability (PDD) was the ICF. In an effort to simplify responses, categories were created by using the responses of each participant to determine which model was given the highest degree of agreement. The preference for the social model scored a 1, the medical model scored a 2, and the ICF model scored a 3. Instances when the agreement scores were tied earned a score of 3, as the ICF is an integration of the other two models. When medical and social model scores were tied and greater than the ICF score, the data was contradictory and excluded (4). Other exclusions occurred when participant responses were missing (2). Seven nurse educators preferred the social model, 17 preferred the medical model, and 96 preferred the ICF. Table 6 provides the mean scores for responses to each three model/definition and the mean score of the PDD.

Table 6 RQ 2. Descriptive Statistics for Preferred Definition of Disability (PDD)

	N	Minimum score	Maximum score	Mean score	SD
Social	126	1	7	4.29	1.502
Medical	125	1	7	4.73	1.547
ICF	125	1	7	5.70	1.270
PDD <sup>a</sup>	121	1	3	2.74	.556

Note. <sup>a</sup>Preferred definition of disability.

*Research question #3*

Does a relationship exist between the attitudes of nurse educators toward people with disability and their definition of disability?

A one-way ANOVA was calculated and no statistically significant relationship was found to exist between the nurse educators' PDD and their attitude toward disability using the subscales inclusion [ $F(2,118) = .738, p = .480$ ], discrimination [ $F(2,118) = 1.040, p = .357$ ], gains [ $F(2,118) = .390, p = .678$ ], and prospects [ $F(2,118) = .595, p = .553$ ] as seen in Tables 7-10.

Table 7 RQ 3. Summary of ANOVA for ADS -Inclusion and PDD

Source	Type III Sum of Squares	df	Mean square	F	Sig.
PDD	10.668	2	5.334	.738	.480
Error	852.473	118	7.224		
Total	13265.000	121			

Table 8 RQ 3. Summary of ANOVA for ADS -Discrimination and PDD

Source	Type III Sum of Squares	df	Mean square	F	Sig.
PDD	15.962	2	7.981	1.040	.357
Error	905.393	118	7.673		
Total	21920.000	121			

Table 9 RQ 3. Summary of ANOVA for ADS -Gains and PDD

Source	Type III Sum of Squares	df	Mean square	F	Sig.
PDD	4.648	2	2.324	.390	.678
Error	703.782	118	5.964		
Total	11224.000	121			

Table 10 RQ 3. Summary of ANOVA for ADS -Prospects and PDD

Source	Type III Sum of Squares	df	Mean square	F	Sig.
PDD	4.314	2	2.157	.595	.553
Error	427.686	118	3.624		
Total	5056.000	121			

*Research question #4*

Is there a relationship between attitudes of nurse educators toward disability and the age, years as a registered nurse, and years as a nurse educator?

Regression analysis was conducted using the respondent's age, years as a registered nurse and years as a nurse educator as the independent variables to predict each subcategory of the ADS. The analysis showed no significant relationship existed between the individual subscales of the ADS and the educators' age, years as a registered nurse, and years as a nurse educator as shown in Tables 11 and 12.

Table 11 *RQ 4. Regression of Demographics and Subcategories*

Dependent Variable	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	Df1
Inclusion	.131 <sup>a</sup>	.017	-.008	2.692	.017	.673	3
Discrimination	.139 <sup>a</sup>	.019	-.006	2.711	.019	.752	3
Gains	.137 <sup>a</sup>	.019	-.007	2.453	.019	.733	3
Prospects	.109 <sup>a</sup>	.012	-.014	1.933	.012	.464	3

Notes. <sup>a</sup>Predictors: (constant), age, years a nurse educator, years an RN

Table 12 RQ 4. ANOVA<sup>a</sup> of attitudes of nurse educators toward disability and the age, years an RN, and years as a nurse educator

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.
Inclusion	Regression	14.627	3	4.876	.673	.570 <sup>a</sup>
	Residual	833.239	115	7.246		
	Total	847.866	118			
Discrimination	Regression	16.585	3	5.528	.752	.523 <sup>a</sup>
	Residual	845.398	115	7.351		
	Total	861.983	118			
Gains	Regression	13.233	3	4.411	.733	.534 <sup>a</sup>
	Residual	692.044	115	6.018		
	Total	705.277	118			
Prospects	Regression	5.199	3	1.733	.464	.708 <sup>a</sup>
	Residual	429.726	115	3.737		
	Total	434.924	118			

Note. <sup>a</sup>Predictors: (constant), age, years a nurse educator, years an RN

### Principal Component Analysis of the ADS

The WHO created the ADS for use by people with and without physical or intellectual disabilities. An analysis of its use with specific populations has not occurred. A principal component analysis (PCA) with varimax rotation using SPSS was used to identify new patterns in the data and to determine if the factors and subscales identified in the original scale were supported in this sample of nurse educators. Analysis, run on the items with an Eigenvalue greater than 1, resulted in four components with loadings greater than 0.40. These results, shown in Table 13, illustrate how the items correlated within the original subscale headings. Those items with factor loadings greater than 0.40 were retained and those below 0.40 were excluded. Table 14 shows the revised subscales based on the nurse educator responses.



