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The University of Southern Mississippi

EDUCATING STUDENTS TO BECOME CULTURALLY COMPETENT PHYSICAL THERAPISTS: ISSUES OF TEACHING AND ASSESSMENT

by

Lisa Jayroe Barnes

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
In Partial Fulfillment of the Requirements
For the Degree of Doctor of Philosophy

May 2013

ABSTRACT

EDUCATING STUDENTS TO BECOME CULTURALLY COMPETENT PHYSICAL THERAPISTS: ISSUES OF TEACHING AND ASSESSMENT

by Lisa Jayroe Barnes

May 2013

With the growing multicultural population within the United States, healthcare providers need to be prepared to care for and educate adult clients from various cultural backgrounds. The purpose of the study was to examine the teaching and assessment methods being used by faculty in the education of future physical therapists in teaching the construct of cultural competence, how these methods may vary according to the educational background of faculty in relation to the use of concepts specific to adult education that may lead to transformational learning, and faculty opinions about teaching and assessing this abstract construct.

Survey methodology was used in the study. A questionnaire was distributed to faculty within physical therapy academic programs throughout the United States. Participants were separated into groups by educational background of clinical sciences versus education in order to assess for differences in teaching and assessment methodology, attitudes related to adult learning theory, and opinions related to personal understanding of cultural competence and the ability to teach and assess cultural competence in the educational environment. The results of the study offered an overall picture of academic activities in physical therapy education related to preparing future physical therapy practitioners to be culturally competent healthcare providers.

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by

Lisa Jayroe Barnes

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

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CHAPTER I

INTRODUCTION

Background

The United States population is an ever-changing cultural picture. As we move through the 21st century, the racial and ethnic minority populations will continue to grow and are expected to reach 50% of the general population by mid-century (Poirier, Butler, Devraj, Gupchup, Santanello, & Lynch, 2009). Diversity within the population may have an effect on the provision of healthcare services. As diversity increases so does the necessity to address health needs across various cultures and ethnicities in a healthcare environment that values all cultures as vibrant and ever-changing (Ziegahn & Ton, 2011). In spite of advances in healthcare and general health of the population over the past several years, there continue to be discrepancies between the health status of those identified as ethnic minorities and those with lower socioeconomic status when compared to the general population (Wells & Black, 2000).

The Office of Minority Health (OMH) within the United States Department of Health and Human Services established the National Standards on Culturally and Linguistically Appropriate Services (CLAS) in 2001 in an effort to guide healthcare providers in structuring health services for culturally competent care (Leavitt, 2010; Office of Minority Health, 2007; Ziegahn & Ton, 2011). The first three standards are focused on the provision of culturally competent health care and are as follows:

> Standard 1: Health care organizations should ensure that patients/consumers receive from all staff member's [sic] effective, understandable, and respectful care that is provided in a manner compatible with their cultural health beliefs and

> practices and preferred language. Standard 2: Health care organizations should implement strategies to recruit, retain, and promote at all levels of the organization a diverse staff and leadership that are representative of the demographic characteristics of the service area. Standard 3: Health care organizations should ensure that staff at all levels and across all disciplines receive ongoing education and training in culturally and linguistically appropriate service delivery. (Office of Minority Health, 2007, p. 1)

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requires the education of employees working within healthcare facilities to be related to the provision of culturally competent care (Leavitt, 2010). Therefore, health professions schools need to graduate health professionals ready to provide culturally competent care in a multicultural health system.

In a study by Johnson, Saha, Arbelaez, Beach, and Cooper (2004), participants from the minority population within the study reported lower quality of care in the healthcare system when compared to care received by white patients. Participants reported this was caused by ethnic identity and language differences. The authors of this study also noted the importance in patient/caregiver communicative interactions as an area in need of continued research related to culturally competent care. Professionals in all healthcare fields will be faced with the task of caring for individuals from a variety of cultural identities with varying belief systems (Onyoni & Ives, 2007). The development of culturally competent healthcare environments that include consideration for patients, providers, and involved caregivers is emerging throughout healthcare professions (Ziegahn & Ton, 2011). Wells and Black (2000) noted that neglecting to include

attention to cultural differences in the provision of healthcare services makes the statement that individual cultures are not deemed valuable by the healthcare community.

Research has demonstrated a link between health disparities and cultural competency of healthcare providers across the various health-related professions (Fitzgerald, Cronin, & Campinha-Bacote, 2009; Onyoni & Ives, 2007; Rowland, Bean, & Casamassimo, 2006). Health disparity is explained by Lewis (2009) as an inconsistency in the quality of service outcomes related to the healthcare of individuals from differing cultural identities. Lefebvre and Lattanzi (2010) point out that health disparity is present across the population and is not unique to one or more specific cultural identifier. Lewis (2009) goes on to discuss the problem of disparity in healthcare services and outcomes related to the multicultural identities of both providers and patients, and he relates this to a lack of cultural competence. The development of culturally competent healthcare providers has become a focus in the reduction of disparities in health status and outcomes of care (Rowland et al., 2006). In an effort to address the concern of disparities in health status and outcomes that could be a result of sociocultural variations and misunderstandings, Hill and Winter (2007) called for the refinement of cultural competence in the various health-related professions in order to improve culturally sensitive clinical interactions, leading to more successful outcomes.

Cultural competence is a complex construct that encompasses an understanding of and appreciation for individuals from varied cultural belief systems and the ability of healthcare providers to successfully interact with clientele in order to meet specific healthcare needs (Onyoni & Ives, 2007). In the realm of healthcare, the success of quality care and positive outcomes will depend on culturally competent care for

constantly changing social groups and culturally diverse communities (Wells & Black, 2000). Clients served within the healthcare system should be allowed to embrace personal ethnicity and belief systems while receiving the highest quality healthcare provided in a respectful and competent manner (Wells & Black, 2000).

The development of cultural competence involves a deep understanding of self in order to comprehend and appreciate the cultural identity of others, leading to interactions that are successful in meeting healthcare objectives (Lewis, 2009; Lypson, Ross, & Kumagai, 2008). The literature supports the expanding importance of cultural competency education within the healthcare professions and discusses a variety of teaching methods and assessment techniques that may be utilized to accomplish this task (Musolino et al., 2010; Panzarella, 2009; Poirier et al., 2009; Rowland et al., 2006).

Statement of the Problem

Limitations in the cultural competence of healthcare providers have been linked to health disparities within multicultural communities (Fitzgerald et al., 2009; Musolino et al., 2010). With the progressively changing multicultural composition of this country, national healthcare organizations are calling for improved education of future healthcare providers in areas related to cultural competence (Fitzgerald et al., 2009; Sasnett, Royal, & Ross 2010).

Accordingly, the realization of the necessity for culturally competent providers of physical therapy services has become evident, and the incorporation of cultural competence training into educational activities and objectives is required for accreditation of physical therapy academic programs (Commission on Accreditation in Physical Therapy Education [CAPTE], 2011a). The Commission on Accreditation in Physical

Therapy Education (CAPTE) requires the inclusion of curriculum content that addresses the development of culturally competent healthcare professionals (CAPTE, 2011a). The accreditation process calls for physical therapy academic programs to explain both teaching methodologies and assessment activities that demonstrate learning in this specific content area.

Accredited academic programs that offer physical therapy education are autonomous in how to incorporate cultural competence education into the curriculum; therefore a lack of consistency in the curricular content, methods of teaching, and assessment of the development of cultural awareness and sensitivity is present (Musolino et al., 2010). Additional information available in the literature that helps describe teaching methodology and assessment techniques may yield positive outcomes in the education of healthcare professionals, which may be beneficial in the quest to develop cultural awareness and sensitivity throughout the academic preparation of these students. Researchers and educators of healthcare professionals have suggested that curricular activities specific to the development of cultural competency be incorporated throughout the learning process, both in the classroom and clinic (Core, 2008; Panzarella, 2009). Some suggest that at least one class be devoted entirely to the development of cultural knowledge, awareness, and understanding early in the academic career to serve as a foundation (Poirier et al., 2009). Others discuss the benefits of activities that allow students to participate in clinical and community-based activities that facilitate experiential learning specific to their chosen health-related fields of study (Hilliard, Rathsack, Brannigan, & Sanders, 2008; Kardong-Edgren et al., 2010).

Purpose of the Study

Future healthcare providers will be caring for and educating adult clients of various cultural identities. Research into how healthcare providers are prepared in the educational environment in order to learn the skills necessary to effectively educate adult clients may be beneficial. This study explored the teaching and assessment techniques being used in physical therapy academic programs across the country by examining educational methods that faculty are utilizing to teach the construct of cultural competency, methods of assessing the development of cultural competency, and the differences in teaching and assessment methods utilized by faculty members from differing educational backgrounds. The results indicated teaching and assessment methods used that incorporate adult learning theory and, specifically, activities that facilitate transformational learning.

In the process of educating healthcare professionals to provide culturally competent care for clients, one should consider that many of those clients will be adults, and it is therefore appropriate to use concepts inherent in adult education. Merriam, Caffarella, and Baumgartner (2007) expanded upon the characteristics of andragogy, which were originally identified by Malcolm Knowles as the basic assumptions that define the characteristics of adult learning. These assumptions are that adults are self-directed learners who should have input in choosing and organizing learning experiences, that adults come into an educational situation with a vast history of prior life experiences which may affect learning, and that adults have unique identities within the society which will have an effect on learning. In addition, the authors explained that andragogy assumes that adults desire immediate and applicable use of information learned in order

to meet a specific need, that adults are more internally motivated, and that adults require an understanding of the reasons that learning new information or skills is needed and beneficial. Merriam et al. (2007) also clarified that in some situations in which external circumstances are involved, external motivation may overpower internal motivation. This concept may speak directly to the effect that an unexpected external occurrence related to health status could have on the adult learner.

Alfred (2002a) explained that adults have individual cultural backgrounds which have nurtured and molded the ways in which they learn. This concept is comparable to the sociocultural aspect of adult learning, which calls for the educator to consider the cultural nuances of the learner that are specific to the individual and may influence preferred learning styles. She went on to note that adults learn in various ways that have been influenced by cultural identity, and this should be considered in the quest to create a successful learning environment. The concepts of the andragogical and the sociocultural views of learning may be interwoven to meet the educational needs related to the development of cultural competency in healthcare professionals.

With the realization that an increase in cultural competence may lead to a reduction in health disparities, there is a focus across healthcare educational programs to improve cultural competence education (Ziegahn & Ton, 2011). The profession of physical therapy requires that practitioners entering the workforce have the ability to meet specific needs of clients across the spectrum of cultural beliefs and attitudes about health and wellness (Panzarella, 2009). Students in physical therapy programs should begin to understand their own personal cultural beliefs as they move through the educational process in order to develop an appreciation for the value of cultural

differences among the patients they serve (Purtillo & Haddad, 2002). The American Physical Therapy Association (APTA) has created The Operational Plan for Cultural Competence, which outlines three specific goals for the development of culturally competent and inclusive professional practice (Leavitt, 2010). This plan emphasizes the commitment of the profession of physical therapy to have a positive impact on the reduction of health disparities through the development of culturally competent providers.

Lewis (2009) specifically calls for work within the rehabilitation specialties to improve interaction with and care of clients from various cultural backgrounds. Leavitt (2010) notes that the profession of physical therapy continues to need research related to the development of culturally competent provision of care. This research may yield information that will be useful for academic programs in planning and implementing curricular activities aimed at guiding the development of culturally competent rehabilitation providers.

Research Questions and Hypotheses

The literature supports the expanding importance of cultural competence education within the healthcare professions and the use of assessment techniques to demonstrate the successful acquisition of cultural competence by students who will graduate and enter the workforce as healthcare providers in multicultural environments. This study explored the extent to which the theories of adult learning are utilized in the education of culturally competent physical therapists, the teaching and assessment techniques used in physical therapy educational programs to facilitate learning of cultural competence, and how these differ among physical therapy faculty members who have

varied educational degrees and backgrounds. It was expected that those faculty members with advanced degrees in education and/or continuing educational studies related to the theories of adult learning are more likely to incorporate andragogical learning theories in the academic environment, when compared to the teaching and assessment methodologies used by faculty members with advanced degrees in the clinical or social sciences who may have less background in adult learning theory. Faculty with terminal degrees in the clinical sciences may teach facts and skills related to a specialized area of practice, but have no specific background on how to educate students on the content while incorporating activities that lead to transformational learning.

