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Perceptions of Physical Therapy Faculty on the Inclusion of Spirituality in Physical Therapy Education

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PERCEPTIONS OF PHYSICAL THERAPY FACULTY ON THE INCLUSION OF SPIRITUALITY IN PHYSICAL THERAPY EDUCATION

A Dissertation

Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

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ABSTRACT

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IN PHYSICAL THERAPY EDUCATION

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ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

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Title: PERCEPTIONS OF PHYSICAL THERAPY FACULTY ON THE INCLUSION OF SPIRITUALITY IN PHYSICAL THERAPY PROGRAM

Name of researcher: Janice C. Pitts

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Problem

The physical therapy profession currently does not require the integration of spirituality in patient care in the physical therapy curriculum, and it is unclear how physical therapy faculty and practitioners view its inclusion. There is limited research literature on the integration of spirituality in the field of physical therapy or within its academic environment.

Method

The study utilized standard survey research methodology to gather data relating to spirituality and its inclusion in a physical therapy curriculum. Five participants from each of 101 sampled programs received a survey instrument along with instructions and

consent form disseminated through electronic mailing. Data were analyzed on 166 respondents using descriptive and inferential statistics.

Results

Approximately half (49.0%) of the respondents indicated their physical therapy programs included spirituality concepts. More than half of the respondents (56.0%) also indicated that they believed spirituality concepts should be included in physical therapy education and that every physical therapy program should include it in its curriculum. Response patterns indicated respondents felt spirituality concepts should be integrated into the physical therapy curriculum rather than having specific courses focused on spirituality. Respondents indicated spirituality concepts should be taught by a few physical therapy faculty members who have a basic level of experience in spirituality and involve spiritual leaders in their teaching. Collaborative discussions, case studies, and presentations were viewed by more than 75% of the respondents as the most effective ways to teach spirituality concepts.

Recommendations

It is recommended that spirituality objectives be added to the Normative Model of Physical Therapist professional education accreditation guidelines as well as the Guide to Physical Therapist Practice. It is also recommended that the American Physical Therapy Association adopt a principle of addressing the spiritual needs of patients in the Practice Act for physical therapists.

Lastly, it is recommended that directors of physical therapy programs equip their faculty members with a basic knowledge of spirituality beliefs and practices to allow them to gain the experience needed to teach topics of spirituality.

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CHAPTER 1

INTRODUCTION

The spiritual nature of humans appears to be accepted across almost all cultural and people groups in the United States. Cultural groups tend to have their own ways of dealing with spirituality (Bonder et al., 2002). Mayer (1992) suggests that healthcare workers should treat individuals as a total being, which includes the body, mind, and spirit. Too often healthcare focuses on the body and mind and ignores the spiritual component.

During times of calamity, people generally have an instinctive desire to rely on a supernatural entity. It is often during challenging times when human beings generally become more spiritual (Cohen, Wheeler, Scott, Edwards, & Lusk, 2000; Koenig, et al., 1999; Mayer, 1992). The professional healthcare community includes in its mission a dedication to providing services that accommodate appropriate societal needs. Since society as a whole acknowledges the spiritual nature of individuals, society indicates a need for spirituality within all aspects of life, including the delivery of healthcare. Over 60 of the 126 medical schools in the United States have integrated the concepts of spirituality, religion, and health outcomes in the curriculum for training physicians (Koenig et al., 1999).

Several research studies support the direct association between spirituality and healing (Anadarajah, 2001; Cohen et al., 2000; Groer, O'Connor, & Dropplemann, 1996;

Hickson & Housley, 2000; Koenig et al., 1999). Consequently, nursing has integrated spirituality concepts in its professional preparation curriculum. In discussing spirituality in the nursing curriculum, Mayer (1992) reports:

> Spiritual care should be seen as an inseparable part of patient care, not as an optional extra fitted with difficulty in a teaching module or exclusively linked with chaplaincy. The emphasis needs to pervade all lectures and all nursing practice so that spiritual care is seen not as an esoteric interest for religious nurses or budding psychoanalysts but as something of intrinsic value and importance that every nurse may feel confident to give as part of her identity as a caring and integrated person. (p. 27)

While Mayer's discussion is limited to the inclusion of spirituality in the nursing curriculum, various other authors advocate the inclusion of spirituality in allied health professional curricula (Fayer, Gieske, & Holderby, 2001; Groer et al., 1996; Knight, 1996; Leach, 1999; Schaub & Schaub, 1999; Sloan, Bagiella, & Powell, 1999; Taylor, Mitchell, Kennan, & Tacker, 2000). However, as of 2005, inclusion of spirituality in health profession curricula has filtered into only one discipline of the allied health professions, Occupational Therapy. Knight (1996) describes the occupational therapy profession as a "profession rooted in holistic ideals, striving to return clients to health as it is envisioned from a holistic perspective" (p. 3). Taylor et al. (2000) researched the attitudinal relationship of occupational therapists regarding their perceptions on spirituality and its involvement with health issues. They discovered that "both religious and non-religious participants had positive attitudes toward addressing spirituality in occupational therapy practice with the religious group significantly more positive than the non-religious group"(p. 422). The discussion section of the study stated that the occupational therapy professional board, American Occupational Therapy Association, should create and define practice guidelines for the integration of spirituality in the field

of occupational therapy. Taylor et al. (2000) suggested that the guidelines are imperative to ensure uniformity in the integration of spirituality into the practice of occupational therapy.

Statement of the Problem

Society as a whole acknowledges the spiritual nature of humans. In general, the healthcare profession has acknowledged that spirituality is a part of human beings. Within the medical profession, some of the physicians and nurses have adopted the method of treating the total individual body, mind, and spirit (Fayer, Gieske, & Holderby, 2001; Groer et al., 1996; Knight, 1996; Leach, 1999; Schaub & Schaub, 1999; Sloan et al., 1999; Taylor et al., 2000). Some of these medical professions include spirituality concepts in their preparation curricula to prepare both medical and nursing students in addressing the societal healthcare need for spirituality. It is important for a patient's continuity of care that other members of the healthcare team adopt the same method. However, the physical therapy profession currently does not require the integration of spirituality in patient care in the physical therapy curriculum, and it is unclear how physical therapy faculty and practitioners view its inclusion. There is limited research literature on the integration of spirituality in the field of physical therapy or within its academic environment. Highfield and Osterhues (2003) held an on-line discussion on 34 physical therapy students on their perspectives of "spiritual care rights and quality of care" (p. 12). They reported that students feel that spirituality is an integral part of rehabilitation. Another article reported by Le Postollec (2000) discussed only the idea of including spirituality in rehabilitation, but no scientific research was done to deduce that this was needed. Both articles lack the scientific investigation into the inclusion of

spirituality in physical therapy from both a clinical and an academic setting. In the literature reviewed, no other published or unpublished articles or papers were found that discussed these topics.

Purpose of the Study

Although studies have suggested that the effect of spirituality in healthcare practice influences the health and well-being of patients, few of these studies examined the healthcare professionals' perception towards inclusion of spirituality in physical therapy curriculum. Some medical programs as well as nursing programs are committed to educating their students with knowledge and skill to provide spiritually integrated healthcare. However, within the field of physical therapy, the American Physical Therapy Association (APTA) has not recognized the need to address the societal desire of incorporating spirituality within the practice of physical therapy. As a result, physical therapy programs are not required to equip students to meet the spiritual needs of patients. It is the purpose of this study to determine the perception among physical therapy faculties toward the inclusion of spirituality concepts in the physical therapy curriculum.

Research Questions

This study investigated the following research questions:

Research Question 1: *To what extent is spirituality currently included in physical therapy curriculum?*

Research Question 2: *What beliefs do physical therapists have about inclusion of different aspects of spirituality based on the physical therapy curriculum questions?*

Curriculum Question 1: *Do physical therapy faculty perceive inclusion of spirituality concepts in the physical therapy curriculum as an important issue?*

Curriculum Question 2: *How should spirituality concepts be included in the existing or a revised physical therapy curriculum?*

Curriculum Question 3: *What core spirituality topics should be included in a physical therapy program?*

Curriculum Question 4: *Who should teach spirituality concepts in a physical therapy curriculum?*

Curriculum Question 5: *Which teaching strategies should be used for teaching spirituality?*

Curriculum Question 6: *When should spirituality concepts be included in the physical therapy curriculum?*

Research Question 3: *What differences exist in responses based on ethnicity, age, professional status, and gender?*

Research Hypotheses

The first two research questions were answered through the presentation of descriptive data. Research question 3 was tested through the following research hypotheses:

Hypothesis 1. There is a difference among physical therapy educators in the perception of the inclusion of spirituality based on age.

Hypothesis 2. There is a difference among physical therapy educators in the perception of the inclusion of spirituality based on gender.

Hypothesis 3. There is a difference among physical therapy educators in the perception of the inclusion of spirituality based on ethnicity.

Hypothesis 4. There is a difference among physical therapy educators in the perception of the inclusion of spirituality based on professional status.

Hypothesis 5. There is no interaction in the perception of the inclusion of spirituality between age, gender, ethnicity, and professional status.

Significance of the Study

Since there has been an increase in the awareness of religion, spiritually, and health outcomes in both society and medical professions, this study was timely as it specifically investigated the physical therapy profession. This study was significant in that it determined practicing physical therapy faculty members' perceptions concerning the inclusion of spirituality in the physical therapy curriculum to better equip physical therapy graduates with the skill set to address clearly identified societal needs related to spirituality in healthcare. Information from this study can be used to shape future policies concerning the inclusion of spirituality issues in the physical therapy curriculum. It is possible that as a result of this study future physical therapists will develop the ability to include spirituality as a part of the examination of the patient and develop an appropriate treatment plan. It is important for the physical therapy profession to address, as well as meet, the demands of the ever-changing society. It is also imperative that the physical therapy profession stays abreast of any changes that may occur within the medical education model in order to maintain a professional working relationship with physicians and other primary healthcare providers. This professional relationship could produce spiritual continuity of care within a transdisciplinary team. It was therefore

critical to assess the attitudinal perception of physical therapy faculties in the inclusion of spirituality in physical therapy curriculum.

Limitations and Delimitations of the Study

This study utilized a self-report, survey instrument. I assumed that respondents understood the survey items and answered honestly and openly. One limitation is that the respondents may misinterpret questions since there is no independent verification of the returned responses. This study was delimited to physical therapy education programs accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE). These limitations and delimitations must be kept in mind when generalizing this study's results to other populations.

General Research Method

The study utilized standard survey research methodology to gather data relating to spirituality and its inclusion in a physical therapy curriculum. Systematic sampling was used to obtain the physical therapy programs selected for inclusion in this study. Five participants from each sampled program received a survey instrument along with instructions and consent form disseminated through electronic mailing. Survey instruments were returned anonymously via electronic mail. The survey instrument included a definition of spirituality to avoid confusion of the terms. Data were analyzed using descriptive and inferential statistics.

Definition of Terms

Allied Health Professions: Ancillary services that include various healthcare disciplines. Examples: nursing, physical therapy, occupational therapy, speech language pathology, and social worker.

Continuity of Care: The process by which each member from different disciplines on a healthcare team provides patient care services on one patient to achieve the same general desired outcome.

Discipline: The various health related professions that are involved on the health care team. Example: nursing, physical therapy, occupational therapy, speech language pathology, social worker.

Physical Therapy Curriculum: The physical therapy educational program developed according to the standards of the Commission on Accreditation of Physical Therapy Education.

Professional Status: The academic position of a faculty member in a physical therapy program. These positions include Instructor, Associate Professor, Assistant Professor, Adjunct, Academic Clinical Coordinator, and Program Administrator.

Religion: Pertaining to an organized group or affiliation that has certain traditions or worship practices (Underwood & Teresi, 2002).

Spirituality: May include elements of religion, but this concept usually involves the individual's view of relating to something greater than self. It refers to anything that gives meaning, wholeness, and direction to life (Underwood & Teresi, 2002).

Summary of Chapter

In summary, the purpose of this study was to determine the perceptions physical therapy faculty members have toward the inclusion of spirituality in a physical therapy curriculum. The study was based on the assumption that it is crucial for the physical therapy profession to address societal needs to better serve patients. Literature revealed that contemporary society is spiritually driven and has expressed a need for spirituality to be included in their healthcare (Cohen, et al., 2000; Fayer,et al., 2001; Knight, 1996; Leach, 1999; Mytko & Knight, 1999; Sloan et al., 1999; Taylor, et al., 2000). Current physical therapy graduates, however, may have been unprepared to address this salient issue. The study investigated the need to integrate spirituality in physical therapy curriculum.

This study is reported in five chapters. Chapter 1 includes: (a) The Introduction, (b) Statement of the Problem, (c) Purpose of the Study, (d) Research Questions, (e) Research Hypotheses, (f) Significance of the Study, (g) Limitations and Delimitations, (h) General Research Method, and (i) Definition of Terms.

Chapter 2 contains a review of the literature that includes (a) Spirituality and Health, (b) Spirituality and Healthcare, (c) Influence of Demographic Variables, and (d) Spirituality in the Education of Healthcare Providers.

Chapter 3 contains the following: (a) Research Design, (b) Research Questions, (c) Description of the Population and Sampling of Participants, (d) Instrumentation, (e) Procedure, (f) Protection of Human Subjects, (g) Null Hypotheses, and (h) Data Analysis.

Chapter 4 contains a comprehensive report of results along with analysis of data including tables. Chapter 5 presents a discussion of the results, conclusions, recommendations for the physical therapy profession, and suggestions for future studies.

CHAPTER II

Literature Review

This chapter presents the review of literature that informed this study. The literature was located through the use of various search databases provided by Web Luis and reviewed for its depth, currency, and relevancy. Key terms used singly and in combination in the literature search included spirituality, healthcare, physical therapy, medical profession, age, race, culture, gender, allied health, occupational therapy, nursing, and athletic training. This chapter first presents a review of literature related to spirituality and healthcare. This is followed by a discussion of research focused on spirituality and specific healthcare providers: physicians, nurses, and allied health professionals. The third section of the literature review looks at the relationship of demographic variables–ethnicity, age, gender, and professional status–to various healthcare providers' perceptions on the utilization of spirituality. The chapter closes with a review of literature on spirituality in the education of healthcare providers.

Studies on the Connection Between Spirituality and Health

Several authors denote that the mind and body are not separate and should be considered as one. They imply that the total person should be treated instead of just their physical body. The common thread among the authors is the conclusion that spirituality should become an integral part of patient care. The authors suggest that a person/patient

does not receive complete care if there is no regard for the effects of spirituality on health (Anadarajah, 2001; Fayer et al., 2001; Groer et al., 1996; Leach, 1999, Le Postollec, 2000; Knight, 1996; Byrd, 1988).

An increasing number of studies report a probable relationship between health and spirituality (Anadarajah, 2001; Byrd, 1988; Cohen, et al., 2000; Ferraro and Albrecht-Jensen, 1991; Groer et al., 1996; Harris et al., 1995; Knight, 1996; Leach, 1999; Le Postellec, 2000). Udermann (2000) reports, "With all of the sophisticated technologic advances in medicine today, a relatively unknown factor has been shown to have a profound impact on health and healing: the relative strength of an individual's faith or spirituality" (p. 194). The author suggests that a person's spirituality should not go unnoticed as a potential key element in the person's recovery (Udermann, 2000). In a survey performed by the Princeton Religion Research Center (1996), 30% of the United States population reported that they had experienced a miraculous healing at some time in their life. These participants attributed the miraculous healing to their spirituality.