Factor loadings for two subscales, gains and discrimination, remained relatively unchanged. The subscales, inclusion and prospects, were replaced with two new subscales, belonging and opportunity, as identified through factor loadings. The revised subscales are as follows and, as with the original ADS, focused on different aspects of disability. The gains subscale, unchanged, comprised of four items (7, 8, 9, and 10) relate to perceptions about the emotional strength, maturity, achievement, and determination of people with disability. The discrimination subscale (3, 11, and 12) is unchanged and reflects attitudes of ridicule, irritation, and ignorance toward people with disability. The belonging subscale (1, 2, and 4) reflects a theme of how people with disability fit in society based on relationships, inclusion, and exploitation. The opportunity subscale (5, 6, 14, and 16) focused on the outlook of people with disability as a burden to society, a burden to family, experiencing underestimation and future prospects.

Table 15 shows the mean scores of the nurse educator ADS responses within the new subscales. Survey questions 13 and 15 were excluded from the new format due to the absence of a loading weight. The mean scores of the revised subscales, Table 16, demonstrate less favorable attitudes in the subscales of belonging and discrimination and favorable attitudes toward gains and opportunity. Discussion of these results and the significance of the new domains occur in Chapter 5.

Table 13 *Factor Loadings for Principal Component Analysis With Varimax Rotation*

	Component			
	1	2	3	4
<b>Inclusion</b>				
Q1. People with a disability find it harder than others to make new friends. (relationships)	-.015	.029	<b>.910</b>	.031
Q2. People with a disability have problems getting involved in society. (inclusion)	.011	.263	<b>.827</b>	.196
Q5. People with a disability are a burden on society. (burden)	-.144	<b>.762</b>	.131	-.278
Q6. People with a disability are a burden on their family. (burden)	.045	<b>.759</b>	.099	.107
<b>Discrimination</b>				
Q3. People often make fun of disabilities. (ridicule)	-.179	-.012	.371	<b>.454</b>
Q4. People with a disability are easier to take advantage of compared to other people. (exploitation)	-.298	.073	<b>.490</b>	.371
Q11. People tend to become impatient with those with a disability. (irritation)	-.056	.042	.029	<b>.820</b>
Q12. People tend to treat those with a disability as if they have no feelings. (ignorance)	-.137	.032	.198	<b>.753</b>
<b>Gains</b>				
Q7. Having a disability can make someone a stronger person. (emotional strength)	<b>.811</b>	-.004	-.030	.024
Q8. Having a disability can make someone a wiser person. (maturity)	<b>.811</b>	.059	-.097	-.105
Q9. Some people achieve more because of their disability. (achievement)	<b>.795</b>	-.120	.017	-.122
Q10. People with a disability are more determined than others to reach their goals. (determination)	<b>.538</b>	.262	-.095	-.208
<b>Prospects</b>				
Q13. Sex should not be discussed with people with disabilities. (sexuality)	-.090	.049	.068	-.191
Q14. People should not expect too much from those with a disability. (underestimation)	.061	<b>.783</b>	.052	.116
Q15. People with a disability should not be optimistic about their future. (optimism)	.155	.095	.049	.227
Q16. People with a disability have less to look forward to than others. (future prospects)	.259	<b>.594</b>	.049	.151

*Note. Factor Loadings >.40 are in boldface.*

Table 14 *Attitude to Disability Subscales Using Factor Loadings*

	Component			
	1	2	3	4
<b>Belonging</b>				
Q1. People with a disability find it harder than others to make new friends. (relationships)	-.015	.029	<b>.910</b>	.031
Q2. People with a disability have problems getting involved in society. (inclusion)	.011	.263	<b>.827</b>	.196
Q4. People with a disability are easier to take advantage of compared to other people. (exploitation)	-.298	.073	<b>.490</b>	.371
<b>Discrimination</b>				
Q3. People often make fun of disabilities. (ridicule)	-.179	-.012	.371	<b>.454</b>
Q11. People tend to become impatient with those with a disability. (irritation)	-.056	.042	.029	<b>.820</b>
Q12. People tend to treat those with a disability as if they have no feelings. (ignorance)	-.137	.032	.198	<b>.753</b>
<b>Gains</b>				
Q7. Having a disability can make someone a stronger person. (emotional strength)	<b>.811</b>	-.004	-.030	.024
Q8. Having a disability can make someone a wiser person. (maturity)	<b>.811</b>	.059	-.097	-.105
Q9. Some people achieve more because of their disability. (achievement)	<b>.795</b>	-.120	.017	-.122
Q10. People with a disability are more determined than others to reach their goals. (determination)	<b>.538</b>	.262	-.095	-.208
<b>Opportunity</b>				
Q5. People with a disability are a burden on society. (burden)	-.144	<b>.762</b>	.131	-.278
Q6. People with a disability are a burden on their family. (burden)	.045	<b>.759</b>	.099	.107
Q14. People should not expect too much from those with a disability. (underestimation)	.061	<b>.783</b>	.052	.116
Q16. People with a disability have less to look forward to than others. (future prospects)	.259	<b>.594</b>	.049	.151

*Note. Factor Loadings >.40 are in boldface.*

Table 15 *Descriptive Statistics for the reordered ADS Subscales following PCA*

<b>Belonging</b>	
Q1. People with a disability find it harder than others to make new friends. (relationships)	3.03
Q2. People with a disability have problems getting involved in society. (inclusion)	3.04
Q4. People with a disability are easier to take advantage of compared to other people. (exploitation)	3.29
<b>Discrimination</b>	
Q3. People often make fun of disabilities. (ridicule)	3.54
Q11. People tend to become impatient with those with a disability. (irritation)	3.62
Q12. People tend to treat those with a disability as if they have no feelings. (ignorance)	2.80
<b>Gains</b>	
Q7. Having a disability can make someone a stronger person. (emotional strength)	2.02
Q8. Having a disability can make someone a wiser person. (maturity)	2.36
Q9. Some people achieve more because of their disability. (achievement)	2.32
Q10. People with a disability are more determined than others to reach their goals. (determination)	2.69
<b>Opportunity</b>	
Q5. People with a disability are a burden on society. (burden)	1.76
Q6. People with a disability are a burden on their family. (burden)	2.38
Q14. People should not expect too much from those with a disability. (underestimation)	1.62
Q16. People with a disability have less to look forward to than others. (future prospects)	1.83