Specific research questions include:

1. What educational methods are faculty utilizing to teach the construct of cultural competence in physical therapy programs?
2. How are faculty who are teaching the construct of cultural competence incorporating theories of adult learning into teaching methodology?
3. How are faculty members of physical therapy educational programs assessing the development of cultural competence in physical therapy students?
4. What are the educational backgrounds and training experiences of faculty who are teaching cultural competence in physical therapy academic programs?
5. Are there differences in teaching and assessment methods utilized among faculty members from different educational backgrounds and from varied cultural identities?

Specific research hypotheses include:

- Faculty members who have an academic background in the field of education will incorporate teaching and assessment methods that facilitate transformative learning more consistently than those faculty members with academic backgrounds in other areas.
- Faculty members with an academic background in education will be more likely to use the concepts of adult learning when compared to faculty members with other educational backgrounds.
- Faculty members with an academic background in education will be more confident in personal ability to teach and assess the construct of cultural competence when compared to faculty members with other educational backgrounds.

Definitions

Clients/patients - Clients/patients are those individuals who enter the healthcare system seeking health-related services from healthcare providers that are need-specific.

Culture - Culture is a unique blend of learned values and beliefs developed through social interactions related to constructs such as spirituality, socioeconomic status, language, family or societal traditions, ethnicity, and other characteristics that mold individual attitudes and identities (Onyoni & Ives, 2007; Purden, 2005).

Cultural competence - Cultural competence has been defined in a multitude of published statements of explanation. For the purpose of this study, cultural competence is defined as “a set of behaviors, attitudes, and policies that come together in a continuum

to enable a healthcare system, agency, or individual rehabilitation practitioner to function effectively in transcultural interactions" (Leavitt, 2010, p. 38).

Cultural diversity - Cultural diversity refers to the vast array of differences among cultures and cultural belief systems.

Health disparities - Health disparity refers to a variety of discrepancies among the health status and the outcomes of healthcare for individuals across the spectrum of cultural identities. It is defined by the Institute of Medicine as "a differential health care outcome attributed to an individual's race or ethnicity when other factors such as socioeconomic status (SES) and access to care are controlled" (Lewis, 2009, p. 1136).

Health professions education – Health professions education refers to educational curriculums that are geared specifically to the educational preparation of individuals within specific areas of healthcare delivery. These professions may include medicine and rehabilitation professions including physical therapy, pharmacy, nursing, dentistry, etc.

Healthcare professions -The healthcare professions are those dedicated to the provision of services designed to meet the health needs of clients/patients being served across a broad continuum which includes a variety of settings, services, levels of care, and interventions (Shi & Singh, 2004).

Learning assessments – Learning assessments are methods used to determine if students have successfully learned information and concepts that have been presented during teaching activities.

Patient outcomes – Patient outcomes are measures used to describe the status of individuals before, during, and after interactions with healthcare providers as a means of demonstrating quality of care provided and improvement in health status resulting from

the care received (Sandstrom, Lohman, & Bramble, 2009). Outcome measurement tools may be designed to measure a variety of health issues related to specific interventions and/or disease processes.

Physical therapists – Physical therapists are licensed healthcare professionals who practice the unique profession of physical therapy in which they “assume leadership roles in rehabilitation; in prevention, health maintenance, and programs that promote health, wellness, and fitness; and in professional and community organizations” (American Physical Therapy Association, 2003, p. 13).

Physical therapy – The APTA defines physical therapy as “a dynamic profession with an established theoretical and scientific base and widespread clinical applications in the restoration, maintenance, and promotion of optimal physical function” (American Physical Therapy Association, 2003, p. 13). Physical therapy is a healthcare profession which can involve ongoing personal interaction with clients for rehabilitation services after potentially life-changing illness, injury, or disease.

Physical therapy faculty – For the purpose of this study, physical therapy faculty are educators who are teaching within accredited physical therapy educational programs, the graduates of which will be eligible to take the national licensure examination for licensure as physical therapists. These faculty members may or may not be licensed physical therapists. They may have a degree in physical therapy or degrees in other areas such as the biological sciences, social sciences, or education. It is certainly possible that many will have multiple degrees combining physical therapy with other areas of expertise. The term physical therapy faculty will not include those educators teaching in

physical therapist assistant programs, nor will it include those licensed professionals who serve as clinical instructors within the clinical environments.

Delimitations

This study is delimited to educational faculty participants who are educating entry level physical therapists, and it does not include those educating physical therapist assistants, those educating current physical therapists who are working toward a transitional doctor of physical therapy degree or other terminal degree, or those clinical instructors who are providing cultural competence education during clinical education.

Assumptions

This study was carried out with the assumptions that all participants are allowed to include some aspect of culturally applicable educational material and assessment methodology in their professional educational offerings, and that information received accurately reflects the practice pattern of the individual. There is also the assumption that participants have a working understanding of the concept of cultural competence education within the healthcare arena.

Justification

The Commission for the Accreditation of Physical Therapy Education (CAPTE) is the accrediting body that oversees the education of physical therapists. The commission has included standards for education on culturally competent care within physical therapy academic programs in order to meet the requirements for accreditation (CAPTE, 2011a). Although these types of activities are included within the objectives throughout various healthcare curriculums, Hill and Winter (2007) suggest that there is uncertainty as to the clinical effectiveness of the educational sessions when students are

in the real world of multicultural patient interaction. During the educational process physical therapy students must develop unique hands-on skills such as those related to kinesthesia, the understanding of movement, and proprioception, the recognition of position in space (Schmitz, 2007). Similar to these skills developed by physical therapists, Hill and Winter (2007) point out that cultural competence is a learned skill with complex levels of development that require ongoing improvement. The methods of teaching and assessing the development of cultural competence in the academic environment in a manner that allows real learning and inherent change to occur within the learner throughout his or her academic career is a monumental challenge. However, meeting this challenge may positively affect the development of real cultural competency skills during clinical interactions with clients, as well as facilitate cooperative efforts with various stakeholders who may be interested in community health status across the multitude of cultural identities.

Merriam and Brockett (2007) acknowledged that "adult educators can be found in all of society's institutions" (p. 301). There seems to be a two-dimensional view presented in this statement in which adult educators in these environments are educating adults on the topics that are integral to those institutions. However, there may also be a three-dimensional aspect of educating adults on how to understand adult learning in order to become adult educators as they move forward in their roles in society. This dissertation study seeks to examine the potential presence of the assumptions and theories related to adult learning in the post-graduate professional education of physical therapists in an attempt to understand how faculty incorporate these theories in the educational process as students are prepared for assuming the role of adult educators in the healthcare

arena. As faculties in healthcare educational programs educate students for clinical competence in professionally diverse environments, there is also a need to educate future healthcare providers on how to effectively educate adult clients from all cultural identities. The underlying premise of this work is to investigate how this education is being achieved and discover ways of improving the process in a manner that facilitates transformation of students, healthcare providers, educators, and perhaps the multicultural communities being served.

The theoretical framework upon which this research is based is an important and thought-provoking theory in the field of adult education. This theory is that of transformational learning which was defined by Jack Mezirow. Adults have specific experiences and realities that occur throughout life that mold cultural identities and personal belief systems (Mezirow, 1991). Transformational learning explores the concept of focused critical self-reflection for a deeper understanding of self, without relying on ideas and feeling that have been suggested by society. This is a conscious effort on the part of the learner to define personal beliefs and identify the differences in meaning across other belief systems and cultural identities in order to transform his or her thoughts, beliefs, and attitudes.

Merriam et al. (2007) expanded upon transformational learning theory from the sociocultural perspective as it was further defined from a spiritual standpoint. This perspective explores how individuals from various cultural identities think and learn in ways that are developed through their cultural backgrounds, which have been at least partially influenced by spiritual belief systems. The authors encourage open investigation by teachers and learners into the multitude of cultural realities that may affect the

learning process and suggest that intellectual activities be interwoven with the emotional and spiritual constructs that may be guiding factors in the process of learning (Merriam et al., 2007).

During the limited time that students spend in graduate healthcare education, faculty may incorporate adult learning theory as a mechanism for transformative learning, which can continue throughout the future careers of the students. While in the classroom and clinical settings, a student may begin the process of individuation as he or she learns the intricacies of a specialized career in healthcare, which leads to empowerment and a level of responsibility for the welfare of others (Taylor, 2008). As this process churns within the learner, a movement toward the psychodevelopmental stage of transformation that facilitates a desire within the students to continue to expand knowledge and actively seek reflective and critical thought about the multicultural environments in which they serve inspires personal growth and changes in attitudes, opinions, and understanding of various cultural differences (Taylor, 2008).

Although perspectives of transformational learning may be defined separately as though they are independent of one another, perhaps these views may work together on a continuum of learning, growth, and change. With the potential for spurring personal and professional transformation in the healthcare professions related to culturally competent care, the possibility of emerging social-emancipatory transformation may be considered. Taylor (2008) explained this perspective as “a theory of existence that views people as subjects, not objects, who are constantly reflecting and acting on the transformation of their world so it can become more equitable” (p. 8). This perspective proposes that as personal transformation of understanding and meaning occurs it may lead to changes in

pertinent aspects of societal problems (Merriam & Brockett, 2007). This concept may be superimposed on the issue of health disparity within multicultural communities that has been attributed to the lack of cultural competence of healthcare providers.

This study identified the teaching methodology being utilized in the education of physical therapists, as well as the methods of assessing the development of cultural competence during the educational process. This could help guide physical therapist educators in the development of curriculum content specific to the acquisition of cultural awareness and sensitivity and assist them in finding a consistent means of assessing the outcomes. The findings from this study may provide specific benefit to physical therapy educational programs in meeting accreditation requirements and preparing culturally competent healthcare professionals. On a larger scale, the findings could benefit the community at large with the infusion of culturally competent physical therapists who may positively affect reduction in health disparity in this country through the provision of quality physical therapy services across the continuum of cultural identities.

By bringing the assumptions of adult education into consideration when planning, implementing, and assessing the development of culturally competent patient care skills of health professional students, the post-graduate educational experience may positively influence the impact that these graduates have on the lives of adult clients throughout individual careers. The compilation of teaching and assessment methods used by faculty may identify current trends in physical therapy education for cultural competence and assist in molding the future of physical therapy education as the communities served by these healthcare professionals continue to change in a multicultural society. The findings from this study may allow physical therapy faculty to identify educational methods used

in the areas of cultural competence education while prompting reflection on personal ideologies related to this topic. This critical reflection may encourage change within faculty members and lead to a more holistic method of teaching this sometimes abstract concept of cultural awareness and competence, and facilitate a cooperative educational experience in which teachers and learners work together in the learning process to share ideas and grow personally, professionally, and academically (Freire, 2009).

CHAPTER II

LITERATURE REVIEW

Introduction

The field of adult education has a vast array of definitions expressed by educators often depending upon the particular environment and specific intentions of those involved in the educational experience (Merriam & Brockett, 2007). However varied, definitions generally agree to some extent that adult education involves educational activities designed for learners who are socially accepted as *adults* involved in planned learning activities aimed at achieving some type of change or personal growth. Historically, the field of adult education and the activities that define it have come from societal realization that some type of change was necessary to address issues or problems (Merriam & Brockett, 2007). In the quest to educate culturally competent healthcare providers, adults are involved in specifically-designed academic activities created for learning to educate adult clients with the goal of changing health behaviors in a manner that will benefit the individual adult learner and, ultimately, the community as a whole.

Transformative learning is a concept ingrained in the field of adult education that emphasizes personal reflection, critical thinking, and a quest to understand self and the meaning systems within the individual that help mold and define attitudes and opinions as an avenue to facilitate deep and meaningful learning (Merriam & Brockett, 2007). Mezirow (1991) began *Transformative Dimensions of Adult Learning* by stating that "as adult learners, we are caught in our own histories" (p. 1). Transformative learning revolves around this concept and explores the idea that adults learn and develop meaning and understanding related to the mental landscapes developed through personal history

and experiences (Mezirow, 1991). Inherent in transformative learning is personal critical reflection not only to understand personal beliefs, but also to identify where belief systems originated, why they developed as they did, and to consider the reality that changes in beliefs and attitudes may be required and, in fact, desired as transformation occurs (Mezirow, 1991).

In the field of healthcare education it is expected that professionals entering the workforce understand the cultural differences of the clientele they serve in order to provide competent care regardless of cultural variations (Lypson et al., 2008; Ndiwane et al., 2004). According to the theory of transformational learning, Alfred (2002b) and Sasnett et al. (2010) suggest that students of the health professions should be guided through the process of critical self-reflection in an effort to identify and dissect their individual attitudes and preconceptions of the cultural identities of others. Wells and Black (2000) emphasized that students must first develop an understanding of self in order to more deeply understand the cultural realities of those they serve. With a more complete understanding of self, healthcare providers may be more acutely aware of their personal contributions to the interactions experienced with patients (Boutin-Foster, Foster, & Konopasek, 2008). Since healthcare is a very personal and at times emotional interaction, providers may become more empathetic and perhaps more successful in positively impacting the health status of others with a deeper understanding of those they serve.