There are several forms of the use of spirituality in healthcare. In a study of patients admitted to a coronary care unit, prayers were offered for some patients without their consent for 4 weeks. The patients who were prayed for had 10% fewer complications than did patients who did not receive prayer (Byrd, 1988). Harris et al., (1995) performed a similar study on heart-transplant recipients. The results showed that the heart-transplant recipients who exercised their faith and spirituality demonstrated better compliance with their cardiac program regime along with a higher improvement of their functional status. These authors deduced that spirituality has a great impact on a person's health. Ferraro and Albrecht-Jenson (1991) both agree with Harris et al. (1995).

Their study on individuals with health-related problems and practiced spirituality revealed similar results.

Controversy has arisen over the validity of prayer in scientific studies (Byrd, 1988; Cohen et al., 2000; Dossey, 1993; Walker, Tonigan, Miller, Comer, & Kahlich, 1997). Cohen et al., (2000) debate that prayer is a difficult variable to measure. The scientific studies that have studied the effects of prayer on individuals' health have attempted to use the "double blind" approach (Byrd, 1988; Cohen et al., 2000; Dossey, 1993; Walker et al., 1997). The ability to measure 'if a person was prayed for' or 'the intensity of that prayer' is almost impossible to control in a study. On a regular basis, several spiritual groups pray in general for all individuals who are in the hospital. Cohen et al. noted there would be no way to identify each spiritual person in the community and then convince them not to pray for certain sick individuals.

The use of spirituality assists in the prevention, coping, and recuperation of illness. Acklin, Brown, and Mauger (1983) identified the use of spirituality as a mechanism to increase a person's ability to regulate their psychosocial issues, such as depression, anxiety, and feelings of helplessness. The researchers also mention that psychosocial issues can increase a person's anxiety, stress, or depression levels. An increase in these levels can have an opposing effect on the physiological system of a person with an illness, thus inhibiting their rate of recovering (Acklin et al., 1983). Spirituality has been shown to increase a person's sense of well being because of the hope, comfort, encouragement, and support that it lends. The practicing of spirituality can reduce a person's life stresses hence creating a better physiological atmosphere that is

conducive for healing (Acklin et al., 1983; Collins, 1998; McColl, Johnston, Schumaker, & Smith, 2000; Peloquin, 1997).

Spirituality and Healthcare

Research studies have revealed that the majority of patients prefer to have spirituality incorporated into their healthcare (Anadarajah, 2001; Cohen et al., 2000; Fayer et al., 2001; Groer et al., 1996; Knight, 1996; Leach, 1999; Le Postollec, 2000). Recognizing a patient's need for spirituality in the delivery of healthcare requires the health professional be able to identify the versatile components of spirituality within their patients. This specialized skill requires the use of empathy and the ability to provide, as well as encourage, reasonable optimism. The use of spirituality in patient care may or may not involve directly addressing the topic of religion or a higher being. As a result, it is important that a health professional be familiar with how to incorporate spirituality effectively (Anadarajah, 2001).

Sims (1994) speculates that spirituality has been left out of the field of healthcare because of healthcare professionals' uneasiness with discussion of the topic. He deduced that this is due to a lack of faith and belief system of the healthcare professionals.

Kaiser (2000) reports that spirituality belongs in healthcare. He recognized that an individual should be treated as a total being utilizing both homeopathic as well as "allopathic medicine" (p. 8). Kaiser suggested developing spiritually based community programs to increase the health and wellness knowledge of the general population. He believes that "spirituality will prove to be the most powerful dimension in future healthcare" (p. 9).

Influence of Demographic Variables

Age

The general young adult population, ages 18 to 35 years, is looking for 'self-enhancement' (Cavendish et al., 2001). The fulfillment of this may be achieved through a spiritual program as the young adult tries to determine who they are. This may occur when the mature young adult analyzes their belief and value systems. It is extremely important to understand the spiritual growth and development of the young adult population in order to provide an adequate assessment of a patient that fits within this population. These young adult patients will also be of a diverse spiritual background, and spiritual sensitivity should be considered if spirituality is integrated within the scope of the healthcare practice (p. 77).

It can be considered that patients between the ages of 18 and 35 may possibly practice spirituality and want the inclusion of spirituality in their healthcare. One study (Cavendish et al., 2001) sampled 13 healthy young adults to determine their perception towards spirituality and its involvement in their lives. The results revealed that more than half of the young adults incorporated spirituality as a part of their everyday life. It was mentioned that this particular group of young adults used spirituality in assisting them in accomplishing their life goals. They also believed that a higher entity was in existence and provided them with guidance. Webber (2002) agrees that young people do believe in a supernatural being and may involve spirituality within their lives. In contrast, she mentions that her study suggests young people are not generally religious or spiritual. Young people are in search of finding true meaning for their lives. This youthful population prefers to conduct their lives with a sense of meaning that may or may not be

influenced by spirituality. This does not necessarily involve the use of spirituality unless they have identified it as a source that creates meaning for their life. Webber (2002) suggests that young adults are not interested in religion and therefore are not considered to be spiritual in nature. If young people are involved or active in church they tend to be more spiritual thus wanting spirituality included in all aspects of their lives. Nevertheless, a small percentage of young adults are involved in or attending church (Brienen, 1998).

The adult to middle aged adult population has provided information on their perception of spirituality and their health. It is this population that has revealed that they would like to have spirituality included within their healthcare. Many of these adults are involved in the utilization of spirituality and have realized that it serves as an integral part of their lives (MacLean et al., 2003).

The older adult tends to be more spiritual in nature. Their age has shown a positive correlation between spirituality and their health status. Oman and Reed (1998) discovered that adults, 55 years and older, had a decrease in their mortality as a result of their spirituality. Other studies discussed by Musick, Traphagen, Koenig, and Larson (2000) agreed with these same findings. In contrast, a study performed by Idler and Kasl (1992) reported that there was no correlation between spirituality and an older adult's health status.

The older adult copes with grieving the loss of a loved one, health problems, and other life issues through the practice of a form of spirituality (Musick et. al., 2000). Spirituality is viewed as a means of comfort as well as a mechanism of retrieving advice on such matters. Everson et al. (1996) concluded that the older adult may have a decline

in health status once they lose hope in their recovery. Prayer, belief, and faith allow for the older adult to manage their health problems, which ultimately increases the chances of having a favorable end result. In opposition, Musick et al., (2000) also postulate that "religion is associated with health, not whether religion causes health" (p. 81). The authors, however, present the argument that the older adult population crosses the practice of religion with spirituality. It is perceived that one cannot practice religion without being spiritual and vice versa. Therefore it can be assumed that religion and spirituality are interchangeable for the older adult (Musick et. al, 2000; Everson, et al., 1996).

Jianbin and Mehta's (2003) investigation on spirituality and the aging population revealed a common theme that the elderly turn to spirituality for comfort and companionship. It is through the use of spirituality that they believe that a type of omnipresence is constantly consoling and communing with them. Their sense of loneliness decreases as a result of this belief. Lastly, Lowry and Conco (2002) concluded in their study that the older adult expressed a need for spirituality to be included in their healthcare. "They described spiritual needs as respect, kind treatment, listening, thoughtfulness, compassion, and attention to their concerns" (p. 395). The spiritual needs were also interpreted as the way a healthcare worker relates to the patient on a physical level. The healthcare worker can listen as the patient talks on topics of spirituality; they can pray with the patient, read spiritual literature to the patient, or simply take good care of them. All of these needs are referred to as being spiritual and would be adequate in fulfilling the spiritual needs of the patient. It should be noted that a spiritual assessment must be taken to reveal what type of spiritual need the person may have. The researchers'

study also discovered that the elderly population thought that topics of spirituality should be included in a healthcare worker's curriculum. The older adult perceived that learning how to respect, identify, and deal with the various components of their patients' spirituality can only make the student a better equipped professional.

Gender

According to Lindholm (2003), spirituality can vary between the two genders. More women (45%) have spirituality as an integral part of their lives when compared to men (38%). Statistics revealed that as both males and females age, the spirituality gap narrows and eventually becomes equal. Men and women may both choose spirituality; however, they are chosen for different reasons. Men may choose to be more spiritual during their greatest times of need when they are seeking comfort or meaning in their life. They tend to turn to spirituality when it is affecting their physical and/or mental well-being. Women, on the other hand, seek spirituality throughout their phases of life and not just during their time of need. Both genders have a heightened sense of spirituality when their health, both mentally and physically, is challenged (Ferraro & Kelley-Moore, 2000).

Shahabi et al. (2002) reported in their study of 1,422 respondents that educated young females were found to be more spiritual than males. They showed that these educated young females were healthier as a result of their spirituality. Their study also indicated that the respondents in this category were less stressed and religious. It was concluded that young educated females view spirituality as a mechanism to produce good coping strategies for the reduction of stressful events within their life. As a result of the person's ability to manage stress through the use of spirituality, the individual also

increases the quality of meaning to their life. This in turn has a positive effect on decreasing any health disparities (Lindholm, 2003).

Ethnicity

Spirituality may be different across ethnic groups. Since spirituality can be viewed as a type of behavior, one may view a variance among ethnic groups. One study found that older Japanese adults tend to be more spiritual in nature than the young adult Japanese. Among the Hispanic and African American ethnic group, the women tend to be more spiritual than males. Within the Hispanic ethnic group of females, Musgrave, Easley-Allen, and Allen (2002) mention that the "mind, body, and spirit are inseparable" (p. 558). Together a person's health and sickness includes their spiritual being. The Hispanic ethnic group generally integrates this concept of spirituality within their healthcare. The research concludes that "the intersection of spirituality or religiosity and health for ethnic women of color can make a difference in their health experience, helping to eliminate health disparities and promoting positive health outcomes" (p. 560).

One study analyzed how 13 African-American males viewed spirituality. The results indicated that African-American males were more spiritual in nature when compared to the European Americans (Caucasian). It was suggested by Taylor and Chatters (1991) that the African American male population was more spiritual because of their socioeconomic status, race, and stressful environment. McAdoo (1993) reports that this occurs due to their strong belief system in a higher power and its integration into life, thus making it meaningful. The results of the study revealed that African Americans utilize spirituality within their lives as a way to cope with life's stresses. It is their spiritual belief system that allows them to persevere.

The study concluded that African American males between the ages of 19 to 26 years of age have a greater tendency to be spiritual. It also postulated that African American males within that same age group rely on spirituality for their support, means of encouragement, and guidance through stressful situations (Herndon, 2003).

Thistlethwaite and Engel (1990) report that European Americans have a tendency to relate to spirituality from a 'theoretical' standpoint. The authors did not posit that the European Americans do not value spiritual issues, but they do suggest that this group of people relate to spirituality from a more transcendent view.

Cole (2002) suggests that ethnic people tend to have more of a spiritual background. They have spirituality as a source of their existence. It would be neglectful not to address or even be aware of their spiritual nature. The awareness of a person's ethnic background would help healthcare professionals understand their spiritual needs. Having a comprehension of the various ethnicities increases the knowledge base for cultural competency. Within the physical therapy curriculum, teaching for cultural competency does not include teaching students how to deal with various spiritual matters as they arise from the different ethnic groups. Cultural competency includes the teaching of the various cultures that may include spirituality, but students are only taught to identify and respect a person's culture. They are not taught how to assess and integrate spirituality within the intervention plan (Kraemer, 2001). The teaching of both cultural competency and addressing a person's spiritual needs holds the challenge of teaching for transformation. A student can learn cultural competence and how to address spiritual needs, but that same student must adapt their mind-set to appreciate and respect it. It is possible that a student can have comprehension of addressing cultural competency that

includes the patient's spiritual needs, but is unable to practice it with competence and compassion as a result of their own biases (Kraemer, 2001).

Not knowing an ethnic person's spiritual background may cause conflict or undesirable health outcomes. It is suggested that the various ethnic groups perceive health information slightly different as a result to their relation of spirituality and health. It is possible to insult someone if you have performed a technique or said something that may be spiritually forbidden. Having a basic understanding as well as accommodating for a person's spiritual needs may help prevent any possible complications (Cole, 2002).

A study of 456 patients (MacLean et al., 2003) revealed that patients wanted spirituality to be included in their doctor's office visit. A closer look at the results revealed that the desire for the inclusion of spirituality increased with the severity of their illness. Differences in perceptions about spirituality were found among the three ethnic groups: White, African-Americans, and Other. African-American patients wanted the physician to take time during their visit to address their spiritual needs. This ethnic group did not want the physician to spend all of the visit time on physical examination. This study indicated the importance of spirituality to the African-American population. It indicates African-Americans valued their spirituality as much as their physical health. Their belief systems valued the treatment of both the body and spirit.

In a report on ethical care and patient rights, the Joint Commission on Accreditation of Health Organizations (JACHO, 2004) supported the inclusion of spirituality in health care. JACHO is the accrediting body for healthcare facilities. Their report states that the healthcare team should assess and accommodate the patient's spiritual needs; this includes being respectful of the patient's spiritual values. The

healthcare team is responsible for implementing the recommendations of JCAHO during examinations and intervention planning. Thus, healthcare workers need an understanding of how to address spiritual matters. Medical and nursing schools along with allied health programs teach cultural competency in their curricula, but the allied health's curricula does not include how to handle patients who bring up spiritual issues (Cole, 2002; Dudley & Helfgott, 1990, Kraemer, 2001;Udermann, 2000).

Spirituality in the Education of Healthcare Providers

Psychologists, philosophers, and researchers have identified humans as being spiritual in nature. Spirituality has been described as an essential component of life, as a key component of the general makeup of the individual. Some authorities posit that if an individual renounced their spirituality then the individual would be incomplete (Christiansen, 1997; Egan & Delaat, 1994; Maslow & Fleming, 1970; Urbanowski & Vargo, 1994). These assertions have been supported by studies that indicate that patients want spirituality included in their medical regime (Anadarajah, 2001; Cohen et al., 2000; Koenig et al., 1999; Mayer, 1992). Anadarajah (2001) states,

> "Up to 77 percent of patients would like spiritual issues considered as part of their medical care, yet only 10 to 20 percent of physicians discuss these issues with their patients. Reports such as these have increased interest in the incorporation of spirituality into the practice of medicine. As a result, nearly 50 medical schools currently offer courses in spirituality and medicine" (p. 37).

Physicians

Physicians are sometimes faced with fast recovery or unexplainable cures that are beyond the normal scope of medical practice. It appears as if every physician has a supernatural story of how a patient was healed or experienced rapid recuperation beyond

their comprehension (Byrd, 1988; Cohen, et al., 2000). Many physicians are faced with spiritual comments from patients, especially when patients are dealing with a serious illness or surgery. It is imperative that the physician has the ability to address these issues appropriately (Koenig et al., 1999; Leach, 1999; Mytko & Knight, 1999; Sloan et al., 1999).