Table 16 *Descriptive Statistics for New Subscale of ADS*

Belonging

		Minimum score	Maximum score	Mean	SD
Q1	126	1	5	3.03	1.050
Q2	125	1	5	3.04	.987
Q4	126	1	5	3.29	.988

Discrimination

		Minimum score	Maximum score	Mean	SD
Q3	126	1	5	3.54	.969
Q11	125	2	5	3.62	.820
Q12	125	1	5	2.80	1.000

Gains

	N	Minimum score	Maximum score	Mean	SD
Q7r	126	1	4	2.02	.693
Q8r	125	1	5	2.36	.856
Q9r	126	1	4	2.32	.797
Q10r	125	1	4	2.69	.723

Opportunity

	N	Minimum score	Maximum score	Mean	SD
Q5	126	1	5	1.76	.834
Q6	125	1	5	2.38	.981
Q14	124	1	4	1.62	.606
Q16	126	1	4	1.63	.688

## Summary

The data for this study was obtained from the online survey results of 126 nurse educators teaching in baccalaureate nursing programs in 11 southeastern states. Demographic data depicted the average nurse educator as a 53 year-old White female prepared with a master's in nursing and likely teaching as an assistant professor. She has been a nurse for 29 or more years and a nurse educator for at least 13. She has a 96 % likelihood of personal experience with someone with a disability in a relationship as personal as one-self or as distant as an acquaintance. Yet, as an educator, she has a 50 % chance of no knowledge about models of disability and a 54 % chance of no formal education in teaching about disability, though 60 % reported responsibility for some aspect of disability teaching. Forty-four % denied knowledge of documented teaching aims, objectives, or outcomes within their institution.

Nurse educator attitudes toward people with disability were generally positive in the areas of inclusion, gains, and prospects and negative in the area of discrimination. Nurse educators preferred the ICF model definition to the medical and social models and there was no significant relationship between nurse educators' attitude toward disability and their definition of disability. Finally, the attitude and definition preference were the same regardless of the respondents age, years as a registered nurse, and years as a nurse educator. A PCA performed on the ADS instrument for goodness of fit resulted in the development of new subscales. Chapter V will discuss the findings of this study further.

## Chapter V - Discussion

This quantitative study explored nurse educator attitudes toward people with disability and factors that influenced these attitudes including definition of disability, age and years of professional experience. The theoretical framework proposed that disability, when viewed from a bio-psychosocial standpoint, promotes a holistic approach to viewing people with a health condition. The literature implied that health care providers, including nurses, regard disability from a medical stance and hold negative attitudes toward people with disability, which had a detrimental effect on the health outcomes of people with disability. Additional findings included nurse educators' attitudes influenced the attitudes of their students and ultimately the care provided to the increasing numbers of people with disability. Increased knowledge of how nurse educators view disability and people with disability will inform how disability instruction occurs in undergraduate nursing curriculum. For decades, researchers have been studying the attitudes toward people with disability without the benefit of a multidimensional instrument that performs with all populations. The ADS, recently developed by the WHO sought to develop such an instrument that supports “cross-sectional studies between different services or treatments and longitudinal studies of interventions” (M. J. Power, et al., 2010, p. 873). The instrument has not been tested with nurse educators prior to this study.

This chapter provides a discussion and summary of the results, the implications as they apply to the ADS and to nursing education, and recommendations for future research. The limitations of the study are discussed. The purpose of this study was to determine nurse educator attitudes toward people with disability and their definition of disability with additional analysis for connections between these attributes and the nurse educators' age and years of professional practice and teaching experience. The data established that nurse educators held a predominantly

positive attitude toward people with disability, with negativity in the area of discrimination, and following PCA, belonging, and favored a bio-psychosocial definition of disability. No relationship existed between the attitudes, definition, and educators' age and years of professional experience as a nurse or educator. The ADS, when evaluated for appropriateness of fit with nurse educators, was found to benefit from a restructuring and renaming the subscales. Results demonstrate that the instrument may not be suitable use with nurse educators in its present form.

### **Findings and Implications to Research Questions**

RQ1. What are the attitudes of nurse educators toward people with disability?

The ADS data determined that attitudes were generally positive. As a reminder, a mean score less than 3 indicated a positive attitude, greater than 3 were increasingly negative, and a score of 3 was "uncertain". A lower mean score indicated an attitude that supported inclusion, less discrimination, more gains and better prospects resulting from having a disability. Mean scores of individual items demonstrated 11 of 16 individual items were positive, three were negative, and two were uncertain. It is noteworthy that negative attitudes were identified in the subscale discrimination in the items related to ridicule, exploitation, and irritation. The positive items in the inclusion subscale reflected that the respondents did not perceive people with disability as a burden to society or to their families. In addition, the positive items in the prospects subscale, indicated an optimistic outlook toward prospects for people with disability with regard to sexuality, underestimation, optimism, and future prospects. In the gains subscale positive items supported emotional strength, maturity, achievement, and determination. Neutral "uncertain" responses were in the subscale inclusion for items relating to relationships and inclusion.