The Operational Plan on Cultural Competence, developed by the APTA, was designed to emphasize the importance of culturally competent physical therapy care and to define specific goals to meet this overall objective (American Physical Therapy

Association, 2011). This plan calls for both educational methods and assessment methods for developing culturally competent practitioners. It also emphasizes the importance of this construct and its impact on health disparity, and calls for a more culturally diverse field of physical therapy professionals.

Faculty members who are guiding the education of future healthcare providers have the goal of holistically educating the professionals of the future. Faculty members may be of cultural backgrounds that are different from the students they teach. Transformational learning may be seen as an ongoing process that is undertaken by faculty and students alike if the teaching/learning transaction is to be successful and lead to the development of qualified and culturally competent healthcare practitioners (Alfred, 2002b). Learning activities offered during the educational process should provide opportunities for students to engage in personal reflection, dialogue with both faculty and peers, and include affective constructs whose interpretation may vary greatly among those engaged (Taylor, 2008). This process recognizes that although a group of students and faculty may have the same educational and professional goals grounded in a particular health-related profession, each is still an individual with a multitude of thoughts, feelings, and emotions that may differ enormously.

Freire (2009) calls for a teacher/student relationship in which the two entities are cohorts in the learning process. Considering the changing role from that of *student* to that of *teacher* upon entry into the world of patient care, preparation during the academic process involving the dissolution of the traditional teacher/student dichotomy may lead to a smoother transition to patient care and the lifelong process of transformational learning in real-world interaction (Freire, 2009). Faculty members within professional healthcare

programs have the opportunity to begin the processes of open dialogue and cooperation in learning among students of various cultural identities, which in itself serves as a teaching method grounded in adult learning theory that may prepare healthcare providers of the future to be well-versed and experienced in these learning concepts.

Faculty members within the healthcare professions traditionally have academic degrees that are specific to the clinical health-related fields in which they teach. The literature is unclear as to the academic background of professional healthcare faculty related to academic degrees in the field of education. Threlkeld, Jensen, and Royeen (1999) noted that physical therapy faculties are often deemed competent because of their clinical degree and experience, but call for faculty to hold clinical doctorate degrees in physical therapy. The authors did not specify the area of academic study other than the clinical sciences related to the professional field of study. In a survey report of dental faculty, Nunn et al. (2004) discussed academic credentials related to certifications and level of academic degree without specifying area of study.

Mattingly and Barnes (1994) discussed faculty teaching anatomy, most of whom had terminal degrees related to the biological sciences and physical therapy, but the authors made no mention of academic training in the field of education. Teaching specific names and functions of anatomical structures can lead to culturally sensitive discussions. The Hmong culture, for example, holds deep spiritual beliefs about the placenta following childbirth and throughout the lifetime into death (Fadiman, 1997). Aside from specific academic backgrounds, Lazaro and Umphred (2007) asked physical therapy faculty in a small study about personal understanding of cultural diversity and found that the group considered it less than adequate.

As suggested by Merriam (2008), the physical and emotional environments and situations in which learning occurs have an effect on adult learning. Students move from the role of adult learner in the classroom to the role of adult educator in the healthcare field which involves a myriad of environmental, emotional, and sociocultural issues that affect the teaching/learning transaction occurring during patient care. Seemingly overnight the student is placed in the role of educator with a calling to guide adults from many cultural identities in the learning process to develop better health-related behaviors. Some may find the challenges of this transition both unexpected and frustrating for the therapist/teacher and the patient/learner, especially when the two are from vastly different cultural backgrounds with opposing or differing belief systems.

Hilliard et al., (2008) suggested that challenges which occur in the clinical environment related to cultural issues in patient care may stimulate the minds of students and encourage a time of critical self-assessment and reconsideration regarding cultural competence. This may facilitate a transformative learning opportunity for the individual. Mezirow (1991) described the concept that learners must be confronted with the realization that there is an inherent need to understand a difficult situation from a different perspective in order to make sense of it and to, therefore, understand and navigate the situation successfully. From this desire comes a deeper and more reflective thought process that may lead to changes in thoughts, attitudes, and understanding of the world and its inhabitants. The skills required for culturally competent healthcare leading to better outcomes and decreased healthcare disparity involve the multifaceted aspects of cultural understanding and acceptance which may be inspired by this type of challenge and reflective thought. Students in the healthcare professions have the opportunity to

understand this reflective thought process and begin to understand the need for transformational learning while in the trenches of the academic world, which may better prepare them to face the culturally sensitive challenges that will most surely arise in the clinical world.

Cultural Competence in Healthcare

With the changing cultural complexion of the United States has come the necessity to focus on culturally competent healthcare. Leavitt (2010) cited social change within this country coupled with the growth of immigration in the 1960s as a pivotal time in the historical recognition of the need for cultural competence in healthcare professions. She also noted early action to address this need over the next two decades was led predominantly by the professions of nursing and medicine. The nursing profession established the Transcultural Nursing Society in the 1970s, and in the 1990s the medical profession saw the publication of guidelines to assist in curriculum development that would bring the issue of culturally competent care into focus in medical education (Leavitt, 2010).

As recently as 2008, the Center for International Rehabilitation Research Information and Exchange (CIRRE) published a work dedicated to promoting the inclusion of cultural competence educational activities in the education of physical therapists (Panzarella & Matteliano, 2008). The Blueprint for Teaching Cultural Competence in Physical Therapy Education was created in 2008 by the Committee on Cultural Competence of the APTA (American Physical Therapy Association, 2008). This document discusses the concept of cultural competence in the education of physical therapists and encourages a holistic approach to achieving this goal. It outlines

definitions and models of teaching and learning the construct of cultural competence, defines goals and objectives applicable to the academic environment, and suggests teaching and assessment methods specific to cultural sensitivity and awareness.

Disparity in healthcare outcomes for clients of lower socioeconomic status and for those who are of diverse cultural and ethnic backgrounds and its relationship to cultural competence have been discussed widely among various healthcare professionals (Hill & Winter, 2007; Wells & Black, 2000). Wells and Black (2000) reported the issues of power within healthcare interactions and the privilege that is inherent in the dominant Caucasian culture in North American society. They noted that those who inherently have this social power "are taught not to see the mantle of privilege within which they are wrapped" (Wells & Black, 2000, p. 104), while individuals from the non-dominant cultures "are very aware of the differences in power and access" (Wells & Black, 2000, p. 104). The natural human interactions occurring during the provision of healthcare puts the provider in a position of power over the patient/client. If the client is from a cultural identity that is deemed by society as *inferior*, the challenge for culturally competent care becomes magnified.

Anne Fadiman (1997) illustrated a myriad of misunderstandings, frustrations, and power struggles that can occur in the healthcare environment when there is a lack of cultural understanding among healthcare providers and the clients they serve. In the book *The Spirit Catches You and You Fall Down*, she chronicles the difficulties for healthcare providers from the dominant American culture in the care of a Hmong child and her family who came to the United States from Laos. Issues related to deeply ingrained views of illness, the human body, spirituality, and trust can lead to frustrations for both

providers and clients. The book described a lack of communication that ran deeper than just a language barrier and low literacy, but instead was defined by cultural belief systems that were inherently very different. Unfortunately, this journey was one of a prolonged cultural clash which led to misdiagnosis, medication misuse and abuse, anxiety, mistrust, and even anger from all individuals involved when the two cultures could not reach a point of common understanding (Fadiman, 1997).

In the book *Mamma Might be Better off Dead*, Laurie Kaye Abraham (1993) chronicled the struggles of a poor Black family as they seek healthcare in the Chicago healthcare system. She tells of mistrust, misunderstanding, lack of access, and varied perspectives on healthcare from the family and their healthcare providers whose individual cultures differed. One member of the family described the expressway that led away from the family's impoverished neighborhood as "an escape route for the employees of the various hospitals and social service institutions, for people who do not carry poverty home with them in a plastic bag" (Abraham, 1993, p. 14). Health issues related to hypertension, diabetes, alcohol and drugs, and tobacco were woven into the family health history, leading them into a healthcare system about which the matriarch of the family stated that "a general distrust of the white establishment inevitably seeped into dealings with doctors, few of whom are black" (Abraham, 1993, p. 202).

The Center on an Aging Society at Georgetown University reported that clients from the minority populations have fewer interactions with healthcare practitioners, are less likely to be included in the decision-making process, and are more likely to be dissatisfied with care provided (Center on an Aging Society, 2004). The center also stated that the development of cultural competence should be viewed as ongoing within

the learner and that continued cultivation of culturally competent healthcare will lead to higher quality outcomes. With increased focus on educating healthcare practitioners who are culturally competent, educational institutions are expected by health professional organizations and accrediting agencies to provide students in health-related educational programs with activities that will guide the development of cultural awareness and cultural competence (CAPTE, 2011a; Leavitt, 2010; Wells & Black, 2000).

Educational Methodology

Various educational methods for teaching cultural competence are represented in the literature. The Blueprint for Teaching Cultural Competence in Physical Therapy Education suggests that successful teaching of this construct may be achieved through the use of methods such as "lecture, discussion, role play, simulations, interactive games and active training techniques, self-awareness and self-reflection, case studies . . . and clinical education" (American Physical Therapy Association, 2008, p. 7). In a study of pharmacy education, Onyoni and Ives (2007) found that the majority of pharmacy educators used didactic activities to teach cultural competence, followed by the utilization of case study format. Similar teaching methods were discussed in a study by Rowland et al. (2006) that explored the teaching of cultural competence in schools of dentistry. The authors found that a large majority of dental faculty preferred to use the lecture format for presenting this topic. Kripalani, Bussey-Jones, Katz, and Genao (2006) suggested that medical schools tend to utilize the teaching methods of lecture and case studies most often in the education of medical professionals.

The use of lecture in the education of healthcare professionals is noted within the literature quite often. Farrah (2004) stated that lecture is quite often the teaching method

of choice in the education of adults and that it is a legitimate method of teaching that is valuable when used appropriately. She emphasized that the presenter should incorporate the assumptions of adult learning within the lecture format so that the experience encourages the learner to think critically about the content and to reflect upon the information based upon personal thoughts, opinions, and learning needs. In the field of healthcare education, classes of students are brought together for a focused learning of discipline-specific content. Farrah (2004) also suggested that the use of lecture allows the entire group to hear and experience the content, and in a well-presented lecture session, the class will be able to learn from the thoughts, opinions, past experiences, and wisdom of the teacher. In this environment, the lecture format should not only encourage personal reflection by individual learners, but also facilitate meaningful discussions among classmates as they move through the learning process to reach common discipline-specific goals.

The aforementioned study by Rowland et al. (2006) also reported that more than half of the participants used group work and case-based learning activities in the education of students of dentistry. Additionally, Onyoni and Ives (2007) discovered that the case study format was often utilized in the education of pharmacy students. The incorporation of case studies in the educational process was noted fairly often within the literature related to various health-related fields (Hilliard et al., 2008; Kripalani et al., 2006; Lypson et al., 2008; Rowland et al., 2006). In the education of future healthcare professionals, it is important that the learners develop the ability to think critically, analyze health problems, and create accurate solutions within the individual disciplines. These are the unique benefits of case studies in the educational environment as discussed

by Marsick (2004). She described the use of case studies in the education of adults across a myriad of professions and stressed that case studies can be designed with specific learning criteria and case-based situational realities in order to facilitate learning and problem-solving within specific disciplines.

Marsick (2004) explained the educational continuum represented in the use of case studies in the field of adult education. She outlined the case study format as bringing forth situational realities from the past, allowing the learners to explore the situation from individual perspectives, encouraging contemplation and discussion of problems and solutions related to the case, and through these processes facilitate learning which will be necessarily utilized in the care of clients over the professional career of the learner. This is inherently beneficial to the education and the preparation of healthcare professionals who will be caring for and educating future clients.

A report by Sasnett, Royal, and Ross (2010) discussed educational activities aimed at the development of cultural competence across nine different health-related professions; however, the profession of physical therapy was not included. This study emphasized activities in which students performed self-reflection and journaling activities combined with investigation into the cultural identities of other students within different healthcare disciplines as well as patients within the healthcare setting. Interestingly, this study described activities for which students explored various communities and cultural characteristics of residents of the communities that related to everyday life without a specific healthcare component. Boutin-Foster et al. (2008) also discussed the concept of guiding students in personal self-exploration in order to

understand and value personal cultural ideas leading to improved interaction in the healthcare environment.

