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CULTURAL COMPETENCE AND CURRICULA IN PHYSICAL THERAPIST
PROFESSIONAL EDUCATION

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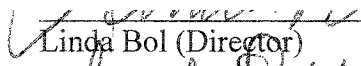
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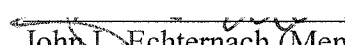
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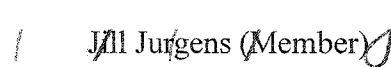
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ABSTRACT

CULTURAL COMPETENCE AND CURRICULA IN PHYSICAL THERAPIST PROFESSIONAL EDUCATION

Beth Ernst Jamali
Old Dominion University, 2005
Director: Dr. Linda Bol

The purpose of this research was to examine the methods and degree to which content related to cultural competence is incorporated into current entry-level physical therapist education. Face-to-face interviews were performed with 10 program directors from various physical therapist education programs across the country to obtain in-depth information regarding cultural competence in the physical therapy curricula. A questionnaire was sent to all of the 193 accredited physical therapist education programs in the United States as a second means to collect information regarding the methods and extent to which cultural competence is included in the physical therapy curricula. Data were collected from 104 out of 193 accredited programs in physical therapy in the United States for a 53.8% response rate. For prerequisite coursework, 74% of the respondents reported requiring 2 or more psychology courses, with 41.5% of the respondents requiring 1 or more sociology courses. The majority of the respondents (81.7%) reported requiring coursework related to psychology of illness or patient behavior within the professional curriculum. Clinical methods of delivering material related to cultural competence included offering multicultural clinical experiences (74%), international clinical experiences (26.9%) and use of standardized patients with a cultural focus (18.3%). Methods and materials used for instruction included courses or portions of

courses, textbooks, discussion, case studies and supplemental materials such as videos, literature, journal articles, and activities. The results of a MANOVA revealed a statistically significant main effect for percentage of minority faculty on two of the questionnaire subscales. The means for programs with primarily non-minority faculty (less than 10%) were higher than those programs with a higher percentage of minority faculty (10% or greater) for both of these subscales. Three main themes emerged from the qualitative data: (a) the importance of teaching communication skills, especially non-verbal communication and language; (b) concerns over the use of discussion; and (c) lack of diversity among faculty and students.

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This dissertation is dedicated to my husband Al, for his patience, encouragement and undying support during this significant endeavor.

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CHAPTER I

INTRODUCTION

The population of the United States is becoming increasingly diverse. The 2000 United States Census of Population estimates the population of the United States to be approximately 75% White and 25% minority populations including Black, Hispanic, Asian, Pacific Islander, and American Indian and Alaskan Native. Also, according to the 2000 Census, 5.5% of the population identified themselves as some other race and 2.4% as two or more races (U.S. Bureau of the Census, 2000). When compared with the 1990 U.S. Census, which reported 80% White and 20% minorities, with 4% of the population identifying themselves as some other race, there is a seemingly upward trend in the minority populations (see table 1). Projections by the U.S. Bureau of the Census indicate that the population should continue on this trend of increased diversity. One concern that arises with an increase in the minority population is the documented fact that minority populations have increased health disparities and decreased health status compared to the majority population (U.S. Department of Health and Human Services (DHHS), 1998). The reasons for these disparities are thought to be multifactorial. In addition to issues such as decreased education and income levels, one possible explanation for the increased health disparities is a lack of cultural competence on the part of health care providers.

Definitions

According to the Normative Model of Physical Therapist Education, cultural competence is, “a set of congruent behaviors, attitudes, and policies that come together in

a system, agency or among professionals that enables effective work in cross-cultural situations” (American Physical Therapy Association, 2000, p. 113). Cross, Bazron, Dennis, and Isaacs (1989), further describe cultural competence as occurring on a continuum consisting of six positions, starting with cultural destructiveness on one end and cultural proficiency on the other. In comparison, Starn (1996), describes cultural competence as having five components: “(a) awareness and acceptance of cultural differences, (b) self-awareness, (c) understanding the dynamics of cultural differences, (d) knowledge of the client’s family culture, (e) adaptation of services to support the client’s culture” (p. 28).

Table 1 – Census Data 1990 and 2000

| Race | 1990 Census | 2000 Census |
|---------------------------------------|-------------|-------------|
| White | 80% | 75.1% |
| Black | 12.1% | 12.3% |
| American Indian and Alaskan Native | .8% | .9% |
| Asian | 2.9% | 4% |
| Hispanic | 9% | 12.5% |
| Some other race | 4% | 5.5% |
| Two or more races | n/a | 2.4% |

For this study, the definition of *cultural competence* by Purnell and Paulanka (1998) will be utilized. Purnell and Paulanka (1998), define cultural competence as,

(a) developing an awareness of one's own existence, sensations, thoughts, and environment without letting it have an undue influence on those from other backgrounds; (b) demonstrating knowledge and understanding of the client's culture; (c) accepting and respecting cultural differences; (d) adapting care to be congruent with the client's culture. (p.2)

Purnell and Paulanka (1998), also describe a nonlinear concept of cultural consciousness:

One progresses from unconscious incompetence (not being aware that one is lacking knowledge about another culture) to conscious incompetence (being aware that one is lacking knowledge about another culture); then to conscious competence (learning about the client's culture, verifying generalizations about the client's culture, and providing culturally specific interventions); and finally to unconscious competence (automatically providing culturally congruent care to clients of a diverse culture). (p.2)

It has been suggested that the key to understanding cultural competence lies in an understanding of the concept of culture (Leavitt, 2002). *Culture*, was defined by Leininger in the 1960's as "the learned and shared beliefs, values, and lifeways of a designated or particular group that are generally transmitted intergenerationally and influence one's thinking and action modes" (Leininger, 2002, p.9). Culture has been described as the non-rigid, constantly evolving framework that guides life practices, a framework that is learned rather than inherited (Leavitt, 2002). *Cultural awareness* is the basic idea that behavior and ways of thinking and perceiving are culturally conditioned rather than universal aspects of human nature (American Physical Therapy Association,

2000). *Cultural sensitivity* refers to the awareness of cultural variables that may affect assessment and treatment (APTA, 2000). *Multicultural/multilingual* are characteristics of populations defined by changes in the demographic patterns of consumers (APTA, 2000). As Leininger (2002) points out, “multiculturalism refers to a perspective and reality that there are many different cultures and subcultures in the world that need to be recognized, valued and understood for their differences and similarities” (p. 50).

National Cultural Competence Initiatives

The diversification of the population has led many organizations that influence health care regulation and practice to begin looking at the concept of cultural competence in health care. In March, 2001, the U.S. Department of Health and Human Services Office of Minority Health published the National Standards for Culturally and Linguistically Appropriate Services in Health Care (CLAS). The 14 nationally recommended CLAS standards are proposed as a means to correct the inequities that currently exist in the provision of health services, and are intended to make health services more responsive to all consumers of health care from all cultures (DHHS, 2001). These standards consist of mandates, guidelines, and recommendations that are intended to inform and guide required and recommended practices in the provision of culturally and linguistically appropriate health services. Although the CLAS standards are primarily directed at health care organizations, the report explicitly states the standards are intended for use by:

Educators, to incorporate cultural and linguistic competence into their curricula and to raise awareness about the impact of culture and language on health care delivery. This audience would include educators from health care professions and

training institutions, as well as educators from legal and social services professions. (DHHS, 2001, p. 2)

A nationwide health promotion and disease prevention agenda, the Healthy People 2010 initiative is designed to serve as a blueprint for improving the health of the U.S. population during the first decade of the 21st century. While tertiary services such as hospital and specialty care services are not included in the objectives for Healthy People 2010, long-term and rehabilitative care are included, which directly impact the physical therapy profession. The two overarching goals of Healthy People 2010 are (a) to increase the quality and years of healthy life and (b) to eliminate health disparities. According to the Healthy People 2010 report, in order to reduce health disparities, access to health care needs to be improved, and health care communication and services need to be provided in a culturally and linguistically sensitive manner (DHHS, 2000).

The increase in diversity also presents unique challenges for health care providers trained in the Western style of medicine of the United States. These health care providers tend to be familiar with scientific explanations for illness and disease, and less familiar with belief systems that may indicate illness and disease result from social or supernatural phenomena that is evident in many cultures (Chin, 2000; Kavanagh & Kennedy, 1992). Practitioners of the Western style of medicine are trained that interventions should match the etiologies in order to be effective. Because of this style of training, patients with different cultural beliefs about healing are often not offered opportunities to discuss their explanatory models of illness and disease or expectations of treatment as they relate to those beliefs, which may compromise accurate assessment and effective intervention (Chin, 2000; Kavanagh & Kennedy, 1992). Educational programs

responsible for training health care providers are recognizing the need to respond to the changing demographics in order to prepare these individuals to work in a diverse community. In addition to adding content related to cultural competence into the curricula, many feel this would ideally include an increase in the number of minority health care providers practicing in the health professions (Baker, J. & Baker C., 1989; Baldonado, 1996; Briggance & Burke, 2002; Campinha-Bacote, Yahle, & Langenkamp, 1996; Chapman, 1989; Haskins, 1989; Haskins & Rose-St. Prix, 1994; Kachingwe, 2003; Rosello, Regan-Kubinski, & Albrecht, 1994; Splenser, Canlas, Sanders, & Melzer, 2003). There are several arguments as to the benefits of increased ethnic representation in the health care professions, one argument being that the professions should reflect national racial/ethnic demographics (Association of American Medical Colleges (AAMC), 2000; Baker, J. & Baker C., 1989; Baldonado, 1996; Briggance & Burke, 2002; Chapman, 1989; Cole & Stutte, 1998; Gary, Sigsby, & Campbell, 1998; Haskins, 1989; Haskins & Rose-St. Prix, 1994; Rosello et al, 1994). Also, it is believed that culturally matching practitioners and patients would result in better treatment outcomes, although this phenomenon has not been well documented in the literature (Baldonado, 1996; Cole & Stutte, 1998; Cooper-Patrick, et al., 1999; Saha, Komaromy, Koepsell & Bindman, 1999). Finally, there is the speculation that upon graduation, practitioners from underrepresented ethnic or racial groups will be more likely to treat patients from their own ethnic or racial group as well as they may practice in culturally diverse settings that are underserved (Komaromy et al.1996; Moy & Bartman, 1995).

One of the objectives of the Healthy People 2010 initiative is to increase the proportion of all degrees awarded to members of underrepresented racial and ethnic

groups in the allied and associated health professions (DHHS, 2000). While it is recognized that increasing the representation of minorities in health care professions would be ideal, statistics show that the numbers of minority health care providers is still well below ideal. In the physical therapy profession, for example, the current minority membership in the American Physical Therapy Association for licensed physical therapists is approximately 9%, with the percentage for students at 17% (APTA, Office of Minority and International Affairs, 2003).

The ability to care for a diverse population of patients may come from actually working with a variety of patients from various cultures in “real life” or internship experiences that allied health professionals complete. However, since it is the professional preparation programs’ responsibility to prepare their students prior to the internship experience, there appears to be a need for inclusion of educational material on cultural sensitivity and cultural competence in medical and other health professional curriculums to give the students the necessary tools and background information (Babyar, Sliwinski, Krasilovsky, Rosen, Thronby, & Masefield, 1996; Cook & Cullen 2000; Kachingwe, 2003; Kraemer, 2001; Loudon, Anderson, Gill, & Greenfield, 1999; Lyman, 1992; Pope-Davis, Prieto, Whitaker, & Pope-Davis, 1993; Sasano & Shepard, 1973).

Cultural Competence Initiatives in Health Care Professions Education

Many health care professions are realizing the need for this commitment to cultural competence in their educational programs. Nursing was the first professional discipline to recognize the need to establish culturally based care as a formal area of study and practice in the late 1950’s, when the concept of transcultural nursing was first introduced (Leininger, 2002). While the nursing profession may have identified the need

for content related to cultural diversity over 30 years ago, the profession was slow to add content to the curricula. According to Leininger (2002), by 1983 only 18% of the National League for Nursing (NLN) accredited baccalaureate nursing programs and 13% of the graduate programs included course content related to culture and multiculturalism in their curricula. As of 2000, approximately 48% of baccalaureate degree nursing programs offered some sort of curricular content related to transcultural nursing, and the nursing profession now offers specific graduate degrees and certifications in transcultural nursing (Leininger, 2002). Participation in a racially and culturally diverse society is now considered one of the core competencies for post-secondary and higher degree programs in nursing according to the accreditations standards established by the National League of Nursing Accrediting Commission (National League for Nursing Accrediting Commission, 2004).

The field of medicine began including some content related to cultural competence in medical school curricula around 1970, but similar to nursing, has been slow to require cultural competence as part of the curricula (Crandall, George, Marion, & Davis, 2003). The American Medical Association's House of Delegates adopted a policy in 1998 related to enhancing the cultural competence of physicians, which included incorporating the topic of cultural competence in medical school and residency curricula (American Medical Association, 1999). As a result of this policy, the American Medical Association published the Cultural Competence Compendium as a resource for physicians, medical education facilities, and other medical professionals (AMA, 1999). The current (2003) accreditation standards from the Liaison Committee on Medical Education have identified topics related to cultural competence as necessary content for

medical education, with specific objectives related to cultural competence included in the accreditation objectives (Liaison Committee on Medical Education (LCME), 2003).

From the occupational therapy profession, Sanchez (1964) was first to introduce the concept of incorporating the patient's cultural background into treatment in order for therapy to be effective. The profession of occupational therapy has since incorporated concepts related to cultural competence as part of the foundational content requirements for accredited occupational therapy programs (American Occupational Therapy Association, 1998).

Cultural Competence Initiatives in Physical Therapy

The physical therapy profession first suggested the need for the inclusion of sociocultural content in physical therapy education in 1973 (Sasano & Shepard, 1973). A thorough review of the literature revealed limited additional publications related to the topic until the 1990's, although the American Physical Therapy Association has stated the importance of the topic in practice, research, and education. In 1981, the Advisory Panel on Minority Affairs was created by the APTA's Board of Directors (E. King, personal communication, August 22, 2003). In 2001, the Committee on Cultural Competence was formed, replacing the Advisory Panel on Minority Affairs. The committee is intended to "assist the APTA in the development of physical therapy practitioners to meet current and future societal health care needs"(APTA, 2003). In 2002, the APTA's Board of Directors approved the Committee on Cultural Competence Strategic Plan. The major goals of the plan are to (a) promote the delivery of culturally competent physical therapy care, (b) ensure that the physical therapy profession reflects the demographics of society, and (c) increase and improve access to physical therapist

services to persons in underserved communities (APTA, Office of Minority and International Affairs, 2002).

In terms of relating to physical therapy education specifically, there are three objectives under the major goals related to education: (a) Identify and publicize a model of cultural competence curriculum for inclusion in physical therapy education, (b) identify and publicize strategies for recruitment/retention of student body and faculty from diverse backgrounds and/or individuals who are culturally competent, and (c) promote the preparation of a doctorally prepared faculty who are from diverse backgrounds and/or who are culturally competent (APTA, Office of Minority and International Affairs, 2002). In the 1998 revision of a “Plan to Foster Minority Representation and Participation in Physical Therapy,” developed by the Advisory Panel on Minority Affairs, one of the goals is to “promote the inclusion of cultural diversity in all levels of physical therapy education” (APTA, 2003, Section 5, p.4).

This commitment to cultural competence is echoed in the criteria for accreditation of entry-level physical therapy education programs established by the Commission for Accreditation of Physical Therapist Education (CAPTE). The accreditation process is designed to help a program assess its performance and identify ways to increase its educational effectiveness, among other things (APTA, Commission for Accreditation of Physical Therapist Education, (CAPTE), 2000). The Commission encourages programs to obtain regular feedback regarding the performance of their graduates to ensure the continued quality of the program, which may need to include feedback related to cultural competence. In addition to specific criteria related to examination, evaluation, and interventions related to physical therapy, a specific criterion

has been established related to cultural competence. The criterion 3.8.3.2. states:

“graduates of the program are prepared, in the following areas, to: incorporate an understanding of the implications of individual and cultural differences when engaged in physical therapy practice, research and education” (APTA - CAPTE, 2000, p. B-21).

The ways in which education programs are to satisfy this criterion is not specifically documented, and whether an educational program satisfies this specific criterion for accreditation is determined by CAPTE. The Normative Model of Physical Therapist Professional Education, published by the American Physical Therapy Association (2000), is a consensus model for physical therapist professional education designed to assist education programs in meeting the mission of physical therapy. The original version of the Normative Model was created in 1997, with a subsequent revision in 2000, which reviewed health care, economic, educational, and practice considerations that might impact the academic and clinical components of the educational process. The Normative Model is intended to minimize the risk of having programmatic diversity in physical therapist education, and to provide a consensus-based mechanism that existing and developing programs can utilize to evaluate and refine curricula (APTA, 2000). The Normative Model has as professional practice expectation 2.1, related to individual and cultural differences, “displays sensitivity to individual and cultural differences in all professional interactions” (APTA, 2000, pp.61-62). The content of the foundation sciences, which include Anatomy, Histology, Physiology, Applied Physiology, Pathophysiology, Behavioral Sciences, Biomechanics and Kinesiology, Neuroscience, Pathology, and Pharmacology, serves the purpose of facilitating the student in gaining competency with normal application in each of the sciences addressed. The content of

the clinical sciences is a systems approach to medical and surgical conditions frequently seen by physical therapists. The content is intended to build on and add to the information in the foundation sciences. It is the content from the foundational sciences and clinical sciences that are the suggested means to achieve the expectation related to individual and cultural differences, as well as through content that deals with “cultural and biological differences related to and clinical implications of...race/ethnicity, religious orientation, gender issues, age issues, national origin, sexual orientation, health status of cultural groups, discrimination, and socioeconomic factors” (APTA, 2000, p.62).

Examples of how these instructional objectives may be achieved in the classroom include discussion of interrelations of cultural diversity, learning styles and educational theories, analyzing cultural research and one’s own cultural context, and discussion of specific health problems related to race/ethnicity, socioeconomic status, and age (APTA, 2000).

While the Normative Model does not dictate curriculum, it does inform the educational institutions about what needs to be in the curriculum.

While there has been some documentation regarding cultural competence in other health professions’ literature, the documentation in the physical therapy education literature is significantly lacking. Sasano and Shepard (1973) initially documented the need for inclusion of multicultural content in physical therapy curricula in the early 1970's. Although the diversity of the United States population has been increasing since that time, there has been limited subsequent documentation in the physical therapy literature, with all of it occurring in the last decade (Babyar et al, 1996; Bender, 2002; Kachingwe, 2003; Kraemer, 2001; Padilla & Brown, 1999). Black (2001) compared the multicultural literature in three health professions, physical therapy, nursing, and social

work, and found a significant lack of literature in terms of curricular inclusion of culture and diversity in the physical therapy profession compared with the other two professions. The need for research related to what is being taught in health professions education in addition to outcome measures related to the impact of these educational objectives on the delivery of culturally competent care has been documented (Donini-Lenhoff & Hedrick, 2000)

Relationship to Urban Education

As stated previously, the population of the United States is becoming increasingly diverse. Cultural diversity tends to be most evident in the urban areas of the United States. The majority of the physical therapy education programs are located in urban areas, and the majority of health care jobs tend to be in or near urban areas as well. With the increase in cultural diversity, this topic is relevant to urban education in terms of educating health care professionals to provide care to individuals of a diverse population.