Some medical schools have developed curricula that incorporate the training of students in assessing the patient's spiritual needs as well as providing therapeutic spiritual intervention. These courses have evidence-based research to provide efficacy to its content. Leach (1999) reports:

> FICA, which stands for Faith, Influence, Community, and Address, is a formula doctors can use to ensure that patients' spiritual histories become part of their medical records. Using it, doctors will ask questions such as: Does religious faith or spirituality play an important role in your life? How does your religious faith or spirituality influence the way you think about your health or the way you care for yourself? Are you part of a religious or spiritual community? (p. 21)

It is through the use of the above pertinent assessment questions that a spiritual needs picture is painted. The answers to the above questions would assist the physician in creating an intervention plan that would include any spiritual needs. If the physician is unable to integrate the patient's spiritual needs because of their complexity, it is suggested that the patient be referred to a chaplain or a religious leader for further consultation.

Another spiritual assessment model utilized in a physician's curriculum is the bio-psychosocial model. This spiritual model teaches physicians how to assess patients' spiritual level and its inclusion into their patient care. The course outlines procedures that incorporate ethical issues that relate to knowing when to refer to spiritual leaders.

The main objective of the bio-psychosocial model is to provide a link between the physician and spiritual leaders for consultation (Thiel & Robinson, 1997).

Nurses

The nursing profession has integrated spirituality in its educational model. This profession has researched several facets of religion and spirituality and its involvement in a patient's health status. Mayer (1992) states,

> "It is thus assumed that all patients have spiritual needs, and these needs are in general conceived in terms of meaning, relatedness, and a sense of one's own worth. It is also recognized that holistic nursing care requires the nurse to learn how to diagnose spiritual distress and promote spiritual well-being" (p. 45).

In response to several studies, the nursing profession has addressed the issue of identifying spiritual distress by integrating spirituality in their curriculum (Koenig et al., 1999; Leach, 1999; Mytko & Knight, 1999; Sloan et al., 1999).

Craven and Hirnle (2001) report that the International Council for Nurses' Code, the Patient Bill of Rights, and the Joint Commission on Accreditation of Hospitals indicate that nurses are required to incorporate spirituality within patient care. Maddox (2001) discusses how a nursing program incorporated the teaching of utilizing a spiritual assessment form that consisted of all open-ended questions. The nursing students were taught how to keenly listen to the responses to assess the true "meaning" (p. 136). The researcher also describes a curriculum that utilizes a "spiritual wellness assessment" (p. 136). This assessment is used to reveal information about the patient's spiritual lifestyle. The students are then taught how to effectively integrate the patients' results into the intervention plan.

Allied Health Professionals

A study using 16 participants was conducted to determine if there was a correlation between the participants' spiritual needs and their disability as a result of a traumatic event. Analysis revealed participants became more spiritual in nature as it created more meaning and hope to their lives (McColl, Johnston, et al., 2000).

Several authors describe spirituality as giving meaning to life. They view it as an integral component of activities of daily living (Christiansen, 1997; Egan & Delaat, 1994; Engquist, Short De Graff, Gliner & Oltjenbruns 1997; Howard & Howard, 1997). Collins (1998) indicates that spirituality has a therapeutic effect on patients in need of physical rehabilitation. He states that it is best seen when it is integrated into the person's treatment plan as a purposeful activity that will assist in increasing their well-being. Vash (1981) postulated that the involvement of spirituality in the rehabilitation process seemed to "ameliorate destructive reactions to disability" (p. 19). It can be concluded that patients who will require physical rehabilitation intervention by allied health professionals may have spiritual needs.

The allied health professions have also considered the implementation of spirituality in patient care. Occupational Therapy has been identified as one of those professions. Hume reported that during an Occupational Therapy Congress in 1995, several clinicians discussed how both patients and clinicians agreed that spirituality is an essential component in activities of daily life (ADL). They proposed that spirituality should not be treated as an exclusive component that is addressed separately or a component that is isolated and ignored. The College of Occupational Therapists (1995) *Code of Ethics and Professional Conduct* reports that, it is the duty of the occupational

therapist to have an understanding of a patient's spiritual issues. Hume (1999) posits that the occupational therapy profession should prepare its students to address these spiritual needs. However, the American Occupational Therapy Association has not yet mandated the profession to make it an integral part of its curricula. Additional research studies are needed to provide evidence-based information on the effectiveness of spirituality in occupational therapy practice (Le Postollec, 2000).

The field of social work has also adopted the concept of the inclusion of spirituality within its profession. Social work researchers identified a need for the use of understanding of spirituality in the practice of social work. Both education and clinical practice of social work have been integrated with topics of spirituality (Dudley & Helfgott, 1990; Miller, 2001; Sheridan & Hemert, 1999; Sheridan, Wilmer, Atcheson, 1994).

Sheridan (2001) addresses the sensitivity of spiritual issues that social workers may face while practicing social work. He theorizes that awareness of spiritual sensitivity in social work practice can increase one's cultural competency level (p. 87). This will enable social workers to develop a stronger rapport with their clients, thus increasing the clients' trust.

The profession of athletic training has similar trends as sports and outpatient physical therapy. Treatment goals may be slightly different, but both professions aim to return the athlete/patient to prior level of functioning. Udermann (2000) reports that most athletic trainers are completely unaware of the possible correlation between restoration of health and the use of spirituality in healthcare. Athletic trainers are not exposed to topics of spirituality in their curriculum and therefore may have a difficult time in addressing

such topics with spiritual athletes. Further research is indicated for the field of athletic trainers and spirituality.

Physical Therapy

The physical therapy profession has yet to embrace the idea of including spirituality within the scope of practice as well as education. Le Postollec (2000) states, "Given this evidence-not to mention numerous other studies linking religion to everything from decreased mortality rates to lower stress levels-even the most skeptical physical therapist (PT) should realize the positive role that spiritual harmony can play in patients' health" (p. 9). It is therefore imperative that the physical therapy profession begin to address the spiritual needs of the patients.

The term *quality of care* within the healthcare environment can be defined as the type of adequate care a patient receives from its caregiver. A patient should receive total, effective quality of care that approaches all domains of the patient. This would include the person's body, mind, and spirit. Currently, within the physical therapy profession, the physical therapist addresses the patient's body and knows how to continue care from one discipline to the next. The physical therapist is aware of practice domains and understands when to refer the patient when the skill set for treating a person's mind is beyond their scope of practice. The third component, spirit, is generally not included in a physical therapist's treatment plan. Very little literature and few educational programs provide the therapist with adequate information to deal with the spiritual part of the patient (Highfield & Osterhues, 2003). It is understood that each patient may or may not have a spiritual need, but in order to provide good, effective quality of care, the total person should be assessed.

Physical therapists are charged with the responsibility to provide 'palliative care' for terminally ill patients when the goal is to maintain their function and quality of life. It is essential to understand the stages of dying and how they affect not only the patient's body, but also their mind and spirit. Mackey and Sparling (2000) discuss the essential components of providing palliative care. One of the elements involves addressing both psychological and spiritual issues. Physical therapists should have the ability to modify their intervention plans to allow for spiritual issues that may arise during treatment. Awareness of a patient's spirituality as well as psychology issues can enhance the outcome of that treatment sessions which can potentially increase the patient's functional activities of daily living.

It is possible that physical therapists are not competent in dealing with the spiritual needs of a patient since it is not required to be included in their educational program. Many patients rely on their spirituality to provide them with the confidence that is needed to perform the physical therapy therapeutic activities. It becomes important for physical therapists to be educated on patient care that involves spiritual issues.

Highfield and Osterhues's (2003) study concludes that a physical therapy program should focus on:

> (a) enhancing student and professional PT awareness of existing standards through discussion; (b) developing professional PT standards directly related to spiritual values of patients; (c) consulting with clergy about the spiritual values of individual patients; (d) documenting assessment, plans, interventions, and outcomes; and (e) conducting educational clinical research. (p. 14)

The conclusions presented by the two researchers support further research in the inclusion of spirituality in physical therapy education. Subsequent findings deduce that

physical therapy students agree that topics of spirituality should be included in physical therapy curricula.

In summary, the healthcare profession has begun to consider, as well as address, societal spiritual needs as they relate to health status. Some medical and nursing schools have integrated the assessment of spirituality as well as its inclusion in patient care within their curriculum program. To offer continuity between disciplines, it is crucial that other health professional educational programs give study to adopting a similar curriculum.

CHAPTER III

RESEARCH METHOD

This chapter outlines the research method that was utilized to determine perceptions among physical therapy educators toward the inclusion of spirituality in physical therapy curriculum. The first section of this chapter outlines the research design and describes the research approach and rationale for its utilization. Second section highlights the population that was studied along with how the study sample was selected. The third section provides a description of the instrumentation, including reliability and validity. Section four outlines the procedure for the implementation of the research design. Finally, the fifth section presents the plan for statistical analysis of the data and hypothesis testing.

Research Design

This study used standard survey research techniques to obtain data from the sample. The survey research design was chosen for its ability to investigate relationships between key variables. The use of the survey research design also allows the researcher to collect data from a larger sample and to apply the results to a general population. The data collected from the survey research design offer anonymity of response, thus facilitating confidential treatment of data and results. This gives the respondents assurance that their opinions and demographic information are protected.

Research Questions

The survey instrument provided descriptive information from respondents on demographic characteristics of study respondents, including their gender, age, ethnicity, and professional status. It also provided data from respondents for explanatory analysis of the dependent variables to provide answers for the following research questions:

Research Question 1: To what extent is spirituality currently included in physical therapy curriculum?

Research Question 2: *What beliefs do physical therapists have about inclusion of different aspects of spirituality based on the physical therapy curriculum questions?* The following are the curriculum questions:

Curriculum Question 1: *Do physical therapy faculty perceive inclusion of spirituality concepts in the physical therapy curriculum as an important issue?*

Curriculum Question 2: *How should spirituality concepts be included in the existing or a revised physical therapy curriculum?*

Curriculum Question 3: *What core spirituality topics should be included in a physical therapy program?*

Curriculum Question 4: *Who should teach spirituality concepts in a physical therapy curriculum?*

Curriculum Question 5: *Which teaching strategies should be used for teaching spirituality?*

Curriculum Question 6: *When should spirituality concepts be included in the physical therapy curriculum?*

Research Question 3: *What differences exist in responses based on ethnicity, age, professional status, and gender?*

The independent variables in this study include age, gender, ethnicity and faculty status. The dependent variable was the physical therapists' perception toward the inclusion of spirituality.

Population and Sampling of Participants

Systematic sampling, completed in two stages, was used to select 505 faculty members from accredited physical therapy programs. The first stage of sampling involved selecting 101 physical therapy programs from the 202 accredited programs listed on the American Physical Therapy Association web site (www.apta.org). To generate a sample of programs, systematic sampling was used. The 202 programs on the Website were listed alphabetically and numbered. From that list, every second program was selected.

The second stage of the sampling process involved the systematic selection of 5 faculty members from each selected program. From a list of faculty members arranged alphabetically by last name, the first 5 faculty members were chosen to participate in the study. Each of these faculty members then received a copy of the study's survey instrument through electronic mail with instructions for its completion.

Instrumentation

The instrument used in this study collected demographic data and a measure of the participant's perception toward including spirituality concepts in physical therapy education. Items on the survey that measured spirituality were modified from the survey produced for the study on attitudes of occupational therapists toward spirituality in

practice (Taylor et al., 2000). The occupational therapy survey instrument was chosen because of similarities between occupational therapy and physical therapy as disciplines within the allied health professions. With minor modifications, the items on the occupational therapists' attitude toward spirituality survey were able to provide answers to the research questions that guided this study.

Content validity for the physical therapy version of the instrument was established in the form of expert judgment. Two judges were selected on the basis of their expertise in the area of religion and physical therapy as it related to academia. One religion professor and one physical therapy professor were selected to participate as judges in determining content validity.

The two judges analyzed each question and statement on the survey and determined if it aligned with the study's purpose and research questions. The judges were provided with a survey instrument and indicated beside each question or statement whether it should be omitted, modified, or accepted. Judges marked *omit* if the survey item was irrelevant to the study and *accept* if the item addresses the research questions or objectives. An item was marked *modify* if it partially addressed the study's objective and/or the wording was confusing. If a survey item needed modification, revisions were made to the item and resubmitted to the judges. This process continued until all items of the survey instrument reflected the study's objectives and provided answers to the research questions. Both judges agreed on the final survey instrument.

Following content validation, the survey instrument was pilot tested by six faculty members of a physical therapy education program to assist in fine-tuning the questionnaire. Each survey was hand delivered to five members of the faculty body in the

program of physical therapy at the University of Central Florida. The faculty members were given instructions to read and answer the questions in the survey. The pilot study respondents reviewed the instrument and answered yes or no to the following questions that were related to the administration of the actual survey. The questions read as follows:

1. Are the questions easy to answer?
2. Are the definitions clear?
3. Are the directions clear and easy to follow?

The pilot study assisted in determining the length of time needed to complete the survey, along with the identification of any other needed changes to the survey items. Participants of the pilot study reported that the survey instrument was easy to read as well as to follow. They also indicated that both the directions and definitions presented were clear. The maximum amount of time reported on completing the survey instrument was 7 minutes. Based on this feedback, no modifications were indicated for the survey instrument.

Procedure

Five hundred and five surveys were e-mailed to the randomly chosen sample with a letter of introduction and instructions. The letter of introduction identified the researcher and provided creditability through endorsement from the President of the American Physical Therapy Association. The letter outlined the objectives of the study and importance of the respondent's participation for the enhancement of the profession along with an outline of the rights of the respondents, including statements on confidentiality.

Each survey included a set of instructions as well as the definition of spirituality and religiousness to distinguish between the two terms and to avoid confusion in the responses to survey items. All respondents were notified of approximately how long it would take to complete the survey as well as the deadline for the submission of the survey. Ten days after the survey was e-mailed, a reminder e-mail was sent to increase the return rate. Another follow-up e-mail letter, which included a second copy of the survey, was sent to non-respondents 3 weeks after the first e-mailing of the survey.

Protection of Human Subjects

An Institutional Review Board (IRB) application was filled out, indicating the objective of the study along with its proposed population, protocols, and instruments. As the study met all requirements for research in educational settings using survey research tools, approval for the study was granted by a sub-committee of the IRB. This study was exempt from review by the full IRB committee. Approval notice was received in the form of a letter.

Null Hypotheses

The following null hypotheses were tested:

Hypothesis 1. There is no difference among physical therapy educators in the perception of the inclusion of spirituality based on age.

Hypothesis 2. There is no difference among physical therapy educators in the perception of the inclusion of spirituality based on gender.

Hypothesis 3. There is no difference among physical therapy educators in the perception of the inclusion of spirituality based on ethnicity.

Hypothesis 4. There is no difference among physical therapy educators in the perception of the inclusion of spirituality based on professional status.

Hypothesis 5. There is no interaction in the perception of the inclusion of spirituality between age, gender, ethnicity, and professional status.

Age, gender, ethnicity, and professional status functioned as the independent variables and the perceptions of the physical therapy faculty members functioned as the dependent variable.