Mezirow (1991) described the process of self-reflection in an effort to more deeply and completely understand self before one could truly experience the concept of transformational learning. Learning activities, such as journaling, which facilitate introspective consideration of one's feelings, thoughts, and opinions may be considered one part of this process. In an attempt to educate students in the somewhat abstract concept of cultural competence, activities that require the student to think critically about his or her personal cultural identity and to consider other cultural belief systems is a beginning step to understanding, acceptance, and the transformation of beliefs and opinions.

Brookfield (2004) explained critical thinking as the ability to intricately examine personal ideologies in order to understand from where beliefs and opinions were derived and to begin the process of exploring various ways of thinking and understanding beliefs that may differ. He went on to warn of internal conflict, as realization may lead to changes in basic deeply ingrained ways of seeing and understanding the world and its multifaceted value systems. Since reflective thinking and journaling must come from within the individual learner, each student will experience a different and specifically personal journey (Musolino & Mostrom, 2005).

The prevalence of experiential learning through the immersion of students into various multicultural clinical environments is emphasized in the literature related to health professional education. Kardong-Edgren et al. (2010) discussed educational components in nursing programs throughout various parts of the United States. A

common thread in these schools was the participation of students in local health clinics as well as many opportunities for students to participate in the provision of nursing care abroad as a student nurse. Clearly, this would provide experiential learning opportunities that are laden with cultural variations. The authors also discussed the inclusion of cultural competence activities in courses offered by the nursing schools but made minimal explanations of how the material is presented within the classroom. There was some mention of the utilization of lecture methodology at one school, and a discussion of self-reflection and peer analysis was mentioned within another program (Kardong-Edgren et al., 2010).

Experiential learning was also explored in a small study of physical therapy students (Hilliard et al., 2008). In this study, the authors separated the educational opportunities that occurred during classroom sessions related to the development of cultural competence from the educational opportunities that occurred during the experiences of clinical patient interactions which occurred during student internships. Classroom teaching methods described in this study included class discussions, case studies, and role playing activities that were used to facilitate improved communication. The results of this study showed that the patient interactions that are inherent in clinical components of the educational process had a significant impact on the development of cultural competence of the students (Hilliard et al., 2008).

Students who are preparing to work in the areas of healthcare are often exposed to experiential learning concepts through clinical experiences, internships, or service learning projects that are incorporated into the curriculum. These opportunities allow the students to experience real-world situations in patient care that are directly related to their

chosen profession. Mezirow (1991) explained that individuals develop meaning based on past experiences and ways of knowing and understanding that have been developed over time. Because of these personal meanings, individuals learn to prepare for certain expectations in real-world interaction that fit into preconceived notions of what should happen.

According to Mezirow's theory of transformational learning, experiential activities will allow learners to have the opportunity to experience situations and interactions that may be different from the learner's expectations, which may facilitate reflection upon personal understanding of the way things should occur in the clinical environment (Mezirow, 1991). This reflection and, perhaps, reconsideration of the experiences will allow the learner to develop new and expanded ways of knowing and understanding, leading to different ways of interacting with others (Mezirow, 1991). The concept of using experiences to facilitate learning could be beneficial in the education of healthcare providers in the skills of cultural competence.

Wehling (2008) discussed the development of cultural competence through experiential learning that allowed students to become immersed in a variety of cultures and think reflectively about cultural differences. She emphasized the broad aspect of cultural competence that calls for an understanding of the various cultural attitudes and traditions that are prevalent in everyday life activities. Allowing students to learn through experience and interaction may lead to a more complete view of cultural differences that extend beyond individual components of personal identity such as healthcare beliefs or language differences. The utilization of experiential learning in the education of physical therapists not only allows students to practice clinical skills learned

in the classroom, but also opens the opportunity for interaction with clients who are culturally diverse.

In a study conducted by Gazsi and Oriel (2010), students of physical therapy expressed that immersion into a culturally diverse environment led to an increased understanding of cultural differences and the challenges that these differences may bring in everyday patient care. Musolino et al. (2010) explored the development of cultural competence within a multidisciplinary educational program that included students from various health professions, one of which was physical therapy. This report discussed specific educational units to be incorporated into the healthcare curriculum, as the authors emphasized the importance of incorporating real-world examples of multicultural patient/provider interactions and the evolution of culturally attuned respect and sensitivity for each patient regardless of his or her cultural beliefs.

In a report on the teaching of cultural competence to medical students, Lypson et al. (2008) echoed some of the teaching methods already mentioned such as lecture, groups, and case studies. Student feedback regarding this medical program provided insight into student perspectives about cultural competence education. Notably, students preferred experiential learning while immersed in the clinical environment, questioned the worth of case studies stating that perhaps these “reinforce cultural stereotypes” (p. 1081), and brought forth the question of the validity of developing cultural competence through traditional educational methods (Lypson at al. 2008). Gazsi and Oriel (2010) reiterated the positive educational benefits of experiential learning shared in the opinions of the students, while Sasnett et al. (2010) discussed the effectiveness of a combination of

case studies and experiential learning activities in the development of cultural awareness and competence.

Assessment of Learning

Activities to assess student learning are necessary to objectively show that beneficial learning has occurred. Adults learn through both knowledge and experience as they critically examine life experiences and intellectual understanding to mesh these constructs expanding individual depth of knowledge (Kasworm & Marienau, 1997). Assessment techniques to measure the development of cultural competence during the education of healthcare professionals do not appear to be clearly defined or delineated within the literature. Kardong-Edgren et al. (2010) and Onyoni and Ives (2006) call for more testing and validation of assessment techniques used specifically for assessing the evaluation of cultural competence. Kumas-Tan, Beagan, Loppie, MacLeod, and Frank (2007) suggested that some of the tools used to measure cultural competence in healthcare education appear to revolve around the dominant White culture in America in preparation of white practitioners to provide competent care for clients from racial and ethnic minorities.

The Blueprint for Teaching Cultural Competence in Physical Therapy Education calls for assessment of the development of cultural competence in students to focus on the three domains of knowledge, attitude, and skill (American Physical Therapy Association, 2008). There are several assessment tools being used to measure the construct of cultural competence in the education of healthcare professionals. The Tool for Assessing Cultural Competence Training (TACCT) is an assessment product that was designed for use in medical education (Onyoni & Ives, 2007). This tool contains five

broad constructs related to cultural competence, within which there are 67 specific items that are designed to measure the categories of skill, knowledge, and attitude (Lie, Boker, & Cleveland, 2006).

The Cross Cultural Adaptability Inventory (CCAI) is another tool used to assess the development of cultural competence in students of the health professions (Hilliard et al., 2008). The CCAI is a self-assessment designed to demonstrate the participant's level of ability in four categories related to cultural understanding and collaborations (Kelley & Meyers, n.d.). The instrument measures these four areas defined by the authors as "emotional resilience, flexibility/openness, perceptual acuity, personal autonomy" (Kelley & Meyers, n.d., p. 2).

The Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals – Revised (IAPCC-R) is an assessment tool that was designed to assess and define the level of cultural competence developed by health professional students as they progress through the educational experience (Kardong-Edgren et al., 2010; Musolino et al., 2010). It is a method of self-assessment that includes 25 questions designed to measure the "five cultural constructs of desire, awareness, knowledge, skill, and encounters" (Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Revised, 2011b, p. 1). Its developer, Dr. Campinha-Bacote, created a student version of the tool in 2007 known as the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version (IAPCC-SV) in which 20 questions are used in measuring the same constructs (Campinha-Bacote, 2008; Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version, 2011a). Campinha-Bacote (2008)

suggested using this measurement tool in conjunction with other forms of assessment intended to assess the development of cultural competence qualitatively. Kumas-Tan et al. (2007) also suggested the benefit of utilizing both qualitative and quantitative measures to assess the acquisition of patient care skills related to cultural competence.

Other assessment methods include The Civic Attitudes and Skills Questionnaire (CASQ) and the Cultural Competence Health Practitioner Assessment (CCHPA). The CASQ is a tool containing 45 items within six categories designed for students to self-assess issues related to service learning (Moely, Mercer, Ilustre, Miron, & McFarland, 2002). This instrument measures attitudes related to various social issues including cultural diversity and social justice. The CCHPA was developed through the National Center for Cultural Competence as a way for practitioners to perform a self-assessment of information related to cultural competence divided into six applicable categories (Cultural Competence Health Practitioner Assessment, n.d.). This tool is only available electronically and has not undergone the process of validation for use in the assessment process.

Musolino and Mostrom (2005) suggested that journaling not only be considered as a teaching method, but also should be utilized as an assessment tool in order for the educator to be able to follow changes in thought processes, attitudes, and the ability to interact with others in a more culturally diverse and competent manner. The authors expressed the importance of open communication among faculty and students that allows for the safe exchange of ideas which may promote deeper reflection, consideration and appreciation of differences, and increased awareness and understanding of valid and valuable differences. During this journaling process students learn the value of reflective

thinking, while faculty members develop an avenue for assessment of student learning and growth.

Educational programs may also have facility-specific tools that have been generated by faculty members with expertise in cultural competence curricular activities. Kripalani et al. (2006) suggested classroom testing in the form of pre- and post-examinations to show changes over time, as well as assessing recorded interactions of the students in a patient-care environment. Using the academic tool of journaling as a qualitative measure is one avenue for assessment as described by Musolino and Mostrom (2005). Panzarella (2009) discussed a tool for assessment which incorporated simulated patients. In this method, patient scenarios are simulated either by incorporating lay people who have been trained to act as a patient in a standardized patient situation, or simulations may be accomplished through the use of manikins.

Panzarella (2009) emphasized the importance of assessment in the educational realm, stating that the assessment process has a direct effect on students' attitudes as to the value and importance of specific curricular content. This idea was supported in the work of Lypson et al. (2008) in which medical students reported that they "recognized the lack of formal assessment through traditional exams and suggested that this gave rise to the perception that topics on multicultural issues were not essential to their education" (p. 1081). In an academic environment focused on scientific evidence-based curriculum, the inclusion of research outcomes describing culturally competent healthcare and current health disparities related to the lack thereof should be included in the educational process (Kripalani et al., 2006).

Summary

Johnson-Bailey (2002) suggested that a positive and beneficial learning interaction depends upon the educator's grasp of his or her personal belief system, an understanding and acceptance of the learner's belief system, and the capability of differentiating between the two. Educational activities designed to teach cultural competence skills are valuable components of the healthcare curriculum, teaching necessary clinical skills utilized within professional practice to enhance healthcare outcomes. Panzarella (2009) noted the role and preparation of faculty in providing education related to cultural competence throughout academic programs and called attention to the various attitudes and experiences among the faculty members related to cultural awareness and understanding. She called for creative assessment by faculty within educational programs and presentation to students in a manner that will ingrain cultural competence as inherent in successful practice (Panzarella, 2009).

With the regulations governing the education of physical therapists in the area cultural competence requiring the acquisition of skills to allow culturally competent care, faculty must be able to demonstrate that regulations are being met (Commission on Accreditation in Physical Therapy Education, 2011a). The literature related to this topic appears to lean heavily toward the student activities and response to learning opportunities demonstrated by the students (Hilliard et al., 2008; Kardong-Edgren et al., 2010; Sasnett et al., 2010). The study presented in this work explored the education of physical therapy students in the area of cultural competence from the perspective of faculty who are seeking to meet this educational challenge through various curricular activities.

Students in physical therapy educational programs are viewed as a unique entity with common educational goals both from the student perspective and from that of educational institutions and accrediting bodies. Physical therapy educators from varied professional and educational backgrounds are called upon to guide the students in meeting these goals, using educational methodologies that may or may not be consistently effective in achieving desired educational outcomes. Since educational goals vary from uniquely specific hands-on clinical skills to broad complex skills such as problem-solving and interpersonal interactions with clients from diverse backgrounds, educational methodologies utilized may require ongoing variations in both teaching and assessment.

Graduates from physical therapy academic programs will enter an ever-changing multicultural world in which they are expected to provide culturally competent care including health education to adult clients across many cultures. Academic faculty who hold the responsibility of preparing these graduates to be quality providers of healthcare within society are from varied educational, academic, and sociocultural backgrounds, and may have varied attitudes and opinions about the teaching of concepts and assessment of learning. This study explored the teaching and assessment methodologies utilized by physical therapy educators in teaching the construct of cultural competence, opinions regarding confidence in the outcome of these methods, and utilization of methodologies consistent with adult learning theory in the education of physical therapy students who will be adult educators within the healthcare delivery system.