Research Questions

Physical therapist education appears to be lagging behind many of the health care professions with regards to inclusion of content related to cultural competence in the curriculum. The purpose of this research is to examine the methods and degree to which content related to cultural competence is incorporated into current entry-level physical therapy education. Therefore, this research will answer the following questions:

1. How and to what extent is content related to cultural competence incorporated into physical therapy education?
2. Is there a difference in content related to cultural competence in physical therapy curriculums based on the demographic makeup of faculty and students?

The present study will examine the methods and extent to which content related to cultural competence is included in physical therapy curricula, and whether a difference exists based on the demographic characteristics of the programs. It is hypothesized that there will be a wide variation in the type and amount of content related to cultural competence, as well as in the method of instruction in the different physical therapist education programs.

Overview of Methodology

Face-to-face interviews were conducted with a sample of the Program Directors from various programs across the country to obtain in-depth information regarding cultural competence in the physical therapy curricula. A questionnaire was sent to all of the accredited physical therapist education programs in the United States as a second means to collect information regarding the methods and extent to which cultural competence is included in the physical therapy curricula. Demographic items in the questionnaire were utilized to determine if there was a difference on how cultural competence is addressed based on demographic make-up of the faculty and students. Document analysis served as a means to confirm the results obtained in the surveys and interviews and increase the credibility of the study.

Chapter II

REVIEW OF LITERATURE

The varied health care needs of the culturally diverse population of the United States has been well documented in the literature for nursing and medicine, recognizing the disparities that exist between the health status of minority populations and the U.S. population as a whole (Chin, 2000; Davidhizar, Bechtel, & Giger, 1998; Fielo & Degazon, 1997; Fitzgerald, 1992; Lea, 1994; Loudon et al, 1999; Rosella, et al., 1994). The literature suggests the development of cultural competence, which includes an understanding and willingness to learn about various cultures' diverse practices and beliefs, as the best means to achieve culturally competent care (Campinha-Bacote, Yahle, & Langenkamp, 1996; Chin, 2000; Davidhizar et al., 1998; Dillard, Andonian, Lai, MacRae, & Shakir, 1992; Fielo & Degazon, 1997; Fitzgerald, 1992; Jecker, Carrese, & Pearlman, 1995; Lea, 1994; Padilla & Brown, 1999; Rosella et al., 1994).

The United States health care system is based on Western medicine, which relies heavily on scientific evidence during the decision-making process. Frequently, those educated in the Western medical system have little understanding of non-traditional healing ceremonies or alternative treatments that are dominant in other cultures, which can lead to a clash in communication between practitioner and patient (Jecker et al., 1995). Concern arises among health care practitioners about their professional obligation to provide what they consider appropriate care. Often patients are labeled as "difficult" or "non-compliant" if they do not ascribe to the recommended treatment program, when the treatment program may be against their religious or cultural beliefs (Fielo & Degazon,

1997; Jecker et al., 1995). As Fitzgerald (1992) points out, the need for cultural competence in health care becomes apparent when Western educated health care practitioners impose their views of medicine on individuals of other cultures, who may not be ready or willing to accept these views. The successful rehabilitation of a patient in the physical therapy environment typically requires the coordination of the patient's and therapist's goals, therefore an understanding of the difference in cultural beliefs is essential for the best patient outcome. The ability to accept beliefs outside of Western medicine may allow for openness in treatment options on the part of the practitioner.

An understanding of comparative value orientations, such as considering whether a person comes from a collectivistic or an individualistic culture, may also be a critical in developing a positive relationship between the patient and practitioner (Leavitt, 2003). From a physical therapy standpoint, there are a number of ways a person's value orientation can impact the therapeutic encounter. For example, a person from an individualistic culture may prefer to use any means possible to function independently in society, compared with a person from a collectivistic culture where the family is expected to take care of the patient, and independence is not considered necessary for this reason. The goals and intervention strategies will be significantly different for these two people, and it is essential for the therapist to recognize these differences in value orientation. Other aspects of value orientation that may differ between collectivistic and individualistic orientation include pace of life and the notion of time, equality of the sexes (inequality or equality), level of formality (formal or informal) and values across the lifespan (elders versus youth) among others (Leavitt, 2003). Miscommunication, misunderstandings, and an ineffective patient-provider relationship may result if cultural

values are not taken into consideration in the health care environment.

This chapter will begin with suggestions from the health professions literature on how to achieve cultural competence. A review of the nursing, medicine, and occupational therapy literature related to cultural competence will follow, as these professions are most similar to the profession of physical therapy. The physical therapy literature related to cultural competence will then be reviewed. The chapter will conclude with an overview of the two models that will be utilized in the methodology of this study.

Suggestions For Achieving Cultural Competence

The literature provides multiple suggestions of both how and what content to include to educate various health care professionals in cultural competence. It appears that the awareness, both of cultural differences and personal values and beliefs, along with knowledge and acceptance of cultural differences and similarities seem to be pivotal in the development of cultural competence (Canales & Bowers, 2001; Leininger, 2001). It has been suggested that medical and allied health schools offer specific courses or portions of courses in cultural sensitivity or racial and ethnic diversity (Bender, 2002; Clinton, 1996; Like, Steiner, & Rubel, 1996; Loudon et al, 1999; Robinson, 2000). Communication, specifically the ability to address issues related to language barriers and non-verbal communication, has also been suggested as a necessary skill for a culturally competent practitioner (Bentancourt, 2004; Black & Purnell, 2002; Brach & Fraser, 2000; Flores, Abreu, Schwartz, & Hill, 2000; Niemeir, Burnett, & Whitaker, 2003). Timing of content related to cultural competence in educational curricula has been questioned in both nursing and medicine. While many programs report offering this content early in the curriculum (year one or two), the argument has been raised that issues related to

culture may be better received by students in later years after they have had some clinical experience (Barzansky, Jonas, & Etzel, 2000; Flores, Gee, and Kastner, 2000; Like et al., 1996; Lum & Korenman, 1994; Pope – Davis, Eliason, & Ottavi, 1994). Diversity orientation programs combined with the development of a proposed schoolwide diversity course, required for all students in the allied health programs of one university, were suggested after a mediocre performance of both faculty and students on a cultural competency survey (Velde, Wittman, & Bamberg, 2003). One question that remains unanswered in the literature is whether specific courses related to multicultural content and issues should be added to health care professions education, or whether the material should be incorporated into multiple courses in the curriculum (Dyck & Forwell, 1997; Forwell, Whiteford, & Dyck, 2001; Like et al., 1996; Pope-Davis, Eliason, & Ottavi, 1994; Scott, 1997).

The nursing literature proposes an increased sensitivity and understanding of other cultures, including respect for culture, recognition of biases, and avoidance of generalizations as a means to deliver culturally relevant care (Erlen, 1998; Robinson, 2000), which may mean adopting diversity as a value in nursing education (Cook & Cullen, 2000). Davidhizar et al. (1998), suggest the use of staff education to enhance and understand communication, both verbal and nonverbal, appreciate and respect variations in dimensions of personal space, regard for temporal orientation, biological variations and develop an understanding of social organization of various cultures as a means for enhancing culturally competent care. Similar suggestions were made by Campinha-Bacote et al. (1996), in their presentation of a conceptual model of culturally competent care for nurse educators to use as a foundation in cultural diversity education programs.

Service learning and health promotion community based projects have been suggested as a means of enhancing cross-cultural learning in both nursing and physical therapy (Moch, Long, & Jones, 1999; Musolino & Feehan, 2004). Definitions of cultural competence suggest that it relates to more than just ethnic differences. Concern has been expressed that education initiatives related to cultural competence have emphasized cultural and ethnic beliefs rather than the full spectrum of cultural competence, which should also include race, gender, class, and sexual orientation as well (Abrums & Leppa, 2001).

In the field of medicine, inclusion of material related to cultural competence has been suggested in the didactic portion of undergraduate medical school as well as in the residency programs (Genao, Bussey-Jones, Brady, Branch & Corbie-Smith, 2003; LCME, 2003; Like et al., 1996). In physical and occupational therapy literature as well as medicine, cultural competence training has been suggested to be a life-long process. This applies to all health professionals, regardless of one's culture, which requires a supportive administrative and academic environment in order for health professionals to be engaged in the process (Dillard et al., 1992; Genao et al., 2003; Padilla & Brown, 1999). In addition to the national standards that have been suggested, Genao et al. (2003) suggest increased personal, professional, and institutional awareness of cultural perspectives and biases as a means to design, implement, and assess cultural competence curricula. Paasche-Orlow (2004) proposes acknowledgement of the importance of culture, respect for cultural differences, and minimization of any negative consequences of cultural differences are essential principles of cultural competence. He also stresses the ethical contributions of "(a) clarification of the underlying moral agenda of cultural competence, and (b) an explicit development and evaluation of the relationship between

the moral agenda of cultural competence and the moral consciousness of medical trainees” in the discourse and pedagogy of cultural competence (Paasche-Orlow, 2004). Interactive case studies, especially incorporating language and communication barriers, have been suggested as an ideal means for teaching medical students about delivering culturally competent care (Betancourt, 2004; Flores et al., 2000; Niemeier et al., 2003).

Means of achieving cultural competence documented in occupational therapy literature includes developing a culturally competent staff, which allows for the incorporation of culture in therapy, and being open to different ways of engaging the patient in treatment (Dillard et al., 1992; Padilla & Brown, 1999). Literature related to occupational therapy education suggests a strong foundation, building concepts into the curriculum as a basis for understanding and interaction (Forwell, et al., 2001), such as exposure to the social science literature on culture, race, and health (Dyck & Forwell, 1997; Scott, 1997). In addition to a curriculum grounded in occupation, teaching students to consider the personal, social, and familial implications of certain outcomes in occupational therapy, such as occupation and independence have also been recommended (Whiteford & Wilcock, 2000). For currently practicing therapists, Pope-Davis et al. (1993) advocate the importance of educational experiences such as multicultural coursework or seminars as a means to develop cultural competencies.

The value of fieldwork or clinical experience with culturally diverse populations is well documented throughout the health professions literature as a means for increasing cultural competence (Bond & Jones, 1994; Dyck & Forwell, 1997; Forwell, et al., 2001; Haloburdo & Thompson, 1998; Kulwicki & Bolonik, 1996; Patten, Woods, Agarenzo, Brubaker, Metcalf, & Sherrer, 1997; Rosenkoetter, Reynolds, Cummings, & Zakutney,

1993; St. Clair & McKenry, 1999). Clinical exposure and interaction with patients or clients from different cultures is thought to be pivotal for achieving confidence in caring for diverse populations (Kulwicki & Bolonik, 1996). International experiences in both developed and developing countries have also been shown to increase self-perceived attitudes and skills related to cultural competence (Bissonette & Route, 1994; Godkin & Savageau, 2001, 2003; Haloburdo & Thompson, 1998).

Performing a health care ethnography on patients or clients has also been suggested as a means toward becoming culturally competent (Leavitt, 2002). An ethnography, or description of a culture, may allow the practitioner to learn about the material realities and beliefs and behaviors of patients and clients from an insider's point of view rather than from a stereotypical outsider's point of view. Leavitt (2002) suggests using open-ended questions during the interview portion of a patient examination, to allow the patient to discuss their health based on their perceptions as one means to gather information about the patients' culture. Variables including methods of communication, socioeconomic status, incidence and prevalence of disease, learning styles, degree of acculturation, and health beliefs and behaviors must be considered during the process of ethnography, so that the examination and subsequent interventions may be appropriately modified (Leavitt, 2002).

Nursing Literature

The field of nursing is very broad with regards to patient care responsibilities, with much of the literature in the field related to cultural competence outside the realm of physical therapy practice. Several research studies related to preparing culturally competent practitioners do bear some relevance to the practice of physical therapy and

are worth mentioning. The implications of a study performed in 1990 examining attitudes of student nurses toward Black American clients included increased and improved cultural content in nursing education (Felder, 1990). The findings indicated that the majority of the 100 students that participated in the sample had only an average knowledge of Black American clients.

A subsequent study that investigated knowledge and attitudes of nurses toward culturally different patients was performed targeting Black American, Asian American, and Hispanic cultures (Rooda, 1993). A self-administered questionnaire was sent to a randomly selected sample of 274 registered nurses from an urban Midwestern county. The questionnaire consisted of three sections; knowledge of cultural diversity, attitudes toward culturally diverse patients, and demographic questions. The section regarding knowledge of cultural diversity included questions related to culturally specific diseases and symptoms, values and issues related to family orientation of specific cultural groups. The second section, which measured the nurses' attitudes toward culturally different patients, consisted of questions related to four vignettes describing four ethnic individuals from Hispanic, Black American, Asian American, and Anglo-American cultures. The demographic section included information such as age, gender, ethnic identity, educational preparation, year of graduation, and professional experiences. Several findings emerged from the study. The participants knew more about the culture and health care practices of Asian Americans than Hispanic or Black Americans. The study also showed that educational preparation of this sample was the only demographic variable that was found to be a significant predictor of knowledge or bias toward cultural groups, with those earning associate degrees having a greater knowledge and less bias

than those with bachelor's degrees. Thirdly, the study found that the participants had different attitudes towards the cultures and health practices of ethnic groups; from most to least positive the ranking was Anglo-Americans, Black Americans, Asian Americans, and Hispanics. Finally, it was found that cultural bias appeared to be a function of cultural attitudes.

Pope-Davis, et al. (1994), hypothesized that the needs of nursing students and educational programs related to multiculturalism might in part be determined by measuring the multicultural competencies of nursing students. In an exploratory investigation of a representative sample of 120 undergraduate nursing students from a single nursing program in the Midwest, Pope-Davis et al.(1994), investigated differences in multicultural skills, knowledge, awareness, and relationships using the Multicultural Counseling Inventory (MCI) and a demographic questionnaire. The researchers attempted to determine if differences in multicultural skills occurred based on demographic variables including gender, age, work experience, and academic class standing. While 76% of the sample had some work experience in the nursing field, none of the sample had completed a course in multicultural issues at the time of the study. Of the demographic variables, work experience produced a significant main effect, indicating that students with work experience had higher self-perceived multicultural skill and knowledge levels than students without work experience. However, there was no significant difference in self-perceived multicultural awareness or relationships between students with or without work experience. Although the researchers stated further research was indicated based on the results of this study, they suggested that nurse educators may want to incorporate content related to multicultural issues after students

have had some work experience, since work experience appeared to be related to greater self-perceived multicultural knowledge and skills.

In a more recent study looking at self-reported cultural competency skills of nursing students toward clients from culturally diverse backgrounds, Napholz (1999), investigated the effectiveness of an innovative cultural sensitivity intervention. The purpose was to ascertain if augmenting the traditional approach to teaching cultural diversity would produce greater self-reported cultural competency skills. Using a convenience sample of 66 junior level nursing students from two campuses, a traditional group and an innovative treatment group were compared. The traditional group of 49 participants received the traditional approach to learning and applying cultural diversity concepts in a clinical setting. This consisted of a cultural assessment exercise, incorporation of sociocultural concepts into anecdotal records, documentation of culturally sensitive care in patient records, and clinical papers demonstrating an understanding of cultural uniqueness of clients. The innovative treatment group of 17 participants received the traditional approach as well as three, 2-hour onsite consultations from an expert in cultural nursing. While there was a statistically significant increase in post-test scores compared with pre-test scores in both groups, there was also a significant difference in the pre-test scores, with the traditional group scoring higher. The unequal groups precluded the researcher from making any firm conclusions regarding the intervention. The findings were reported as being instructive rather than conclusive, suggesting that nurse educators look at the differences in learning experiences that may contribute to differences in student attitudes related to cultural diversity.

Several research studies have evaluated the effect of international clinical

experiences on nursing students. In many of the studies, the students participated in short-term clinical experiences combined with traveling throughout the respective countries to see how the people lived. These experiences were all shown to increase the students' cultural awareness and sensitivity through various measures (Bond & Jones, 1994; Kulwicki & Bolonik, 1996; Patten et al., 1997; Rosenkoetter et al., 1993).

In another study related to international clinical education, St. Clair and McKenry (1999), explored the relationship between short-term international clinical immersion experiences, cultural self-efficacy, and cultural competence. This study differs from the previous studies in that the nursing students were immersed into the culture by actually living and working within a community for a 2-3 week period of time. The qualitative analysis of field notes and observations in this study demonstrated how significantly the immersion experience impacted the students. For example, students working in a country where they were the minority significantly sensitized those students to being a minority. Additionally, it was noted that concepts such as communication, space, time, social organization, environmental controls, and biological variations had not been meaningful to the students until they were outside of their own environment. They were able to experience for themselves such things as not being understood, to having an altered biological and physical clock time, and to being excluded from the social organization. For those students in developing or third world countries, the addition of poverty and lack of resources affecting the population was also experienced. The authors suggested that immersion in culturally diverse communities in the United States may prove to be a feasible alternative to an international experience and produce the same results (St. Clair & McKenry, 1999).

In a grounded theory study exploring the meaning of an international experience for nursing students, Haloburdo and Thompson (1998), analyzed the similarities and differences in learning outcomes among students who had traveled to developed versus developing countries. The results of the study indicated more similarities than differences in the experiences, with all students reporting both personal and professional growth including a greater appreciation for cultural differences. The students from both groups also reported the opportunity to gain empirical knowledge, such as an appreciation for the influence of sociopolitical factors on health care, a greater ability to critique as well as appreciate the United States' health care system, and gain insights into population-based health problems. The students who went to the developing countries experienced struggles related to the environment and found themselves in a situation that allowed them to establish a connection with caring as the essence of nursing, experiences that were not seen to the same extent by those students who went to developed countries (Haloburdo & Thompson, 1998).

While the majority of the nursing literature is from the perspective of teaching cultural competence from a majority point of view, Canales and Bowers (2001), attempted to gain an understanding of cultural competence from non-mainstream, Latina, nurse educators. Interestingly, the authors found that the Latina faculty did not distinguish between competent and culturally competent care; to them cultural competence is a component of competent care. The Latina faculty perceived that as competent practitioners, not only would safe and effective care be provided, but students and colleagues would become more sensitive towards and respectful of all clients. The teaching practices of the participants in the study was based on the belief of teaching

students how to think about differences and how to connect with individuals perceived as different from themselves, rather than giving specifics about different cultural groups (Canales & Bowers, 2001). This study generated a new theory of teaching practice; teaching to change perceptions of the Other (anyone who is perceived as different from themselves).

The results from the nursing literature suggest that that nursing students have varied levels of knowledge about different cultural groups and self-perceived levels of cultural competency. The literature supports the notion that international clinical experiences or fieldwork has a positive effect on personal and professional growth related to cultural competence.

The major limitations of the nursing literature revolve around the lack of sound research studies. There are few experimental studies linking interventions to outcomes found in the literature. Often the samples are small or not representative of the nursing profession or educational programs as a whole. There were several studies related to international fieldwork experiences, but very few related to curricular content and its impact on cultural competence.

Medicine Literature

Medical educators and medical school accreditation bodies have realized that cultural competency is a critical component of professional development of physicians (Crandall et al., 2003; Flores, Gee, & Kastner, 2000; LCME, 2003; Like et al., 1996; Lum & Korenman, 1994). The literature suggests that providing culturally sensitive and competent care promotes positive health outcomes for patients (Brach & Fraser, 2000; Briggance, 2002; Chin, 2000; Flores, Abreau et al., 2000). Despite this realization,

inclusion of content related to cultural competence in medical education is still considered a relatively new concept. In 1991-1992, Lum and Korenman (1994), surveyed all 126 U.S. medical schools to determine the extent to which cultural sensitivity training was being provided to medical students and the perceived need for such training. Of the 98 medical schools that responded, only 13 of the schools reported offering cultural sensitivity courses, with only one of the 13 schools requiring the course for all students. For the 12 schools offering optional cultural sensitivity courses, the enrollment tended to be very low, approximately 5-10% of the students. Interestingly, 72 of the 98 schools reported having qualified faculty members to teach cultural sensitivity courses, with 59 schools indicating that they integrated cultural sensitivity information into other courses. The amount of time devoted to cultural sensitivity in these other courses ranged from two to 18 hours. According to the authors, many of the deans from the schools that participated felt their students would have a fairly high likelihood of interacting with minority patients, but felt their recent graduates were only "somewhat prepared" to provide culturally sensitive patient care. Despite this perception, only 34% of the programs had any plans to implement new cultural sensitivity programs.