Data Analysis

The data from the returned survey instruments were entered into the Statistical Package for the Social Sciences (SPSS) version 8.0 for statistical analysis. Descriptive statistics were used for demographic data and to answer the first two research questions. For research question 3, two-way Analysis of Variance (ANOVA) was utilized to determine the main effect of each independent variable on the dependent variable. This type of analysis was also used to establish the amount of interaction effect that may occur between the independent variables. The independent variables were analyzed through two-way ANOVA and included gender by professional status, age group by professional status, and gender by age group interactions. Ethnicity was not included in these two-way analyses since there was a low variability of response in that area.

Summary

Five hundred and five randomly chosen physical therapy faculty members were chosen from 101 accredited physical therapy programs and received a survey instrument. Age, gender, ethnicity, and professional status were identified as the independent

variables while the physical therapists' perception on the inclusion of spirituality based on why, what, when, where, and how it is delivered in a physical therapy curriculum was determined to be the dependent variable.

The survey instrument used was revised from one developed for a study in the occupational therapy field. Content validity for the instrument used in this study was documented through a process of expert judgment. Each participant was e-mailed the survey instrument along with the study's objective and the estimated amount of time to complete the survey. Follow-up email reminders were sent out 10 days after the survey, and then 3 weeks later a second survey was sent to non-respondents.

Once the data were collected, descriptive analysis was performed on the demographical information as well as the survey questions to determine the answer to research questions 1 and 2. The null hypotheses were analyzed using two-way ANOVA, revealing the answer for research question 3.

CHAPTER IV

RESULTS

Introduction

The purpose of this study was to examine perceptions among physical therapy educators toward the inclusion of spirituality in the physical therapy curriculum. This chapter presents results from the statistical analysis of the respondents' answers to questions included on the survey instrument. The chapter begins with a presentation of demographic data that describe this study's respondents. This is followed by data analysis organized according to the three research questions that guided this study.

Description of Respondents

This study investigated the population of faculty members who teach in one of the Commission on Accreditation of Physical Therapy Education (CAPTE) approved programs for the preparation of physical therapists. From this national population, 101 accredited physical therapy programs were systematically selected from the American Physical Therapy Association web site. Then from within that sample of programs, 505 physical therapists were systematically chosen to receive a copy of the instrument survey via electronic mail. Participants received an electronic mail reminder 2 weeks after the initial survey was sent and a second reminder during the fourth week of the study. At the conclusion of week 5, data collection closed with a response rate of 32.8% (N=166).

Descriptive analysis of demographic data provided a general picture of this study's respondents. The majority of respondents in this study were female (72.8%, *N*=118) with 2.4% (*N*=4) of the respondents not reporting their gender (see Table 1). This is similar to the national makeup of faculty members in physical therapy programs as reported by the CAPTE. CAPTE (2004) reports that nationally 67.9% of physical therapy faculty members are females. Thus the sample of respondents in this study appears to be representative of physical therapy faculty nationally in terms of gender.

The most common age range of respondents was 41-50 years of age (42.6%) (see Table 2). The next largest age groups were 31-40 years of age (25.9%) and 51-60 (24.7%). This also is similar to a nationally reported statistics of 43.2%, 23.1%, and 26.8% respectively for comparable categories by CAPTE (2004). Thus the sample of respondents in this study appears to be representative of physical therapy faculty nationally in terms of age distribution.

Caucasian/White was the largest ethnic group represented by respondents in this study, with 98.8% of respondents (*N*=161) reporting membership in that ethnic group. While 6.8% higher then CAPTE, these data are still comparable to that reported nationally by CAPTE, where 92.0% of physical therapy faculty members identified themselves as Caucasian/White. The Hispanic/Latino and the Asian American groups in this study were each reported at 0.6%, where as no respondents indicated their ethnicity as either American Indian or other (0%). A few respondents (1.8%, *N*=3) chose not to report their ethnicity. The national ethnic makeup of physical therapy faculty minorities is limited in its diversity. CAPTE reports 3.0% Asian American faculty and 2.0%

Table 1

Respondents by Gender, Compared With CAPTE Percentages

Gender	Respondents	CAPTE
Female	72.8	66.6
Male	27.2	33.3
Total	100.0	99.9

Note. N=162. Columns may not total 100% due to rounding.

Table 2

Respondents by Age, Compared With CAPTE Percentages

Age	Respondents (N = 162)	CAPTE Age Categories	CAPTE (%)
20-30	2.5	20-29	1.3
31-40	25.9	30-39	23.1
41-50	42.6	40-49	43.9
51-60	24.7	51-59	26.8
61-90	4.3	60-70	4.1
Total	100.0		99.2

Note. N=162. Columns may not total 100% due to rounding.

Hispanic/Latino faculty. Thus the sample of respondents in this study appears to be representative of physical therapy faculty nationally in terms of ethnicity (see Table 3).

In terms of professional status, the largest group of respondents was faculty members (58.4%) (see Table 4). The second largest group was faculty/clinicians

Table 3

Respondents by Ethnicity, Compared With CAPTE Percentages

Ethnicity	Respondents (N= 163)	CAPTE
African-American/Black	0.0	2.0
Caucasian/White	98.8	92.0
Hispanic/Latino	0.6	2.0
American Indian	0.0	0.0
Asian/American	0.6	3.0
Other	0.0	1.0
Total	100.0	100.0

Note. *N*=163. Columns may not total 100% due to rounding.

Table 4

Respondents by Professional Status

Professional Status	Respondents (N=166)
Faculty	58.4
Faculty/Administration	15.7
Faculty/Clinician	19.3
Faculty/Administration/Clinician	5.4
Retired	1.2
Total	100.0

(19.3%), and the third largest group was faculty/administrators (15.7%). Only 5.4% of respondents identified themselves as faculty/administrator/clinician, where as 1.2% of respondents indicated they were retired. There were no missing values for the reporting of professional status.

Results for Research Question 1

Research Question 1 asked: *To what extent is spirituality currently included in physical therapy curriculum?*

Research Question 1 was answered by items 1-3 on the survey instrument (see Appendix A). Item 1 on the survey asked respondents to react to a statement that their physical therapy curriculum does NOT currently cover spirituality topics. Forty-nine percent of the respondents selected strongly disagree or disagree, indicating that their current curriculum *does* cover the topic of spirituality, while 39.9% either strongly agree or agree that their curriculum does not cover topics of spirituality. The remaining 11.0% gave a neutral response. These data indicate a fairly even division between inclusion (49.0%) and exclusion (39.9%) of spirituality in the physical therapy curricula of the respondents.

Item 2 asked respondents to indicate if their physical therapy program included spirituality topics in one or more classes. A little more than half (50.9%)of the selected respondents strongly agree or agree, indicating that their physical therapy programs are covering spirituality issues in one or more classes. This result is consistent with the response to item 1, where 49.0% of respondents disagreed that their programs did NOT cover spirituality topics.

On item 3 17.1% of respondents (strongly agree or agree) indicated their physical therapy program had at least one course focused on the topic of spirituality, while 76.1% (strongly disagree or disagree) indicated their programs did not have a course focused on spirituality. Thus, in programs that include topics of spirituality, these topics appear to be distributed throughout the curriculum rather than focused in a single course (see Table 5).

Table 5

Responses for Items 1 through 3 (Given in Percentages)

Response	Item 1[a] *N*=163	Item 2[b] *N*=163	Item 3[c] *N*=163
Strongly Disagree	15.3	18.4	49.7
Disagree	33.7	21.5	26.4
Neutral	11.0	9.2	6.7
Agree	20.9	35.6	10.4
Strongly Agree	19.0	15.3	6.7
Total	100	100	100

[a]Item 1: The physical therapy education program I currently work in does NOT cover the topic of spirituality.
[b]Item 2: The physical therapy education program I currently work in covers issues related to spirituality as a topic in *one or more* required course.
[c]Item 3: The physical therapy education program I currently work in includes at least one course focused on the topic of spirituality.

Item 4 was excluded from analysis because it was stated as an inverted item 8 on the survey instrument.

Data from these three items indicate that almost half of physical therapy programs include spirituality concepts in their curriculum and that these concepts are typically integrated throughout the curriculum rather than organized into a focused course.

Results of Research Question 2

Research Question 2 asked: *What beliefs do physical therapists have about inclusion of different aspects of spirituality based on the physical therapy curriculum questions?*

Curriculum Question 1

Research Question 2 was addressed through five subcategories that focused on the physical therapy curriculum, and are referred to as curriculum questions in this study. Curriculum Question 1, *Do physical therapy faculty perceive inclusion of spirituality concepts in the physical therapy curriculum as an important issue?* was answered by questionnaire items 5 through 11 on the survey instrument (see the Appendix 1).

Items 5–11 investigated respondents' perceptions about the importance of spirituality concepts in the physical therapy curriculum. Three items, numbers 5, 8, and 10, asked explicitly about inclusion of spirituality concepts in physical therapy education. In response to item 5, *Physical therapy education should prepare therapists to address the spiritual needs of patients*, 36.0% of respondents indicated agreement or strong agreement, while 33.1% indicated disagreement or strongly disagreement.

Fifty-six percent of the respondents strongly agreed or agreed that spiritual concepts should be included in the physical therapy curriculum, while 22.0% strongly disagree or disagreed with item 8. The number of respondents who strongly disagreed or disagreed with item 8 were virtually the same number of respondents who remained neutral in their response to item 8 (21.5%). The results revealed that almost half of the respondents either were not sure or disagreed with including spirituality concepts in physical therapy education (item 8). In comparing item 5 with item 8, the responses to item 5 revealed that the respondents were almost equally split in both strongly agreeing/agreeing (36.0%) and strongly disagreeing to preparing students to address patients' spiritual needs (33.1%). There was not a large difference (2.9%) between the two groups of respondents, thus revealing 20.9% of the respondents as being neutral.

However, more than half of the respondents perceive that every physical therapy program should teach spirituality concepts.

In responding to the negatively phrased item 10, *Spirituality concepts should not be included in the physical therapy education curriculum*, only 18% strongly agreed or agreed, while 66.6% strongly disagreed or disagreed. There is a similarity in the response pattern with 22.0% of respondents who strongly disagreed/disagreed with including spirituality concepts in every physical therapy educational program (item 8) and 17.8% strongly agreed/agreed with not including spirituality concepts in physical therapy curriculum (item 10). The percentage difference between the two statements is only 5.8%, suggesting that the respondents perceive that spirituality should be included in physical therapy education. Responses to these three items (5, 8, and10) suggest consistency of response patterns by participants in this study and the general consensus that spirituality concepts should be included in the physical therapy curriculum (see Table 6).

Items 6 and 7 address the notion of gaining spiritual knowledge through life endeavors. Descriptive analysis revealed that 46.7% (strongly agree/agree) of the respondents reported that their life experiences prepared them to address the spiritual needs of patients (item 7), while 33.7% (strongly disagree/disagree) stated that they did not. In contrast, only 14.1% of the respondents strongly agreed/agreed that physical therapists' already possess the knowledge and skills to assist clients in spiritual matters (item 6), while 64.8% (strongly disagree/disagree) felt they did not. The results suggest that a little less than half of the respondents (46.7%) may believe that their life experiences prepared them for addressing patients' spiritual needs (item 7) (see Table 7).

Table 6

Responses for Items 5, 8 and 10 (Given in Percentages)

Response	Item 5[a] *N*=163	Item 8[b] *N*=163	Item 10[c] *N*=163
Strongly Disagree	11.0	6.7	23.3
Disagree	22.1	15.3	39.3
Neutral	20.9	21.5	19.6
Agree	31.3	41.1	11.7
Strongly Agree	14.7	15.3	6.1
Total	100	100	100

[a]Item 5: Physical therapy education should prepare therapists to address the spiritual needs of patients.
[b]Item 8: Every physical therapy education program should include spirituality concepts in its curriculum.
[c]Item 10: Spirituality concepts should NOT be included in the physical therapy education curriculum.

Table 7

Responses for Items 6 and 7 (Given in Percentages)

Response	Item 6[a] *N*=163	Item 7[b] *N*=163
Strongly Disagree	23.9	13.5
Disagree	39.9	20.2
Neutral	22.1	19.6
Agree	12.9	38.7
Strongly Agree	1.2	8.0
Total	100	100

[a]Item 6: Physical therapists possess the knowledge and skills to assist clients in spiritual matters.
[b]Item 7: My life experiences prepared me to address the spiritual needs of patients.

Items 9 and 11 investigated respondents' perceptions of the importance of spirituality issues in the daily practice of a physical therapist. In responding to item 9, *Good physical therapy practice should address the spiritual needs of patients*, 45.1% of respondents agreed/strongly agreed while 28.4% strongly disagreed/disagreed. An even larger percentage of respondents, 65.7%, agreed or strongly agreed with item 11, *Knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist*, while 15.8% strongly disagreed/disagreed. These responses seem to indicate the respondents' perception of "spirituality knowledge" as important in the practice of physical therapy (see Table 8).

Table 8

Responses for Items 9 and 11 (Given in Percentages)

Response	Item 9[a] *N*=162	Item 11[c] *N*=163
Strongly disagree	9.9	6.1
Disagree	18.5	11.7
Neutral	26.5	16.6
Strongly Agree	34.6	49.1
Agree	10.5	16.6
Total	100	100

[a]Item 9: Good physical therapy practice should address the spiritual needs of patients
[b]Item 11: Knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist.

In response to curriculum question 1, *Do physical therapy faculty perceive inclusion of spirituality concepts in the physical therapy curriculum as an important issue?* the respondents perceive that it is important to include spirituality concepts in a physical therapy curriculum. They indicated teaching the concepts of spirituality is important in the physical therapy curriculum. The respondents also reported that they do not have the skills to adequately address the spiritual needs of patients, but they believe their life experiences are helping them.

Curriculum Question 2

Curriculum Question 2, *How should spirituality concepts be included in the existing or a revised physical therapy curriculum*? was answered by items 12-15 on the survey instrument and is shown in Table 9.

The respondents reported their perception on the creation of new courses for the purpose of teaching spirituality topics. Only 10.0% of the respondents strongly agreed or agreed that including topics in spirituality will require the creation of only one new course (item 14), while 65.9% strongly disagreed or disagreed. The respondents for item 15, *Including topics in spirituality will require the creation of more than one new course*, strongly agreed or agreed by only 11.8%, while 70.2% strongly disagreed or disagreed. The results suggest that respondents believe there is no need to create new courses for including topics of spirituality in a physical therapy curriculum.

Two other items asked about the number of courses that respondents thought should include spirituality concepts. A response of either strongly agree or agree was reported by 45.6% of the respondents when asked if spirituality should be included in more than one of the existing physical therapy courses (item 13), while 22.2% strongly

disagreed/disagreed. When asked in item 12 if spirituality should be included as a topic in only one *existing* physical therapy course, only 18.6% of the respondents either strongly agreed or agreed with that item of the survey instrument while only 45.4% strongly disagreed or disagreed. The results suggest that the respondents believe that it is best to integrate spirituality in more than one existing course rather than in just one course (see Table 9).