Prior studies of nurse educator attitudes to disability, both explicit and implicit, provided a single score, reflective of some degree of positive or negative attitude. These studies focused on nursing students and potential nursing students with disability. While several of these studies used attitude scales developed with multidimensional consideration, the results provide a single score focused primarily on inclusion (Powers et al., 2010). Three prior studies evaluated for explicit attitudes toward disability and each reported a score indicative of a positive attitude while the single implicit study reported negative attitude scores. A possible cause for this discrepancy is that respondents may have given answers that they unconsciously considered socially acceptable. While nurse educators consciously believed they had positive attitudes, nursing students and potential nursing students with disability reported that they had experienced negativity (Aaberg, 2010; Carroll, 2004; Marks, 2007). Health care providers reported positive attitudes toward people with physical disability, yet people with disability reported negative attitudes from healthcare providers (Lam et al., 2010; Smeltzer, Avery, & Haynor, 2012). In spite of positive explicit findings, unconscious attitudes of nurse educators toward people with a visible physical disability were negative. The inconsistency between the conscious and the unconscious attitudes toward people with disability and the differing views of each party supports that a bias exists that affects the actions of the nurse educator (Aaberg, 2010).

The ADS provides summative scores for four different aspects of disability. Results provide a range of scores related to the various aspects of disability and helps identify areas of bias in an explicit survey. ADS results were generally positive except in the area of discrimination. The predominant view that people with disability are often made fun of, are easier to take advantage of and that people often become impatient with people with disability is

both discriminatory and relevant to how nurse educators interact with and instruct students about disability.

RQ2. How do nurse educators define disability?

Nurse educators defined disability from an ICF, or bio-psychosocial viewpoint. The initial evaluation found that nurse educators agreed with all three definitions of disability, though at a greater rate with the ICF statement. Further analysis established that more educators believed that disability is both a medical and social issue. While no prior studies were found that evaluated how health care providers define disability, a review of the literature indicated that most had a strong tendency toward viewing people with disability from a medical standpoint (Chenowith et al., 2004; McDermott & Turk, 2011; USDHHS, 2005). This is in conflict with the findings of this study. In this study, the educators were asked to respond to three separate statements describing models of disability. This eliminated the pressure to provide the “correct” answer and provided an objective method to establish how nurse educators viewed disability.

RQ3. Does a relationship exist between the attitudes of nurse educators toward people with disability and their definition of disability?

A one-way ANOVA demonstrated there was no statistically significant connection between the nurse educators’ PDD and their attitude toward disability.

RQ4. Is there a relationship between attitudes of nurse educators toward disability and their age, years as a registered nurse, and years as a nurse educator? No studies were identified that evaluated for a relationship between years as a registered nurse and years as a nurse educator. There were limited studies that made association with age and attitude toward people with disability. Yuker, Block and Young (1970) determined there was no relationship between the age and attitude toward people with disability. Traweek (1990) identified age as a significant

demographic factor of nurse educators contributing to less favorable attitudes toward disability. A systematic review of published studies related to attitudes of health care students and professionals toward people with disability was performed by Satchidanand et al. (2012) and cited only two articles related to age with one study reporting no effect of age on attitude (Paris, 1993) and the other reporting a negative correlation with increasing age (Messmer & Rice, 1990). Ney (2004) reported in a literature review that a number of studies found no significant relationship between age and attitude toward disability (Gething, 1993; Paris, 1993; Oermann & Lindgren, 1995; Gething, LaCour, & Wheeler, 1994). However, Lindgren and Oermann (1993) used a pretest posttest design and found a negative relationship between age and attitude scores on the posttest with older participants having the more negative scores. In summary, two of nine studies, published between 1970 and 1995, found age had a negative effect on the attitudes toward people with disability. One of these studies that identified age as a factor, determined that nurse educators had a mean age 44.5 (Traweek, 1990). Mean age for this study was 52.9.

A multiple regression analysis determined that in this nurse educator population, no significant relationship existed between the nurse educator's attitude toward disability and their age, years as a registered nurse and years as a nurse educator.

In addition to the four research questions, the reliability of the ADS was evaluated for use with nurse educators located in the southeastern United States. A PCA of the instrument identified four factors, two that aligned with the original instrument subscales of discrimination and gains and two new subscales identified as belonging and opportunity. The subscales inclusion and prospects were eliminated. The revised subscales demonstrated less favorable attitudes in the areas of belonging and discrimination and favorable attitudes toward gains and opportunity.

## **Implications**

The WHO developed the ADS instrument in 2010 as a cross-cultural instrument for use by people with and without disability to measure attitudes toward disability. The sample used in the development the instrument consisted of those identified with physical and intellectual disabilities and its use with others has been relatively untested. The data from this study of nurse educator attitudes toward disability, following PCA, suggests that usage of this instrument may not be ideal for all populations in its present form. In addition, ADS scoring discrepancies, within prior studies, generates the need for caution when comparing results. Finally, the results from this study provide current information about the state of nurse educator attitudes toward people with disability and disability education in nursing.