CHAPTER III

METHODOLOGY

Introduction

The issue of cultural competence in healthcare delivery has been brought to the forefront of the healthcare system in this country. Academic institutions that provide health professions educational programs have been called on to integrate activities that facilitate the development of cultural competence within its student populations. Physical therapy is one of the rehabilitation professions that are directly affected by this issue. Upon graduation from an accredited physical therapy program and after successfully completing a national licensing examination, physical therapists enter a multicultural world of patient care. These therapists move from the role of *student* to that of *educator* in the daily care of their clients from all ages and cultural identities. Academic programs that are providing entry-level education for future physical therapists are required to incorporate cultural competency learning opportunities within the curriculum that will prepare these individuals for providing culturally competent care that will include patient education (Commission for the Accreditation of Physical Therapy Education, 2011a).

Faculties within academic institutions are expected to provide course content related to cultural competence, which may be accomplished in several ways. The overall quest of this study was to determine how educators of future physical therapists are teaching and assessing the development of the construct of cultural competency during the formal education process and the degree to which andragogical theory is incorporated into the educational process. The study attempted to gain insight into the educational background of faculty who are teaching students enrolled in entry level physical therapy

programs and how faculty from differing academic backgrounds and with varying clinical and educational degrees are incorporating educational material related to cultural competence and applicable adult learning theory.

Research Design

Survey methodology was utilized for this study. A questionnaire was developed by the investigator which included demographic information, items related to teaching methodology, items related to assessment methodology, and items that were related to adult learning theory and cultural competence education. The questionnaire was piloted by the researcher with a group of 20 physical therapy and occupational therapy faculty at the University of Mississippi Medical Center School of Health Related Professions in order to gain insight into the clarity of the questions, ease of understanding and completing the questionnaire, and time required to complete it (Fowler, 1993).

In the pilot study, the initial questionnaire was given to 23 physical therapy and occupational therapy faculty, and 20 of them were returned to the researcher for an 87% response rate. The average time for responding to the questionnaire was 9 minutes. Suggestions from the participants included adding an assessment method to the questionnaire, the addition of an avenue for explaining *why* for one of the items, and clarification of two words in the questionnaire. Applicable changes were made to the final questionnaire before it was distributed. There were several positive comments related to the ease of responding to the questionnaire and the importance and relevance of the topic.

The final questionnaire was created and distributed electronically using Qualtrics Labs, Inc. software, version 2009 of the Qualtrics Research Suite (Qualtrics Labs, Inc.,

2012). It was distributed to the work e-mail addresses of the target population within academic institutions and followed up with a reminder and a final email expressing appreciation for participation along with an additional reminder for those who had not yet taken the survey. Out of respect for the academic programs, the e-mails were sent to the individual Department Chairs of the Physical Therapy programs with a request to participate and forward to individual faculty members within the various institutions. By utilizing these academic e-mail addresses, access to e-mail and frequent use of e-mail addresses was reasonably expected (Dillman, Smyth, & Christian, 2009).

The questionnaire was introduced to the participants through a cover letter (see Appendix A). The letter described the intent of the survey, its relevance to the profession of physical therapy and, specifically, to the process of educating future physical therapists who are culturally competent healthcare providers. The respondents gave implied consent to participate in the study by completing and returning the questionnaire to the researcher.

Participants

Participants in the study were faculty in professional physical therapy educational programs around the United States. These individuals work in academic institutions that are accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE) and are educating entry-level physical therapy students. Participants were recruited from the various institutional websites and contacted via e-mail to request participation in the study. The request for participation was sent to each of the 202 physical therapy educational programs that were accredited within the United States at the time of the survey. According to CAPTE, in accredited physical therapy programs

there is a mean of 9.9 full-time faculty members and a mean of 1.1 part-time faculty members (Commission on Accreditation of Physical Therapy Education, 2011b). The individual program Chairs had the autonomy to choose to forward the questionnaire to the entire faculty or none at all.

Data Analysis

The data were analyzed using SPSS in order to get information about how faculty in physical therapy educational programs are teaching and assessing cultural competence education. Descriptive analysis was performed in order to get a clear understanding of the sample population, including demographic information, educational backgrounds, opinions related to teaching and learning, and methods utilized to teach and assess the development of cultural competence within the academic program.

Three logistic regression analyses were run according to the three research hypotheses. These analyses used the dependent variable of highest earned academic degree separated into those with terminal degrees in the field of education and those with terminal degrees in the sciences. In the first analysis the independent variables were the utilization of specific teaching methodologies and the various assessment methods used in the education of physical therapy students related to the construct of cultural competence. In the second analysis the independent variables were participant opinions related to the use of adult learning concepts in the academic environment. Finally, in the third analysis the independent variables were the data related to successfully teaching the construct of cultural competence in the classroom, assessing the development of cultural competence within the students, and faculty comprehension of what it means to be culturally competent.

Hypotheses

This study expected to find that:

- Faculty members who have an academic background in the field of education will incorporate teaching and assessment methods that facilitate transformative learning more consistently than those faculty members with academic backgrounds in other areas.
- Faculty members with an academic background in education will be more likely to use the concepts of adult learning when compared to faculty members with other educational backgrounds.
- Faculty members with an academic background in education will be more confident in personal ability to teach and assess the construct of cultural competence when compared to faculty members with other educational backgrounds.

CHAPTER IV

RESULTS

Questionnaires were sent to the 202 accredited physical therapy educational programs across the United States, and 126 responses were received. Of the 126 questionnaires that were returned, there were eight that had no items answered. These eight were deleted from the data, which left 118 participants. When considering the number of questionnaires sent to the academic institutions around the country, this represents a 58.4% response rate. However, the request was made for the questionnaire to be forwarded to all academic faculty involved in the education of future physical therapists, which could have included as many as 2,000 educators. If this occurred as intended the response rate was 5.9%. The responses were confidential with no way to know if the department chairs forwarded the questionnaire to any or all of the individual faculty members. It is possible that the questionnaires were forwarded only to faculty members who were considered key faculty in this area or that questionnaires were not forwarded to faculty at the discretion of the department chair.

Descriptive analyses were performed in order to obtain a clear understanding of the sample population. Although respondents encompassed a variety of ethnicities, an overwhelming majority identified themselves as Caucasian (Non-Hispanic) (86.4%) with the next most frequent ethnicity being Asian (5.1%) (see Table 1). Over half of the respondents were either relatively new to teaching with less than five years of experience (27.1%) or were quite experienced with more than 20 years serving as faculty (29.7%) (see Table 2). A large majority of respondents were licensed physical therapists (113)

and a small number were licensed in other health related professions (8). Four of the participants reported that they were not licensed physical therapists.

Table 1

Participant Ethnicity

Ethnicity	%
African American	2.5
Asian	5.1
Pacific Islander	.8
Caucasian (Non-Hispanic)	86.4
Other	2.5
Rather not say	2.5

There was a wide variety of highest academic degrees represented in the sample with the majority holding a Doctor of Philosophy (42.4%), followed by transitional Doctor of Physical Therapy (16.9%) and entry-level Doctor of Physical Therapy (12.7%) (see Table 3). Ninety-one of the respondents reported highest earned academic degrees related to the clinical sciences (77%) including such areas as physical therapy, anatomy, physiology, pathokinesiology, and health sciences. Twenty-six respondents reported highest earned academic degrees in the field of education (22%) and listed educational degrees in areas such as higher education and administration, education curriculum and instruction, educational leadership, and adult education.

Table 2

Participant Number of Years of Serving as Faculty

Years as Faculty	%
0 – 5 years	27.1
6 – 10 years	11.0
11 – 15 years	16.1
16 – 20 years	16.1
> 20 years	29.7

When asked questions related to opinions about teaching and learning, the respondents indicated a strong agreement that teachers should convey subject matter to the learner (M = 5.54, SD = .74), guide the learners in critical self-reflection (M = 5.62, SD = .60), and engage the learners in dialogue with both other students (M = 5.64, SD = .53) and the instructor (M = 5.51. SD = .59). There was also some level of agreement that teachers should guide the students in the process of better understanding themselves (M = 5.26, SD = .83), and that there should be a student/teacher relationship in which both entities can learn from each other (M = 5.27, SD = .71). The respondents had some level of disagreement that instructors should ensure that students demonstrate learning through agreement with the instructor (M = 3.29, SD = 1.39), and slightly more disagreement that there should be a dichotomous relationship between the teacher and student in which there are two separate entities (M = 2.99, SD = 1.36).

Table 3

Highest Academic Degrees of Participants

Degree	%
Masters	6.8
Doctor of Physical Therapy	12.7
Transitional Doctor of Physical Therapy	16.9
Doctor of Science	5.1
Doctor of Education	10.2
Doctor of Philosophy	42.4
Other	5.9

When presented with the statement "I have a thorough understanding of what it means to be culturally competent," the respondents had only slight agreement (M = 4.86, SD = .91). There was slightly less agreement with the statement that academic programs in which the respondents teach are producing culturally competent healthcare providers (M = 4.56, SD = .85). When asked if the participants incorporate educational activities to teach the construct of cultural competency 78.8% indicated that they do incorporate these activities, while 14.4% reported that they do not teach this construct in the educational environment. When asked about personal teaching and assessment of the construct of cultural competence respondents who teach this content agreed that they are successful in teaching cultural competence in the classroom (M = 2.72, SD = .82) and that they can

accurately assess the development of cultural competence in the students in their classrooms (M = 3.19, SD = 1.06).

Participants who reported that they did not include cultural competence educational activities in the curriculum were asked to explain why. The most common reason expressed was that the respondents felt it was someone else's responsibility (35.3%) (see Table 4). Other participants indicated that they did not teach cultural competence because they did not know how (17.6%), while some felt that this construct was less important than the other topics they were expected to teach within the academic curriculum (17.6%). Some participants reported "other reasons" for not teaching this construct and generally explained this response as being a combination of the choices offered (see Table 4).

Table 4

Reasons for Not Including Cultural Competence Activities

Reason	%
I do not know how	17.6
I consider it less important than other topics	17.6
I do not have adequate time	5.9
It is someone else's responsibility	35.3
Other reasons	23.5

Logistic regression was run using SPSS to find the probability that faculty who are teaching cultural competence would be using specific teaching methodologies and assessment techniques in the education of future physical therapists. The dependent variable was the highest earned academic degree separated into those who had degrees in education and those who had degrees in the sciences. The independent variables were the teaching methodologies and assessment techniques used in the educational process. Items 19–24 of the questionnaire were the teaching methods, and items 26–33 were methods used for assessment of learning (see Appendix B). The classification tables indicated 71.6% accuracy for the naïve model, and 70.4 % for the actual model. The Hosmer and Lemeshow Test was not significant ($X^2(8, N = 118) = 11.371, p >05$). The differences found in this model were not statistically significant, indicating that teaching and assessment methodologies utilized by faculty with terminal degrees in education were not statistically different from those techniques used by faculty with terminal degrees in the sciences. The results showed the likelihood of faculty utilizing the specific teaching and assessment methods listed on the questionnaire (see Table 5).

A similar logistic regression was run to examine the probability of faculty incorporating adult learning concepts into the education of physical therapists related to the development of cultural competence. The dependent variable remained the same; however, the independent variables were the opinions of the respondents related to teaching and learning theory as recorded in items 9–15 of the questionnaire (see Appendix B). The classification tables indicated 78.0% accuracy for the naïve model, and 85.3% for the actual model. The Hosmer and Lemeshow Test was not significant ($X^2(8, N = 118) = 4.697, p > .05$). This indicates no difference in the participants'

attitudes about utilizing adult learning concepts between those participants with terminal degrees in education when compared to those with backgrounds in the clinical sciences.

Table 5

Odds Ratios for Teaching and Assessment Methodologies

Teaching Method	Odds Ratio	Assessment Method	Odds Ratio
Lecture	1.454	Multiple choice test	1.231
Case study	.528	Pre-post-tests	.925
Group work	1.957	Discussion/short answer	.702
Journaling	1.172	Self-assessment	1.304
Cultural Immersion	1.075	Peer assessment	.539
Self-Reflection	.995	Journaling	1.071
		Videos of interactions	.806
		Standardized measures	1.205

The final logistic regression was run using SPSS to examine the probability of faculty who are teaching the construct of cultural competence in the classroom understanding what it means to be culturally competent and considering themselves successful in both teaching and assessing this construct. The independent variables were acknowledging a thorough understanding of what it means to be culturally competent, confidence in the ability to teach the construct of cultural competence, and the ability to accurately assess the development of cultural competency in the students as indicated on

items 16, 34, and 35, respectively (see Appendix B). The dependent variable was the highest earned academic degree separated into those who had degrees in education and those who had degrees in the sciences. The classification tables showed that naïve model indicated 73.6% accuracy, while the actual model indicated 78.2% accuracy. The Hosmer and Lemeshow Test, which assesses the validity of the model, was not significant ($X^2(7, N = 118) = 1.745, p > .05$), indicating that the group membership predicted by the model is not significantly different from actual group membership. Therefore, the educational background of faculty in the areas of science or education did not have a statistically significant impact on the variables of personal understanding of what it means to be culturally competent, the ability to successfully incorporate cultural competency into the teaching process, or the ability to assess student learning in this area.