In response to the curriculum question 2, *How should spirituality concepts be included in the existing or a revised physical therapy curriculum?* the results suggest that spirituality concepts should be integrated in several existing physical therapy courses. Respondents did not indicate that it was necessary to create a new course on the topic of spirituality.

Table 9

Responses for Items 12 Through 15 (Given in Percentages)

Responses	Item 12[a] *N*=161	Item 13[b] *N*=162	Item 14[c] *N*=161	Item 15[d] *N*=161
Strongly Disagree	19.3	6.8	28.0	37.3
Disagree	26.1	15.4	37.9	32.9
Neutral	36.0	32.1	24.2	18.0
Agree	16.1	33.3	7.5	9.9
Strongly Agree	2.5	12.3	2.5	1.9
Total	100	100	100	100

[a]Item 12: Spirituality should be included as a topic in only one existing physical therapy course.
[b]Item 13: Spirituality should be included as a topic in more than one existing physical therapy course.
[c]Item 14: Including topics in spirituality will require the creation of only one new course.
[d]Item 15: Including topics in spirituality will require the creation of more than one new course.

Curriculum Question 3

Curriculum Question 3, "*What core spirituality topics should be included in a PT program?*" was answered by items 21 through 25. Over two thirds of the respondents indicated that they strongly agreed or agreed on four of these items. In response to item 22, *Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education*, 74.9% of the respondents strongly agreed or agreed with the item, while 14.1% strongly disagreed or disagree. Item 23, *Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education*, 72.4% of the respondents strongly agreed or agreed with the item, while 17.7% strongly disagreed or disagreed. Item 24, *Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body should be included in a physical therapy education*, was strongly agreed or agreed on by 70.5% of the respondents, while 11.0% strongly disagreed or disagreed. When they were asked to respond to the statement, *Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education* (item 25), 67.5% of the respondents strongly agreed or agreed, while 12.9% strongly disagreed or disagreed. Only 38.1% of the respondents strongly agreed or agreed with item 21, *Gathering spiritual information about a patient should be a part of a physical therapy* assessment. More of the respondents (38.1%) strongly disagreed or disagreed with item 21 (see Table 10).

In summary, the results reveal that respondents believe that core topics of spirituality should include topics on one's spirituality and how it influences his or her health, disease and disability along with how they affect a person's spirituality, holistic treatment that includes mind, body, and spirit, and how spirituality is a fundamental

Table 10

Responses for Items 21 through 25 (Given in Percentages)

Responses	Item 21[a] *N*=163	Item 22[b] *N*=163	Item 23[c] *N*=163	Item 24[d] *N*=163	Item 25[e] *N*=163
Strongly Disagree	14.7	6.1	6.7	4.3	8.0
Disagree	28.8	8.0	11.0	6.7	4.9
Neutral	17.8	11.0	9.8	18.4	19.6
Agree	32.5	57.1	50.3	50.3	47.9
Strongly Agree	6.1	17.8	22.1	20.2	19.6
Total	100	100	100	100	100

[a]Item 21: Gathering spiritual information about a patient should be a part of a physical therapy assessment.
[b]Item 22: Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education.
[c]Item 23: Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education.
[d]Item 24: Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body should be included in a physical therapy education.
[e]Item 25: Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education.

aspect of being human. The respondents do not believe that gathering spiritual information about a patient should be included in physical therapy assessment as a core spirituality concept.

Curriculum Question 4

Curriculum Question 4, "*Who should teach spirituality concepts in a physical therapy curriculum?*" was answered by items 26 through 29 of the survey instrument. Descriptive analysis was performed by percentages on items 26 through 29 of the survey instrument. Of the respondents, 54.8% reported on item 26, *Many persons have training or experience in teaching spirituality concepts. How important is experience in deciding who teaches spirituality concepts?* that a basic level of experience is needed before

faculty members can effectively teach spirituality. Almost one fourth of the respondents, 24.1%, indicated experience was important but necessary in deciding who teaches spirituality concepts, while 3.0% of the respondents believed that no experience was necessary.

In response to item 27, "Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the physical therapy curriculum?" 49.4% of the respondents reported that a physical therapy faculty member should lead out in teaching spirituality concepts, but they should also involve spiritual leaders in the process. Just over one fourth (26.4%) of the respondents indicated that only physical therapy faculty should be involved in teaching spirituality concepts.

When asked how many physical therapy faculty members should be involved in teaching spirituality concepts (item 28), 38.0% of the respondents indicated that only a few faculty members should be assigned to teach spirituality concepts. The response to the statements, One faculty member should teach spirituality concepts, and Most of the faculty should teach concepts of spirituality, were almost the same (20.5% and 21.1% respectively). In contrast, only 10.2% of the respondents reported that all faculty members should teach spiritual concepts. Lastly, in response to item 29, "should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts?" 79.5% of the respondents perceived that all faculty members, whether full-time, part-time, or adjunct, should be allowed to teach spirituality concepts. Less than 5% of the respondents indicated that only full-time tenure track-faculty (3.6%) and only full-time faculty (4.8%) faulty should teach spirituality concepts (see Table 11 and 12).

Table 11

Responses for Items 26 and 27 (Given in Percentages)

Response	Percentage	*N*
Item 26[a]		159
High level experienced persons	13.9	
Basic level experienced persons	54.8	
Experience important, but not necessary	24.1	
No experience necessary	3.0	
Total	95.8	
Item 27[b]		156
Only spiritual leaders should teach	0.6	
Spiritual leaders teach and involve PT faculty	17.5	
PT faculty should teach and involve Spiritual leaders	49.4	
Only PT faculty should teach	26.5	
Total	94.0	

[a]Item 26: Many persons have training or experience in teaching spirituality concepts. How important is experience in deciding who teaches spirituality concepts?
[b]Item 27: Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum?

Table 12

Responses for Items 28 and 29 (Given in Percentages)

Responses	Percentage	*N*
Item 28[a]		
One faculty member should teach	20.5	149
A few faculty members should teach	38.0	
Most faculty members should teach	21.1	
All faculty members should teach	10.2	
Total	89.8	
Item 29[b]		
Only full-time, tenure track faculty	3.6	
Only full-time faculty members	4.8	
All faculty members (full and part-time; adjunct)	79.5	
Total	88.0	146

[a] Item 28: How many PT faculty members should be involved in teaching spirituality concepts?
[b] Item 29: Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts?

In summary, the respondents indicated that only a few faculty members should be required to teach concepts of spirituality. These faculty members should have a basic level of experience in spirituality and should also involve spiritual leaders to assist with the presentation of the spiritual concepts (see Table 11 and 12). The faculty members responsible for teaching the spirituality concepts should include both full- and part-time faculty, along with adjuncts.

Curriculum Question 5

Curriculum Question 5, *Which teaching strategies should be used for teaching spirituality?* was answered by items 30 through 37. It was revealed that having collaborative discussions on topics of spirituality was the highest reported response

(95.4%) from the respondents. More than three quarters of the respondents indicated both case studies (86.0%) and presentations (78.0%) were very effective or effective teaching strategies for presenting spirituality concepts. More than half of the respondents indicated that simulations (71.7%), role playing (70.4%), and clinical education (64.9%) were very effective or effective teaching strategies. Less than half of the respondents indicated classroom lecturing (46.7%) and on-line pedagogy (32.4%) were very effective or effective. The results suggest that respondents were not sure (42.4%) how effective on-line pedagogy is for teaching spirituality concepts. A little more than a fourth of the respondents indicated that both classroom lecture (27.0%) and on-line pedagogy (25.2%) are very ineffective or ineffective teaching strategies (see Table 13).

Table 13

Responses for Items 30 Through 37 (Given in Percentages)

Response *N*= 158	VE/E	Neutral	VI/IE
Collaborative Discussions	95.4	3.9	0.7
Case Studies	86.3	10.5	3.3
Presentations by Students	78.3	34.2	9.2
Simulations	71.7	20.4	7.9
Role Play	70.4	23.0	6.6
Clinical Education	64.9	27.8	7.3
Classroom Lecture	46.7	26.3	27.0
On-line Pedagogy	32.4	42.4	25.2

Items 30-37 respond to the question, What teaching strategies should be used for teaching spirituality?
Note. VE/E = Very effective/effective; VI/IE =Very ineffective/ineffective.

In summary, the results suggest that more than 1/2 of the respondents indicated that collaborative discussions, case studies, presentations, simulations, role play, and clinical education by students are all very effective or effective teaching strategies for presenting spirituality concepts in a physical therapy curriculum. Less than half of the respondents thought that classroom lecture and on-line pedagogy was very effective or effective teaching strategies for presenting concepts in physical therapy curriculum.

Curriculum Question 6

Curriculum Question 6, *When should spirituality concepts be included in the PT curriculum?* was answered by items 16 through 20. A cross tabulation was performed to determine if respondents answered inconsistent on items 16 through 20. Eight respondents were inconsistent in their response and were therefore eliminated from the analysis of items 16 through 20 for curriculum question 6. An inconsistent answer was determined if a respondent answered favorable to two or more items. An example of an inconsistent response is as follows; respondents answer strongly agreed/agreed on item 19, *all topics in spirituality should be taught throughout a physical therapy program* and item 20, *all topics in spirituality should be taught only in professional development courses offered after the completion of a physical therapy program.* This is concluded to be an inconsistent response because the respondents contradicted themselves and a true response cannot be determined. A consistent response was indicated when respondents answered strongly agreed/agreed to only one item from items 16 through 20.

A little more than half of the respondents (55.9%) reported that all topics of spirituality should be taught throughout a physical therapy program (item 19). The

majority of the respondents (80.2%) strongly disagreed/disagreed that all topics in spirituality should be taught only in a DPT program (item 18). They (71.7%) also strongly disagreed/disagreed that all topics in spirituality should be taught only in professional development courses offered after the completion of a physical therapy program (item 20). Lastly, a little more than half of the respondents strongly disagreed/disagreed to both item 16 (58.6%) and item 17 (57.2%).

In summary, the results indicated that all topics of spirituality should be taught throughout a physical therapy program (see Table 14). Less than 6.0% of the respondents strongly agreed/agreed with teaching all topics of spirituality concepts in either the first year of the MSPT program, second year of the MSPT program, only in a DPT program, or only in professional development courses offered after the completion of a physical therapy program.

Table 14

Responses for Items 16 Through 20 (Given in Percentages)

Responses	Item 16[a] *N*=152	Item 17[b] *N*=152	Item 18[c] *N*=152	Item 19[d] *N*=154	Item 20[e] *N=152*
Strongly Disagree	22.4	21.7	41.4	9.1	32.9
Disagree	36.2	35.5	38.8	9.7	38.8
Neutral	34.9	37.5	19.7	25.3	23.0
Agree	5.9	4.6	0.0	39.0	4.6
Strongly Agree	0.7	0.7	0.0	16.9	0.7
Total	100	100	100	100	100

[a]Item 16: All topics in spirituality should be taught during the first year of the MSPT program.
[b]Item 17: All topics in spirituality should be taught during the second year of the MSPT program.
[c]Item 18. All topics in spirituality should be taught only in a DPT program.
[d]Item 19: All topics in spirituality should be taught throughout a PT program.
[e]Item 20: All topics in spirituality should be taught only in professional development courses offered after the completion of a PT program.

Results of Research Question 3

What differences exist in responses based on ethnicity, age, professional status, and gender?

Research Question 3 was answered by performing two-way analysis of variance (ANOVA) three times: gender by age, gender by professional status, and age by professional status on items 5, 6, and 8 through 29 of the survey instrument. Item 4 was excluded from analysis because it was stated as an inverted form of item 8 on the survey instrument. As a result, the respondents would answer the same on both items.

No analyses based on ethnicity were run because of low variability of response in that area. For analysis, the categories for age and professional status were re-grouped because some of the original categories were too small in number to be analyzed appropriately by a two-way ANOVA. The new groups were age (20-40; 41-50; 51- 90) and Professional Status (Faculty; Faculty/Admin [Administrator]; Faculty/Admin/Clin [Administrator/Clinician]).

Two-way ANOVA was performed for each survey item three times. First analysis was run using the gender and age variables. The second analysis looked at gender and professional status variables. The final analysis for each survey item was based on the variables age and professional status.

In the first set of analyses of the two-way ANOVA with gender and age as independent variables, significance was found in the main effect of gender for item 29 (*Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts*), in the main effect of age for item 14 (*Including topics in spirituality will require the creation of only one new course*), and item 27 (*Should*

spiritual leaders [for example, a pastor, priest, rabbi, or imam] be involved in teaching spirituality concepts in the PT curriculum). In the second set of analyses of the two-way ANOVA with gender and professional status as independent variables, significance was found in the main effect of gender for item 29 (*Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts*), in the main effect of professional status for items 6 (*Physical therapists possess the knowledge and skills to assist clients in spiritual matters*), 8 (*Every physical therapy education program should include spirituality concepts in its curriculum*), 13 (*Spirituality should be included as a topic in more than one existing physical therapy course*), 23 (*Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education*), 24 (*Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body should be included in a physical therapy education*), 25 (*Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education*), 27 (*Should spirituality leaders [for example, a pastor, priest rabbi, or imam] be involved in teaching spirituality concepts in the PT curriculum?*), and 28 (*How many PT faculty members should be involved in teaching spirituality concepts?*) and in the interaction effect of items 5 (*Physical therapy education should prepare therapists to address the spiritual needs of patients*), 8 (*Every physical therapy education program should include spirituality concepts*), 10 (*Spirituality concepts should NOT be included in the physical therapy education curriculum*), and 22 (*Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education*). In the third set of analyses of the two-way ANOVA with age and professional status as independent variables, significance was found in the main

effect of professional status for item 11 (*Knowledge of spirituality beliefs and practices is essential when* working *with patients as a physical therapist*) and 23 (*Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education*).

Caution should be taken when interpreting the main effect results when a significant difference was found in one of the two two-way analysis of variance runs, but not the other. In the two-way ANOVAs, the main effects means of the independent variables age, gender, and professional status are unweighted means. The means in the two analyses are different because each main effect is controlled for a different variable in each two-way ANOVA.

Both non-significant and significant differences are reported in appropriate tables for the items 5, 6, and 8 through 29 of the survey instrument.

Tables 15 to 17 show the results of a two-way ANOVA for item 5: *Physical therapy education should prepare therapists to address the spiritual needs of patients.* Table 15 shows both the main effects and interaction effect on the independent variables gender and age. Table 17 shows the results for the main effects and interaction effect on the independent variables professional status and age. The results for Tables 15 and 17 show that there were no significant differences for the independent variables age, gender, and professional status on item 5.

Table 16 shows no significant main effect for the independent variables gender and professional status. However, Table 16 reports a significant interaction effect (p=0.012) between professional status by gender. The results showed that the smallest mean score difference was between male faculty and female faculty. The difference

between male and female faculty showed that females had a more favorable response to item 5 (*Physical therapy education should prepare therapists to address the spiritual needs of patients*) than males. An even larger difference was found between male and female faculty/administrators. Female faculty/administrators had a more favorable response than the male faculty/administrators. The largest difference for all groups was between male and female faculty/administrator/clinician. Male faculty/administrator/clinicians had a much more favorable response to the importance of preparing physical therapists to address the spiritual needs of patients (item 5) than did female faculty/administrator/clinicians.