In a more recent study published in 2000, Flores, Gee and Kastner performed a cross-sectional telephone survey of all U.S. and Canadian medical schools to determine the number of schools that have courses on cultural issues, to look at the content and format of those courses, and determine when in the medical school curriculum these courses were offered. With an excellent response rate (94%) for both the U.S. and Canadian schools, the findings of this study were similar to the study by Lum and Korenman (1994) performed almost a decade earlier. Only 8% of the U.S. schools

(down from 13% in the 1994 study) and 0% of the Canadian schools offered a separate course addressing cultural issues. Schools in both countries (87% U.S. and 67% Canadian) typically addressed cultural issues in one to three lectures during pre-clinical courses or elective courses. These courses were typically offered in the first or second year of medical school, with 20% of U.S. and 36% of Canadian schools reporting teaching about cultural issues in all four years of medical school. Interestingly, the majority of the schools reported the content, either separate courses or integrated lectures, had been taught for less than six years. Content related to cultural issues was typically delivered in case scenario format, with specific cultural issues of non-white ethnic groups taught by only 35% of U.S. medical schools, and less than one third of Canadian schools. The authors of both of these studies concluded that medical schools provide inadequate instruction about cultural issues.

While the previous studies reported that instruction related to cultural competence is inadequate in medical school curricula, the authors suggested further research should assess the outcomes of cultural competency training in the medical school curricula. In a case study by Crandall et al. (2003), a year-long cultural competency training course for second-year medical students was described and evaluated. The purpose of the course, which was designed following the awarding of a contract for culture and diversity by the American Medical Student Association, was to experiment with content, activities, and experiences that could be integrated into the four-year curriculum. The course was piloted by a group of 12 ethnically diverse student volunteers (5 men and 7 women), out of a class of 113 students. The students attended 20, two-to-three hour sessions over the course of the year, which incorporated a variety of strategies such as interactive lectures,

videos, simulations, role-plays, community-based service learning, and online problem-based learning cases to deliver the content. In addition to contributing to a critical and reflective journal for each session, the students also performed interviews with a culturally different individual, observed interviews using interpreters, and participated in a self-directed service-learning project as additional assignments for the course. The course was evaluated using the Multicultural Assessment Questionnaire (MAQ), a 16-item, Likert-type scale self-report questionnaire containing items related to knowledge, skill, and attitude, at the first and last sessions of the course. Statistically significant means were noted for all students between the pre and post-course administration of the questionnaire, indicating the students believed their knowledge, skills, and attitudes improved dramatically. The authors noted limitations of the study including the need to compare self-reported measures with actual behaviors during clinical encounters, other factors besides the course may have contributed to the changes in knowledge, skills and attitudes, and the small sample size. The results from the study were used to begin integrating material related to cultural competence into the curriculum. The medical school is continuing to use the results from this program evaluation to add cultural competence content into the curriculum. The students' journals from the course will be used as one source of information for designing additional activities to be added into the four-year curriculum.

In addition to the didactic portion of the medical school curriculum, the residency portion of physician training is also felt to be pivotal in helping physicians achieve cultural competence (Like et al, 1996). Shapiro, Hollingshead, and Morrison (2002), performed a qualitative study using 10 focus groups to explore resident, faculty, and

patient attitudes and beliefs about barriers to cultural competence and the required skills to overcome them. The focus groups were performed with separate groups of faculty and residents from family medicine, internal medicine, and pediatrics from one medical school, and patients from a low-income community clinic where many faculty and residents practiced. During participant recruitment, the researchers attempted to diversify knowledge and interest level in cultural competency issues of faculty and residents, and to include various ethnicities, different sexual orientations, and individuals with disabilities in the patient participant groups. All focus groups were conducted in English, due to the inability of the researchers to hire a bilingual translator, thereby excluding non-English speaking participants from the study. The results of the study showed that in terms of understanding culturally competent communication, both faculty and residents emphasized language skills, cultural knowledge, and general attitude. The residents focused more on language skills, while the faculty tended to give greater importance to cultural knowledge and culturally sensitive attitudes. The patient responses tended to be on a very generic versus cultural level, such as taking time with the patient, exhibiting a caring attitude and interest in the patient's problem, and using a collaborative rather than authoritative model of care. With regards to barriers to culturally competent communication, residents and patients tended to blame each other, rather than take responsibility for failures in cross cultural communication. The residents tended to criticize interpreters or the patients themselves for creating obstacles to communication, while the patients placed the blame on the residents. The faculty tended to hold both patients and residents accountable for the barriers. For the patients, the focus was predominately on behaviors rather than cultural differences as barriers to communication.

Although a few white patient participants expressed the opinion that physicians and patients should be of the same ethnicity for optimal communication, this was not echoed by the non-white participants. When discussing approaches for overcoming communication barriers with culturally different patients, both faculty and residents gave limited endorsement for didactic cross-cultural education. Faculty and residents advocated for (a) developing language skills, (b) working with interpreters, (c) acquiring personal knowledge of patients, and (d) maintaining an attitude of interest and respect as a means to overcome communication barriers. Faculty placed greater emphasis on their own role-modeling as being a key approach, while residents tended to feel that experience was the best way to develop the necessary skills. The patients emphasized the importance of careful listening and empathy on the part of the physician as means to overcome communication barriers.

In a second study looking at self-perceived attitudes and skills of cultural competence, a survey was performed of 107 first, second, and third year family and internal medicine residents to determine the residents' perceptions of competent, cross-cultural doctor-patient communication (Shapiro et al., 2003). Using a novel, 69-item, Likert-type scale questionnaire, the researchers examined the dimensions of (a) relevance of sociocultural factors, (b) perceived competence in dealing with sociocultural issues, (c) frequency of usage and helpfulness of specific cross-cultural communication techniques, and (d) extent to which certain patient cross-cultural characteristics presented problems in communication. The questionnaire also addressed curricular content areas related to cross-cultural communication. The 57 respondents to the questionnaire included 19 females and 36 males, with 23 of the respondents self-identified as other than non-

Hispanic white ethnicity. Overall the residents perceived sociocultural issues as relevant to clinical practice, rated themselves as moderately competent in cross-cultural communication skills, and tended to use a range of cross-cultural communication techniques frequently, finding them to be quite helpful. Insufficient time was rated as a moderate to severe barrier to communication by 92% of the residents, and over half of the residents rated patient characteristics as posing moderate to serious problems interfering with effective culturally competent communication. Differences were noted between family medicine and internal medicine residents, with family medicine residents more likely (a) to rate sociocultural factors as relevant to the practice of medicine, (b) to rate themselves as competent in cross-cultural communication, and (c) to find the cross-cultural communication techniques they used to be helpful. The most useful topics for a cross-cultural curriculum identified by the residents included patient health beliefs and patient expectations of physicians, while the least useful topics were residents' own attitudes and training in cross cultural communication skills. Time constraints, lack of relevant materials, resentment at having this topic take up valuable curricular time, and lack of interest of both the residents and the faculty were listed as barriers to the introduction of a cross-cultural curriculum. Overall there were similar responses across ethnic groups, indicating that residents from both the majority and minority groups view cross-cultural issues similarly. The tendency of the residents, as was similarly noted in the previous study by Shapiro et al. (2002), was to use patient deficiencies as an explanation for difficulties in cross-cultural communication.

International and domestic immersion and clinical experiences have been suggested as one strategy to teach medical students and residents' cultural competence

(Like et al., 1996; Taylor, 1994). In a 7-year study documenting the educational impact of clinical rotations in developing countries for medical students, Bissonette and Route (1994), found a self-reported greater appreciation for the role of family and culture in health and disease in addition to increased skill and confidence with certain technical skills. Godkin and Savageau (2001), found that preclinical medical students participating in an elective global multiculturalism track, which included domestic and international immersion experiences, had (a) self-reported greater knowledge of certain aspects of local cultures, (b) more tolerance of people from non-English speaking cultures, and (c) more comfort with patients from other cultures compared with non-track participants. In a second study, Godkin and Savageau (2003) investigated the effect of international electives on the attitudes of preclinical and clinical year medical students. Although they found that the overall effect was different for the two groups of students, perceptions and values conducive to serving underserved multicultural populations, such as self-reported increases in cultural competence and personal attributes like idealism and enthusiasm, were found with both groups.

The literature from the field of medicine shows that medical school curriculums provide what is perceived to be inadequate instruction in issues related to cultural competence and cultural sensitivity. Furthermore, the studies performed with residents show that they tend to place the responsibility for cross-cultural communication difficulties on patients, rather than on themselves. Although there is literature to support inclusion of cross-cultural competence material into the didactic portion of physician training, the present studies show role-modeling by faculty and experience to be the residents' preferred means for developing cross-cultural competence. International and

domestic immersion and clinical experiences appear to have a positive impact on personal and professional growth related to cultural competence, similar to the findings in the nursing literature.

Similar to the nursing literature, there are few sound research studies related to cultural competence in literature from the field of medicine. The studies that have been performed tend to be on single programs, limiting the ability to generalize the results. Although there is an identified lack of curricular content related to cultural competence in the medical school curricula, there remains a lack of consensus as to when and how to address these issues, whether in the didactic portion or the residency portion of physician training or both.

Occupational Therapy Literature

There are several studies documented in the occupational therapy literature that relate to cultural competence, both of practicing occupational therapists and occupational therapy students. A qualitative study related to cross-cultural practice was performed by Scott (1997) using practicing British occupational therapists. The purpose of the study was to investigate the therapists' perceptions of their own cross-cultural experiences in the clinical setting, and to identify approaches to practice that would help facilitate culturally appropriate delivery of care. Nine occupational therapists practicing at seven different facilities in culturally diverse areas of London volunteered to serve as the sample for this study. Through personal diaries and semi-structured interviews, the author reported findings which fell under two main topics: difficulties and concerns, and culturally sensitive approaches to practice. The difficulties and concerns reported by the therapists included accuracy in interpretation of clients' behaviors, language differences,

and reluctance of clients' to communicate with therapists if they were from different cultural backgrounds, all of which contributed to the therapists feeling frustrated with the therapeutic relationship. With regards to culturally sensitive practice, the therapists' identified focus on family and home environment, analysis of the client's socio-economic status, the need for the therapist and the client to learn from each other about his/her respective cultural differences, and a greater awareness of personal attitudes and stereotypical beliefs of people from different cultural backgrounds as being necessary. The author concluded that the results of this study supported the need for a broader educational curriculum in the occupational therapy profession to provide a solid foundation on which the students could build effective cross-cultural skills. Suggested content included the social sciences such as sociology and anthropology, politics of health care, and psychology of disability as an illness experience (Scott, 1997).

In exploring the influence of demographic and educational variables on the self-reported multicultural competencies, Pope-Davis et al. (1993), investigated practicing occupational therapists in California, Illinois, and Iowa. There were 94 participants in the study, 90 women and 4 men, primarily Caucasian, ranging in age from 21 to 68. The majority of the participants held bachelor's degrees, with the remaining participants holding either master's or associate degrees. Work experience ranged from 1 to 396 months. Thirty-six percent of the participants had completed a multicultural course, 30% had attended a seminar or workshop, and approximately 75% of the participants reported less than half of their work had been with patients of color. The Multicultural Counseling Inventory (MCI), designed to measure multicultural competencies on the four subscales of awareness, knowledge, skills, and relationship, was adapted by the authors for use with

the participants along with a demographic questionnaire. The results suggest that there is a definite difference in perceived multicultural competencies among these practicing occupational therapists. The authors found that multicultural course work, seminars and workshops, percentage of minority patients worked with, and highest degree held correlated significantly with higher self-reported multicultural competencies. The researchers also point out the significance of the absence of any significant correlation between the relationship subscale (which measures the interaction process with minority patients, such as comfort level, world view, and trustworthiness), and the demographic and educational variables. The authors suggest this may be due to the instrument's inability to accurately measure these competencies, or may suggest the current educational curricula are not imparting these specific abilities within that domain. The researchers also point out that age and experience were uncorrelated, tending toward negative correlations with the multicultural scales, which may be indicative of a need for ongoing training with older or more experienced therapists. Overall the authors felt this study underscores the importance of academic programs that incorporate multicultural course work as being likely to better assist their students in becoming multiculturally skilled therapists (Pope-Davis et al., 1993).

Whiteford and Wilcock (2000), in a 3-year, qualitative study of 15 occupational therapy students at a university in New Zealand, investigated the students' experience related to development of knowledge, skills, and competency to practice in diverse, multicultural settings. Using a series of three, semi-structured interviews, the researchers investigated how the students learned to understand and work with people from diverse social and cultural backgrounds. The researchers also explored the students' perceptions

of the importance of previous life experiences and relationships in developing skills to work with people from different cultural backgrounds, and how they felt their educational curriculum, including the role of fieldwork, assisted them in their learning and competency development. Two major themes, the relationship between occupation and culture and independence, and their relevancy to intercultural practice, emerged as key issues from the study. Specifically, the participants noted the potential for differences in cultural values as well as the personal, familial, and social implications related to work and productivity, and the importance of being independent. Several participants critiqued both concepts as being largely Western cultural constructions. One participant even suggested that the concept of occupational therapy itself is a Western notion, which may not fit with other cultural orientations. The authors suggested that the findings from this study highlight the need for further investigation into the concept of occupation as a complex, culture bound concept, and to consider the personal, familial, and social implications of focusing on independence as an outcome in intercultural occupational therapy intervention. In addition to educational curricula grounded in occupation, other content with the purpose of understanding the complexities of the human in various cultural contexts was suggested (Whiteford & Wilcock, 2000).

While the importance of culture has been documented to some degree in the occupational therapy literature, there has been limited evidence of how culturally sensitive practice develops. While looking at the preparation of occupational therapy students for practice in a multicultural society, Dyck and Forwell (1997), and Forwell et al. (2001), reported findings from the first year of a three-year qualitative, twin study of occupational therapy students from programs in Canada and New Zealand. Through the

use of in-depth interviews and fieldwork journals, the studies investigated the students' perceptions of their cultural competencies and the educational experiences that helped to form these perceptions. Since the articles generated from the research report on different results, they will be discussed separately. In the study performed at the Canadian program, interviews were held during the first few weeks of classes in the first year of a three-year occupational therapy program (Dyck & Forwell, 1997). During those interviews, as the researchers attempted to get a baseline of the students' perceptions of the students' level of cultural competence, 17 students reflected on prior, everyday life experience with individuals from different cultural groups; the skills and attributes they felt they already possessed; and the skills and knowledge that they perceived as necessary to be competent to work in a culturally diverse setting. Fifteen of the students were raised in British Columbia, with all but four of the students being raised in predominately urban areas. Seven main areas of the students' lives, which included the place where they had grown up, influences from family, university or college life, volunteer or paid work, having a partner or friend from a different cultural background, and travel were identified in the interviews as having been the source of experiences with people from different cultures. Using journals the students were issued prior to commencing fieldwork placements, the students' documented cultural situations encountered during their fieldwork experiences, providing comments on their response to the situation as well as their interpretation of how the situation was handled. Definitions of culture, ethnicity, and race were not provided for the students so the researchers could ascertain what the students perceived as being culturally significant. In post-placement interviews, cultural situations encountered during the fieldwork placements were explored and the

students were asked to comment on their perception of what academic preparation, if any, had prepared them for these occurrences. The two main themes reported on in this study, Canadian-ness and making sense of difference, emerged from the analysis of the data collected from the interviews and journal entries. In looking at the theme of Canadian-ness, the researchers found that many of the students compared situations they encountered with what they perceived to be the mainstream Canadian or North American culture, rarely talking of racial or ethnic groups. The students commented on generational and regional differences, as well as the effect of a lowered socioeconomic status on lifestyle. With regards to the theme of making sense of difference, findings included those situations where the student used cultural as a rationalization for the situation, or weighed a cultural explanation against other explanations for what they observed. The students frequently perceived that differences in the client's culture compared with the majority culture as an explanation in understanding a particular response to a therapeutic intervention. Culture was often seen as a significant explanation in assessments, attitudes and concepts related to disability, mental illness, pain and aging, and situations where family organization and the role of the caregiver were at issue. The results also showed there were various situations where the students were unsure about using culture to explain the situation, particularly if they were unsure about how to operationalize the concept of culture, if the situation was ambiguous where alternative explanations were feasible, and if stereotyping were possible. Educational preparation in terms of course content prior to fieldwork placements was rarely identified by the students as being influential in making sense of the cultural situations. In terms of educational implications of the findings of this study, it was suggested by the authors that

clarification of cultural issues and theoretical constructs pertaining to occupational therapy practice in a multicultural society would be most useful if they came early in the curriculum, prior to fieldwork placements. This should help the students better gain from cultural experiences and encounters during these placements.

In a second article generated from this twin study, Forwell et al. (2001), highlighted the similarities and differences of the curricular content of the two programs, including how cultural content is presented. In addition to some differences related to sequencing of occupational therapy specific courses and type and duration of first-year fieldwork experience, the management of cultural content varied between the programs. In the New Zealand program, there is a specific course related to the current health issues faced by one of the two indigenous groups identified in the self-identified bicultural society. This group, while identified as one of the two majority populations of the country, experiences a significantly lower health status than the other group, and there is a nationwide effort to enhance the health status of this group. In contrast, the Canadian program does not have a separate course related to culture, but instead integrates cultural issues in several courses throughout the program. The sample for the New Zealand program consisted of a purposeful sample of 21 students from a class of 60, chosen to represent the total cohort with respect to gender, age, and ethnicity. Forwell et al. (2001), points out that the samples from the two programs were similar in terms of demographics, but differed in their formal education prior to beginning the occupational therapy programs, with the students from the Canadian program all holding some type of degree. While the authors report 15-20 themes emerging from the data, this article focused on three themes: (a) identification and value of cultural content by course and

method of teaching; (b) occupational therapy curriculum's contribution to addressing cultural issues in practice; and (c) perception of further knowledge, skills, and strategies needed. With respect to the first theme, over half of the Canadian students identified course content related to cultural issues, with high regard for the educational value. With the New Zealand students, the views were varied as to the contribution of specific course work on the ability to work in a diverse setting, with some finding the specific course related to the indigenous population to be very valuable. There was a fairly unanimous perception by the students from both programs as to the value of anthropology or sociology as assisting with initial fieldwork. Teachers' style and nature of interactions with the students, and the use of hypothetical case studies emerged as being the most valuable with regards to the methods of teaching associated with theme one. According to the instructors of the Canadian students, additional cultural material presented in the form of storytelling and audiovisual material was presented to the students, and while they did not seem to recognize these methods as explicitly contributing to cultural content, some of the students referred to this material during their interviews. For the second theme, the contribution of the curriculum to addressing cultural issues in practice, both the New Zealand and Canadian students provided varied responses. Some students felt the curriculum provided them with a solid foundation, while others found little to no integration between subject areas. Still others felt that they already had the foundation from previous study and life experiences. The third theme, perception of further knowledge, skills and strategies needed, also showed a significant variation in responses. Some of the students from both programs expressed a perception that they needed to learn more specific information about selected cultural groups in terms of beliefs,

practices, and traditions, while others thought a more global approach is more appropriate. The areas of further learning expressed by both groups included cultural traditions of other groups such as view of disability, family structures, role of the elderly and view of medical practices, and communication skills such as languages, terminology, and politically correct documentation. The Canadian students also identified the need for further self-development on ways to behave, working in groups and developing facilitation skills, open-mindedness, and the ability to listen. Optimal methods of learning cultural competence suggested by the students included interaction with people from different cultures, case studies, use of library resources, talking with colleagues, role playing, and having a resource handbook of do's and don'ts. The conclusions presented by the authors based on the results of this study included the impression that students are struggling with the concepts related to culture and cultural competence, further confirming the challenging nature of these concepts. They also discussed the expressed desire of students to learn through contact with what the students perceived to be real, and wanted concepts relating to identity and difference to be delivered in a creative manner. Finally, the authors concluded that the students' value and desire to be culturally competent practitioners, however they are wrestling with whether to achieve that through specific or general means, and how much information is needed.