The questionnaire specifically asked about the use of teaching methods including lecture, case study, group assignments, journaling, cultural immersion, and self-reflection activities. The teaching methodology used most often was case study (M = 3.75, SD = .74), and the method used by the respondents least often was journaling activities (M = 2.70, SD = 1.40) followed by cultural immersion (M = 2.83, SD = 1.32) (see Table 6). The respondents were given the opportunity to share other teaching methods utilized in teaching this often abstract construct. Other teaching tools used by faculty included the use of videos and plays as examples of culturally appropriate or inappropriate interactions related to healthcare delivery, role playing activities, learning through songs and games, and reading assignments focused on cultural awareness and sensitivity.

For assessment techniques used by the participants, the questionnaire specifically asked about the methods of multiple choice tests, pre-post-tests, discussions/short answer

tests, self-assessments, peer-assessments, journaling activities, video recording of clinical interactions, and the use of standardized measures. The method of assessment reported as used most often was discussion/short answer tests (M = 3.16, SD = 1.21), and the assessment methodology used least often was standardized measures (M = 1.45, SD = .95) followed closely by video recordings of actual clinical interactions (M = 1.56, SD = .96) (see Table 6). Eight respondents reported using standardized measures to assess cultural competency. Some of the instruments reported being used by the participants for assessment included the IAPCC-SV, the CASQ, the CCHPA, and the CCAI. The Core Values Self-Assessment was also listed; however, this tool was designed as a self-assessment measure of professionalism in physical therapy practitioners rather than as a specific measure of cultural competence (American Physical Therapy Association, n.d.).

Table 6

Teaching and Assessment Methodologies

Teaching Method	M	SD	Assessment Method	M	SD
Lecture	3.10	.95	Multiple choice test	2.33	1.37
Case study	3.75	.74	Pre-post-tests	1.98	1.21
Group work	3.61	.95	Discussion/short answer	3.16	1.21
Journaling	2.70	1.40	Self-assessment	3.07	1.15
Cultural Immersion	2.83	1.32	Peer assessment	1.90	1.14
Self-Reflection	3.63	1.12	Journaling	2.52	1.41

Table 6 (continued).

Teaching Method	M	SD	Assessment Method	M	SD
			Videos of interaction	1.56	.96
			Standardizes measures	1.45	.95

CHAPTER V

DISCUSSION

The results of this study did not reveal the expected outcome defined by the research hypotheses. Instead, it showed that physical therapy faculty with varying educational backgrounds demonstrate no statistically significant differences in teaching and assessment methodology related to the construct of cultural competence. In addition, the results indicated that faculty have similar opinions about using adult learning concepts when teaching this material and are confident in personal ability to both teach and assess this often abstract construct. Although the research hypotheses were not supported, the findings from this study revealed meaningful information related to the educational processes being used in the profession of physical therapy in the quest to prepare future healthcare providers with culturally sensitive and competent care skills.

Specific research questions were answered with this study. The first question was related to the types of educational methods used by physical therapy faculty when teaching the construct of cultural competency. The method used most often was reported as case studies, followed by activities designed to facilitate self-reflection. The predominant use of case studies in the education of physical therapists is consistent with the literature related to the education of other healthcare professionals. The case study format can be a useful tool in developing culturally competent physical therapists when designed with cultural aspects of the case brought into focus in addition to the clinical decision-making process. As discussed by Marsick (2004), this format allows the learner to examine the case and its unique characteristics from the learner's perspective and then

take part in discussions related to the case with peers who may have differing perspectives.

The use of activities to facilitate self-reflection was reported as being utilized heavily as a teaching methodology in the development of cultural awareness and sensitivity. This finding seems to suggest that faculty are attempting to guide students through activities to promote critical thinking and self-awareness of cultural belief systems in order to better understand cultural differences. These activities lead to a personal journey of examination of deeply ingrained thoughts and opinions as a beginning step to understanding self. As discussed by Mezirow (1991), explorations into self-defining and self-understanding activities are necessary before transformational learning can occur.

Whereas self-reflection activities were reported as being used very frequently as a teaching methodology, journaling activities were used the least. Perhaps incorporating journaling activities as a component of self-reflection would be beneficial in facilitating the transformational component of education related to cultural awareness and sensitivity. The journal may allow the student time to analyze personal ways of thinking and belief systems and lead to an examination of why these attitudes are present. Journals allow for a unique and personal exploration of thoughts and opinions.

Cultural immersion was also reported as being used infrequently as a teaching methodology. This finding was interesting since clinical education experiences are a required component of the physical therapy educational process. As students spend several weeks at a time in the clinical environment providing patient care as part of the

academic curriculum, there should be ongoing opportunities for cultural differences to be explored and lessons to be learned.

As students enter the clinical environment they have certain expectations about the patient interaction experiences to come that are defined by personal understandings developed over a lifetime (Mezirow, 1991). As they interact with clients who are from different cultural identities including aspects such as age, gender, sexual preference, ethnicity, etc., opportunities to facilitate learning and understanding of cultural belief systems and lifestyles should occur. There may be interactions that produce frustrations, which challenge the learner to engage in more reflective thought, in turn leading to a realization of the value of cultural and personal identity. Because of the experiential nature of the clinical education experience, there is a rich opportunity for teaching the construct of cultural awareness and sensitivity.

In the study by Lypson et al. (2008) students reported a preference for learning through the experiential opportunities in the clinical phases of the educational process, and Sasnett et al. (2010) suggested the benefit of using the experiential learning experiences that occur with cultural immersion in the clinic as an adjunct to case studies in the classroom environment. The results of this study indicated that the case study teaching methodology is being actively utilized in teaching this construct, but the potential benefit from culturally relevant interactions in the clinical environment may not be utilized fully as a teaching method to facilitate transformational learning necessary to develop a deeper understanding of cultural awareness and sensitivity.

The second research question was related to how faculty are incorporating some of the theories of adult education into the education of future physical therapists related to

culturally competent care. The results showed that the participants agreed that faculty should guide learners through activities that facilitate the process of understanding self such as assignments involving self-reflection and journaling activities. This finding demonstrated an attempt to facilitate focused self-exploration that may lead to the initial aspects of transformational learning, which is a deeper understanding of personal belief systems and reasons behind them. Respondents also agreed that faculty should facilitate dialogue for the students with both the instructor and other students, which may be accomplished through group work and case study discussions. This allows the learner to explore the belief systems of others in a meaningful and nonthreatening environment and provides a means of learning about differing attitudes and beliefs.

Agreement from the participants that faculty should create a student/teacher relationship in which each entity can learn from the other demonstrates positive attitudes related to the cooperative learning defined by Friere (2009) in which teachers and learners share and learn from each other. In this exchange the teacher is also a learner, and the student may have the opportunity to teach. This concept is in direct conflict with notions that the teacher/student relationship is a dichotomous relationship in which two separate entities exist and work together but separately and that the students should demonstrate learning by agreement with the teacher. Participants in this study demonstrated some disagreement with these notions, which indicated a tendency toward incorporating adult learning theory in the academic classroom.

The third research question was related to the types of learning assessments being utilized in the education of physical therapists for the construct of cultural competence development. The methods used most often were discussion/short answer questions and

self-assessment activities. The self-assessment method correlates with the self-reflective learning activities reported by the respondents as used often in the academic environment. Each of these assessment methods can be formulated within individual academic institutions as a valuable way to measure the development of cultural awareness of the students. However, it should be noted that the outcome of these types of assessment tools may be directly influenced by the cultural belief system and degree of cultural sensitivity reflected by the grading faculty members.

The methods of assessment used least often were standardized measures and video recordings of clinical interactions. The literature shows that there are published standardized measures that can be used in the assessment of cultural awareness and sensitivity in healthcare providers; however, results from this study indicated that this type of assessment tool is used least often. When standardized measures were reported as an assessment tool there was no consistency as to the specific measure that was used. This finding appears to be congruent with the literature in that the use of standardized measures is recommended, but the few tools available for the assessment of this construct are not documented as being used on a widespread basis in the academic environment.

Assessing culturally competent care as demonstrated during client interactions using video recordings was suggested by Kripalani et al. (2006). This method would allow faculty members who have differing opinions about cultural sensitivity and awareness to view the video and assess the interactions demonstrated. This may stimulate discourse among students and faculty related to appropriate culturally sensitive client and peer interactions in the clinical environment and demonstrate that issues of

cultural competence are critical aspects of the educational process in order to be successful healthcare practitioners.

The last two research questions were related to the academic background of physical therapy faculty and the potential for differences in both teaching and assessment methodologies used by faculty in the educational process. The academic background of the participants was separated into degrees that focused in the clinical sciences and those that were related to the field of education. Logistic regression indicated no statistically significant differences in teaching or assessment methodologies between the two. However, some differences were found that may be considered educationally interesting. Academic faculty members with terminal degrees in the field of education were 1.17 times more likely to use journaling as a teaching method, and 1.08 times more likely to use cultural immersion as a teaching method when compared to faculty with a science background. Additionally, faculty members with terminal degrees in the sciences were .99 times less likely to use activities that facilitate self-reflection as a teaching methodology when compared to faculty with an education background (see Table 5). Transformational learning may be accomplished more successfully by using the activities of journaling, cultural immersion to facilitate experiential learning, and activities to stimulate self-reflection.

When considering assessment methodology, the results indicated that faculty members with terminal degrees in education were 1.21 times more likely to use standardized measures of assessment, 1.07 times more likely to use journaling for assessment, and 1.30 times more likely to use self-assessment activities to assess the development of cultural competence when compared to faculty with degrees in the

sciences. In addition, faculty members with terminal degrees in the sciences were .81 times less likely to use videos of clinical interactions and .54 times less likely to use peer assessments as a means to assess the development of cultural competence when compared to faculty members with terminal degrees in the field of education (see Table 5).

Interestingly, when presented with the statement that the participant has a thorough understanding of what it means to be culturally competent, there was only slight agreement among the sample. Additionally, in response to the statement that physical therapy graduates from the academic programs in which the participants teach were well-prepared to provide culturally competent patient care upon graduation, there was slightly less agreement. These two results seem to suggest that faculty may benefit from activities to achieve a better understanding of the construct of cultural awareness and sensitivity, and that there may be some uncertainty within the academic institutions as to the overall success of the educational activities designed to teach the construct of cultural competence.

As both educators and adult learners, perhaps the respondents have identified an area of need within the academic institutions that educate future physical therapists to be both culturally competent and effective adult educators. Perhaps reflective thought about the response to these questions may lead respondents to realize that a deeper personal understanding of what it means to be culturally competent may affect teaching and assessment methodologies and lead to better student outcomes. As noted by the APTA’s Committee on Cultural Competence, “a holistic model of cultural competence education in physical therapy assumes that educators are culturally competent and the institutions of

higher education . . . seek to be culturally competent" (American Physical Therapy Association, 2008, p. 3).

There were limitations within this study. The sample size was small considering the number of physical therapy faculty within the United States. The reason for limited participation in the survey process is unclear. Perhaps the department chairs chose not to forward the questionnaire to faculty due to workloads or other reasons. It is possible that questionnaires were forwarded and faculty chose not to participate. This could have been due to time limitations, lack of understanding of cultural competence education, or opinions that the topic was not worth spending the time necessary to complete the questionnaire.

In addition to the small sample size, there was unequal variance within the sample with the majority of the respondents reporting positively that they were actively teaching the construct of cultural competency in the academic environment. This may indicate that those who did not teach this curricular content chose not to participate. The educational background of the participants also led to unequal groups when separated into academic degrees related to the sciences versus education. A majority of the participants in the study had degrees related to the sciences, which could have influenced the statistical outcomes.