The ADS data for this study were analyzed using PCA with varimax rotation on the 16 items. Following PCA, 14 items remained and the four subscales were reordered. Two subscales, discrimination with three items and gains with four items remained unchanged, with the subscales inclusion and prospects deleted and the subscales belonging and opportunity added as seen in Table 15. These new subscales change the results from the original analysis to reflect two positive domains and two negative domains. This analysis demonstrates the ADS is a useful instrument that benefits from modification for use with nurse educators and likely, for other health care professionals. This information is useful to attitude research as it demonstrates that while the subscales of the ADS did not perform consistently across all populations, the items within the subscales did support common themes. Knowing this will enable further use and appropriate modifications of the ADS as indicated.

Additional limitations were identified with the instrument. While development of the ADS occurred across 14 international centers, the countries included were predominantly non-

English speaking and culturally non-representative of a large portion of the world, especially with regard to how people with disability are viewed and treated within society. In addition, it is noteworthy that all participants in the pilot test and field trial were identified, by diagnosis, as having a physical or intellectual disability, though 13% of those in the pilot test identified themselves as nondisabled. The absence of nondisabled participants, especially health care professionals, in the instrument's testing may affect reliability of the scale and may influence its use across all populations.

Another concern is the lack of a published guide to score the instrument as earlier published studies using the ADS both describe discrepancies in scoring. Scoring for this study was performed using instructions confirmed by email correspondence with the author, M. J.

Power as follows:

Domain scores are scaled in a negative direction with lower scores indicating a more positive attitude except for items 7, 8, 9, and 10, which are reverse scored. Where an item may be missing the mean of the other items in the domains is substituted. Where more than two items are missing from the domain, the domain score should not be calculated. Where more than 20% of data is missing, the assessment should be discarded. Results will provide a rating of the participant's attitude to disability.

In the first article, Zheng, et al. (2014), reported that "Higher mean scores for each domain were indicative of better inclusion, less discrimination, more gains and better prospects" (p. 3). This is a reverse of the instructions cited previously, except for Q 9-12, which are reverse scored. The second article, Gerling, Mandryk, Birk, Miller, and Orji (2014), reported using the ADS in a wheelchair simulation with forty nondisabled participants. The authors described scoring results as follows:

*Inclusion.* Higher ratings indicate lower inclusion of people with a disability.

*Discrimination.* Higher ratings indicate higher awareness of discrimination between people with and without a disability. *Gains.* Higher ratings indicate a positive attitude

towards people with a disability, by focusing on the gains of disabilities. *Prospects*. Higher ratings indicate a negative attitude towards people with disability, by focusing on their prospects. (Gerling, et al., p. 4)

This would indicate low scores meant positive attitudes related to inclusion, negative attitudes related to discrimination, negative attitudes related to gains, and positive attitudes related to prospects. This interpretation of the inclusion subscale neglects to use reverse scoring creating confusion when comparing results with other studies and potential for error when generating a single attitude score. There is a potential for error when analyzing the ADS scores potentially putting results and conclusions in question.

Nurse educators have generally favorable attitudes toward people with disability, though with a negative tendency in the area of discrimination and, following PCA, belonging. This reflects the multidimensionality of attitudes. Prior attitude studies using nurse educators generated a single attitude score and these provided mixed results. Three studies that measured explicit attitudes resulted in positive scores and one study that measured implicit attitudes demonstrated a negative score. The literature supported that people with disability, patients and nursing students alike, felt that nurses and nurse educators, held negative attitudes toward them (Lam et al., 2010; Smeltzer, Avery, & Haynor, 2012). These conflicting results underscore the complexity of research about attitudes toward people with disability and reflect the need for multidimensional testing.

The study failed to identify any factors that influenced nurse educators' attitude toward people with disability. However, the data contributed to knowledge about nurse educators and how they view and teach about disability. Nurse educators preferred the bio-psychosocial definition of disability to the medical and social model views, in spite of half the educators being unfamiliar with disability models and lacking formal education about disability and disability

models. In addition, nursing programs that teach disability models tend to teach from a medical model perspective (Smeltzer, 2005). This, and the generally positive attitude toward disability may be attributed to the high number of nurse educators (96%) who reported some degree of personal and professional experience with some person(s) with disability in various degrees of contact intensity and duration, which aligns with prior research findings (Au & Man, 2006, Sahin & Akyol, 2010; Satchidanand et al., 2012, ten Klooster, 2009).

Data showed a lack of formal knowledge related to disability that supports the need for improvements in both the nurse educators' knowledge about disability and how disability education occurs in nursing. While 60 % of the educators reported some responsibility for teaching about disability, 44 % were unaware of any documented aims, objectives, or outcomes related to teaching about disability within their institution's curriculum. Goals set by Healthy People 2010 and the IOM's *Call to Action* recommended an increase in health care provider training and capacity to see and treat the whole person and not just a person's disability and that "Too often, health care service programs and personnel have not adopted the bio-psychosocial approach to disability" (Carmona, 2010, p. 11). This *Call to Action* stressed a bio-psychosocial approach to disability, which will broaden the outlook on disability, improve the health status of people with disability and change the attitudes toward people with disability. Kearney and Prior (2003) advocated for the ICF, a bio-psychosocial framework, be incorporated into nursing education to encourage students "to think broadly, to assess comprehensively and to plan relevant health care in a structured and systematic fashion" (p. 166). The educator must prepare the graduate to "Promote achievement of safe and quality outcomes of care for diverse populations." (AACN, 2008, p. 14). To accomplish the recommended goals of the AACN, the educator herself must be knowledgeable about disability and disability models and have an

understanding of the experiences of people with disability (Sahin & Akyol, 2010; Scullion, 2010; Smeltzer, 2007). Raising the awareness of the educator may require collaboration with faculty in disability studies and the inclusion of people with disabilities in the curriculum development (Byron, et al., 2006; Smeltzer,2007). In addition, teaching cultural competency in conjunction with a holistic view of the human being and their healthcare needs will improve both the graduate nurse and the nurse educators' attitude toward people with disability (Robey, et al., 2013).