Although nursing and medicine have numerous studies related to the value of international experiences, there is only one such study in occupational therapy, which also included a student from a physical therapy program in the same institution. Using a sample of four occupational therapy students and one physical therapy student, a qualitative study was performed to determine the impact of a field immersion experience

in Belize on the participants' cultural awareness (Ekelman, Bello-Haas, Bazyk, & Bazyk, 2003). A series of predetermined educational strategies that the students participated in both before and after the experience allowed data to be collected from a variety of sources. Using student journals, reflection papers, field notes and transcription notes from a formal discussion of the experience, the authors suggested the following themes: (a) anticipation, (b) heightened vigilance, (c) making connections with villagers, (d) meaningful confusion, (e) reflection and (f) relevance to practice as indicative that the students developed cultural competence skills beyond the knowledge and awareness levels. In addition to recommending international field immersion experiences as a means to enhance education curricula related to cultural competence, the authors suggested for practical and economic reasons, programs should consider local immersion and service learning projects in communities with diverse populations. The key to immersion experiences, as suggested by the authors, is to remove the students completely from their familiar environment to allow them to interact with others who are different from them.

The results of the occupational therapy literature suggest that practicing occupational therapists who have completed multicultural coursework, work with a diverse population, and have a higher educational level, tend to have higher self-reported multicultural competencies. Students in occupational therapy programs emphasized the importance of courses in the social sciences as well as content related to cultural issues in building the foundation for achieving cultural competence. The importance of working with a diverse population during fieldwork placements, and international or domestic immersion experiences is also evident in the occupational therapy literature.

Limitations of the studies in occupational therapy are similar to nursing, primarily with the lack of rigorous research studies. Although the occupational therapy literature contains studies investigating the impact of education on the development of cultural competence, the majority of the published literature is the result of a single major study. This also limits the generalizability of the findings to the occupational therapy profession as a whole.

Physical Therapy Literature

There are several articles documenting the need for content related to cultural competence in addition to suggestions of ways to include content related to cultural competence in medical, nursing, and occupational therapy curricula (Campinha-Bacote et al, 1996; Cook & Cullen, 2000; Lyman, 1992; Pope-Davis et al, 1993; Rosella et al, 1994), but there is little documented in physical therapy education. This lack of documentation in the physical therapy literature hinders the evaluation of physical therapy programs in their ability to meet the accreditation criteria related to cultural competence. To date, only three studies have been published regarding inclusion of multicultural content in the curricula of physical therapy education programs (Babyar et al, 1996; Kachingwe, 2003; Kraemer, 2001).

The first study, which was a survey sent to all physical therapy programs in New York State, used a two-part questionnaire to survey faculty members asking them to describe the type, frequency, source, and situation for references made to gender difference, race, cultural, religious, socioeconomic, and sexual preference issues (Babyar et al., 1996). The first part of the survey was a structured, grid format to document the previously mentioned information. The second part of the survey consisted of a one-page

questionnaire with open-ended questions pertaining to the course and the respondents' degree of exposure to cultural and gender issues and the degree of influence this exposure had on their teaching. A list of resources utilized regarding cultural and gender issues that assisted their teaching was also requested. Nine of 13 physical therapy programs responded, and 34 out of 121 faculty members from these 9 programs responded for a 25% faculty response rate. The purpose of this study was to establish a baseline of existing practice regarding the inclusion of cultural and gender issues in New York State PT education programs. The author reported that while culture and gender issues were being discussed in multiple courses, there were no reports of special courses or units within the physical therapy curriculum, or having a programmatic plan to integrate material of this nature into the curriculum (Babyar et al, 1996). The gender and racial composition of the faculty members and student body in these nine PT programs was also investigated, with 54.5% of the faculty members at participating institutions being non-minority females, 40% being non-minority males, and the student body at each program consisted mostly of non-minority females as well (Babyar et al, 1996). Personal experience was found to be what faculty members utilized most to relay information about culture and gender issues, which is interesting given the lack of diversity in the faculty makeup and the current push for evidence-based practice in medical fields.

In another study, Kraemer (2001), identified the need for a more culturally competent medical workforce due to the rapidly changing demographics of the United States. She also identified the professional lag of the physical therapy profession in addressing the issue of cultural diversity and providing culturally congruent cross-cultural care. Additionally, she discussed the profession's ethnocentric position, a 60-year

traditionalist curriculum history, and the historical majority female practitioner, among other factors, as significantly impacting the practice and education of physical therapists during this cultural shift (Kraemer, 2001). In a qualitative case study, the author explored the perceptions and experiences of 12 randomly, but purposively selected, entry-level PT students from one physical therapy education program, regarding the provision of culturally congruent care in a clinical setting. The participants included 10 females and 2 males, with 9 classified as Caucasian, 2 as African American, and 1 as Asian. She reported that a lack of clinical preparation, a lack of awareness of barriers and clinical cultural clashes, and a lack of available resources were the three main themes that emerged from the study related to the students' perceived clinical preparation for providing culturally congruent care.

Most recently, Kachingwe (2003), interviewed 28 physical therapists from a variety of geographic locations, to investigate diversity and multiculturalism in the physical therapy profession. The sample was predominately female (70%), African American (56%), and the majority of the sample indicated the academic setting as their primary employment setting. The purposes of the study presented in the article were, (a) to investigate the importance of diversity and multiculturalism in the profession, and (b) to develop a model suggesting how diversity and multiculturalism can be attained in physical therapy education. The researcher used a grounded theory methodology, which allowed for the emergence of a thematic model to become evident while she was still collecting data. The model, entitled interculturalization, was used to describe the coexistence of diversity, multiculturalism and conviction. A Venn diagram consisting of three, overlapping circles, was constructed to represent the schema. Feedback from a

focus group of five participants was obtained to verify the model. Further analysis of the data revealed four major themes related to this concept of interculturalization: (a) incidental learning, (b) understanding of physiological differences, (c) understanding of cultural differences and similarities, and (d) fostering an inclusive environment. With respect to incidental learning, many of the participants suggested that incidental learning (the unintentional learning that takes place during daily experiences and interactions) among diverse students is integral to increasing knowledge about different cultural beliefs and practices. Since most physical therapy students spend many hours a day together both in and out of the classroom, this presents a wealth of opportunities for them to learn from each other. The participants pointed out that discussion about cultural issues does not compare with directly witnessing cultural variations, and may even lead to misconceptions. The second theme of understanding physiological differences among individuals again relates to having a diverse student body. This allows students to directly witness how different physical therapy interventions produce different physiological responses, and gives them additional practice treating people who differ physiologically. Understanding of cultural differences and similarities, which included not only obvious differences of language, gender, or skin color, but also family responsibilities, age, sexual orientation, socioeconomic status, and where they were raised, emerged as the third theme. The participants once again commented on the need for diversity in the student body as a means to facilitate this understanding of similarities and differences, considering the potential for stereotyping when attempting to discuss cultural issues with a homogenous group. Faculty conviction was also mentioned as being important in fostering the understanding of cultural differences and similarities as

well as in the final theme of fostering an inclusive environment. The participants felt that especially with a diverse student body, inclusion of multicultural content may potentially heighten student self-esteem, and heighten awareness of faculty and students for a nurturing a welcoming environment for diverse students. The author concludes that due to this inexorable link between diversity, multiculturalism, and conviction, trying to attain diversity or infuse multiculturalism without conviction may be futile.

While the profession of physical therapy continues to struggle with issues related to cultural content in physical therapist professional education, the ability to measure cultural competence needs to be addressed. In the single study in the physical therapy literature related to measures of cultural competence, Kraemer and Beckstead, using a sample of 342 entry-level master's degree students, established the reliability of the Cross Cultural Adaptability Inventory (CCAI) (Kraemer & Beckstead, 2003). A total of 288 students participated (89% response rate) from the sample of convenience obtained from four, accredited physical therapy education programs in the Mid Atlantic region of the United States. The CCAI is a self-reported, 50-item inventory that measures the cultural adaptability subscales of: (a) emotional resilience, (b) flexibility/openness, (c) perceptual acuity, and (d) personal autonomy. Using the Cronbach alpha coefficient of internal consistency, the results showed the total score for the CCAI had an estimated reliability of .90, with reliability estimates for each of the subscales ranging from .59 to .83. While the authors concluded overall that the CCAI is a reliable instrument, they suggested that the total score may prove to be more useful in future studies than the individual subscores, and recommended additional research using the instrument on physical therapy students.

The results of the physical therapy literature suggest that there is a significant need for the inclusion of content related to cultural competence in physical therapist education programs. In addition, the most recent article by Kachingwe (2003) highlighted the need for a diverse student body in physical therapist education programs.

The major limitation of the physical therapy literature is that there is very little literature related to cultural competence in the field. The few studies that have been done were performed using small samples. While the literature does have two studies directly related to physical therapist education, the Babyar (1996) study was limited to one state, and the Kraemer (2001) study to only one program. There has been only one study performed related to measures of cultural competence. This significantly limits the ability to generalize the results of these studies to the physical therapy profession as a whole.

Models For Cultural Competence

Normative model for physical therapist education. Developed specific to the professional education of physical therapists is the Normative Model for Physical Therapist Education (APTA, 1997, 2000). The Normative Model is a consensus based model designed to provide physical therapist professional education programs with a mechanism for evaluating and refining curricula, as well as a means of minimizing programmatic diversity (APTA, 1997). In considering the rapidly changing healthcare environment, the document was revised in 2000. In addition to a more concise presentation of the material, the latest model has the following changes: (a) revision of the content to reflect contemporary knowledge of the clinical and foundational sciences, (b) revision of terminology to reflect language in other APTA documents, (c) an

improved balance of content across all practice expectations, with full integration of the academic and clinical education components, (d) and changes related to information on clinical education administration and the addition of an appendix that outlines the expectations for the preferred relationship between the physical therapist and the physical therapist assistant (APTA, 2000).

The framework for the original Normative Model consisted of curricular portions that translated practice expectations into educational outcomes, identified necessary content categories, and provided descriptions of potential strategies to achieve these outcomes (APTA, 1997). The current model operates on the same framework, although the suggestions for potential strategies to achieve the educational objectives requires more interpretation in the 2000 Normative Model.

The Normative Model is designed to provide a matrix for educators that includes, primary content, terminal behavioral objectives, and examples of instructional objectives for both the classroom and clinical practice. This allows educational programs not only to determine whether their curriculum is up-to-date with current expectations, but also allows them to evaluate and revise their educational objectives accordingly (APTA, 2000). Concepts related to cultural content are woven throughout the model, in the foundation science and clinical sciences sections, as well as in the practice expectations section. The foundation and clinical sciences refer to content that deals primarily with biological variations related to disease and systemic variations. The practice expectations section contains a specific expectation relating to individual and cultural differences that states the student “displays sensitivity to individual and cultural differences in all professional interactions” (p.61). The primary content for this practice expectation

ideally comes from the foundation and clinical sciences as well as specific content related to cultural competence.

Purnell's model for cultural competence. Although the Normative Model is familiar to all accredited physical therapy programs, the addition of components from Purnell's model for cultural competence helps to clarify and expand on some of the vague concepts in the Normative Model and in the physical therapy literature. Purnell proposes an evolving Model for Cultural Competence, which is designed to provide a systematic and comprehensive framework for learning culture (Purnell 2000; Purnell 2002; Purnell & Paulanka 1998). While originally designed for nursing as an organizing framework to use as a cultural assessment tool, the framework is proposed to be relevant to all health-care providers, and easily utilized in any practice setting, making it ideal for the present team-oriented health care system (Purnell, 2002). Figure 1 shows Purnell's Model for Cultural Competence. The diagram used to depict the model developed by Purnell is a circle with four outer concentric rings, a pie-shaped inner circle, and a dark center core. The outermost ring represents global society, the second ring represents community, the third ring represents family, and the fourth, innermost ring represents the person. The pie-shaped inner circle is divided into 12 wedges, depicting the interconnected cultural domains considered common to all cultures which are: overview/heritage, communication, family organization, workforce issues, biocultural ecology, high-risk behaviors, nutrition, pregnancy, death rituals, spirituality, healthcare practices, and healthcare practitioners. The core of the circle is a dark center that represents an unknown phenomenon. This model has been suggested as valuable for the practice of

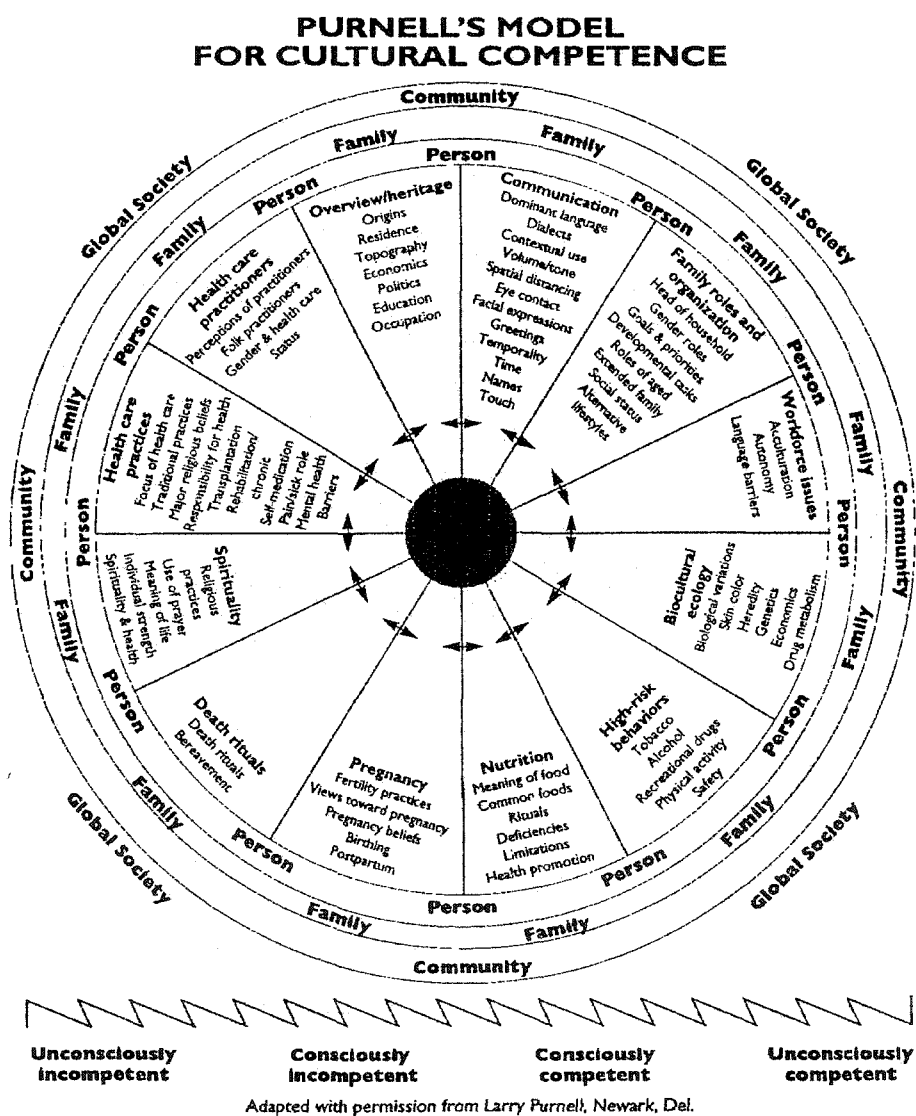
physical therapy, as a means of offering direction for therapists seeking to educate clients and in the education of future therapists (Black & Purnell, 2002).

Purnell (2000) suggests that cultural competence is a non-linear process, in which “a culturally competent health care provider develops an awareness of his or her existence, sensations, thoughts, and environment without letting these factors have an undue effect on those for whom care is provided” (p.43). Purnell proposes that the culturally competent health care provider is able to adapt his or her provision of care in a manner that is compatible with the culture of the client. Selected primary and secondary characteristics of culture and selected domains from the Purnell model have been used in two published studies as a guide for questionnaire development, data analysis, and discussion (Purnell, 1999; Purnell, 2001). He performed a two-part, multinational descriptive study looking at Panamanians’, Panamanian Americans’, and Guatemalans’ practices for health promotion and wellness, disease and illness prevention, and the meaning of respect afforded to them by health care providers. Eight of Purnell’s 12 domains, including overview/heritage, communication, family organization, high-risk behaviors, nutrition, spirituality, health care practices, and health care practitioners, were utilized to help design the framework for the open-ended questionnaire used in the studies (Purnell, 1999; Purnell, 2001).

While all 12 domains described by Purnell are relevant to the provision of culturally competent health care, not all of the domains are readily applicable to the field of physical therapy. Communication, biocultural ecology, health care practices, and health care practitioners appear to be the most relevant to the profession of physical therapy.

Figure 1

Purnell's Model For Cultural Competence



According to Purnell's Model, the domain of communication includes: (a) dominant language and dialects, which encompasses contextual use of language, volume and tone of language; (b) cultural communication patterns, which include the willingness to share thoughts and feelings, the meaning of touch, spatial distancing during communication, use of eye contact and facial expressions, and acceptable greetings; (c) temporal relationships, which include social versus clock time, interpretation of time factors and temporal orientation of the group; and (d) format for names, including expectations for greetings by strangers and health care practitioners. Communication, both verbal and non-verbal is a critical aspect of physical therapy practice. It is important for physical therapists to realize that the use of verbal and non-verbal communication holds different meanings in different cultures. The lack of this realization can significantly impede effective patient care (Black & Purnell, 2002).

The domain of biocultural ecology includes: (a) skin color and biologic variations; (b) diseases and health conditions including specific risk factors, common hereditary or genetic diseases or conditions, and increased susceptibility to and/or endemic diseases specific to a cultural or ethnic group and; (c) variations in drug metabolism. It is imperative that a physical therapist understands the physiologic variations that occur in individuals, since this can guide the examination process and significantly impact the outcomes of the physical therapy interventions.

The domain of health care practices includes: (a) health seeking beliefs and behaviors; (b) responsibility for health care, including who assumes responsibility, the

role of insurance, and behaviors associated with over-the-counter medications; (c) folklore practices; (d) barriers to health care such as language, economics, and geography; and (e) cultural responses to health and illness which includes beliefs and responses to pain, beliefs, and views regarding mental and physical handicaps, beliefs related to chronicity and rehabilitation and perceptions of the sick role. It is critical for health care professionals to understand the significance culture has on one's interpretation and understanding of health and illness. Although the biomedical or Western style of medicine prevails in the United States, the increasing diversity of the population necessitates an understanding of other cultural beliefs toward healing if effective care is to be given. It is important to realize that not all cultures hold the same values, which can influence beliefs surrounding concepts such as achieving independence, and response to pain which may be related to the goals set in physical therapy.