Tables 18-20 show the results of a two-way ANOVA for item 6: *Physical therapists possess the knowledge and skills to assist clients in spiritual matters*. Both tables 18 and 20 report that there are no significant main effects or interaction effects.

Table 18 shows both the main effects and interaction effect on the independent variables gender and age. Table 20 shows the results for the main effects and interaction effect on the independent variables professional status and age. The results show in Table 18 and Table 20 that there were no significant differences for the independent variables age, gender and professional status on item 6.

Table 19 shows no significant main effect for gender and no interaction effect between gender and professional status on item 6 (*physical therapists already possess the knowledge and skills to assist clients in their spiritual matters*). There was a significant main effect (p=0.037) for professional status. Faculty/administrator/clinicians were the highest group, and faculty was the lowest. Caution is taken in interpreting this result

Table 15

Two-Way Analysis of Variance for Item 5, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	0.01	0.931
Female	118	3.16				
Male	44	3.18				
Age				2,156	0.04	0.958
20-40	46	3.14				
41-50	68	3.22				
51-90	48	3.16				
Interaction				2,156	0.65	0.521
Female						
20-40	36	3.08				
41-50	48	3.08				
51-90	34	3.32				
Male						
20-40	10	3.20				
41-50	20	3.35				
51-90	14	3.00				
Total		3.17	1.25			

Note. Item 5: Physical therapy education should prepare therapists to address the spiritual needs of patients.

Table 16

Two-Way Analysis of Variance for Item 5, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.17	0.683
Female	117	3.21				
Male	43	3.31				
Professional Status				2,154	2.44	0.091
Faculty	93	3.04				
Faculty/Admin	26	3.12				
Faculty/Admin/Clin	41	3.61				
Interaction				2,154	4.53	0.012*
Female						
Faculty	70	3.11				
Faculty/Admin	17	3.47				
Faculty/Admin/Clin	30	3.03				
Male						
Faculty	23	2.96				
Faculty/Admin	9	2.79				
Faculty/Admin/Clin	11	4.18				
Total		3.17	1.25			

Note. Item 5: Physical therapy education should prepare therapists to address the spiritual needs of patients.
*$p<0.05$.

Table 17

Two-Way Analysis of Variance for Item 5, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,151	0.27	0.761
	20-40	45	3.05				
	41-50	67	3.10				
	51-90	48	3.27				
Professional Status					2,151	0.46	0.632
	Faculty	93	3.07				
	Faculty/Admin	26	3.05				
	Faculty/Admin/Clin	41	3.30				
Interaction					4,151	0.91	0.461
20-40							
	Faculty	28	3.11				
	Faculty/Admin	4	2.75				
	Faculty/Admin/Clin	13	3.31				
41-50							
	Faculty	40	3.08				
	Faculty/Admin	8	2.75				
	Faculty/Admin/Clin	19	3.47				
51-90							
	Faculty	25	3.04				
	Faculty/Admin	14	3.64				
	Faculty/Admin/Clin	9	3.11				
Total			3.17	1.25			

Note. Item 5: Physical therapy education should prepare therapists to address the spiritual needs of patients.

Table 18

Two-Way Analysis of Variance for Item 6, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	1.11	0.294
Female	118	2.33				
Male	44	2.14				
Age				2,156	0.54	0.584
20-40	46	2.10				
41-50	68	2.24				
51-90	48	2.36				
Interaction						
Female				2,156	0.36	0.701
20-40	36	2.31				
41-50	48	2.33				
51-90	34	2.35				
Male						
20-40	10	1.90				
41-50	20	2.15				
51-90	14	2.36				
Total		2.28	1.01			

Note. Item 6: Physical therapists possess the knowledge and skills to assist clients in spiritual matters.

Table 19

Two-Way Analysis of Variance for Item 6, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.01	0.912
Female	117	2.33				
Male	43	2.31				
Professional Status				2,154	3.38	0.037*
Faculty	93	2.08				
Faculty/Admin	26	2.26				
Faculty/Admin/Clin	41	2.63				
Interaction				2,154	1.38	0.256
Female						
Faculty	70	2.29				
Faculty/Admin	17	2.18				
Faculty/Admin/Clin	30	2.53				
Male						
Faculty	23	1.87				
Faculty/Admin	9	2.33				
Faculty/Admin/Clin	11	2.73				
Total		2.29	1.01			

Note. Item 6: Physical therapists possess the knowledge and skills to assist clients in spiritual matters.
*$p<0.05$.

Table 20

Two-Way Analysis of Variance for Item 6, Professional Status by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effect						
Professional Status				2,151	1.67	0.191
Faculty	93	2.21				
Faculty/Admin	26	2.16				
Fac/Admin/Clin	41	2.54				
Age				2,151	0.40	0.672
20-40	45	2.17				
41-50	67	2.34				
51-90	48	2.40				
Interaction				4,151	1.03	0.396
20-40						
Faculty	28	2.29				
Faculty/Admin	4	2.00				
Fac/Admin/Clin	13	2.23				
41-50						
Faculty	40	2.05				
Faculty/Admin	8	2.13				
Fac/Admin/Clin	19	2.84				
51-90						
Faculty	25	2.28				
Faculty/Admin	14	2.36				
Fac/Admin/Clin	9	2.56				
Total		2.29	1.01			

Note. Item 6: Physical therapists possess the knowledge and skills to assist clients in spiritual matters.

since no significant main effect for professional status was found in the two-way ANOVA with age and professional status as independent variables.

Tables 21 to 23 show the results of a two-way ANOVA for item 8: *Every physical therapy education program should include spirituality concepts in its curriculum.* Both Tables 21 and 22 report that there are no significant main effects and interaction effect. Table 21 shows both main effects and interaction effect on the independent variables gender and age. Table 22 shows both main effects and interaction effect on the independent variables professional status and age. The results show in Tables 21 and 22 that there were no significant differences for the independent variables age, gender, and professional status on item 8.

Table 23 shows no significant main effect for the independent variable gender for item 8 (E*very physical therapy education should include spirituality concepts in its curriculum*). However, Table 23 reports a significant main effect (p=0.012) for professional status. Faculty/administrator/clinicians had the highest mean and faculty/administrators the lowest. There was also a significant interaction effect (p=0.032) between the independent variables gender and professional status. The results showed that the smallest mean score difference was between male faculty and female faculty. The difference between male and female faculty showed that female faculty had a more favorable response to item 8 (E*very physical therapy education should include spirituality concepts in its curriculum*) than male faculty. An even larger difference was found between male and female faculty/administrators. Female faculty/administrators had a more favorable response than the male faculty/administrators. The largest difference was between male and female faculty/administrator/clinician. Male

Table 21

Two-Way Analysis of Variance for Item 8, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	0.12	0.729
Female	118	3.45				
Male	44	3.38				
Age				2,156	0.28	0.754
20-40	46	3.48				
41-50	68	3.47				
51-90	48	3.31				
Interaction				2,156	0.86	0.424
Female						
20-40	36	3.56				
41-50	48	3.33				
51-90	34	3.47				
Male						
20-40	10	3.40				
41-50	20	3.60				
51-90	14	3.14				
Total		3.43	1.13			

Note. Item 8: Every physical therapy education should include spirituality concepts in its curriculum.

Table 22

Two-Way Analysis of Variance for Item 8, Professional Status by Age

Source		N	*M*	*SD*	*df*	*F*	*p*
Main Effects							
	Professional Status				2,151	1.83	0.165
	Faculty	93	3.45				
	Faculty/Admin	26	3.04				
	Faculty/Admin/Clin	41	3.62				
	Age				2,151	0.01	0.988
	20-40	45	3.39				
	41-50	67	3.35				
	51-90	48	3.36				
Interaction					4,151	1.36	0.250
20-40							
	Faculty	28	3.64				
	Faculty/Admin	4	3.00				
	Faculty/Admin/Clin	13	3.53				
41-50							
	Faculty	40	3.00				
	Faculty/Admin	8	2.75				
	Faculty/Admin/Clin	19	4.00				
51-90							
	Faculty	25	3.40				
	Faculty/Admin	14	3.36				
	Faculty/Admin/Clin	9	3.33				
Total		3.45	1.12				

Note. Item 8: Every physical therapy education should include spirituality concepts in its curriculum.

Table 23

Two-Way Analysis of Variance for Item 8, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.17	0.683
Female	117	3.40				
Male	43	3.49				
Professional Status				2,154	4.56	0.012*
Faculty	93	3.36				
Faculty/Admin	26	3.06				
Faculty/Admin/Clin	41	3.92				
Interaction				2,154	3.52	0.032*
Faculty						
Female	70	3.50				
Male	23	3.22				
Faculty/Admin						
Female	17	3.24				
Male	9	2.89				
Faculty/Admin/Clin						
Female	30	3.47				
Male	11	4.36				
Total		3.45	1.13			

Note. Item 8: Every physical therapy education should include spirituality concepts in its curriculum.
*$p < .05$.

faculty/administrator/clinician had a much more favorable response to including spirituality concepts in every physical therapy curriculum (item 8) than females. Caution is taken in interpreting this result since no significant main effect for professional status was found in the two-way ANOVA with age and professional status.

Tables 24 to 26 show the analyzed effect of a two-way ANOVA for item 9: *Good physical therapy practice should address the spiritual needs of patients.* Table 24 shows both main effects and interaction effect in the independent variables gender and age. Table 25 shows the results for the main effects and interaction effect on the independent variables professional status and age. Table 26 shows the results for the main effects and interaction effect on the independent variables professional status and gender. The results for Tables 24, 25, and 26 show that there were no significant differences for the independent variables age, gender, and professional status on item 9.

Tables 27 to 29 show the results of a two-way ANOVA for item 10: *Spirituality concepts should NOT be included in the Physical Therapy education curriculum.* There are no significant main effects or interaction effect in the independent variables gender and age. Table 28 shows no significant main effects or interaction effect in the independent variables age and professional status.

Table 29 shows no significant main effect in the independent variables professional status and gender. However, Table 29 shows a significant interaction effect (p= 0.038) between professional status by gender. The results showed that the smallest mean score difference was between male and female faculty/administrators. The difference between male and female faculty/administrators showed that male

Table 24

Two-Way Analysis of Variance for Item 9, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,155	0.90	0.344
Female	117	3.23				
Male	44	3.03				
Age				2,155	0.60	0.551
20-40	46	2.98				
41-50	67	3.14				
51-90	48	3.28				
Interaction				2,155	0.99	0.373
Female						
20-40	36	3.06				
41-50	47	3.09				
51-90	34	3.56				
Male						
20-40	10	2.90				
41-50	20	3.20				
51-90	14	3.00				
Total		3.17	1.15			

Note. Item 9: Good physical therapy should address the spiritual needs of patients.

Table 25

Two-Way Analysis of Variance for Item 9, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,150	1.70	0.186
	20-40	45	2.88				
	41-50	66	3.09				
	51-90	48	3.41				
Professional Status					2,150	0.29	0.749
	Faculty	92	3.18				
	Faculty/Admin	26	2.98				
	Faculty/Admin/Clin	41	3.22				
Interaction					4,150	0.56	0.689
20-40							
	Faculty	28	3.14				
	Faculty/Admin	4	2.50				
	Faculty/Admin/Clin	13	3.00				
41-50							
	Faculty	39	3.08				
	Faculty/Admin	8	2.88				
	Faculty/Admin/Clin	19	3.32				
51-90							
	Faculty	25	3.32				
	Faculty/Admin	14	3.57				
	Faculty/Admin/Clin	9	3.33				
Total			3.18	1.16			

Note. Item 9: Good physical therapy should address the spiritual needs of patients.

Table 26

Two-Way Analysis of Variance for Item 9, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,153	0.38	0.540
Female	116	3.24				
Male	12	3.10				
Professional Status				2,153	0.18	0.838
Faculty	92	3.12				
Faculty/Admin	26	3.12				
Faculty/Admin/Clin	41	3.26				
Interaction				2,153	0.56	0.573
Female						
Faculty	69	3.20				
Faculty/Admin	17	3.35				
Faculty/Amin/Clin	30	3.17				
Male						
Faculty	23	3.04				
Faculty/Admin	9	2.89				
Faculty/Admin/Clin	11	3.36				
Total		3.18	1.15			

Note. Item 9: Good physical therapy should address the spiritual needs of patients.
*$p<0.05$.

Table 27

Two-Way Analysis of Variance for Item 10, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	0.14	0.906
Female	118	2.37				
Male	44	2.34				
Age						
20-40	46	2.23		2,156	0.31	0.736
41-50	68	2.43				
51-90	48	2.40				
Interaction				2,156	0.73	0.485
Female						
20-40	36	2.36				
41-50	48	2.50				
51-90	34	2.24				
Male						
20-40	10	2.10				
41-50	20	2.35				
51-90	14	2.57				
Total		2.36	1.15			

Note. Item 10: Spirituality concepts should NOT be included in the Physical Therapy education curriculum.

Table 28

Two-Way Analysis of Variance for Item 10, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,151	0.18	0.835
	20-40	45	2.41				
	41-50	67	2.52				
	51-90	48	2.38				
Professional Status					2,151	0.46	0.630
	Faculty	93	2.32				
	Faculty/Admin	26	2.46				
	Faculty/Admin/Clin	41	2.53				
Interaction					4,151	0.55	0.702
20-40							
	Faculty	28	2.18				
	Faculty/Admin	4	2.50				
	Faculty/Admin/Clin	13	2.54				
41-50							
	Faculty	40	2.45				
	Faculty/Admin	8	2.75				
	Faculty/Admin/Clin	19	2.37				
51-90							
	Faculty	25	2.32				
	Faculty/Admin	14	2.14				
	Faculty/Admin/Clin	9	2.67				
Total			2.38	1.15			

Note. Item 10: Spirituality concepts should NOT be included in the Physical Therapy education curriculum.

Table 29

Two-Way Analysis of Variance for Item 10, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.26	0.612
Female	117	2.43				
Male	43	2.31				
Professional Status				2,154	0.18	0.838
Faculty	93	2.41				
Faculty/Admin	26	2.43				
Faculty/Admin/Clin	41	2.28				
Interaction				2,154	3.34	0.038*
Female						
Faculty	70	2.26				
Faculty/Admin	17	2.29				
Faculty/Admin/Clin	30	2.73				
Male						
Faculty	23	2.57				
Faculty/Admin	9	2.56				
Faculty/Admin/Clin	11	1.82				
Total		2.38	1.15			

Note. Item 10: Spirituality concepts should NOT be included in the Physical Therapy education curriculum.
*$p<0.05$.

faculty/administrators had a more favorable response to item 10 (*Spirituality concepts should NOT be included in Physical Therapy education curriculum*) than did female faculty/administrators. An even larger difference was found between male and female faculty. The male faculty had a more favorable response than the female faculty. The largest difference was between male and female faculty/administrator/clinicians. Female faculty/administrator/clinicians had a much more favorable response to the statement that spirituality concepts should NOT be included in physical therapy education (item 10) than did males.