### **Limitations**

Survey studies have inherent limitations and the use of an online survey adds a new dimension. Mail deliveries, both standard and electronic are subject to delivery errors. In addition, it is uncertain that the recipient is actually the person who completes the survey and returns it. The results of this study are limited to the degree of honesty in the answers the respondents provided as they may misrepresent their age, level of education or other variables. Social desirability has been a persistent problem in self-reporting surveys. Respondents may misrepresent their correct feelings about the survey content in an effort to appear better or to present themselves in a way that is more socially acceptable. A specific issue with online surveys is the aspect of self-selection bias as some individuals have a tendency to respond to an invitation to participate in an online survey requests, while others tend to ignore them, though response rates are equal to or better than those for traditional mailed surveys (Wright, 2005). Frequent requests to participate in surveys may also result in desensitization to worthwhile studies. The survey itself may be subject to problems with development, scoring, or goodness of fit with the targeted population. The ADS was developed with a good distribution of male and female respondents, yet in this study, the percentage of female faculty members in nursing education



was significantly high. Therefore, an analysis of nurse educator attitudes based on gender is not suitable.

## **Recommendations**

Considering the results, implications, and limitations from this study, several areas for future research are identified. Replication of this study using nurse educators located in other geographical areas while using the ADS instrument with the modifications following PCA will confirm validity of the instrument and identify nurse educator attitudes in other regions. These replication studies would provide confirmation of the ADS as a reliable instrument for use with nurse educators and will advance its use into attitude research of other health care providers and educators allowing for comparative studies as the WHO intended. In addition, given the discrepancy in prior research between implicit and explicit findings related to the attitudes of nurse educators, simultaneous testing will inform researchers about attitude study and the contrast will shed light on the complexities of attitude research. A study that administers the modified ADS in conjunction with the Disability Attitudes Implicit Association Test will confirm if the conscious and unconscious attitudes toward people with disability are in conflict. Another avenue for research would be to evaluate the nurse educators in the Southeast, using a pre and post intervention, perhaps based in the models of disability, to see if the nurse educator attitudes toward disability improve, especially with regard to discrimination. Further data analysis from this study, using exploratory factor analysis could identify common factors and patterns of underlying attitude contributors. In addition to the research questions analyzed, it may be informative to compare an institutional view of disability with the personal views of the nurse educators. Data analysis to examine and compare the attitudes of the educators from within individual institutions may identify institutions where educators holding more positive or negative attitudes toward people with disability and factor analysis may identify critical variables to improve attitudes.

## **Conclusion**

People with disabilities report physical and situational barriers in healthcare, one of which relates to the negative attitudes of nurses and other caregivers. Improvement in these attitudes will occur through educational change, such as the incorporation of the bio- psychosocial and other disability models in the curriculum. In addition, increased awareness of the knowledge and attitudes of nurse educators toward disability will influence the success of their instruction, as this influences the attitude development in nursing students. This study found that nurse educators, while lacking knowledge about models of disability, preferred the bio- psychosocial definition and held predominantly positive attitudes toward people with disability. In addition, the nurse educators' age and professional experience had no effect on the attitude and the majority (96%) reported some degree of personal experience with people with disability. These findings support the goal of the Institute of Medicine to adopt the bio- psychosocial view of disability and to use evidence based disability oriented training curricula. These changes will encourage health care providers, including nurses, to recognize the value and capabilities of people with disability and change the relationship between disability and health.

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## **Appendix A - Survey Instrument**

PLEASE COMPLETE THIS SURVEY. Results will be used to examine the attitudes toward and instruction about disability in Bachelor of Science nursing education providing information about disability education in 11 southeastern United States. Your responses will provide information about the attitudes of nurse educators toward people with disability, in addition to the professional view and personal experience of people with disability and how disability is being taught in the Baccalaureate nursing program at your institution. The survey consists of five parts and it will take approximately 10 minutes or less to complete.

Part 1/5 This Attitudes to Disability Scale, created by the World Health Organization, asks you how you feel about disabilities and people with disabilities in general.

Instructions: Please answer all the questions. If you are unsure about which answer to give to a question, please choose the one that seems nearest or most appropriate. This can often be the first thing that comes into your mind. There are no right or wrong answers – just answer what is true for you. Please think about your life and your experience of disabilities in general. These questions ask how much you agree with the following statements.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
People with a disability find it harder than others to make new friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with a disability have problems getting involved in society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People often make fun of disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with a disability are easier to take advantage of (exploit or treat badly) compared with other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with a disability are a burden on society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with a	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>disability are a burden on their family.</p>					
<p>Having a disability can make someone a stronger person.</p>	○	○	○	○	○
<p>Having a disability can make someone a wiser person.</p>	○	○	○	○	○
<p>Some people achieve more because of their disability (e.g., they are more successful).</p>	○	○	○	○	○
<p>People with a disability are more determined than others to reach their goals.</p>	○	○	○	○	○
<p>People tend to become impatient with those with a disability.</p>	○	○	○	○	○



<p>People tend to treat those with a disability as if they have no feelings.</p>	○	○	○	○	○
<p>Sex should not be discussed with people with disabilities.</p>	○	○	○	○	○
<p>People should not expect too much from those with a disability.</p>	○	○	○	○	○
<p>People with a disability should not be optimistic (hopeful) about their future.</p>	○	○	○	○	○
<p>People with a disability have less to look forward to than others.</p>	○	○	○	○	○

Part 2/5 Please respond to the following statements related to disability.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. Social, physical, informational and institutional barriers are primary factors that cause disability by restricting participation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Disability is caused by disease, trauma or other health condition and requires medical care and treatment by professionals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Disability is a complex phenomenon that is both a problem at the level of a person's body and a complex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

social phenomenon.							
-----------------------	--	--	--	--	--	--	--

Part 3/5

Q1 Do you hold any responsibility for any aspect of disability teaching?