The domain of health care practitioner includes: (a) traditional versus biomedical care, considering the roles of tradition, folklore and magicoreligious practitioners as well as age and gender of the health-care practitioner; and (b) status of the health-care provider within the specific society including how the different health care practitioners view one another. Physical therapists must realize that different cultures have different levels of confidence and trust in health care practitioners, particularly those trained in the Western style of medicine. Distrust in the health care provider can lead to a barrier in the effective delivery of health care services.

A combination of the Normative Model for Physical Therapist Professional Education and the Model for Cultural Competence described by Purnell were utilized as a

foundation for the development of the instruments to be used in this study. The review of the literature from nursing, medicine, and occupational therapy also contributed to the development of the instruments.

Conclusion

The dearth of literature from the physical therapy profession regarding the issue of cultural competence in physical therapist professional education is the main impetus for this study. Numerous articles from other health care professions' literature document the importance of content related to cultural competence and diversity, with some providing suggestions as to how to incorporate this information into educational curricula. However, the overall lack of research into the usage and effectiveness of these strategies necessitates study in this area. Since it remains essentially unknown what the physical therapist education programs are doing to provide content related to cultural competence, this research study will attempt to determine how and to what extent content related to cultural competence is currently being integrated into physical therapist professional education.

CHAPTER III

METHODS

Design and Overview

This two-phase study was a descriptive, comparative study using a mixed methodology of both qualitative and quantitative measures. Phase one of this study consisted of 10 face-to-face interviews with program directors attending the Academic Administrators Special Interest Group meeting in October, 2003. The interviewees were selected from 10 professional preparation physical therapy programs based on a snowball or chain sampling strategy (Patton, 2002). The second phase of this study consisted of a questionnaire sent to the program directors of the 193 professional preparation physical therapy programs that are accredited by the Commission for the Accreditation of Physical Therapist Education (CAPTE). Analyses was performed on documents provided by the interview participants, and was used to confirm and augment the findings from the interviews.

Participants

The participants for the interview phase of this study were the program directors from 10 professional preparation physical therapy programs. There were 7 female and 3 male participants from physical therapy programs in various regions of the country. The interview participants were selected from a pool of attendees of the 2003 Academic Administrators Special Interest Group meeting using a purposeful sampling strategy of snowball or chain sampling (Patton, 2002). Snowball or chain sampling, as described by Patton (2002), is a process by which well-situated people assist the researcher in locating information rich key informants or critical cases. Typically by asking a number of people who to contact, a greater number of information rich informants are discovered, hence the snowball effect. Often the list of informants will initially diverge and then converge as a

few key names are mentioned repeatedly. A list of potential interviewees was generated by the researcher and two colleagues, well-known in the field of physical therapy education. Individuals were contacted via email prior to the meeting to request their participation in an interview. This process was repeated until a total of 10 interviews were scheduled. Two additional interviews were tentatively scheduled as a backup in case of cancellation of any of the scheduled interviews.

The participants for the second phase of this study were the entire population of 193 accredited professional preparation physical therapy programs in the United States. A questionnaire was sent to the program directors of each of these programs with the option for the program director to delegate the completion of the questionnaire to a designated faculty member if he/she desired.

Measures

For each of the measures utilized in this study, a blueprint was created and reviewed by the researcher and members of the researcher's dissertation committee, one of whom has expertise in physical therapist education, and the other with expertise in survey methodology. After review and discussion, the blueprint was revised and the questions were developed for the instruments used in this study (see Appendices A and B). Content validity for both instruments was established by a panel of three expert reviewers: (a) one member of the dissertation committee with experience in physical therapy curricula; (b) a former member of the Cultural Competence Committee of the APTA; (c) and a nurse educator familiar with Purnell's model of cultural competence.

Interviews. Interviews were conducted with 10 program directors that agreed to participate in the interview portion of the study. The content for the interviews was developed based on the domains described by Purnell (1998, 2000, 2002), in his Model for Cultural Competence, and the Normative Model for Physical Therapist Education

(APTA, 2000). The interview consisted of seven questions related to type and extent of content related to cultural competence currently offered in the physical therapy program of the interviewee. The interview consisted of three open-ended questions related to type of content within the domains of communication, biological and cultural differences, and health care practices and practitioners. Each of these questions had a list of potential probes to be used if the interviewee did not respond to all of the areas specified under these domains. The probes also allowed for further elaboration and explanation of topic areas, and allowed for examples to be given. There was one open-ended question related to clinical education experiences offered by the program and one open-ended question related to the methods used to teach content related to cultural competence. Each of these questions had probes that were used as follow-ups when necessary. There was one open-ended question related to how the program measures cultural competence of its students, and a final open-ended question that prompted the interviewee to provide any additional information not already addressed in the interview related to how his or her program includes content related to cultural competence in their curriculum (see Appendix C for interview blueprint).

Prior to performing the actual interviews, a pilot interview was performed with the program director of the physical therapy program at Old Dominion University to examine the wording and language of the questions, confirm the order and flow of the questions, and determine the amount of time it took to complete the interview. The findings from the pilot interview were positive, and the interview was not modified from the original format. Since the interviews were performed first, the information obtained from the interviews was used to make minor wording modifications to the questionnaire.

Questionnaire. A 54-item questionnaire was utilized for the second phase of this study. The content for the questionnaire was developed based on the domains described by Purnell (1998, 2000, 2002), in his Model for Cultural Competence and the Normative Model for Physical Therapist Education (APTA, 2000). The initial portion of the questionnaire consisted of five demographic questions related to the type of degree offered (master's vs doctoral), and number and racial makeup of primary faculty members as well as students. The remainder of the questionnaire contained both closed and open-ended questions regarding prerequisite and current coursework in social sciences, types of clinical education experiences offered, and materials and measures used related to cultural competence. There was a portion of the questionnaire designed to measure extent of cultural content and consisted of three subsections: (a) communication, (b) cultural and biological differences and (c) health care practices and practitioners. A 6-point Likert-type scale was utilized to measure the extent to which the respondent reports the program teaches content or provides student experiences in the respective areas. The scale ranged from doesn't cover at all (one) to covers exceptionally (six) for each of the three subsections. The *communication* subsection or scale contained 16 items related to both verbal and non-verbal communication, views regarding clock versus social time, learning styles, and religious and sexual orientation. The *cultural and biological differences* subsection contained nine items related to physiologic differences based on race/ethnicity, gender, and age. The *health care practices and practitioners* subsection contained 12 items related to cultural and religious beliefs as well as socioeconomic factors related to health care practices and variations in cultural views toward health care practitioners (see Appendix D for questionnaire).

The use of Purnell's model and the Normative model also assisted in establishing content validity. Purnell's Model is considered to be an evolving model, but has been utilized by nurses, nutritionists, physicians, physical therapists, anthropologists, and social workers for staff development and for education (Purnell, 2002). The Model has also been utilized in qualitative research studies by physicians and allied health professionals, with selected domains and concepts under each domain used to develop research questions for qualitative research, and to guide data collection for various Master's and Doctoral students for their theses and dissertations (Purnell, 2002). The Normative Model is a consensus model based on input from physical therapy faculty with experience in curricula, which helps to establish content validity of the instrument. Readability and face validity was established by the interviewees (as described in the procedure) and a panel of three physical therapy faculty who were not responsible for filling out the actual questionnaire as part of the study.

Internal consistency of the document was determined by using Cronbach's alpha. That is, inter-item consistency was estimated for each of the three scales on the questionnaire. The Cronbach's alpha is reported in the results chapter.

Procedure

Interviews. The interviews were performed at the Physical Therapy Educators Academic Administrators Special Interest Group meeting in early October, 2003. In considering the time constraints of both the interviewer and the interviewees, the interviews were performed in a standardized, open-ended interview format, with a standardized set of questions utilized for all interviews. As described by Patton (2002), the exact wording and sequence of the questions was determined in advance, with all

interviewees asked the same questions in the same order, although the probes and follow-ups may differ. The wording of the questions was strictly open-ended. The audiotaped interviews lasted approximately 90 minutes each. Following completion of the interview, the program directors were informed that they would be sent a self-addressed, stamped envelope along with a letter requesting documentation of the content related to cultural competence utilized in the Program to be used for document analysis in approximately two weeks. These documents could include syllabi, course descriptions, assignments, course packs, lecture outlines, textbook titles, references, and clinical education placement descriptions.

Immediately following the interview, 8 out of 10 participants were asked to examine the questionnaire and provide feedback on the readability and face validity of the document. They informed the researcher at that time if there were any items that were unclear. There was only one item, question number 15 in section II of the questionnaire that required clarification by three of the interviewees, so additional information was added to that question to further clarify.

Questionnaire. The questionnaires were sent to the program directors at each of the 193 accredited professional preparation physical therapist programs via email. A cover letter was included explaining the purpose of the study, and informing the program director that he/she may allow a faculty member to complete the survey if he/she feels that is appropriate for their Program, and a link to the survey instrument. There was an option for a paper copy to be mailed to the participant linked to the survey instrument, if they chose not to fill out the questionnaire electronically. As an incentive for participation in the study, the program directors were informed in the cover letter that

they will be sent a model with strategies for incorporating content and skills related to cultural competence at some point following completion of the study. Each program was assigned an identification number to maintain confidentiality.

A second electronic mailing was performed 2 weeks following the initial survey to those programs that had not returned their questionnaire. A third questionnaire was sent out electronically 4 weeks after the initial survey to the remaining non-responders (Bourque & Fielder, 2003). A 60% response rate was considered acceptable for this study (Portney & Watkins, 2000). A 60% response rate was not achieved after three attempts, so a fourth survey was sent electronically 6 weeks following the initial survey. A 60% response rate was still not achieved after this fourth attempt, so a paper copy of the questionnaire was sent to the program directors of the non-responders requesting their participation, with a self-addressed, stamped envelope included. A reminder postcard was sent out 2 weeks following the initial paper copy mailing to those programs that had not returned their survey. A 60% response rate was still not been achieved after the reminder postcard, so a second and final complete paper copy of the questionnaire was sent, 4 weeks after the initial paper mailing. A final response rate of 53.8% was achieved.

Data Analyses

Questionnaire. Cronbach's alpha, a reliability index, was utilized to measure the internal consistency of each of the scales of the instrument. Internal consistency refers to the extent to which items measure the same characteristic (Portney & Watkins, 2000). The mean scores obtained for each of the subsections, communication, biological and cultural differences, and health care practices and practitioners served as dependent

variables in this study. These dependent variables were used to answer the research question related to what extent content related to cultural competence is incorporated into current, entry-level physical therapist education. To answer the research question what type of content related to cultural competence is incorporated in the curriculum, the scale scores from section three of the questionnaires were used, along with qualitative analysis of the open-ended questions from that section.

Descriptive statistics including frequencies and percentages were computed for the demographic data of the program and faculty. The four independent variables in this study were race/ethnicity of the core faculty (percentage of minority faculty), gender of the core faculty (percentage of female faculty), percentage of minority students in the program, and type of program offered. A multivariate analysis of variances (MANOVA) was performed to determine the effect of each of the independent variables on the three dependent variables. A MANOVA was utilized instead of ANOVA, since there were three theoretically and conceptually related dependent variables in this study.

Interviews. During the audiotape interviews, the interviewer took detailed notes. Once the interviews were completed, the audiotapes were used to augment the detailed notes and verify direct quotes. From the detailed notes, two separate researchers, the primary investigator and a graduate assistant in the physical therapy program trained by the primary investigator, reviewed the information independently and a set of topics was created based on the responses to the interview questions. The list of topics was sorted into major topics, unique topics, and other topics by each of the researchers. Each researcher, using the list of topics, created categories, choosing the best fitting name for each cluster of topics. The original data was then coded using an abbreviation for each

category. Reliability of coding was determined by calculating a kappa statistic, or the percentage of agreement between the two researchers with respect to the topics and categories. Refinement of categories and topics occurred as necessary, and the process of coding the original data was repeated until a kappa of at least .8 or 80% agreement was reached between the two researchers, indicating substantial to almost perfect agreement (Fink, 2003). Once the data was coded, it was reviewed and patterns and themes identified (Patton, 2002).

Document analysis. Documents obtained from the different programs were analyzed by creating a set of topics and categories based on the information contained in the documents. The review of the documents was used as a means to confirm the results obtained from the surveys and interviews.

Triangulation, or the combination of methodologies in the same study, was used to strengthen the study design (Patton, 2002). The qualitative and quantitative data collected in this study was compared, in an attempt to overcome the intrinsic bias that comes from a single method (Patton, 2002). Triangulation of the quantitative and qualitative interview data, questionnaire responses of program directors and/or faculty, and document analysis was performed as a means of confirmation and augmentation of the results.

CHAPTER IV

RESULTS

Data were collected from 104 out of 193 accredited programs in physical therapy in the United States for a 53.8% response rate to the questionnaire portion of the study. Either the program director or a designated faculty member filled out the questionnaire. The majority of the respondents were program directors (54.8%) versus designated faculty members. Of the 104 programs that responded, 47.1% offered a Doctorate in Physical Therapy (DPT) degree, with the remaining programs offering either a Master of Physical Therapy (MPT) degree or a Master of Science in Physical Therapy (MSPT) degree as their entry-level degree (see Table 2). Face-to-face interviews were performed with 10 program directors from various programs across the country. Of the 10 program directors interviewed, six provided documents to the researcher to be used for document analysis.

Table 2
Type of Program

| Type of Program | Number | Valid Percent |
|-----------------|--------|---------------|
| MPT | 32 | 30.8 |
| MSPT | 23 | 22.1 |
| DPT | 46 | 47.1 |
| Total | 104 | 100 |

The remainder of the results section will be organized by research question. The first question related to the type and extent of content related to cultural competence in physical therapist education will be addressed by both quantitative and qualitative data obtained from the questionnaire and interview responses. The second question related to the influence of program type and the demographic makeup of faculty and students on the cultural competence content will be addressed by quantitative data obtained from the questionnaire.

Type and extent of content

Quantitative. Table 3 shows the reported frequency for required prerequisite coursework based on questionnaire responses. When asked about specific required prerequisite coursework, 77 out of 104 participants (74%) reported requiring 2 or more psychology courses, with 2 psychology courses required most frequently (52.9%). Sociology courses were required less frequently, with one or more sociology courses

Table 3
Number and Percent of Required Prerequisite Courses

| Number of courses | Psychology | | Sociology | |
|-------------------|------------|---------|-----------|---------|
| | Number | Percent | Number | Percent |
| 0 | 7 | 6.7 | 59 | 56.7 |
| 1 | 18 | 17.3 | 35 | 33.7 |
| 2 | 55 | 52.9 | 6 | 5.8 |
| 3 | 20 | 19.2 | 1 | 1.0 |
| 4 | 2 | 1.9 | 0 | 0.0 |
| 5 | 0 | 0.0 | 1 | 1.0 |
| NA | 2 | 1.9 | 2 | 1.9 |
| Total | 104 | 100 | 104 | 100 |

required by 43 out of 104 programs (41.5%). Eighty-five out of 104 programs (81.7%) required coursework within the professional curriculum related to psychology of illness or patient behavior.

Based on questionnaire responses, the majority of the programs (74%) reported offering some type of multicultural clinical experience as part of their curriculum, while significantly fewer programs (26.9%) reported offering some type of international clinical experience (see Table 4). This was confirmed during the interviews, with 9 out of 10 of the interviewees stating they offer some type of multicultural clinical experience, but only 2 out of the 10 interviewees reporting they offered any type of international experience.

Table 4

Clinical Methods of Delivering Material Related to Cultural Competence

| | Number | Percent |
|--|--------|---------|
| Multicultural Clinical Experience | | |
| Yes | 77 | 74.0 |
| No | 23 | 22.1 |
| NA | 4 | 3.8 |
| Total | 104 | 100 |
| International Clinical Experience | | |
| Yes | 28 | 26.9 |
| No | 75 | 72.1 |
| NA | 1 | 1.0 |
| Total | 104 | 100 |
| Use of Standardized Patients | | |
| Yes | 19 | 18.3 |
| No | 80 | 76.9 |
| NA | 5 | 4.8 |
| Total | 104 | 100 |

When asked about specific methods of delivering content related to cultural competence including vignettes, case studies, and simulated cases, 8 out of 104 programs (7.7%) reported using none of the specified methods. Of the remaining 96 programs, 32 (30.8%) reported using all three methods, with the remaining programs using one or a combination of two different methods to deliver content (see Table 5). This was echoed in the interview responses with 9 out of 10 interviewees reporting they use either all three methods or a combination of two different methods. As noted in Table 4, a small percentage (18.3%) of the programs responding to the questionnaire reported using standardized patients with a cultural focus. This was similar to the interview responses, with 2 of the 10 interviewees reported using formal standardized patients in their curriculum, with two other program directors stating they use faculty and students as patients in an informal sense.

Table 5
Number and Percent of Methods of Delivering Content Related to Cultural Competence

| Method | Number | Percent |
|--|--------|---------|
| Vignettes | 10 | 9.6 |
| Case Studies | 17 | 16.3 |
| Simulated Cases | 7 | 6.7 |
| Vignettes + Case Studies | 21 | 20.2 |
| Vignettes + Simulated Cases | 1 | 1.0 |
| Case Studies + Simulated Cases | 8 | 7.7 |
| Vignettes + Case Studies + Simulated Cases | 32 | 30.8 |
| None | 8 | 7.7 |
| Total | 104 | 100 |

Section II of the Cultural Competence and Curricula in Physical Therapist Professional Education (CCPTE) questionnaire provided a means for the respondent to report the extent of content related to cultural competence included in their program. Three of the respondents did not complete this portion of the questionnaire appropriately rendering their responses unusable, so the total number of respondents for this section is 101. Using a 6 point, Likert-type scale, respondents reported the extent of content ranging from doesn't cover at all to covers exceptionally (see appendix D).

Section II was divided into three subsections, communication, biological and cultural differences, and health care practices and practitioners. The responses for these subsections were based on a 6-point Likert-type scale with 1 indicating "doesn't cover at all" and 6 indicating "covers exceptionally." A scale score was calculated for each subsection, indicating the overall mean response score for that section. Additionally, a mean score was calculated for each item within the subsection. Cronbach's alpha was used to estimate the reliability for each subsection. The reliabilities were .95 for the communication subsection, .91 for the biological and cultural differences subsection and .95 for the health care practices and practitioners subsection.

Under the communications subsection, willingness to share thoughts and feelings received the highest mean rating for extent of content ($M = 4.57$), while cultural differences in format for names and types of greetings received the lowest mean ratings ($M = 3.62$ and 3.67 respectively). All of the items in the subsection related to non-verbal communication, including body language, eye contact, spatial distancing and the use of touch were reported being covered adequately with means ranging from $M = 4.16$ to $M = 4.32$. Content related to differences in learning styles and content related to sensitivity

and respect toward both religion and sexual orientation received relatively high mean scores ranging from $M = 4.38$ to $M = 4.43$. See Table 6 for descriptive statistics.

Under the biological and cultural differences subsection, content related to aging, both in terms of incidence and risk factors as well as physiologic responses to physical therapy interventions, received the highest mean ratings for extent of content ($M = 4.94$ and 4.86 respectively). Under the same subsection, content related to acceptable levels of pain received the lowest mean rating for extent of content ($M = 4.00$). All items in this subsection received a mean score of at least $M = 4.00$, indicating that content related to biological and cultural differences are reported to be covered at least adequately. See Table 7 for descriptive statistics.