Although it would have been interesting to find out the differences in cultural competence education among faculty who are from different ethnic backgrounds, a large majority of the sample self-identified as *Caucasian (non-Hispanic).* This indicated very little ethnic variability in the sample and suggested a dominantly Caucasian culture among faculty, which is consistent with the literature related to the healthcare professions

(Wells & Black, 2000). However, this response was only related to race/ethnicity, which is only one of the many characteristics that blend to create individual cultural identities.

The findings from this study may stimulate discussion within the professional physical therapy community regarding the education of future physical therapists to be providers of culturally competent care. The APTA is actively striving to address this issue. The Operational Plan on Cultural Competence, developed by the APTA's Committee on Cultural Competence, explains the goals for improving cultural competence within the profession. Included in this plan is the development of specific curricular activities for teaching and assessing cultural competence that will meet the needs of culturally diverse clientele. This study indicated that there was a large amount of variability among faculty related to teaching and assessment methodology designed to address this construct, with minimal standardized assessment of successful learning.

Additionally, the plan calls for increasing the number of physical therapy practitioners from minority populations. Although this study was not focused upon the cultural identity of physical therapy students, it did reveal little variability in the ethnic identity of the participants who were faculty in physical therapy academic programs. It is feasible that the potential lack of cultural diversity among faculty may affect the delivery of academic activities related to both teaching and assessing the construct of cultural competency. Similar cultural identities of a group of faculty within an academic institution may seem intimidating to students from cultural belief systems that may be quite different, particularly if those cultures are considered minority or non-dominant. The results of this study indicated that the faculty does attempt to dissolve the teacher/student dichotomy and facilitate open discourse in an effort to reach the students

in a relationship of cooperative teaching and learning, which in itself can be an experiential learning technique related to cultural understanding.

Perhaps it would be beneficial for the profession to address this issue from an additional perspective. Individual students who graduate from physical therapy academic programs and begin clinical practice are entering a society of ever-changing cultural identities. Although an increased multicultural identity among practitioners is an important step toward culturally competent care in a culturally diverse world, it is worth consideration that a more diverse field of professionals is not enough. Regardless of personal cultural beliefs, practitioners need to be prepared to care for and educate individuals from all cultural backgrounds, as each client served will be different in some human aspect, which creates the individuality ingrained in cultural identity. Achievement of this level of preparation for clinical practice may lead to a decrease in health disparities and improved outcomes of care for those served by the profession of physical therapy.

As students are guided through the academic challenges required to become licensed healthcare professionals, the concepts of adult learning should be utilized. All physical therapists are educators within the day-to-day responsibilities of the profession. Physical therapy practitioners provide education for clients of all ages, family members, peers in the healthcare professions, and community groups and organizations. Within this role they are expected to be adult educators and should be prepared for this during academic preparation for licensure. By incorporating adult learning theory and activities into the physical therapy academic environment, students will gain understanding of how adults learn most efficiently, which will guide their future practice. Faculty who provide

activities that facilitate self-reflection and analysis of individual learning needs and learning styles provide experiential learning opportunities for students. By guiding students in activities that facilitate personal exploration and understanding of cultural beliefs, a deeper understanding of others emerges that will impact future culturally challenging interactions.

The profession of physical therapy is working toward a more culturally diverse and competent workforce to meet the myriad of needs within a multicultural client community. Not only does this require creativity of teaching methods and assessments of learning related to cultural competence, but it also requires that practitioners be effective adult educators of the clients and communities served. Physical therapy practitioners need to understand adult educational concepts and approach clients as adults who are self-directed in learning needs and desires. The practitioner becomes a teacher who must remember that each client brings a unique and rich history of life experiences that will impact learning. It should be expected that clients have a desire to learn things that are immediately beneficial, whether it be internally or externally motivated, in order for the teaching/learning transaction to be successful. Clinicians should respect that clients are adult learners and encourage them to assist in planning interventions designed to achieve specific change, leading to positive health outcomes.

In order to reach a more comprehensive understanding of the education of physical therapists regarding the construct of cultural competence further study may be beneficial. A similar study with a larger sample size and more variability among the respondents may lead to more definitive information. Also, the profession may benefit from a multi-site study that uses similarly defined teaching methodologies and a

standardized assessment tool compared to sites that have no defined teaching methodology that is using the same assessment method.

APPENDIX A

COVER LETTER

Dear Participant,

As an educator in the profession of physical therapy and a physical therapist who is dedicated to the advancement of the profession, I am asking for your help in compiling information regarding the education of future physical therapists in the area of cultural competency. As you know, cultural competency is a sometimes abstract concept which may be difficult to teach and assess; however, it is required within physical therapy academic programs as part of the accreditation standards. As the topic of my dissertation, working toward a Doctor of Philosophy, I am exploring methodologies utilized for teaching and assessing the education of culturally competent physical therapists within academic physical therapy programs across the United States.

I understand that you are busy fulfilling the many areas of responsibility within your professional capacity, and please know that I do value your professional time. I am requesting that you take 10 - 15 minutes to complete this survey related to teaching and assessment techniques that you use within the education of physical therapy students. By examining the information within the survey, I hope to gain and share insights into current educational practices across the country in an effort to better understand this issue within physical therapy education. This study is specific to the education of physical therapists within the academic environment, and will not include educational activities within physical therapist assistant programs, transitional doctor of physical therapy programs, or specific activities utilized by clinical instructors.

Your participation in this survey is voluntary and you may stop the participation at any time without risk of penalty. No identifiable characteristics such as your name or address will be asked within the questionnaire. All information received will be kept strictly confidential, and all questionnaires will be deleted from the system once the data has been compiled. The data from this questionnaire will be compiled and analyzed by the researcher in order to complete a dissertation to be submitted to The University of Southern Mississippi, Hattiesburg. Information gained may also be considered for future submission for publication and/or presentation.

By choosing to complete and submit the attached questionnaire, you are giving implied consent for the information shared to be used for these intended purposes. This study was approved by the Institutional Review Board of The University of Mississippi Medical Center and the Human Subjects Protection Review Committee of The University of Southern Mississippi, which ensures the adherence to federal regulation for the protection of human subjects. Questions or concerns about individual rights as a participant in human research may be directed to the chair of the Human Subjects Protection Review Committee, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266- 6820.

Thank you for your time and participation,

APPENDIX B

QUESTIONNAIRE: REGARDING ISSUES OF TEACHING AND ASSESSMENT

1. Are you currently serving as faculty in a physical therapist academic program?

Yes No

2. Are you a licensed physical therapist?

Yes No

3. Are you licensed in another health profession?

Yes No

If yes, please explain ___________________

4. How many years have you been serving as faculty?

0 – 5   6 – 10   11 – 15   16 – 20   more than 20

5. What is your entry-level professional PT degree?

BSPT   MPT   DPT   I am not a licensed PT

6. What is your highest earned academic degree?

BS MS DPT tDPT MD DSc EdD PhD other _________________

7. What is the area of study in which you earned your highest academic degree?

____

8. What is your ethnicity?

African American

Asian American

Hispanic

Native American

Pacific Islander

White (Non-Hispanic)

Other ___________________

Rather not say

Please read the following statements regarding the education of entry-level physical therapy students. Indicate your level of agreement on the scale from strongly agree to strongly disagree with regard to how important the concept is to teaching.

9. Conveying subject matter to the learner.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

10. Ensuring that all students demonstrate learning through agreement with the instructor.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

11. Guiding the students in the process of better understanding themselves.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

12. Guiding the students in critical self-reflection.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

13. Establishing the dichotomous student/teacher relationship as two distinct identities.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

14. Engaging students in dialogue with other students in the learning process.

Strongly Disagree | Disagree | Somewhat Disagree | Somewhat Agree | Agree | Strongly Agree

15. Engaging students in dialogue with teachers in the learning process.

Strongly Disagree | Disagree | Somewhat Disagree | Somewhat Agree | Agree | Strongly Agree

Please read the following statements and indicate the level of agreement from strongly agree to strongly disagree.

16. I have a thorough understanding of what it means to be culturally competent.

Strongly Disagree | Disagree | Somewhat Disagree | Somewhat Agree | Agree | Strongly Agree

17. The graduates from the program/s in which I teach are well-prepared to provide culturally competent patient care upon graduation.

Strongly Disagree | Disagree | Somewhat Disagree | Somewhat Agree | Agree | Strongly Agree

Please respond "yes" or "no" to the following question.

18. In the education of entry-level physical therapists, I incorporate educational activities to teach the construct of cultural competency.

Yes No

If "no", please indicate which of the following best describes the reason for this answer:

___ I do not know how to incorporate cultural competency education into my curriculum

___ I consider this construct to be less important than the current topic that I teach

___ I do not have adequate time to add this information in my classroom

___ Someone else in the program is responsible for this content

___ other reasons ____

____

____

If you answered "No" to question # 18 above, there is no need to answer further.

Thank you for your time and participation.

If you answered "Yes" to #18 above, please proceed to the next page.

Please choose the number related to how often each teaching method is utilized in your teaching of the construct of cultural competency in the education of entry-level physical therapists. Please do not include activities used in other health related professions, physical therapist assistant education, transitional doctor of physical therapy education, or other academic programs.

In teaching cultural competence:

19. I teach using lecture format.

Never 1 2 3 4 5 Always

20. I teach using case study format.

Never 1 2 3 4 5 Always

21. I teach using group assignments.

Never 1 2 3 4 5 Always

22. I teach using journaling activities.

Never 1 2 3 4 5 Always

23. I teach using cultural immersion in which student personally interact with individuals from varied cultural identities.

Never 1 2 3 4 5 Always

24. I teach using self-reflection assignments.

Never 1 2 3 4 5 Always

25. Are there other teaching methods that you utilize?

Yes No

If yes, please explain ______________________

In assessing the development of cultural competency in physical therapy students please choose the number that indicates how often you use these assessment techniques.

26. I use multiple choice tests to assess cultural competence.

Never Rarely Sometimes Often Always

27. I use pre-post-tests to assess cultural competence.

Never Rarely Sometimes Often Always

28. I use discussion/short answers to assess cultural competence.

Never Rarely Sometimes Often Always

29. I use self-assessments to assess cultural competence.

Never Rarely Sometimes Often Always

30. I use peer assessments to assess cultural competence.

Never Rarely Sometimes Often Always

31. I use journaling to assess cultural competence.

Never Rarely Sometimes Often Always

32. I use video recordings of clinical interactions to assess cultural competence.

Never Rarely Sometimes Often Always

33. I use standardized measures for assessing cultural competence.

Never Rarely Sometimes Often Always

If standardized measurement tools are used, please list the assessment tools utilized:

____

____

____

Please read the following statements and indicate the level of agreement from

strongly agree to strongly disagree.

34. I am successful in teaching cultural competency in the classroom environment.

Strongly Agree | Agree | Somewhat Agree | Somewhat Disagree | Disagree | Strongly Disagree

35. I can accurately assess the development of cultural competency in the students that I teach.

Strongly Agree | Agree | Somewhat Agree | Somewhat Disagree | Disagree | Strongly Disagree

APPENDIX C

INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.6820 | Fax: 601.266.4377 | www.usm.edu/irb

**NOTICE OF
COMMITTEE ACTION**

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

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

If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **12060604**
PROJECT TITLE**: Educating Students to Become Culturally Competent Physical Therapists: Issues of Teaching and Assessment**
PROJECT TYPE**: Dissertation**
RESEARCHER/S**: Lisa Jayroe Barnes**
COLLEGE/DIVISION**: College of Education & Psychology**
DEPARTMENT: **Educational Studies & Research**
FUNDING AGENCY: **N/A**
IRB COMMITTEE ACTION**: Expedited Review Approval**
PERIOD OF PROJECT APPROVAL: **06/07/2012 to 06/06/2013**

Lawrence A. Hosman, Ph.D.
Institutional Review Board
Chair

REFERENCES

Abraham, L. K. (1993). *Momma might be better off dead: The failure of health care in urban America.* Chicago, IL: The University of Chicago Press.

Alfred, M. V. (2002a). The promise of sociocultural theory in democratizing adult education. In M. V. Alfred (Ed.), *New Directions for Adult and Continuing Education*: *No. 96*. *Learning and Sociocultural Contexts: Implications for Adults, Community, and Workplace Education* (pp. 3-13). San Francisco, CA: Jossey-Bass.

Alfred, M. V. (2002b). Linking the personal and the social for a more critical democratic adult education. In M. V. Alfred (Ed.), *New Directions for Adult and Continuing Education: No. 96. Learning and sociocultural contexts: Implications for Adults, Community, and Workplace Education* (pp. 89-95). San Francisco, CA: Jossey-Bass.

American Physical Therapy Association. (2003). *Guide to physical therapy practice* 2nd ed. Alexandria, VA: American Physical Therapy Association.