- Yes
- No

Q2 Within the nursing program in your institution, are you aware of any documented aims, objectives or outcomes related to teaching of disability related topics?

- Yes
- No

Q3 Within the nursing program in your institution, how many faculty/staff have education related to disability instruction?

- None
- Some
- Most
- All
- Do not know

Q4 Within the nursing program in your institution, disability teaching takes place as part of:

- A stand-alone course or module.
- As part of a larger course or module.
- As part of an integrated theme(s) within the curriculum.
- Not taught
- Do not know

Q5 Please check one or more as appropriate. Within the nursing program in your institution, disability teaching occurs using:

- Standardized patient
- Simulation
- Clinical with disability focus
- Text book
- Lecture
- Discussion
- Do not know
- Other \_\_\_\_\_

Q6 Are you aware if the teaching within the nursing curriculum in your institution identifies specific model(s) of disability? (check all that apply)

- social
- medical
- human rights
- individual
- rehabilitation
- bio-psychosocial
- International Classification of Functioning
- other \_\_\_\_\_
- Not familiar with any models

Part 4/5 Questions related to personal experience with disability.

Q1 Do you know a person with a disability?

- Yes
- No

Q2 Identify the people you know that have a disability. You may limit to three if desired.

- self
- spouse/significant other
- your child (1)
- your child (2)
- sibling (1)
- sibling (2)
- significant relative or friend (1)
- significant relative or friend (2)
- co-worker
- employee/employer
- neighbor/acquaintance
- other \_\_\_\_\_

Q3 Indicate one choice, if the disability congenital or acquired.

Q4 Please indicate if the disability is cognitive, physical, emotional, or sensory. Include more than one if applicable.

Q5 Rate your general knowledge of the conditions and life circumstances of each person. Please complete all three columns.

#### Part 5/5 Professional demographic information

Q1 What is your highest degree related to nursing education?

- PhD
- EdD
- DNP
- CNP/LNP
- DNS
- DNA
- CNP/LNP
- MSN
- MEd
- other \_\_\_\_\_

Q2 Indicate your rank at your institution.

- Full Professor
- Associate Professor
- Assistant Professor
- Instructor/Lecturer

Q3 How many years have you been a registered nurse?

Q4 How many years have you been a nurse educator?

Q5 In what state are you currently an educator?

- Alabama
- Florida
- Georgia
- Kentucky
- Louisiana
- Mississippi
- North Carolina
- South Carolina
- Tennessee
- Texas
- Virginia

Personal demographic information.

Q6 Age

Q7 Gender

- Male
- Female
- Transgender

Q8 Marital status

- Single
- Married/living with partner
- Divorced/separated
- Widowed

Q9 Race

- White/Caucasian
- African American
- Hispanic
- Asian
- Native American
- Pacific Islander
- Other \_\_\_\_\_

I thank you for the time you have spent on this survey.

## Appendix B - Personal Correspondence for ADS Scoring

7/30/13 To Mick Power:

I have read over the information you sent me back in November. You included a file ADS-measures.zip file that refers to an attached chart which "summarizes the measures and target populations" I did not get this chart. Also, do the following statements sound accurate?

"Domain scores are scaled in a negative direction with lower scores indicating a more positive attitude except for items 7, 8, 9, and 10, which are reverse scored. Where an item may be missing the mean of the other items in the domains is substituted. Where more than two items are missing from the domain, the domain score should not be calculated. Where more than 20% of data is missing, the assessment should be discarded. Results will provide a rating of the participant's attitude to disability."

I appreciate any input. I am very slowly making my way into defending my proposal.

7/31/13 To Lorena Lyon:

Hi,

The "chart" simply refers to the brief notes about the use of the different ADS measures that were included in the ZIP file? I have included them again in case there was a problem.

And your account of the scoring sounds good.

With best wishes,  
Mick.

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## Appendix C - IRB Certificate



### **Certificate of Completion**

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Lorena Lyon** successfully completed the NIH Web-based training course “Protecting Human Research Participants”.

Date of completion: 08/16/2013

Certification Number: 1227741

## Appendix D - IRB Letter

December 12, 2013

Office for Research  
Institutional Review Board for the  
Protection of Human Subjects

THE UNIVERSITY OF  
**ALABAMA**  
R E S E A R C H

Lorena Lyon  
ELPTS  
College of Education  
The University of Alabama

Re: IRB # EX-13-CM-123 "Nurse Educator Attitudes toward People with Disability in the Southeastern United States"

Dear Ms. Lyon:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your protocol has been given exempt approval according to 45 CFR part 46.101(b)(2) as outlined below:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:  
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and  
(ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Your application will expire on December 11, 2014. If your research will continue beyond this date, complete the relevant portions of Continuing Review and Closure Form. If you wish to modify the application, complete the Modification of an Approved Protocol Form. When the study closes, complete the appropriate portions of FORM: Continuing Review and Closure.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number.