Lastly, under the health care practices and practitioners subsection, cultural views toward the role of the elderly and issues related to socioeconomic status and access and utilization of health care received the highest mean ratings for extent of content ($M = 4.56$ and 4.58 respectively). Table 8 shows the descriptive statistics for this subsection. Cultural views toward the status, gender, and type of health care practitioner all received the lowest mean ratings for extent of content ($M = 3.88, 3.92$ and 3.85 , respectively). Items in this subsection all received a mean rating of above 4.00 except for the items related to health practitioners, which all received means below 4.00 .

As indicated by the scale scores for each subsection, participants reported covering overall content related to each of the three subsections adequately, with each subsection having a mean scale score greater than 4.0 . Participants reported covering overall content related to biological and cultural differences the highest of the three subsections ($M = 4.47$).

Table 6

Descriptive Statistics for Communication Subsection – Extent of Content Related to Cultural Competence

| Content | N | Mean | Standard Deviation |
|---|-----|------|--------------------|
| Need to respond to language other than English | 101 | 4.03 | 1.014 |
| Ability to respond to language other than English | 101 | 3.87 | 1.055 |
| Paralanguage variations (tone of voice, intonations, etc) | 101 | 4.01 | 1.170 |
| Willingness to share thoughts and feelings | 100 | 4.57 | .946 |
| Cultural differences in format for names | 99 | 3.67 | 1.212 |
| Cultural differences in types of greetings | 101 | 3.62 | 1.130 |
| <u>Non – verbal communication</u> Body language | 101 | 4.19 | 1.172 |
| Eye contact | 100 | 4.21 | 1.200 |
| Spatial distancing | 101 | 4.16 | 1.198 |
| Use of touch | 101 | 4.32 | 1.174 |
| Touch across genders | 101 | 4.26 | 1.238 |
| Acceptable greetings/gestures | 101 | 3.93 | 1.177 |
| Clock vs social time | 101 | 3.15 | 1.307 |
| Differences in learning styles | 99 | 4.43 | 1.31 |
| Sensitivity and respect for sexual orientation | 101 | 4.38 | 1.04 |
| Sensitivity and respect for religious orientation | 100 | 4.40 | 1.025 |
| Communication Subsection - Overall | 101 | 4.11 | .860 |

Table 7

Descriptive Statistics for Biological and Cultural Differences Subsection - Extent of Content Related to Cultural Competence

| Content | N | Mean | Standard Deviation |
|--|-----|------|--------------------|
| Ethnic/racial variations in skin color | 100 | 4.21 | .844 |
| Ethnic/racial variations in risk factors | 100 | 4.37 | .861 |
| Ethnic/racial variations in physiologic responses | 99 | 4.29 | 1.003 |
| Gender – incidence and risk factors | 101 | 4.58 | .803 |
| Gender – physiologic responses | 101 | 4.52 | 1.016 |
| Aging - incidence and risk factors | 101 | 4.94 | .835 |
| Aging - physiologic responses | 100 | 4.86 | .888 |
| Pain – cultural variations in response | 99 | 4.25 | 1.137 |
| Pain - cultural variations in acceptable levels of | 92 | 4.00 | 1.027 |
| Biological and Cultural Differences Subsection - Overall | 101 | 4.47 | .860 |

Table 8

Descriptive Statistics for Health Care Practices and Practitioners Subsection – Extent of Content Related to Cultural Competence

| Content | N | Mean | Standard Deviation |
|--|-----|------|--------------------|
| Cultural focus of health care | 101 | 4.11 | 1.009 |
| Role of religious beliefs | 101 | 4.17 | 1.096 |
| Role of cultural beliefs | 101 | 4.22 | 1.064 |
| Acceptable levels of dependence and independence | 101 | 4.13 | 1.036 |
| Cultural views – role of the disabled | 101 | 4.25 | 1.099 |
| Cultural views – role of the elderly | 101 | 4.56 | .994 |
| Cultural views – status of health care practitioner | 100 | 3.88 | 1.148 |
| Cultural views – gender of health care practitioner | 100 | 3.92 | 1.161 |
| Cultural views – type of health care practitioner | 100 | 3.85 | 1.226 |
| SES – access and utilization of health care | 101 | 4.58 | 1.061 |
| SES – health care practices | 101 | 4.29 | .993 |
| SES – health care practitioners | 101 | 4.37 | 1.046 |
| Health Care Practices and Practitioners Subsection - Overall | 101 | 4.19 | .859 |

Qualitative. The interview participants were asked open-ended questions related to what type of content their programs taught related to various aspects of cultural competence. Instead of offering specific responses, all of the interview participants required significant use of probes naming specific types of content related to cultural competence in order to answer the interview questions. The participants typically either agreed or disagreed with the probe in terms of whether that specific content was included in their program. As a result, the bulk of the interview responses related more to *how* their program taught information related to cultural competence rather than *what* was taught.

The detailed notes recorded during the interviews were reviewed and two researchers developed a list of topics and then categories to code the data. The researchers then individually coded the data into the respective categories until a kappa of .80 or 80% agreement was reached. The first attempt at coding the data achieved a kappa of .74. The researchers collaborated, refined the categories, and individually coded the data a second time, and a kappa of .89 was achieved indicating an 89% agreement. The categories were grouped by topic, and the frequency of responses for each category was calculated by dividing the number of responses in each category by the total number of responses for that respective topic.

For the few items that were obtained from the interviews related to what was taught, the number and percentage of responses coded into categories appear in Table 9. The most frequent response related to non-verbal communication (64%). As one program director stated, "That is one of the stronger points, discussions related to eye contact, touch and personal space." The importance of touch within the profession of

physical therapy was brought up by the majority of the interviewees, and is considered an important concept for physical therapy students to understand. As one program director stated:

The use of physical touch is discussed very early with the students during discussions of professional behavior. We use an article from an old PT Bulletin that discusses how PT is one of the only professions that has the right to touch people the way that we do, and how important that is and the need to recognize how careful we need to be about it.

Another program director stated, "We introduce this very early, not only in the communications course, but in the first semester skills course; they need to understand the professional issues surrounding touch."

Table 9

Number and Percentage of Responses on Specific Content Taught

| Content | Frequency | Percent |
|--------------------------|-----------|---------|
| Non-verbal communication | 38 | 64 |
| Language | 14 | 24 |
| Prevention | 7 | 12 |
| Total | 59 | 100 |

The need to respond to languages other than English was also addressed by a number of the interviewees. Many discussed teaching their students about the use of professional interpreters, with one program director commenting on the significant shortage of interpreters in many geographic areas and how that may impact patient care.

We discuss the use of interpreters versus family members and how the family members may not always provide a direct translation. The problem is, there often is not a professional interpreter available, so you need to rely on someone to get information across to the patient; often you have no choice but to use a family member. Unfortunately, that is not always ideal for the patient and family dynamics often become a big issue.

Several other interviewees discussed the importance of learning Spanish as a second language. “We are in a state with a high Spanish speaking population; we encourage students to take a medical Spanish class – we don’t teach these classes, but recognize it as an important element.” Another program director stated, “We recommend to our students to take an elective Spanish course; Spanish is the second largest language in our country and we recommend our students attempt to learn it.” One program director discussed an inexpensive tool that is offered to each of her students at orientation. She talked about a flip-chart of medical languages that is offered to her students at orientation specifically for Spanish. “It only costs about 75 cents, and is specific for physical therapy. They have different ones for different disciplines and different languages; the student feedback has been that it is a very helpful tool!”

Section III of the questionnaire contained open-ended questions related to methods and materials used to teach content related to cultural competence and how cultural competence of the students was measured. These responses from section III were combined with the interview responses for the same questions. The number and percentage of responses coded into categories for methods of instruction and measures of cultural competence can be found in Tables 10 and 11 respectively. While the responses show there are a variety of ways content related to cultural competence is taught, specific courses or sections of courses related to psychosocial aspects of health care or disability, ethics classes, patient skills and psychology classes appeared most frequently as a means of delivering information (24%). Supplemental materials including videos, readings, activities, papers, websites, and literature (books other than textbooks) (22%) was the second most frequent means of delivering information. Videos utilized included specific videos on cultural competence, television shows that depicted cultural issues, and films that had a cultural aspect to them, many with health and health care related issues also illustrated. Readings were typically either refereed articles or from textbooks on cultural issues. Activities included items such as role-playing, presentations, simulation games, and portfolios. Literature included books related to language differences, raising awareness of other cultures, and issues surrounding disability.

Table 10

Number and Percentage of Responses on Methods and Materials Used For Instruction

| Methods and Materials | Frequency | Percent |
|--|-----------|---------|
| Course | 93 | 24 |
| Textbooks | 42 | 11 |
| Experience (other than clinical internship) | 46 | 12 |
| Clinical Internship | 39 | 10 |
| Discussion | 52 | 13 |
| Case Studies | 24 | 6 |
| Standardized Patients | 9 | 2 |
| Supplemental Materials (videos, literature, activities, websites, books, etc.) | 85 | 22 |
| Total | 390 | 100 |

Table 11

Number and Percentage of Responses on Measures of Cultural Competence

| Type of Measure | Frequency | Percent |
|---|-----------|---------|
| Formal Measures | 19 | 40.4 |
| Examinations (written and practical) | 11 | 23.4 |
| Other (papers, self-assessment, presentations, portfolio, etc.) | 17 | 36.2 |
| Total | 47 | 100 |

Discussion was also mentioned frequently (13%) as a means to deliver material related to cultural competence, but not without concerns. Considering that discussion is often driven by class participation and can move in a variety of directions, concern about the ability to demonstrate or document that these topics are being covered was a recurring theme during the interviews. As one program director stated:

We discuss a lot of things informally in class related to cultural competence type issues, but they are not necessarily related to specific course objectives. So if you asked me to “prove” that we were covering a lot of these issues, I would have a hard time doing so.

Another interview respondent echoed the same concern. “We talk about a lot things related to culture and cultural differences that just ‘come up’ during class, but we don’t have a way to show that we did it.” One program director summed it up with this response:

Our program is making a very conscious effort to be sure we cover the cultural issue from four perspectives: first, in their interactions with patients on issues such as communication, interpersonal skills that come with cultural competence; second, appreciating differences in groups, their vulnerability to different diseases, their response to care – the biological aspects of differences; third, the issues we have related to access to health care and discrepancies in quality of care and their role overtly or unconsciously contributing to those discrepancies; and finally, the under representation that goes on within our profession. Now, you come and look at our materials and there will not be anything written, but we do do these things!

Many of the respondents (40.4%) reported using some type of formal measure to evaluate the cultural competence of their students. It should be noted, however, that when asked to name the formal measure, most reported using the typical clinical outcome assessment measures such as 2 to 3 items on the Clinical Performance Instrument (CPI) or the Blue Max, or the Generic Abilities Self-Assessment. Only two respondents cited measures specifically related to cultural competence, the Diversity Awareness Profile, and the Cultural Adaptability Inventory. The remaining respondents described using more informal measures such as questions on examinations, either written or practical, or other means such as papers, self-reflection or self-assessment activities, presentations, portfolios, or simulated clinics. Two respondents reported using the continuing education article on cultural competence from PT Magazine.

A number of respondents from both the interviews and the questionnaires discussed the concept of cultural competence as being a “thread” throughout the curriculum. “Cultural competence is woven through the curriculum as a theme.” Another respondent stated, “Case studies with cultural competence issues are threaded throughout a number of physical therapy courses within the curriculum.” Several respondents reported that there was no single specific course on cultural competence taught, but rather cultural competence was one of the threads throughout the curriculum. “We use a multi-faceted approach – cultural competence is one of those threads throughout our curriculum so it is taught at ‘teachable’ moments.”

When asked in an open-ended question to provide any additional information about how their program includes content related to cultural competence in their curriculum, many responses reflected the uncertainty that remains about this topic with

regards to inclusion in the curricula. “We just sort of go with the flow...we don’t really know what to do or how to do it, but we know it is an objective that we have to meet.” Concern about diversity seems to be a big issue. One program director responded during an interview, “I think we all recognize that we are not a very diverse profession and that is an issue; and that makes it difficult.” Another program director stated, “Our students and faculty are not very ethnically or culturally diverse which makes us as faculty feel as though we are stereotyping when we discuss these issues.” A third program director echoed similar issues surrounding diversity, but from the different perspective of how faculty diversity does enhance the program. “Our awareness and ability to address this has been served in large part by faculty who themselves are culturally and ethnically different...the characteristics and diversity of the faculty as a whole has really helped open our discussions with the students.”

Others feel the focus should not be on teaching specific differences based on culture or ethnicity, but to focus on recognizing and respecting individuals and their differences. “I think that instead of teaching about each culture and the differences, we should focus on teaching about recognition and respect of differences in general and then things like stereotyping are avoided.” Another respondent wrote, “We try to walk the walk not just talk the talk – all our students are treated with respect and dignity and in return we expect them to treat others that way.”

Influence of demographic makeup

The lack of diversity of both students and faculty reported during the interviews was confirmed by the responses to the demographic portion of the questionnaire. Table 12 provides a summary of the demographic characteristics reported. Most of the

programs reported having 4-10 core faculty members (72.1%), between 61 and 100% female faculty members (54.8%), and less than 10% of the faculty classified as being from a minority group (65%). The majority of the respondents (52%) reported the average number of students reported per class as between 10-30 students, with the nearly half of the respondents reporting less than 10% of their class as being minority students.

Table 12

Reported Demographic Makeup of Programs

| | Number | Percent |
|---|--------|---------|
| Number of Core Faculty | | |
| 4-10 | 75 | 72.1 |
| 11-17 | 24 | 23.1 |
| 18-24 | 5 | 4.8 |
| Total | 104 | 100 |
| Percentage of Female Faculty | | |
| 0-60% | 47 | 45.2 |
| 61-100% | 57 | 54.8 |
| Total | 104 | 100 |
| Percentage of Minority Faculty | | |
| Less than 10% | 67 | 64.4 |
| 10% or greater | 36 | 34.6 |
| Total | 103 | 100 |
| Average Number of Students per Class | | |
| 10 - 30 | 53 | 52 |
| 31 - 50 | 37 | 36.3 |
| 51 - 70 | 7 | 6.9 |
| 71 - 90 | 5 | 4.9 |
| Total | 102 | 100 |
| Percentage of Minority Students | | |
| Less than 10% | 45 | 45.5 |
| 10-20% | 31 | 29.8 |
| Greater than 21% | 23 | 22.1 |
| Total | 99 | 100 |

Relationships Among Extent of Content Scale Scores and Demographic Characteristics of the Programs

To address the second research question, a multivariate analyses of variance (MANOVA) was performed on three dependent variables: a) the scale score from the CCCPTE communications subsection, b) the scale score from the CCPTE biological and cultural differences subsection, and c) the scale score from the CCPTE health care practices and practitioners subsection. The four independent variables were: (a) type of program (MPT, MSPT or DPT), (b) gender of core faculty (0-60% females, 61-100% females), (c) percentage of minority faculty (less than 10%, 10% or greater) and (d) percentage of minority students (less than 10%, 10 – 20%, or greater than 21%).

The results revealed a statistically significant main effect for percentage of minority faculty, $F(3,61) = 4.46, p < .001$, Pillai's Trace = .180 (see Table 13). The effect size was noted to be small at .180. A univariate test, analysis of variance (ANOVA), performed as a follow-up showed that the percentage of minority faculty significantly influenced the biological and cultural differences subsection, $F = 6.85, p < .011$ and the health care practices and practitioners subsection, $F = 6.59, p < .013$ but not the communication section, $F = .719, p < .400$ of section II of the CCPTE. As noted in Table 14, the means for the programs with primarily a non-minority faculty (less than 10%) are higher than the programs with a higher percentage of minority faculty (10% or greater) for both the biological and cultural differences and the health care practices and practitioners' subscale. No significant effects of the other demographic variables (i.e. type of program, gender of core faculty, or percentage of minority students) on the extent of content subscales were found.

Table 13

MANOVA – Relationships Among Extent of Content Scale Scores and Demographic Characteristics of the Programs

| | Biological and Cultural Differences | | | Health Care Practices and Practitioners | | |
|--------------------------------------|-------------------------------------|----------|-----------|---|----------|-----------|
| | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> |
| Minority Faculty (10% or greater) | 35 | 4.177 | .142 | 35 | 3.911 | .168 |
| Non-Minority Faculty (less than 10%) | 60 | 4.681 | .118 | 60 | 4.533 | .140 |

Table 14

Mean scores of biological and cultural differences and health care practices and practitioners by percentage of minority faculty

| Source | <i>df</i> | <i>F</i> | <i>p</i> | <i>n</i> ² |
|---|-----------|----------|----------|-----------------------|
| Type of Program | 6, 124 | .203 | .975 | .010 |
| Gender of Core Faculty (percentage of Female Faculty) | 3, 61 | 1.258 | .297 | .058 |
| Percentage of Minority Faculty | 3, 61 | 4.463 | .007 | .180 |
| Percentage of Minority Students | 6, 124 | .729 | .627 | .034 |

CHAPTER V

DISCUSSION

The main purpose of this study was to examine the type, extent, and methods used to deliver content related to cultural competence in current entry-level physical therapist education programs. The need for inclusion of educational material on cultural sensitivity and cultural competence in medical and other health professional curriculums has been well documented in the literature (Babyar et al., 1996; Cook & Cullen 2000; Dyck & Forwell, 1997; Forwell et al., 2001; Kachingwe, 2003; Kraemer 2001; Loudon et al., 1999; Lyman 1992; Pope-Davis et al., 1993; Sasano & Shepard 1973). Additionally, there has been a documented need for research about what is being taught in health professions education and the impact these programs and materials are having on the delivery of health care (Donini-Lenhoff & Hedrick, 2000). As expected, the results of this study indicate that while there is content related to cultural competence being taught, the type, methods, and amount varied among the programs. These findings of variation in content and methods are consistent with the findings cited in the literature available from the professions of nursing, medicine, and occupational therapy (Abrums & Leppa, 2001; Barzansky et al., 2000; Flores et al., 2000; Forwell et al, 2001; Like et al., 1996; Lum & Korenman, 1994).

While the majority of the programs required psychology as a prerequisite course, less than half of the programs required sociology as a prerequisite. Interestingly, several studies from the occupational therapy literature cite the value of exposure to the social sciences, specifically sociology and anthropology, as a foundation for developing cultural competence skills (Dyck & Forwell, 1997; Scott, 1997; Forwell et al., 2001). The

majority of the programs did report requiring a psychology of illness or patient behavior course within the professional curriculum, which is consistent with one of the recommendations from Scott (1997), who suggested offering a psychology of disability course as one of the means of building a foundation for effective cross-cultural care.

The overall content related to cultural competence depicted in Section II of the questionnaire was rated as being covered at least adequately (4 or greater on a 6-point scale) for all three sections. Not surprisingly, content related to biological and cultural differences received a higher mean score rating than the other two sections. Information related to risk factors for injury and disease, physiologic responses to interventions, and responses to pain are typically covered in multiple courses throughout the curriculum. As indicated in the Normative Model for Physical Therapist Education, the foundation and clinical sciences as well as the clinical courses have multiple items related to these areas that are considered necessary content for professional programs (APTA, 2000). Additionally, there are multiple criteria in the accreditation standards for physical therapist education related to this information (APTA – CAPTE, 2000). The nature of this information, for example discussing specific disease processes or risk factors indigenous to individuals from particular ethnic backgrounds or age groups, allows this material to be covered tangentially from a cultural perspective without being considered stereotypical. In general, this type of content is considered more objective in nature, making the material less sensitive or emotional to cover. In the documents provided for document analysis, there were several examples of objectives from syllabi that related to the biological aspect of culture, gender, and age.