Tables 30 to 32 show the results of a two-way ANOVA for item 11: *Knowledge of spirituality belief and practices is essential when working with patients as a physical therapist*. Table 30 shows no significant main effects or interaction effect in the independent variables gender and professional status. Table 31 also reports no significant main effects or interaction effect in the independent variables age and professional status.

Table 32 shows no significant main effect for gender and no interaction effect between gender and professional status on item 11. There was a significant main effect (p=0.041) for professional status. Faculty was the highest group, and faculty/administrators were the lowest. Caution is taken in interpreting this result since no significant main effect for professional status was found in the two-way ANOVA with age and professional status as independent variables.

Tables 33 to 35 show the results of a two-way ANOVA for item 12: *Spirituality should be included as a topic in only one existing physical therapy course.* Table 33 reveals no significant main effects or interaction effect for the independent variables gender and professional status. Table 34 reveals no significant main effects or interaction

Table 30

Two-Way Analysis of Variance for Item 11, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effect						
Gender				1,156	0.08	0.777
Female	118	3.59				
Male	44	3.53				
Age				2,156	1.20	0.303
20-40	46	3.60				
41-50	68	3.72				
51-90	48	3.37				
Interaction Effect				2,156	2.27	0.117
Female						
20-40	36	3.69				
41-50	48	3.48				
51-90	34	3.59				
Male						
20-40	10	3.50				
41-50	20	3.95				
51-90	14	3.14				
Total		3.58	1.09			

Note. Item 11: Knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist.

Table 31

Two-Way Analysis of Variance for Item 11, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effect						
Gender				1,154	0.09	0.765
Female	117	3.48				
Male	43	3.54				
Professional				2,154	2.41	0.093
Faculty	93	3.69				
Faculty/Admin	26	3.15				
Faculty/Admin/Clin	41	3.70				
Interaction				2,154	2.84	0.061
Female						
Faculty	70	3.73				
Faculty/Admin	17	3.41				
Faculty/Admin/Clin	30	3.30				
Male						
Faculty	23	3.65				
Faculty/Admin	9	2.89				
Faculty/Admin/Clin	11	4.09				
Total		3.58	1.10			

Note. Item 11: Knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist.

Table 32

Two-Way Analysis of Variance for Item 11, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,151	0.06	0.942
	20-40	45	3.37				
	41-50	67	3.45				
	51-90	48	3.38				
Professional					2,151	3.27	0.041*
	Faculty	93	3.71				
	Faculty/Admin	26	3.07				
	Faculty/Admin/Clin	41	3.41				
Interaction					4,151	1.82	0.129
20-40							
	Faculty	28	3.89				
	Faculty/Admin	4	2.75				
	Faculty/Admin/Clin	13	3.46				
41-50							
	Faculty	40	3.68				
	Faculty/Admin	8	2.88				
	Faculty/Admin/Clin	19	3.79				
51-90							
	Faculty	25	3.56				
	Faculty/Admin	14	3.57				
	Faculty/Admin/Clin	9	3.00				
Total			3.58	1.10			

Note. Item 11: Knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist.
*$p<0.05$.

Table 33

Two-Way Analysis of Variance for Item 12, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,152	0.74	0.391
Female	115	2.56				
Male	43	2.37				
Professional Status				2,152	1.02	0.362
Faculty	93	2.65				
Faculty/Admin	25	2.35				
Faculty/Admin/Clin	40	2.39				
Interaction				2,152	1.19	0.308
Female						
Faculty	70	2.60				
Faculty/Admin	16	2.38				
Faculty/Admin/Clin	29	2.69				
Male						
Faculty	23	2.70				
Faculty/Admin	9	2.33				
Faculty/Admin/Clin	11	2.09				
Total		2.56	1.06			

Note. Item 12: Spirituality should be included as a topic in only one existing physical therapy course.

Table 34

Two-Way Analysis of Variance for Item 12, Age by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Age				2,149	1.84	0.163
20-40	45	2.73				
41-50	66	2.30				
51-90	47	2.67				
Professional Status				2,149	0.34	0.714
Faculty	93	2.65				
Faculty/Admin	25	2.44				
Faculty/Admin/Clin	40	2.61				
Interaction				4,149	0.48	0.753
20-40						
Faculty	28	2.68				
Faculty/Admin	4	2.75				
Faculty/Admin/Clin	13	2.77				
41-50						
Faculty	40	2.48				
Faculty/Admin	8	2.25				
Faculty/Admin/Clin	18	2.17				
51-90						
Faculty	25	2.80				
Faculty/Admin	13	2.31				
Faculty/Admin/Clin	9	2.89				
Total		2.56	1.06			

Note. Item 12: Spirituality should be included as a topic in only one existing physical therapy course.

Table 35

Two-Way Analysis of Variance for Item 12, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*P*
Main Effects						
Gender				1,154	0.19	0.661
Female	116	2.60				
Male	44	2.52				
Age				2,154	2.10	0.126
20-40	46	2.64				
41-50	67	2.31				
51-90	47	2.73				
Interaction				2,154	0.76	0.467
Female						
20-40	36	2.78				
41-50	47	2.43				
51-90	33	2.61				
Male						
20-40	10	2.50				
41-50	20	2.20				
51-90	14	2.86				
Total		2.56	1.05			

Note. Item 12: Spirituality should be included as a topic in only one existing physical therapy course.

effect for the independent variables professional status. Table 35 reveals no significant main effects or interaction effect for independent variables age and gender. The results for Tables 33 to 35 show that there were no significant differences for the independent variables age, gender, and professional status on item 12.

Tables 36 to 38 show the results of a two-way ANOVA for item 13: *Spirituality should be included as a topic in more than one existing physical therapy course.* Table 36 displays no significant main effect for gender and no interaction effect between gender and professional status on item 13. There was a significant main effect (p=0.039) for professional status. Faculty/administrator/clinician was the highest group, and faculty/administrators were the lowest. Caution is taken in interpreting this result since no significant main effect for professional status was found in the two-way ANOVA with age and professional status as independent variables. The results may suggest that faculty/administrators/clinicians believe that spirituality should be included as a topic in more than one existing physical therapy course.

Table 37 shows no significant main effects or interaction effect for the independent variables age and professional status. Table 38 shows no significant main effects or interaction effect for the independent variables gender and age.

Tables 39 to 41 show the results of a two-way ANOVA for item 14: *Including topics in spirituality will require the creation of only one new course.* Table 39 shows no significant main effect for gender or no interaction effect between gender and age on item 14. There was a significant main effect (p=0.049) for age. Age group 51-90 was the highest group and age group 41-50 was the lowest. Caution is taken in interpreting this

Table 36

Two-Way Analysis of Variance for Item 13, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,153	0.06	0.805
Female	116	3.31				
Male	43	3.36				
Professional Status				2,153	3.32	0.039*
Faculty	93	3.20				
Faculty/Admin	25	3.08				
Faculty/Admin/Clin	41	3.73				
Interaction				2,153	2.59	0.078
Female						
Faculty	70	3.19				
Faculty/Admin	16	3.38				
Faculty/Admin/Clin	30	3.37				
Male						
Faculty	23	3.22				
Faculty/Admin	9	2.78				
Faculty/Admin/Clin	11	4.09				
Total		3.28	1.09			

Note. Item 13: Spirituality should be included as a topic in more than one existing physical therapy course.
*$p<.05$.

Table 37

Two-Way Analysis of Variance for Item 13, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,150	0.28	0.753
	20-40	45	3.13				
	41-50	67	3.32				
	51-90	47	3.29				
Professional Status					2,150	1.30	0.275
	Faculty	93	3.21				
	Faculty/Admin	25	3.05				
	Faculty/Admin/Clin	41	3.49				
Interaction					4,150	1.53	0.195
20-40							
	Faculty	28	3.39				
	Faculty/Admin	4	2.75				
	Faculty/Admin/Clin	13	3.23				
41-50							
	Faculty	40	3.08				
	Faculty/Admin	8	3.00				
	Faculty/Admin/Clin	19	3.89				
51-90							
	Faculty	25	3.16				
	Faculty/Admin	13	3.39				
	Faculty/Admin/Clin	9	3.33				
Total			3.28	1.09			

Note. Item 13: Spirituality should be included as a topic in more than one existing physical therapy course.

Table 38

Two-Way Analysis of Variance for Item 13, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,155	0.001	0.978
Female	117	3.28				
Male	44	3.28				
Age				2,155	0.71	0.491
20-40	46	3.25				
41-50	68	3.42				
51-90	47	3.16				
Interaction				2,155	2.71	0.070
Female						
20-40	36	3.31				
41-50	48	3.15				
51-90	33	3.39				
Male						
20-40	10	3.20				
41-50	20	3.70				
51-90	14	2.93				
Total		3.29	1.09			

Note. Item 13: Spirituality should be included as a topic in more than one existing physical therapy course.

Table 39

Two-Way Analysis of Variance for Item 14, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	2.37	0.126
Female	116	2.13				
Male	44	2.41				
Age				2,154	3.06	0.049*
20-40	46	2.18				
41-50	66	2.07				
51-90	48	2.57				
Interaction				2,154	2.14	0.121
Female						
20-40	36	2.06				
41-50	46	2.13				
51-90	34	2.21				
Male						
20-40	10	2.30				
41-50	20	2.00				
51-90	14	2.93				
Total		2.19	1.01			

Note. Item 14: Including topics in spirituality will require the creation of only one new course.

Table 40

Two-Way Analysis of Variance for Item 14, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,149	2.54	0.082
	20-40	45	2.17				
	41-50	65	2.10				
	51-90	48	2.56				
Professional Status					2,149	2.18	0.117
	Faculty	92	2.12				
	Faculty/Admin	26	2.19				
	Faculty/Admin/Clin	40	2.52				
Interaction					4,149	2.04	0.091
20-40							
	Faculty	28	2.04				
	Faculty/Admin	4	2.25				
	Faculty/Admin/Clin	13	2.23				
41-50							
	Faculty	39	2.05				
	Faculty/Admin	8	2.25				
	Faculty/Admin/Clin	18	2.00				
51-90							
	Faculty	25	2.28				
	Faculty/Admin	14	2.07				
	Faculty/Admin/Clin	9	3.33				
Total			2.18	1.00			

Note. Item 14: Including topics in spirituality will require the creation of only one new course.

Table 41

Two-Way Analysis of Variance for Item 14, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,152	0.92	0.339
Female	115	2.17				
Male	43	2.36				
Professional Status				2,152	1.22	0.300
Faculty	92	2.19				
Faculty/Admin	26	2.12				
Faculty/Admin/Clin	40	2.48				
Interaction				2,152	0.96	0.386
Female						
Faculty	69	2.03				
Faculty/Admin	17	2.24				
Faculty/Admin/Clin	29	2.24				
Male						
Faculty	23	2.35				
Faculty/Admin	9	2.00				
Faculty/Admin/Clin	11	2.73				
Total		2.18	1.00			

Note. Item 14: Including topics in spirituality will require the creation of only one new course.

result since no significant main effect for professional status was found in the two-way ANOVA with professional status and age.

Table 40 shows no significant main effects or interaction effect for independent variables professional status and age. Table 41 shows no significant main effects or interaction effect for independent variables professional status and gender. The results for Tables 40 and 41 show that there were no significant differences for the independent variables age, gender, and professional status for item 14.

Tables 42 to 44 show the results of a two-way ANOVA for item15: *Including topics in spirituality will require the creation of more than one new course.* Table 42 displayed no significant main effects or interaction effect for independent variables gender and age. Table 43 shows no significant main effects or interaction effect or independent variables age and professional status. Table 44 shows no significant main effects or interaction effect for independent variables gender and professional status. The results for Tables 42 to 44 show that there were no significant differences for the independent variables age, gender, and professional status for item 15.

Tables 45 to 47 show the results of a two-way ANOVA for item 16: *All topics in spirituality should be taught during the first year of the MSPT program.* Table 45 shows no significant main effects or interaction effect for the independent variables. Table 46 shows no significant main effects or interaction effect for gender and professional status. Table 47 shows no significant main effects or interaction effect for the independent variables age and professional status. The results for Tables 45 to 47 show that there were no significant differences for the independent variables age, gender, and professional status for item 16.

Table 42

Two-Way Analysis of Variance for Item 15, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.41	0.521
Female	116	2.09				
Male	44	1.97				
Age				2,154	0.68	0.509
20-40	46	1.87				
41-50	66	2.15				
51-90	48	2.08				
Interaction				2,154	1.08	0.342
Female						
20-40	36	1.94				
41-50	46	2.04				
51-90	34	2.29				
Male						
20-40	10	1.80				
41-50	20	2.25				
51-90	14	1.86				
Total		2.07	1.06			

Note. Item 15: Including topics in spirituality will require the creation of more than one new course.

Table 43

Two-Way Analysis of Variance for Item 15, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,149	0.60	0.551
	20-40	45	1.91				
	41-50	65	2.20				
	51-90	48	2.14				
Professional Status					2,149	0.17	0.838
	Faculty	92	2.01				
	Faculty/Admin	26	2.11				
	Faculty/Admin/Clin	40	2.13				
Interaction					4,149	0.59	0.674
20-40							
	Faculty	28	1.82				
	Faculty/Admin	4	1.75				
	Faculty/Admin/Clin	13	2.15				
41-50							
	Faculty	39	1.97				
	Faculty/Admin	8	2.50				
	Faculty/Admin/Clin	18	2.11				
51-90							
	Faculty	25	2.24				
	Faculty/Admin	14	2.07				
	Faculty/Admin/Clin	9	2.11				
Total			2.06	1.05			

Note. Item 15: Including topics in spirituality will require the creation of more than one new course.

Table 44

Two-Way Analysis of Variance for Item 15, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,152	0.64	0.424
Female	115	2.15				
Male	43	1.99				
Professional Status				2,152	0.07	0.931
Faculty	92	2.03				
Faculty/Admin	26	2.07				
Faculty/Admin/Clin	40	2.11				
Interaction				2,152	0.93	0.397
Female						
Faculty	69	1.97				
Faculty/Admin	17	2.35				
Faculty/Admin/Clin	29	2.14				
Male						
Faculty	23	2.09				
Faculty/Admin	9	1.79				
Faculty/Admin/Clin	11	2.09				
Total		2.06	1.05			

Note. Item 15: Including topics in spirituality will require the creation of more than one new course.

Table 45

Two-Way Analysis of Variance for Item 16, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,153	0.29	0.591
Female	115	2.35				
Male	44	2.26				
Age				2,153	0.91	0.407
20-40	46	2.22				
41-50	67	2.23				
51-90	46	2.46				
Interaction				2,153	1.43	0.244
Female						
20-40	36	2.44				
41-50	47	2.11				
51-90	32	2.50				
Male						
20-40	10	2.00				
41-50	20	2.35				
51-60	14	2.43				
Total		2.31	0.92			

Note. Item 16: All topics in spirituality should be taught during the first year of the MSPT program.