Good luck with your research.

Sincerely,



358 Rose Administration Building  
Box 870127  
Tuscaloosa, Alabama 35487-0127  
(205) 348-8451  
FAX (205) 348-7189  
TOLL FREE (877) 820-3066

*[Signature]*  
Carpantato T. Myles, MSM, CIM, CIP  
Director & Research Compliance Officer  
Office for Research Compliance  
The University of Alabama

**Welcome Email**

To: Nurse Educator

Subject: Research Invitation

Below you will find a link to a survey and the informed consent document. You have been selected to participate in this study because you teach in a Baccalaureate program in the southeastern United States. Your contact information was accessed on your school's website. To participate in the study you must be a nursing faculty member, teach in a Baccalaureate nursing program, read and write in English, and provide informed consent. The informed consent information is included below with a link to the survey. If you meet these criteria, please continue. Otherwise, thank you for your time and consideration. All of the answers to your questions will remain anonymous and confidential.

The survey will take approximately 10 minutes to complete and is completely anonymous. Your responses will provide information about the attitudes of nurse educators toward people with disability, in addition to definitions of disability, experience with people with disability and how disability is being taught in the Baccalaureate nursing program at your institution. The results have the potential to improve disability education, influence student attitudes, and positively affect the care of people with disability.

The survey will remain open until X/XX/XXXX (3weeks from this email).

\*LINK TO SURVEY HERE

**Informed Consent**

**Study title:** Nurse Educator Attitudes Toward People with Disability in the Southeastern United States

**Investigator name:** Lorena Lyon MSN, RN, Doctorate in Education graduate student in Educational Leadership/Nurse Educator the University of Alabama.

You are being asked to take part in a research study. The study is titled Nurse Educator Attitudes Toward People with Disability in the Southeastern United States. The study is being done by Lorena Lyon who is a graduate student program at the University of Alabama. Ms. Lyon is supervised by Dr. Rick Houser who is a Professor in Educational Studies in Psychology, Research Methodology, and Counseling at the University of Alabama.

**What is this study about?**

This study is being conducted to provide information about the attitudes of nurse educators toward people with disability, in addition to the professional view and personal experience of people with disability and how disability is being taught in the Baccalaureate nursing programs. This area is not well researched.

**Why is this study important? What good will the results do?**

Negative attitudes toward people with disability create barriers to care. The nurse educator's attitude affects instruction about disability and the students developing attitude. The results of

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this study will identify influencing factors related to attitudes toward people with disability and may change how disability education occurs in Baccalaureate nursing curriculum.

**Why have I been asked to take part in this study?**

You have been asked to participate because you have been identified as a nurse educator in a Baccalaureate nursing program that is accredited by the Commission of Collegiate Nursing Education in one of 11 southeastern states. Participation is voluntary.

**How many other people will be in this study?**

There are approximately 680 nurse educators invited to participate in this study.

**What will I be asked to do in this study? How much time will I spend being in this study?**

If you meet the criteria and agree to be in this study, you will be asked to complete an internet survey that will take about 10 minutes depending on how long you take to respond to the survey questions.

**Will being in this study cost me anything?**

The only cost to you will be your time.

**Will I be compensated for being in this study?**

You will not be compensated for being in this study.

**What are the risks (problems or dangers) from being in this study?**

Participation in this study does not pose any foreseeable risks to you. You can choose to discontinue participation in this study at anytime and skip any question that you do not wish to answer. Similar previous research has found no associated risk.

**What are the benefits of being in this study?**

There are no direct benefit to you, though the study results may help in the education of student nurses and improve the nursing care of people with disability.

**How will my privacy be protected?**

You do not have to answer any questions that make you uncomfortable or that you choose to skip over for any reason.

**How will my confidentiality be protected?**

Your identity will be kept confidential and your name is not used. Your confidentiality is protected using a survey link with no identifiable information attached. This includes the removal of IP addresses and any other identifier. Only the investigators will have access to the data. The data are password protected. Only summarized data will be presented at meetings or in publications. The survey results and reports are stored on secure servers administered by Qualtrics.

**What are the alternatives to being in this study?**

The only alternative is not to participate.

**What are my rights as a participant?**

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Being in this study is voluntary and is your free choice. You may choose not to be in it at all. If you start the study, you can stop at any time by closing the survey window before you submit your answers. Not participating or stopping participation will have no effect on your relationships with the University of Alabama.

The University of Alabama Institutional Review Board is a committee that looks out for the ethical treatment of people in research studies. They may review the study records if they wish. This is to be sure that people in research studies are being treated fairly and that the study is being carried out as planned.

**Who do I call if I have questions or problems?**

If you have questions about this study, please contact Lorena Lyon at 205-799-9946 or by email [llyon@crimson.ua.edu](mailto:llyon@crimson.ua.edu).

If you have questions about your rights as a person taking part in a research study, make suggestions or file complaints and concerns, you may call Ms. Tanta Myles, the Research Compliance Officer of the University at (205)-348-8461 or toll-free at 1-877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach Website at [http://osp.ua.edu/site/PRCO\\_Welcome.html](http://osp.ua.edu/site/PRCO_Welcome.html). You may email us at [participantoutreach@bama.ua.edu](mailto:participantoutreach@bama.ua.edu). You may print this letter for your records.

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