Health care practices and practitioners was also reported to be covered adequately

by the respondents. Specific knowledge of different cultures, especially in terms of health beliefs and practices has been cited in the literature as being perceived as necessary for delivery of culturally competent care (Dyck & Forwell, 1997; Felder, 1990; Forwell et al., 2001; Genao et al., 2003; Shapiro et al., 2002). Occupational therapy students stressed the need for specific content related to cultural groups following a fieldwork experience in order for them to deliver what they perceived to be culturally competent care (Forwell et al., 2001).

Although the communication subscale received the lowest mean rating of the three scales on the questionnaire, the findings still indicate topics related to communication are covered adequately. Throughout the literature related to cultural competence in health professions education, communication is often perceived as a potential barrier to the delivery of culturally competent care, from both a language and a non-verbal communication perspective (Black & Purnell, 2002; Davidhizar et al., 1998; Ekelman et al., 2003; Flores et al., 2000; Niemeier, et al., 2003; Shapiro et al., 2002, 2003) Communication, specifically nonverbal communication, was the most frequent response to the open-ended interview questions regarding type of information that was currently being taught. In addition to being the most frequent response, several program directors strongly expressed the importance of teaching non-verbal communication in the curriculum during their interviews. These views are similar to those discussed by Black and Purnell (2002), who cited the potential miscommunication that can occur across cultures with respect to non-verbal communication issues such as eye contact and physical touch. Several program directors reported during their interviews that they considered the use of physical touch and the issues surrounding touch to be covered well

in the curriculum. However, this was not supported by the responses to the quantitative portion of the questionnaire, which showed that overall specific items related to nonverbal communication were only covered adequately (receiving a mean rating between a 4.2 and 4.3 on a 6-point scale). The documents provided for document analysis also did not support the perceptions of the program directors, with no information or objectives related to non-verbal communication included in any of the documents.

Language, specifically the need and ability to respond to languages other than English, was a finding addressed in this study that has also been addressed by numerous studies in the health professions literature (Flores, Abreau, et al., 2000; Niemeier et al., 2003; Shapiro et al., 2002). In a study of perceived barriers to cultural competence, language competence was how medical residents defined culturally competent communication (Shapiro et al., 2002). Several of the program directors discussed how their students are taught about language barriers and the use of professional interpreters, including the issues that come up surrounding the use of interpreters. This is supported by the findings in the literature from the field of medicine. Residents in a study by Shapiro et al. (2002), found language and interpreter limitations as one of the three major obstacles to providing culturally competent communication. In a second study by Shapiro et al., almost one third of the residents reported they were not likely to address language difficulties or work closely with interpreters even though they found language issues to be a barrier to providing appropriate patient care (Shapiro et al., 2003). In a series of case studies by Flores, Abreau, et al. (2000), language barriers had a significant impact on the provision of health care for the pediatric population in the study, which

depicted the potential life threatening consequences of language as a communication issue.

The findings in this study echoed the literature in terms of the varied opinions regarding what should be taught related to cultural competence. One respondent thought that the approach should be more on recognition and respect of differences instead of providing information related to specific cultures or ethnic groups. This was similar to the findings of Canales & Bowers (2001), and Leininger (2001), who suggested that awareness of cultural differences and personal values combined with knowledge and acceptance of differences and similarities is essential in the development of cultural competence. Treating their students with respect and dignity as a means of modeling the behavior they expect of their students was suggested by another program director. Role modeling was also described as the best method to convey skills of cultural competence to residents by a group of faculty in the field of medicine (Shapiro et al., 2002).

The materials and methods used to teach cultural competence was a major focus of this study. The results of this study raised more questions about how to best cover this material, such as whether or not to offer specific courses related to cultural competence or to infuse material into multiple courses throughout the curriculum has not been decided (Dyck & Forwell, 1997; Forwell et al., 2001; Pope-Davis et al., 1994; Scott, 1997). Responses from both the interviews and the open-ended portions of the questionnaire reflected a general confusion about how to incorporate this content into the curriculum, and what to include. As one program director stated during an interview, "I think we are all kind of blundering into it because we don't really know exactly what we are doing." Material provided for document analysis was varied as well, ranging from

examples of case studies, projects, or activities to one program providing significant evidence of content covered including syllabi with specific objectives, student exercises and activities, self-assessment tools, and examination questions.

The most frequently reported methods and materials used reported in the open-ended questions included courses, supplemental materials, and discussion. Discussion was also reported extensively during the interviews as a means to deliver material, which seems to mirror the general suggestions found in the Normative Model for Physical Therapist Professional Education. The Normative Model suggests using discussion of interrelations of cultural diversity, learning styles and educational theories, analyzing cultural research and one's own cultural context, and discussion of specific health problems related to race/ethnicity, socioeconomic status, and age as a means to achieve the objectives related to cultural diversity (APTA, 2000). Although the use of discussion is suggested by the Normative Model as a means to achieve this objective, significant concern was expressed by the participants about being able to satisfy accreditation criteria for CAPTE, since discussion is difficult to objectively measure. Many interviewees expressed concern about the lack of objectives in their courses related to cultural competence, which was confirmed by analysis of the documents provided by the interviewees. Only one of the programs that provided materials for document analysis had any substantial objectives specifically related to culture and cultural competence. This poses the potential for significant problems related to meeting CAPTE accreditation requirements.

This study found that the majority of the programs participating in the study offer some type of multicultural clinical experience. About one fourth of the programs

reported offering international experiences, although many of these experiences were in countries such as Canada, Bermuda, and Denmark. Students refine not only their technical clinical skills learned in the classroom during internship experiences, but their affective skills are sharpened as well. Previous research has highlighted the value of clinical experience with culturally diverse populations as a means for increasing cultural competence and achieving confidence in caring for diverse populations (Bond & Jones, 1994; Dyck & Forwell, 1997; Forwell, et al., 2001; Haloburdo & Thompson, 1998; Kulwicki & Bolonik, 1996; Patten et al., 1997; Rosenkoetter et al., 1993; St. Clair & McKenry, 1999). Lack of clarity of the definition of a multicultural clinical experience in this study was apparent when analyzing the responses. One respondent wrote, "Aren't they all?" while several other respondents simply answered "no," or "not a specific goal for our program." Formal, full-time clinical internships are part of all physical therapy programs, and generally last six to eight weeks in duration or longer. This fact may have lead to confusion about what type of "experience" was being questioned, full-time internship experience or other types of experiences. Examples given of multicultural clinical internship experiences included: (a) clinical sites with languages other than English spoken; (b) urban areas with high poverty populations; (c) Native American Reservations and; (d) areas with known significant ethnic diversity in the population. Additional multicultural experiences that were documented included brief immersion, half-day experiences in an urban facility, participation in health fairs or service learning projects, international experiences, and a semester-long elective course. Recent literature in the physical therapy profession supports the benefits of service learning with physical therapy students as a means of enhancing diversity (Ekelman et al., 2003; Musolino &

Feehan, 2004). Typically the longer internship experiences that were specific for a multicultural experience, were not offered to the entire student body, but rather to a small cohort of students. International and field immersion experiences, especially in developing countries, have been well documented in the health professions literature as a means to increase self-perceived attitudes and skills related to cultural competence (Bissonette & Route, 1994; Ekelman et al., 2003; Godkin & Savageau, 2001, 2003; Haloburdo & Thompson, 1998; Kaufman, 1994). Financial constraints often limit large numbers of students from experiencing international full-time and field immersion experiences. However, it has been suggested in the literature that local, domestic immersion experiences can be a benefit to larger numbers of students (Ekelman et al., 2003).

The lack of diversity of faculty and students within the profession of physical therapy is an important factor in addressing issues related to cultural competence in the educational curricula as well as the profession as a whole. In this study, the percentage of minority faculty was the only variable that produced a significant main effect on 2 out of 3 subsections in terms of extent of content related to cultural competence reported on the questionnaire. Interestingly, the programs with primarily a non-minority faculty (less than 10%), had higher mean scores for both the biological and cultural differences and the health care practices and practitioners subsection compared with the programs with a higher percentage of minority faculty (greater than 10%). Not only is this finding counterintuitive, it is not supported by qualitative findings in this study. One program director expressed concerns of faculty about being perceived as stereotyping when addressing issues related to cultural competence due to the lack of faculty and student

diversity in his program. A second program director reported the increased diversity of the faculty in his program resulted in increased awareness and ability of the faculty to open discussions related to cultural competence with the students. This finding also does not coincide with the findings of Velde et al., who found that a predominately white faculty in a school of allied health had relatively low scores on a self-perceived measure of cultural competence (Velde et al., 2003). Other possible explanations for this finding could be the programs with more diverse faculty may be more critical when examining extent of content related to cultural competence and therefore rate their extent of content as being lower. Also, just having a more diverse faculty does not speak to extent of coverage, considering perhaps the faculty are more complacent when it comes to topics related to cultural competence. This finding does, however, correspond somewhat with the study by Babyar et al., (1996) exploring the inclusion of culture and gender issues in physical therapy programs in New York State. Although the faculty demographics in that study showed a sample of predominately white females, the authors concluded that content related to culture and gender was infused into the curricula of these programs. It was suggested, however, that the students should regard faculty personal accounts with caution, since personal experience was cited as the most common basis for references to cultural issues from a non-diverse faculty.

This study also found that nearly 46% of the respondents reported less than 10% of the students in their classes were minority students. Previous literature has suggested that in order for the educational programs to train health care providers for the changing demographics of the nation, there is a need to increase the number of minority health care providers practicing in the health professions (Baker, J. & Baker C., 1989; Baldonado,

1996; Campinha-Bacote et al., 1996; Chapman, 1989; Haskins, 1989; Haskins & Rose-St. Prix, 1994; Rosello et al., 1994; Splenser et al., 2003). Kachingwe (2003), highlighted the need for a diverse student body in physical therapist education programs as an integral part of increasing knowledge about different cultural beliefs and practices. This lack of diversity in the student body also suggests that the profession is not currently well positioned to meet the goals of certain national initiatives. Specifically, the profession is lagging behind with regards to one of the goals of the APTA Committee on Cultural Competence, to ensure that the physical therapy profession reflects the demographics of society and one of the objectives of Healthy People 2010, which is to increase the number of degrees awarded to members of underrepresented racial and ethnic groups in the allied and associated health professions (APTA, Office of Minority and International Affairs, 2002; DHHS, 2000).

Finally, since cultural competence relates to one of the program objectives set by CAPTE, the means of measuring cultural competence is in question. As noted in some of the quotations from the program directors during their interviews, significant concerns arise regarding the apparent disconnect between what is documented and what is actually done by the programs to achieve these objectives. One program director reported doing a lot of “informal” things in class related to cultural competence, with a second program director relating discussion that just “comes up” during class with no way to demonstrate the content of the information that was covered. A third program director discussed his programs’ effort to provide a multi-faceted approach to cultural issues that was not documented within the objectives of the curriculum. Additionally, there were large discrepancies in the ways in which programs measured the cultural competence of their

students, if they measured it at all. Only 22 programs reported performing some measure of cultural competence of their students, with only 2 programs reporting using a formal measure specifically related to measuring cultural competence. This was not surprising since there has been only one published study in the physical therapy literature related to a specific measure of cultural competence, which helped to establish the reliability of the Cross Cultural Adaptability Inventory with physical therapy students (Kraemer & Beckstead, 2003). The majority of the other programs reported that they used some type of formal measure used instruments such as clinical education evaluations (the Clinical Performance Instrument or the Blue Max) or the Generic Abilities Self Assessment, all of which only contain a few general items related to this issue. Clinical instructors, who may or may not be familiar with issues related to cultural competence, fill out the clinical education evaluations of interns. In the only physical therapy related study of self-perceived preparation for providing culturally competent care, students from one program felt unprepared from a both a clinical and awareness perspective, which may not have been noted on the standard clinical performance evaluation instruments. The participants that reported using non-formal measures tended to use a wide variety of measures that ranged from exam questions to portfolios. This lack of consistent measures only adds to the disparity between programs about how this issue is addressed in the curriculum.

Limitations

Although the population of physical therapist education programs served as the sample for this study, one of the major limitations was the response rate (53.8%) to the questionnaire portion of the study, which reduces the external validity of the study. The findings obtained from the self-selected respondents may not generalize to the other

physical therapy programs. Also given the sample consisted of only physical therapy programs, the findings of this study may not be generalizable outside of the physical therapy profession to other allied health professions such as nursing or occupational therapy.

There were also limitations that threatened the internal validity of the study. The instruments used in this study were new, designed by the researcher, with no previously tested psychometric properties. However the internal consistency of the instrument was high, indicating good reliability. A second threat to internal validity pertains to the participants in the study. The possibility exists that the participants provided socially desirable answers instead of factual answers to the interview questions and questionnaire, which is true of all self-reported measures. Furthermore, the individual who completed the questionnaire or participated in the interview may be an issue. The interviews were performed with program directors only, which may not always be the most knowledgeable, or experienced representative of the program in terms of issues related to cultural competence. Several interview participants reported that they “believed” the information was being covered, but admitted that they did not teach the information themselves, so they did not know for sure. Also, there were inconsistencies between what topics program directors stated were covered well in the programs during the interviews and the responses related to those topics provided in the questionnaire. Although it would have been beneficial to examine the response differences between the program directors (54.8%) and the designated faculty members (45.2%) to the questionnaire, a problem with this item on the spreadsheet from the online respondents precluded those responses from being included in the data analysis. Even though each

program was assigned an ID number to help protect confidentiality, many respondents failed to use the ID number when responding online. Due to the inability to identify respondents, a comparison of findings by program directors vs faculty could not be included in the analysis.

Implications for Future Research

The intent of this study was not only to add to the sparse literature from the field of physical therapy related to cultural competence, but also to determine a baseline for the type and methods of content related to cultural competence in current physical therapy curriculums. This study targeted only one perspective with regards to methods and type of content related to cultural competence currently taught in physical therapist professional education, that of the educator. Confirmation of these findings through site visits, observations, curricular review, and interviews with students and graduates needs to be performed. Future research might examine this topic from the students' perspective to determine their perceptions of what is being taught as well as the students' perceived and actual levels of cultural competence. Additionally, another focus of future research should be on the link between content related to cultural competence and the impact on clinical practice. The literature from medicine proposes providing culturally sensitive and competent care promotes positive health outcomes for patients, which suggests a link between cultural competence and practice (Brach & Fraser, 2000; Briggance, 2002; Chin, 2000; Flores, Abreau et al., 2000). So, from a physical therapist education perspective, do programs that foster cultural competence graduate better practitioners? This question highlights the need for additional research involving measures related to cultural competence from both a self-perceived and clinical practice aspect. The newly

developed instrument used in this study demonstrated high internal consistency, suggesting it may be useful in future studies related to this topic. However, evidence for the validity as well as the reliability of the questionnaire should be established.

Implications for Practice

In considering the findings of this study along with previous research, there are several directions that physical therapist education programs may want to consider related to curricula. First, programs might require additional sociology courses either as prerequisite coursework or as required coursework in the professional curriculum since the value of sociology in establishing the foundation for developing cultural competence has been suggested (Dyck & Forwell, 1997; Forwell et al., 2001; Scott, 1997). Programs might consider incorporating strategies into their programs such as using more diverse standardized patients or adding diversity to case studies. Also, providing activities that have a cultural or diversity component may promote cultural competence of the students as was found in the case study with medical students by Crandall et al. (2003). In addition to providing specific course objectives related to cultural competence, these activities would help to satisfy the CAPTE accreditation requirements related to cultural competence. Programs might also consider having students participate in service-learning projects in local underserved communities, or domestic or international immersion experiences, all of which have been shown to positively impact participants' cultural awareness, and facilitate the development of cultural competence (Bissonette & Route, 1994; Ekelman et al., 2003; Godkin & Savageau, 2001; Haloburdo & Thompson, 1998; Like et al., 1996; St. Clair & McKenry, 1999; Taylor, 1994). Programs could weave the concept of cultural competence throughout multiple aspects of the curriculum

and utilize some type of measures to determine not only how, but if cultural competence content makes a difference in clinical practice.

One of the major concerns reported by the participants in this study is the lack of objective evidence that content related to cultural competence is included in the curriculum. Programs should review their current curricula and establish verifiable objectives to document the means and extent to which cultural competence is incorporated into the curriculum, integrating strategies into the curriculum where deficiencies are found. This process of curricular review and establishment of objectives will aid in meeting CAPTE accreditation standards and improve the overall quality of the program.

Cultural competence will continue to impact the practice of physical therapy. Although there are continued efforts to increase minority representation in the profession, the current demographics of the profession do not match the demographics of society. Regardless of the lack of minority representation, the profession needs to have culturally competent practitioners to meet the changing demographics of society. This study confirmed what the lack of literature suggests – that the profession of physical therapy is behind other health professions with regards to educating culturally competent practitioners. Although the educators in this study perceived content related to cultural competence to be adequately covered in the curriculum, there is little, if any, documented evidence to support this. While the other health care professions are also struggling with this issue, there has been significantly more empirical research done in the other fields. As with the other health care professions, there appears to be a lack of consensus about what material should be offered in the curriculum as well as the methods used to present

it. Significant research is needed to substantiate the type of material that should be included in entry-level curriculums, the methods of instruction, and the means to measure the effectiveness of instruction in this area.

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Appendix A

Blueprint for Interview Questions

I. Open-ended questions related to each of the subsections of content related to cultural competence included in curriculum

- a. communication
- b. cultural and biological differences
- c. health care practices/health care practitioners

Follow-up probes used for lack of responses related to each area noted in the subsections

II. Open-ended questions related to clinical education

- a. Multicultural experiences or international experiences

III. Open-ended questions related to ways in which cultural competence is incorporated

- a. Use of vignettes, case studies, simulated cases
- b. Standardized patients

IV. Open-ended question related to measures of cultural competence

V. Final question – any additional comments about cultural competence in the curriculum.

Appendix B

Blueprint for Cultural Competence Questionnaire

I. Section I – fill-in the blank questions

A. Demographic information

1. Degree offered
2. Racial/ethnic make-up of primary faculty / gender of primary faculty
3. Racial/ethnic make-up of students (average number of minorities/class)
4. Number of students (average)

II. Section II – Likert – type items

Scale: covers completely / covers / covers minimally / doesn't cover at all

A. COMMUNICATION

1. Language – dominant language/dialects (need & ability to respond to languages other than English)
 - a. Paralanguage variations
 - b. Volume/tone of voice
 - c. Intonation
2. Willingness to share thoughts and feelings
3. Non-verbal communication
 - a. Body language
 - b. Use of eye contact
 - c. Spatial distancing
 - d. Use of physical touch
 1. Physical touch across genders
 - e. Acceptable greetings
4. Format for names
5. Greetings
6. Clock vs social time
7. Learning styles
8. Sensitivity and respect for
 - a. Sexual orientation
 - b. Religious orientation

B. CULTURAL & BIOLOGICAL DIFFERENCES

1. Variations in ethnic and racial origins
2. Skin coloration
3. Diseases
 - a. Genetic
 - b. Heredity

- c. Endemic
 - d. Topographical
- 4. Physiologic responses to PT interventions
- 5. Aging – specific issues
- 6. Gender – specific issues
- 7. Pain
 - a. Variations in response toward pain
 - b. Variations in acceptable levels of pain

C. HEALTH CARE PRACTICES/ HEALTH CARE PRACTITIONERS

- 1. Focus of health care
 - a. Acute or preventative
- 2. Role of traditional, magicoreligious and biomedical beliefs
- 3. Variations in acceptable levels of dependence (independence)
- 4. Views toward
 - a. Role of individual with disability in family/society
 - b. Role of elderly in family/society
- 5. Variations in the acceptable sick role
- 6. Barriers to health care (socioeconomic issues)
 - a. Health care practices (elderly/teens/children)
 - b. Health status (elderly/teens/children)
- 7. Status of health care practitioner
 - a. Gender of health care practitioner
- 8. Use of health care practitioner
 - a. Traditional
 - b. Religious
 - c. Allopathic
 - d. Alternative

III. Section III – yes/no and open ended reponses

- A. Prerequisite course information
 - 1. Number of classes in social sciences offered (fill-in the blank)
 - 2. Types of classes in social sciences (open-ended)
- B. Materials used (texts, videos, etc.) (open – ended)
 - 1. Vignettes/case studies/ simulated cases (yes/no)
- C. Clinical education (yes/no)
 - Multicultural experience – (open-ended)
 - International experience – (open-ended)
 - a. Developed vs developing country (yes/no)
- D. Measure of cultural competence (yes/no)
 - 1. What measure (open ended?)
- E. Standardized patients (yes/no)
- F. Other ways in which cultural competence content incorporated into curriculum...(open-ended/final question)

Appendix C Interview Guide

I am going to be asking you some questions today related to cultural competence and how and to what extent content related to cultural competence is incorporated into the curriculum in your program.