American Physical Therapy Association. (2008). *Blueprint for Teaching Cultural Competency in Physical Therapy Education*. Retrieved from http://www.apta.org/search.aspx?q=blueprint

American Physical Therapy Association. (2011). *Operational Plan on Cultural Competence.* Retrieved from http://www.apta.org/CulturalCompetence/OperationalPlan/

American Physical Therapy Association. (n.d.). *Professionalism in physical therapy: Core values self-assessment*. Retrieved from

http://www.apta.org/uploadedFiles/APTAorg/Practice_and_Patient_Care/Ethics/Professionalism/Professionalism_CoreValues_SelfAssessment.doc

Boutin-Foster, C., Foster, J. C., & Konopasek, L. (2008). Physician, know thyself: The professional culture of medicine as a framework for teaching cultural competence. *Academic Medicine, 83*(1), 106-111.

Brookfield, S. D. (2004). Critical thinking techniques. In M. W. Galbraith (Ed.) *Adult learning methods: A guide for effective instruction,* 3rd ed. pp. 341-360. Malabar, FL: Krieger Publishing.

Campinha-Bacote, J. (2008). Cultural desire: 'Caught' or 'taught'? *Contemporary Nurse, 28*, 141-148.

Center on an Aging Society: Georgetown University. (2004). *Challenges for the 21st century: Cultural Competence in Health Care, (5).* Retrieved from http://ihcrp.georgetown.edu/agingsociety/pdfs/cultural.pdf

Commission on Accreditation in Physical Therapy Education. (2011a). *Evaluative Criteria PT Programs Accreditation Handbook*. American Physical Therapy Association: Alexandria, VA.

Commission on Accreditation in Physical Therapy Education. (2011b). *2010-2011 Fact sheet: Physical therapist educational programs.* Retrieved from http://www.capteonline.org/uploadedFiles/CAPTEorg/About_CAPTE/Resources/Aggregate_Program_Data/AggregateProgramData_PTPrograms.pdf

Core, L. (2008). Treatment across cultures: Is there a model? *International Journal of Therapy and Rehabilitation, 15*, 519-526.

Cultural Competence Health Practitioner Assessment (CCHPA). (n.d.) Retrieved from

http://nccc.georgetown.edu/features/CCHPA.html

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. 3rd Ed. Hoboken, NJ:John Wiley & Sons.

Fadiman, A. (1997). *The spirit catches you and you fall down*. New York, NY: Farrar, Straus and Giroux.

Farrah, S. J. (2004). Lecture. In M. W. Galbraith (Ed.) *Adult learning methods: A guide for effective instruction,* 3rd ed. pp. 227-252. Malabar, FL: Krieger Publishing.

Fitzgerald, E., Cronin, S., & Campinha-Bacote, J. (2009). Psychometric Testing of the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals – Student Version (IAPCC-SV). *Journal of Theory Construction & Testing*, *13*(2), 64-68.

Fowler, F. J. (1993). *Survey research methods.* 2nd Ed. Newbury Park, CA: SAGE.

Freire, P. (2009). *Pedagogy of the oppressed*. 30th Ann. Ed. New York, NY: The Continuum International Publishing Group.

Gazsi, C. C., & Oriel, K. N. (2010). The impact of a service learning experience to enhance curricular integration in a physical therapist education program. *Journal of Allied Health*, *39*(2), p. e-61-e-65.

Hill, L. H., & Winter, G. B. (2007). A critical view of cultural competence from an adult education perspective. *Proceeding of the Western Region Research Conference on the Education of Adults*, Bellingham, WA.

Hilliard, M. J., Rathsack, C., Brannigan, P., & Sander, A. P. (2008). Exploring the cultural adaptability of doctoral entry-level physical therapist students during clinical education experiences. *Journal of Allied Health, 37*(3), e-199-e-220.

Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version (IAPCC-SV). (2011a). Retrieved from http://www.transculturalcare.net/iapcc-sv.htm

Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Revised (IAPCC-R). (2011b). Retrieved from http://www.transculturalcare.net/iapcc-r.htm

Johnson, R. L., Saha, S., Arbelaez, J. J., Beach, M. C., & Cooper, L. A. (2004). Racial and ethnic differences in patient perceptions of bias and cultural competence in health care. *Journal of General Internal Medicine, 19*, 101-110.

Johnson-Bailey, J. (2002). Race matters: The unspoken variable in the teaching-learning transaction. *New Directions for Adult and Continuing Education, 93*, 39-49.

Kardong-Edgren, S., Cason, C. L., Brennan, A. M. W., Reifsnider, E., Hummel, F., Mancini, M., & Griffin, C. (2010). Cultural competency of graduating BSN nursing students. *Nursing Education Perspectives, 31*(5), 278-285.

Kasworm, C. E., & Marienau, C., A. (1997) Principles for assessment of adult learning. In A. D. Rose & M. A. Leahy (Eds.) *Assessing adult learning in diverse settings: Current issues and approaches*, pp. 5-16. San Francisco, CA: Jossey-Bass.

Kelley, C., & Meyers, J. (n.d.). *The cross-cultural adaptability inventory.* Retrieved from http://ccaiassess.com/CCAI_Tools.html

Kripalani, S., Bussey-Jones, J., Katz, M. G., & Genao, I. (2006). A prescription for cultural competence in medical education. *Journal of General Internal Medicine, 21*, 1116-1120.

Kumas-Tan Z., Beagan, B., Loppie, C., MacLeod, A., & Frank, B. (2007). Measures of

cultural competence: Examining hidden assumptions. *Academic Medicine, 82*(6), 548-557.

Lazaro, R. T., & Umphred, D. A. (2007). Improving cultural diversity awareness of physical therapy educators. *Journal of Cultural Diversity, 14,* 121-125.

Leavitt, R. (2010). The historical development of theory, models, and assessment tools. In R. Leavitt (Ed.) *Cultural competence: A lifelong journey to cultural proficiency*, pp. 31-50. Thorofare, NJ: SLACK.

Lefebvre, K., & Lattanzi, J. B. (2010). Racial and ethnic disparities in health status, health care, and physical therapy. In R. Leavitt (Ed.) *Cultural competence: A lifelong journey to cultural proficiency*, pp. 99-119. Thorofare, NJ: SLACK.

Lewis, A. (2009). Disability disparities: A beginning model. *Disability and Rehabilitation*, *31*(14), 1136-1143.

Lie, D., Boker, J., & Cleveland, E. (2006). Using the Tool for Assessing Cultural Competence Training (TACCT) to measure faculty and medical student perceptions of cultural competence instruction in the first three years of the curriculum. *Academic Medicine 81*, 557-564.

Lypson, M. L., Ross, P. T., & Kumagai, A. K. (2008). Medical students' perspective on a multicultural curriculum. *Journal of the National Medical Association, 100*(9), 1078-1083.

Marsick, V. J. (2004). Case study. In M. W. Galbraith (Ed.) *Adult learning methods: A guide for effective instruction,* 3rd ed. pp.383-404. Malabar, FL: Krieger Publishing.

Mattingly, G., E., & Barnes, C., E. (1994). Teaching human anatomy in physical therapy

education in the United States: A survey. *Physical Therapy, 74*, 720-727.

Merriam, S. B. (2008). Adult learning theory for the twenty-first century. In S. B. Merriam (Ed.) *New Directions for Adult and Continuing Education: No 119. Third update on adult learning theory: New directions for adult and continuing education* (pp. 93-98). Hoboken, NJ: Wiley Periodicals.

Merriam. S. B., & Brockett, R. G. (2007). *The profession and practice of adult education*. San Francisco, CA: Jossey-Bass.

Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Learning in Adulthood: A comprehensive Guide*. San Francisco, CA: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco, CA: Jossey-Bass.

Moely, B. E., Mercer, S. H., Ilustre, V., Miron, D., & McFarlend, M. (2002). Psychometric properties and correlates of the Civic Attitudes and Skills Questionnaire (CASQ): A measure of students' attitudes related to service-learning. *Michigan Journal of Community Service Learning, Spring 2002,* 15-26.

Musolino, G. M., Burkhalter, S. T., Crookston, B., Ward, R. S., Harris, R. M., Chase-Cantarini, S., & Babitz, M. (2010). Understanding and eliminating disparities in health care: Development and assessment of cultural competence for interdisciplinary health professionals at the University of Utah - a 3 year investigation. *Journal of Physical Therapy Education, 24*(1), 25-36.

Musolino, G. M., & Mostrom, E., (2005). Reflection and the scholarship of teaching, learning, and assessment. *Journal of Physical Therapy Education, 19*(3), 52-67.

Ndiwane, A., Miller, K. H., Bonner, A., Imperio, K., Matzo, M., McNeal, G., Amertil,

N., & Feldman, Z. (2004). Enhancing cultural competencies of advanced practice nurses: Health care challenges in the twenty-first century, *Journal of Cultural Diversity, 11*(3), 118-121.

Nunn, P. J., Gadbury-Amyot, C. C., Battrell, A., Bruce, S. I., Hanlon, L. L., Kaiser, C., and Purifoy-Seldon, B. (2004). The current status of allied dental faculty: A survey report. *Journal of Dental Education, 68*(3), 329-344.

Office of Minority Health. (2007). National Standards on Culturally and Linguistically Appropriate Services (CLAS). Retrieved from http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlID=15

Onyoni, E. M., & Ives, T. J. (2007). Assessing implementation of cultural competency content in the curricula of colleges of pharmacy in the United States and Canada. *American Journal of Pharmaceutical Education, 71*(2) Article 24, 1-7.

Panzarella, K. J. (2009). Beginning with the end in mind: Evaluating outcomes of cultural competence instruction in a doctor of physical therapy programme. *Disability and Rehabilitation, 31*(14), 1144-1152.

Panzarella, K. J., & Matteliano, M., A. (2008). *A guide to cultural competence in the curriculum: Physical Therapy*. Buffalo, NY: Center for International Rehabilitation Research Information and Exchange.

Poirier, T. I., Butler, L. M., Devraj, R., Gupchup, G. V., Santanello, C., & Lynch, C. (2009). Instructional design and assessment: A cultural competency course for pharmacy students. *American Journal of Pharmaceutical Education, 73*(5), 1-7.

Purtillo, R., & Haddad, A. (2002). *Health professional and patient interaction*, 6th ed. Philadelphia, PA: Saunders.

Purden, M. (2005). Cultural considerations in interprofessional education and practice. *Journal of Interprofessional Care*, Supplement 1, 224-234.

Qualtrics Labs, Inc. (2012). *Qualtrics Labs, Inc. Software Version 2009 of the Qualtrics Research Suite*. Retrieved from http://www.qualtrics.com

Rowland, M. L., Bean, C. Y., & Casamassimo, P. S. (2006). A snapshot of cultural competency education in U. S. dental schools. *Journal of Dental Education, 70*(9), 982-990.

Sandstrom, R. V., Lohman, H., & Bramble, J. D. (2009). *Health services: Policy and systems for therapists*. 2nd ed. Upper Saddle River, NJ: Pearson.

Sasnett, B., Royal, P. D., & Ross, T. (2010). Introduction of a cultural training experience into an interdisciplinary health science education program. *Journal of Allied Health, 39*(2), 55-60.

Schmitz, T. J. (2007). Examination of Sensory Function. In S. B. O'Sullivan & T. J. Schmitz (Eds.) *Physical rehabilitation,* 5th ed. Philadelphia, PA: F. A. Davis.

Shi, L., & Singh, D. A. (2004). *Delivering health care in America: A systems approach*, 3rd ed. Sudbury, MA: Jones and Bartlett.

Taylor, E. W. (2008). Transformative learning theory. In S. B. Merriam (Ed.), *New Directions for Adult and Continuing Education: No 119*. *Third update on adult learning theory* (pp. 5-13). Hoboken, NJ: Wiley Periodicals.

Threlkeld, A. J., Jensen, G. M., & Royeen, C. B. (1999). The clinical doctorate: A framework for analysis in physical therapist education. *Physical Therapy, 79*(6), 567-581.

Wehling, S. (2008). Cross-cultural competency through service-learning. *Journal of*

Community Practice, 16(3), 293-315.

Wells, S. A., & Black, R. M. (2000). *Cultural competency for health professionals*. Bethesda, MD: American Occupational Therapy Association.

Ziegahn, L., & Ton, H. (2011). Adult educators and cultural competence within health care systems: Changes at the individual and structural levels. In L. H. Hill (Ed.) *New Directions forAdult and Continuing Education: No. 130. Adult Education for Health and Wellness* (pp. 55-64). Hoboken, NJ: Wiley Periodicals.