1. Can you tell me what your program teaches about communication?

Probes: Does your program teach anything related to:

- a. the need or ability to respond to languages other than English to communicate with clients, patients, family members and colleagues?
- b. paralanguage variations such as tone of voice, volume and intonations?
- c. the impact of the patient's or client's willingness to share thoughts and feelings?
- d. cultural differences in format for names?
- e. cultural differences in types of greetings (formal vs. non-formal)?
- f. Cultural differences related to non-verbal communication such as:
 - a. body language
 - b. use of eye contact
 - c. spatial distancing
 - d. use of physical touch
 - e. physical touch across genders
 - f. acceptable greetings (such as firmness of handshake)
- g. differences in views regarding clock versus social time?
- h. differences in learning styles?
- i. the need for sensitivity and respect with regards to sexual orientation or religious orientation?

2. Can you tell me what your program teaches related to biological and cultural differences?

Probes: Does your program teach anything related to:

- a. Impact of variations in ethnic and racial origins (such as skin coloration, risk factors for genetic, hereditary, endemic and topographical conditions, or physiologic responses expected from physical therapy interventions?)
 - b. Impact of gender (such as incidence and risk factors for disease and injury, or physiologic responses expected from physical therapy interventions?)
 - c. Impact of aging (such as incidence and risk factors for disease and injury, or physiologic responses expected from physical therapy interventions?)
 - d. Variations in response to or acceptable levels of pain?
3. Can you tell me what your program teaches related to health care practices and health care practitioners?

Probes: Does your program teach anything related to:

- a. impact of client's cultural focus of health care?
- b. Impact of the role of religious beliefs regarding illness and healing on the delivery of physical therapy?
- c. Impact of the role of cultural beliefs regarding illness and healing on the delivery of physical therapy?
- d. Variations in culture related to acceptable levels of independence and dependence?
- e. Variations in cultural views toward the role of an individual with a disability in family/society?
- f. Variations in cultural views toward the role of the elderly in family/society?
- g. Variations in cultural views regarding status and/or gender of health care practitioners?
- h. Variations in cultural views regarding preferred type of health care practitioner (traditional, religious, allopathic and alternative)?
- i. Socioeconomic factors related to access and utilization of healthcare
 - a. Health practices of children, teenagers and the elderly
 - b. Health status of children, teenagers and the elderly

4. Can you tell me what your program offers in terms of clinical education experiences related to cultural competence?

Probes: Does your program offer any experiences:

- a. such as a multicultural experience
- b. such as an international experience (in developed or developing country?)

5. Can you tell me what methods your program uses to teach content related to cultural competence?

Probes: Does your program utilize:

- a. vignettes, case studies or simulated patients?
- b. Standardized patients?

6. Can you tell me how your program measures the cultural competence of your students?

7. Is there any additional information you would like to provide related to how your program includes content related to cultural competence in the curriculum?

Appendix D
Letter to Program Directors

Dear Program Director,

We are asking you to participate in a survey regarding content related to cultural competence included in the curricula of all accredited, entry-level, physical therapist professional education programs in the United States. Your participation in the survey is very important. You may complete the survey yourself, or delegate the completion of the survey to a core faculty member in your program. This study is being performed as part of a doctoral dissertation at Old Dominion University.

Below is the link to the questionnaire. Your ID number is ____; please use this number for the ID box. If you would like to request a paper copy of the questionnaire, please click on the link below and there is a link available to request a paper copy. Please complete the questionnaire and submit it by _____.
<http://www.odu.edu/webroot/instr/HS/BJamali.nsf/CCCPTPE?OpenForm>

The questionnaire includes questions related to:

- The demographic make-up of the faculty and students of your program
- The extent of specific content related to cultural competence included in the curriculum of your program
- The type of content related to cultural competence included in the curriculum of your program

The results from the study will be used to create a model for content related to cultural competence in physical therapist education programs. As an incentive for completing the survey, you will be mailed a copy of the model at the completion of the study.

Your responses are confidential. There will be no identification of you, your faculty, or your program used in this study. If you have any questions regarding the study, please contact Beth Jamali at (757) 683-4381 or bjamali@odu.edu.

Sincerely,

Beth Jamali, PT, MS, OCS

Appendix D: Questionnaire

Cultural Competence and Curricula in Physical Therapy Professional Education**Section I – Demographic Information**

Indicate your position _____ Program Director _____ Faculty Member

Please respond to the following questions using the space provided.

1. Type of entry-level degree offered (place a check next to the appropriate response):
 MPT _____ MSPT _____ DPT _____
2. Number of core physical therapy program faculty: _____
3. Racial make-up of core physical therapy program faculty: (please list the number in each category)

| | |
|------------------------|-------|
| Black | _____ |
| Native American | _____ |
| Asian | _____ |
| White | _____ |
| Hispanic (of any race) | _____ |
| Pacific Islander | _____ |
| Other | _____ |
4. Gender of core physical therapy program faculty: (please list the number in each category)
 Female: _____ Male: _____
5. Average number of students per class: _____
6. Average percentage of minority students per class (based on above list): _____

Section II: Extent of content related to cultural competence

Please check the appropriate box related to how much your program covers content in the described areas.

Our Program teaches content or provides student experiences in the following:

| Topic Area | Doesn't cover at all | Covers in introductory fashion only | Covers minimally | Covers adequately | Covers basic concepts well | Covers exceptionally |
|---|----------------------|-------------------------------------|------------------|-------------------|----------------------------|----------------------|
| COMMUNICATION: | | | | | | |
| 1. Impact of the need and ability to respond to languages other than English to communicate with clients, patients, family members and colleagues | | | | | | |

| Topic Area | Doesn't cover at all | Covers in introductory fashion only | Covers minimally | Covers adequately | Covers basic concepts well | Covers exceptionally |
|--|----------------------|-------------------------------------|------------------|-------------------|----------------------------|----------------------|
| 2. Impact of the ability to respond to languages other than English to communicate with clients, patients, family members and colleagues | | | | | | |
| 3. Impact of paralanguage variations such as tone of voice, volume, and intonations | | | | | | |
| 4. Impact of the patient's or client's willingness to share thoughts and feelings | | | | | | |
| 5. Cultural differences in format for names | | | | | | |
| 6. Cultural differences in types of greetings (formal vs. non-formal) | | | | | | |
| 7. Cultural differences related to non-verbal communication such as: | | | | | | |
| a. body language | | | | | | |
| b. use of eye contact | | | | | | |
| c. spatial distancing | | | | | | |
| d. use of physical touch | | | | | | |
| e. physical touch across genders | | | | | | |
| f. acceptable greetings (such as firmness of handshake) | | | | | | |
| 8. Differences in views regarding clock versus social time | | | | | | |
| 9. Differences in learning styles | | | | | | |
| 10. The need for sensitivity and respect with regards to: | | | | | | |
| a. sexual orientation | | | | | | |
| b. religious orientation | | | | | | |

| Topic Area | Doesn't cover at all | Covers in introductory fashion only | Covers minimally | Covers adequately | Covers basic concepts well | Covers exceptionally |
|--|----------------------|-------------------------------------|------------------|-------------------|----------------------------|----------------------|
| CULTURAL AND BIOLOGICAL DIFFERENCES | | | | | | |
| 11. Impact of variations in ethnic and racial origins such as: a. skin coloration (as related to ability to visualize symptoms of infection, and rash; ability to monitor responses to thermal and electrical modalities) | | | | | | |
| b. incidence of and risk factors for genetic, hereditary, endemic and topographical diseases. | | | | | | |
| c. physiologic responses expected from physical therapy interventions | | | | | | |
| 12. Impact of gender such as: a. incidence of and risk factors for diseases and injury | | | | | | |
| b. physiologic responses expected from physical therapy interventions | | | | | | |
| 13. Impact of aging such as: a. incidence of and risk factors for diseases and injury | | | | | | |
| b. physiologic responses expected from physical therapy interventions | | | | | | |
| 14. Variations in cultural views of pain: a. response toward pain | | | | | | |
| b. acceptable levels of pain | | | | | | |

| Topic Area | Doesn't cover at all | Covers in introductory fashion only | Covers minimally | Covers adequately | Covers basic concepts well | Covers exceptionally |
|--|----------------------|-------------------------------------|------------------|-------------------|----------------------------|----------------------|
| HEALTH CARE PRACTICES AND PRACTITIONERS: | | | | | | |
| 15. Impact of the client's cultural focus of health care (acute versus preventative) | | | | | | |
| 16. Impact of the role of religious beliefs regarding illness and healing on the delivery of physical therapy | | | | | | |
| 17. Impact of the role of cultural beliefs regarding illness and healing on the delivery of physical therapy | | | | | | |
| 18. Variations in culture related to acceptable levels of independence and dependence | | | | | | |
| 19. Variations in cultural views toward: a. role of the individual with a disability in family/society | | | | | | |
| b. role of the elderly in family/society | | | | | | |
| 20. Variations in cultural views regarding: a. status of health care practitioners | | | | | | |
| b. gender of health care practitioners | | | | | | |
| 21. Variations in cultural views regarding preferred type of health care practitioner (such as traditional, religious, allopathic and alternative) | | | | | | |

| Topic Area | Doesn't cover at all | Covers in introductory fashion only | Covers minimally | Covers adequately | Covers basic concepts well | Covers exceptionally |
|--|----------------------|-------------------------------------|------------------|-------------------|----------------------------|----------------------|
| 22. Socioeconomic factors related to: | | | | | | |
| a. access and utilization of healthcare | | | | | | |
| b. health practices of children, teenagers and the elderly | | | | | | |
| c. health status of children, teenagers and the elderly | | | | | | |

Section III – Type of content related to cultural competence.

1. Please list the number of required prerequisite courses in the following social sciences:

psychology _____

sociology _____

other (please list) _____

2. Do you require any coursework in the professional curriculum related to psychology of illness or patient behavior? (check the appropriate response)

____ Yes

____ No

3. If yes, please list the name of the course(s):

4. Please list any texts or other materials your Program uses related to cultural competence.

5. Does your program offer multicultural clinical experiences? (please check the appropriate response)

____ Yes

____ No

6. If yes, briefly describe the experience(s)

7. Does your program offer international clinical experiences? (Please check the appropriate response)

____ Yes

____ No

8. If yes, are these experiences in (check those that apply):

____ developed countries

____ developing countries

9. If yes, briefly describe the experience(s)

10. Does your program use vignettes, case studies or simulated cases with a focus on cultural differences? (Please check all that apply)

____ vignettes ____ case studies ____ simulated cases ____ none

11. Does your program utilize standardized patients with a cultural focus? (Please check the appropriate response)

____ Yes

____ No

12. Does your program use any measure of cultural competence to assess your students? (Please check the appropriate response)

____ Yes

____ No

13. If yes, what measure do you use?

14. Please provide any additional comments regarding ways in which content related to cultural competence is included in your curriculum.

CURRICULUM VITAE

BETH E. JAMALI, PT, MS, OCS

October, 2004

School of Physical Therapy
129 William B. Spong Jr. Hall
Virginia 23451
Norfolk, Virginia 23529-0288
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EDUCATION

- 1989 **Russell Sage College, Troy, New York**
Bachelor of Science in Physical Therapy
- 1997 **Old Dominion University, Norfolk, Virginia**
Master of Science - Concentration: Orthopedic Physical Therapy
- Thesis title: "Windlass Taping Technique for Symptomatic Relief of Plantar Fasciitis"
- 2000 - present **Old Dominion University, Norfolk, Virginia**
Currently enrolled in PhD Program: PhD in Urban Services - Urban Education
Concentration - emphasis Higher Education

CERTIFICATIONS

- 2000 Orthopedic Certified Specialist

HONORS AND AWARDS

- 2000 College of Health Sciences - Excellence in Teaching Award

EXPERIENCE

ACADEMIC EXPERIENCE

- | | | |
|---------------------------|-------------------------------|-----------------------------------|
| 1996 - 1997 University | Instructor- Adjunct Status | Old Dominion Norfolk, Virginia |
| 1997 - 2002 University | Lecturer | Old Dominion Norfolk, Virginia |
| 2002 - present | Senior Lecturer University | Old Dominion Norfolk, Virginia |

CLINICAL EXPERIENCE

| | | |
|------------------------|---|--|
| 1989-1990 1990-1991 | Staff Physical Therapist Senior Physical Therapist | Rome Developmental Disabilities Service Organization Rome, N.Y. |
| 1990-1991 | Staff Physical Therapist Home Health | Oneida County Department of Health Utica, N.Y. |
| 1991-1992 | Staff Physical Therapist Outpatient | Physical Therapy and Sports Medicine Center Chesapeake, VA |
| 1992-1994 | Director of Therapeutic Services Home Health | Olsten Kimberly Quality Care Virginia Beach, VA |
| 1994-1996 | Staff Physical Therapist Home Health | Olsten Kimberly Quality Care Virginia Beach, VA |
| 1996-present | Staff Physical Therapist Home Health | In Home Health Virginia Beach, VA |
| 1996 - present | Contract Physical Therapist Outpatient Orthopedics | Atlantic Physical Therapy Virginia Beach, VA |
| 1998 - 2002 | Staff Physical Therapist Home Health | Comfort Care Chesapeake, VA |

PUBLISHED WORKS

Walker, M., Sussman, D., Tamburello, M., VanLunen, B., Dowling, E., Jamali, B.E.
Relationship between maximum strength and relative endurance for the empty-can exercise. *J Sport Rehabilitation*. 2003;12:31-38.

Jamali, B., Walker, M., Hoke, B., Echternach, J. Windlass taping technique for symptomatic relief of plantar fasciitis. *J Sport Rehabilitation*. 2004;13:228-243.

RESEARCH PRESENTATIONS

- 1998 Presentation: Virginia Physical Therapy Association Annual Conference - research presentation: Windlass Taping Technique for Symptomatic Relief of Plantar Fasciitis
- 1998 Presentation: Tidewater Physical Therapy Association District Meeting - research presentation: Windlass Taping Technique for Symptomatic Relief of Plantar Fasciitis
- 1999 Presentation: American Physical Therapy Association - Combined Sections Meeting - poster presentation: Windlass Taping Technique for Symptomatic Relief of Plantar Fasciitis

GRANTS AWARDED

Planning grant for a Clinical Research Network - awarded by the Foundation for Physical Therapy, February, 2002, \$5000

GRANTS APPLIED FOR

Grant to conduct a Clinical Research Network - theme: Center to study the community dwelling elderly. Submitted to the Foundation for Physical Therapy, May, 2002, not funded.

RESEARCH AND MANUSCRIPTS IN PROGRESS

Jamali, B., Bol, L., Echternach, J.L. Cultural competence and curricula in physical therapist professional education.

Jamali, B., and PT student research group. The effect of physical therapy intervention following intrathecal baclofen pump insertion.

Jamali, B., and PT student research group. The effects of physical therapy interventions on total hip arthroplasty - a 5-year study.

Jamali, B. Rehabilitation of total hip replacements in post-surgical patients. In: *Physical Therapy of the Hip*. Revised edition by Echternach, JL (book chapter)

SOCIETY MEMBERSHIPS

| | |
|----------------|---|
| 1987 - Present | American Physical Therapy Association Orthopedic Section Member Community Health Section Member Education Section Member |
| 1987 - 1990 | New York Physical Therapy Association |
| 1991 - Present | Virginia Physical Therapy Association |
| 2000 | Alpha Eta Society |
| 2002 | Phi Kappa Phi |

UNIVERSITY SERVICE**Departmental Level**

| | | |
|---------------------|-------------|---|
| 1997-Present for | Co-Chairman | Admissions Committee |
| 1997-Present | Member | Physical Therapy Clinical Education Committee |
| 1996-Present | Member | Physical Therapy Curriculum Committee |

College Level

| | | |
|-----------|--------|----------------------------------|
| 1997-2002 | Member | Student Recruitment Committee |
|-----------|--------|----------------------------------|

**INSTRUCTIONAL RESPONSIBILITIES
OLD DOMINION UNIVERSITY****Primary Instructional Responsibilities/Course Coordinator**

| | | |
|--------------|--------|------------------------------|
| 1996-present | PT 836 | Clinical Sciences III |
| 1997-present | PT 826 | Theory and Practice III |
| 1997-present | PT 857 | Clinical Problem Solving III |
| 1998-present | PT 827 | Theory and Practice IV |
| 1998-present | PT 600 | Applied Neurophysiology |

Instructional Responsibilities/ Lab Instructor

| | | |
|----------------|--------|-----------------------------|
| 1996 - present | PT 641 | Patient Evaluation II |
| 1997 - present | PT 842 | Patient Evaluation III |
| 2001 | PT 858 | Clinical Problem Solving IV |

PROFESSIONAL SERVICE

| | |
|----------------|--|
| 1999 - 2002 | Virginia Physical Therapy Association Chairperson, Tidewater District |
| 2003 - present | Virginia Physical Therapy Association Treasurer, Tidewater District |

COMMUNITY SERVICE / PRESENTATIONS

| | |
|-------------|---|
| 1995 | Continuing Education Course: Tidewater Community College a two-day lecture/lab on Proprioceptive Neuromuscular Facilitation Techniques to physical therapy assistant students |
| 1997 | Presentation: Comfort Care Home Health Agency - Rehabilitation Team on the topic of total joint replacements and orthopedic patient management in the home health setting |
| 1998 - 2002 | Chesapeake General Hospital Scholarship Committee - Old Dominion University representative for Health Related Service Scholarship Awards |

- 1999 Continuing Education Course: Affiliate Special Interest Group - Virginia Physical Therapy Association: one day lecture/lab continuing education course for physical therapist assistants: Functional Ideas for the Treatment of the Adult Neurological Client
- 2000 Continuing Education Course: Sponsored by Tidewater District of Virginia Physical Therapy Association: One day lecture for physical therapists/assistants: Update on Total Joint Replacement Arthroplasty
- 2000 Continuing Education Course: Sponsored by Bon Secours. One day lecture for physical therapists/assistants and occupational therapists/assistants on Intervention Strategies for the Neurologically Impaired.
- 2001 Continuing Education Course: Sponsored by Bon Secours. One day lecture for physical therapists/assistants and occupational therapists/assistants: Movement Analysis and Treatment Strategies for the Neurologically Impaired