Table 46

Two-Way Analysis of Variance for Item 16, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,151	0.00	0.984
Female	114	2.33				
Male	43	2.33				
Professional				2,151	0.54	0.585
Faculty	92	2.26				
Faculty/Admin	25	2.27				
Faculty/Admin/Clin	40	2.46				
Interaction				2,151	0.22	0.805
Female						
Faculty	69	2.30				
Faculty/Admin	16	2.31				
Faculty/Admin/Clin	29	2.38				
Male						
Faculty	23	2.22				
Faculty/Admin	9	2.22				
Faculty/Admin/Clin	11	2.55				
Total		2.32	0.93			

Note. Item 16: All topics in spirituality should be taught during the first year of the MSPT program.

Table 47

Two-Way Analysis of Variance for Item 16, Age by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Age				2,148	1.86	0.159
20-40	45	2.37				
41-50	66	2.13				
51-90	46	2.53				
Professional Status				2,148	0.81	0.449
20-40	92	2.30				
41-50	25	2.23				
51-90	40	2.51				
Interaction				4,148	0.37	0.833
20-40						
Faculty	28	2.25				
Faculty/Admin	4	2.25				
Faculty/Admin/Clin	13	2.62				
41-50						
Faculty	40	2.23				
Faculty/Admin	7	2.00				
Faculty/Admin/Clin	19	2.16				
51-90						
Faculty	24	2.42				
Faculty/Admin	14	2.43				
Faculty/Admin/Clin	8	2.75				
Total		2.32	0.93			

Note. Item 16: All topics in spirituality should be taught during the first year of the MSPT program.

Tables 48 to 50 show the results of a two-way ANOVA for item 17: *All topics in spirituality should be taught during the second year of the MSPT program*. Table 48 shows no significant main effects or interaction effect for the independent variables gender and age group. Table 49 shows no significant main effects or interaction effect for independent variables gender and professional status. Table 50 shows no significant main effects or interaction effect for the independent variables age and professional status. The results for Tables 48 to 50 show that there were no significant differences for the independent variables age, gender, and professional status for item 17.

Tables 51 to 53 show the results of a two-way ANOVA for item 18: *All topics in spirituality should be taught only in a DPT program*. Table 51 shows no significant main effects or interaction effect for the independent variables gender and age. Table 52 shows no significant main effects or interaction effect for the independent variables gender and professional status.

Table 53 shows no significant main effects or interaction effect for the independent variables age and professional status. The results for Tables 51 to 53 show that there were no significant differences for the independent variables age, gender, and professional status for item 18.

Tables 54 to 56 show the results of a two-way ANOVA for item 19: *All topics in spirituality should be taught throughout a PT program*. Table 54 shows no significant main effects or interaction effect for the independent variables gender and age. Table 55 shows no significant main effects or interaction effect for independent variables gender and professional. Table 56 shows no significant main effects or interaction effect for the independent variables age and professional status. The results for Tables 54 to 56 show

Table 48

Two-Way Analysis of Variance for Item 17, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*P*
Main Effects						
Gender				1,153	0.06	0.812
Female	115	2.30				
Male	44	2.34				
Age				2,153	2.14	0.121
20-40	46	2.22				
41-50	67	2.20				
51-90	46	2.55				
Interaction				2,153	0.99	0.375
Female						
20-40	36	2.33				
41-50	47	2.04				
51-90	32	2.53				
Male						
20-40	10	2.10				
41-50	20	2.35				
51-90	14	2.57				
Total		2.30	0.88			

Note. Item 17: All topics in spirituality should be taught during the second year of the MSPT program.

Table 49

Two-Way Analysis of Variance for Item 17, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,151	0.17	0.684
Female	114	2.28				
Male	43	2.35				
Professional Status				2,151	0.28	0.757
Faculty	92	2.33				
Faculty/Admin	25	2.21				
Faculty/Admin/Clin	40	2.39				
Interaction				2,151	0.53	0.588
Female						
Faculty	69	2.28				
Faculty/Admin	16	2.31				
Faculty/Admin/Clin	29	2.24				
Male						
Faculty	23	2.39				
Faculty/Admin	9	2.11				
Faculty/Admin/Clin	11	2.55				
Total		2.30	0.89			

Note. Item 17: All topics in spirituality should be taught during the second year of the MSPT program.

Table 50

Two-Way Analysis of Variance for Item 17, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,148	1.40	0.251
	20-40	45	2.31				
	41-50	66	2.12				
	51-90	46	2.45				
Professional Status					2,148	0.24	0.789
	Faculty	92	2.35				
	Faculty/Admin	25	2.20				
	Faculty/Admin/Clin	40	2.33				
Interaction					4,148	0.80	0.530
20-40							
	Faculty	28	2.21				
	Faculty/Admin	4	2.25				
	Faculty/Admin/Clin	13	2.46				
41-50							
	Faculty	40	2.10				
	Faculty/Admin	7	2.00				
	Faculty/Admin/Clin	19	2.26				
51-90							
	Faculty	24	2.75				
	Faculty/Admin	14	2.36				
	Faculty/Admin/Clin	8	2.25				
Total			2.30	0.89			

Note. Item 17: All topics in spirituality should be taught during the second year of the MSPT program.

Table 51

Two-Way Analysis of Variance for Item 18, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,153	0.00	0.987
Female	115	1.90				
Male	44	1.90				
Age				2,153	1.32	0.270
20-40	46	1.78				
41-50	67	1.83				
51-90	46	2.09				
Interaction				2,153	0.22	0.805
Female						
20-40	36	1.86				
41-50	47	1.81				
51-90	32	2.03				
Male						
20-40	10	1.70				
41-50	20	1.85				
51-90	14	2.14				
Total		1.89	0.88			

Note. Item 18: All topics in spirituality should be taught only in a DPT program.

Table 52

Two-Way Analysis of Variance for Item 18, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,151	0.02	0.889
Female	114	1.91				
Male	43	1.93				
Professional Status				2,151	0.29	0.748
Faculty	92	1.86				
Faculty/Admin	25	2.02				
Faculty/Admin/Clin	40	1.88				
Interaction				2,151	0.17	0.844
Female						
Faculty	69	1.86				
Faculty/Admin	16	1.94				
Faculty/Admin/Clin	29	1.93				
Male						
Faculty	23	1.87				
Faculty/Admin	9	2.11				
Faculty/Admin/Clin	11	1.82				
Total		1.89	0.89			

Note. Item 18: All topics in spirituality should be taught only in a DPT program.

Table 53

Two-Way Analysis of Variance for Item 18, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,148	0.44	0.647
	20-40	45	1.98				
	41-50	66	1.83				
	51-90	46	2.01				
Professional Status					2,148	0.24	0.791
	Faculty	92	1.88				
	Faculty/Admin	25	2.04				
	Faculty/Admin/Clin	40	1.91				
Interaction					4,148	0.69	0.602
20-40							
	Faculty	28	1.68				
	Faculty/Admin	4	2.25				
	Faculty/Admin/Clin	13	2.00				
41-50							
	Faculty	40	1.80				
	Faculty/Admin	7	1.86				
	Faculty/Admin/Clin	19	1.84				
51-90							
	Faculty	24	2.17				
	Faculty/Admin	14	2.00				
	Faculty/Admin/Clin	8	1.88				
Total			1.89	0.89			

Note. Item 18: All topics in spirituality should be taught only in a DPT program.

Table 54

Two-Way Analysis of Variance for Item 19, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*P*
Main Effects						
Gender				1,155	0.41	0.522
Female	117	3.43				
Male	44	3.29				
Age				2,155	0.35	0.705
20-40	46	3.29				
41-50	67	3.48				
51-90	48	3.32				
Interaction				2,155	2.20	0.114
Female						
20-40	36	3.47				
41-50	47	3.26				
51-90	34	3.56				
Male						
20-40	10	3.10				
41-50	20	3.70				
51-90	14	3.07				
Total		3.40	1.18			

Note. Item 19: All topics in spirituality should be taught throughout a PT program.

Table 55

Two-Way Analysis of Variance for Item 19, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,153	0.00	0.951
Female	116	3.46				
Male	43	3.45				
Professional Status				2,153	0.86	0.426
Faculty	93	3.29				
Faculty/Admin	25	3.45				
Faculty/Admin/Clin	41	3.62				
Interaction				2,153	1.54	0.219
Female						
Faculty	70	3.37				
Faculty/Admin	16	3.69				
Faculty/Admin/Clin	30	3.33				
Male						
Faculty	23	3.22				
Faculty/Admin	9	3.22				
Faculty/Admin/Clin	11	3.91				
Total		3.40	1.18			

Note. Item 19: All topics in spirituality should be taught throughout a PT program.

Table 56

Two-Way Analysis of Variance for Item 19, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*P*
Main Effects							
Age					2,150	0.16	0.849
	20-40	45	3.31				
	41-50	66	3.48				
	51-90	48	3.41				
Professional Status					2,150	0.04	0.963
	Faculty	93	3.36				
	Faculty/Admin	25	3.44				
	Faculty/Admin/Clin	41	3.40				
Interaction					4,150	1.86	0.121
20-40							
	Faculty	28	3.61				
	Faculty/Admin	4	3.25				
	Faculty/Admin/Clin	13	3.08				
41-50							
	Faculty	40	3.13				
	Faculty/Admin	7	3.43				
	Faculty/Admin/Clin	19	3.90				
51-90							
	Faculty	25	3.36				
	Faculty/Admin	14	3.64				
	Faculty/Admin/Clin	9	3.22				
Total			3.40	1.18			

Note. Item 19: All topics in spirituality should be taught throughout a PT program.

that there were no significant differences for the independent variables age, gender, and professional status for item 19.

Tables 57 to 59 show the results of a two-way ANOVA for item 20: *All topics in spirituality should be taught only in professional development courses offered after the completion of a physical therapy program.* Table 57 shows no significant main effects or interaction effect for the independent variables gender and age. Tables 58 shows no significant main effects or interaction effect for independent variables age and professional status. Table 59 shows no significant main effects or interaction effect for the independent variables gender and professional status. The results for Tables 57 and to 59 show that there were no significant differences for the independent variables age, gender, and professional status for item 20.

Tables 60 to 62 show the results of a two-way ANOVA for item 21: *Gathering spiritual information about a patient should be a part of a physical therapy assessment.* Table 60 shows no significant main effects or interaction effects for the independent variables gender and age. Table 61 shows no significant main effects or interaction effect for the independent variables age and professional status. Table 62 shows no significant main effects or interaction effect for the independent variables gender and professional status. The results for Tables 60 to 62 show that there were no significant differences for the independent variables age, gender, and professional status for item 21.

Tables 63 to 65 show the results of a two-way ANOVA for item 22: *Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education.* Table 63 shows no significant main effects or interaction effect for the independent variables gender and age. Table 65 shows no significant main effects or

Table 57

Two-Way Analysis of Variance for Item 20, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,153	0.52	0.472
Female	115	2.09				
Male	44	2.22				
Age				2,153	0.93	0.398
20-40	46	2.01				
41-50	67	2.12				
51-90	46	2.33				
Interaction				2,150	0.89	0.414
Female						
20-40	36	2.03				
41-50	47	2.15				
51-90	32	2.09				
Male						
20-40	10	2.00				
41-50	20	2.10				
51-90	14	2.57				
Total		2.13	1.01			

Note. Item 20: All topics in spirituality should be taught only in professional development courses offered after the completion of a PT program.

Table 58

Two-Way Analysis of Variance for Item 20, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,148	0.40	0.963
	20-40	45	2.17				
	41-50	66	2.23				
	51-90	46	2.23				
Professional Status					2,148	0.50	0.607
	Faculty	92	2.09				
	Faculty/Admin	25	2.25				
	Faculty/Admin/Clin	40	2.28				
Interaction					4,148	1.79	0.135
20-40							
	Faculty	28	1.79				
	Faculty/Admin	4	2.25				
	Faculty/Admin/Clin	13	2.46				
41-50							
	Faculty	40	2.13				
	Faculty/Admin	7	2.57				
	Faculty/Admin/Clin	19	2.00				
51-90							
	Faculty	24	2.38				
	Faculty/Admin	14	1.93				
	Faculty/Admin/Clin	8	2.38				
Total			2.14	1.01			

Note. Item 20: All topics in spirituality should be taught only in professional development courses offered after the completion of a PT program.

Table 59

Two-Way Analysis of Variance for Item 20, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,151	0.55	0.461
Female	114	2.11				
Male	43	2.26				
Professional Status				2,151	0.18	0.839
Faculty	92	2.11				
Faculty/Admin	25	2.20				
Faculty/Admin/Clin	40	2.24				
Interaction				2,151	0.71	0.931
Female						
Faculty	69	2.06				
Faculty/Admin	16	2.06				
Faculty/Admin/Clin	29	2.21				
Male						
Faculty	23	2.17				
Faculty/Admin	9	2.33				
Faculty/Admin/Clin	11	2.27				
Total		2.13	1.01			

Note. Item 20: All topics in spirituality should be taught only in professional development courses offered after the completion of a PT program

Table 60

Two-Way Analysis of Variance for Item 21, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	3.11	0.080
Female	118	2.94				
Male	44	2.56				
Age				2,156	1.67	0.192
20-40	46	2.48				
41-50	68	2.97				
51-90	48	2.80				
Interaction				2,156	1.31	0.273
Female						
20-40	36	2.86				
41-50	48	2.94				
51-90	34	3.03				
Male						
20-40	10	2.10				
41-50	20	3.00				
51-90	14	2.57				
Total		2.86	1.20			

Note. Item 21: Gathering spiritual information about a patient should be a part of a physical assessment.

Table 61

Two-Way Analysis of Variance for Item 21, Professional Status by Age

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Professional Status					2,151	0.34	0.712
	Faculty	93	2.78				
	Faculty/Admin	26	2.82				
	Faculty/Admin/Clin	41	2.97				
Age					2,151	0.04	0.956
	20-40	45	2.80				
	41-50	67	2.86				
	51-90	48	2.90				
Interaction					4,151	0.93	0.450
20-40							
	Faculty	28	2.64				
	Faculty/Admin	4	3.00				
	Faculty/Admin/Clin	13	2.77				
41-50							
	Faculty	40	2.85				
	Faculty/Admin	8	2.38				
	Faculty/Admin/Clin	19	3.37				
51-90							
	Faculty	25	2.84				
	Faculty/Admin	14	3.07				
	Faculty/Admin/Clin	9	2.78				
Total			2.86	1.21			

Note. Item 21: Gathering spiritual information about a patient should be a part of a physical therapy assessment.

Table 62

Two-Way Analysis of Variance for Item 21, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.61	0.437
Female	117	2.95				
Male	43	2.76				
Professional Status				2,154	1.35	0.262
Faculty	93	2.67				
Faculty/Admin	26	2.80				
Faculty/Admin/Clin	41	3.09				
Interaction				2,154	0.79	0.456
Female						
Faculty	70	2.90				
Faculty/Admin	17	2.94				
Faculty/Amin/Clin	30	3.00				
Male						
Faculty	23	2.44				
Faculty/Admin	9	2.67				
Faculty/Admin/Clin	11	3.18				
Total		2.86	1.21			

Note. Item 21: Gathering spiritual information about a patient should be a part of a physical assessment.

Table 63

Two-Way Analysis of Variance for Item 22, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	0.20	0.654
Female	118	3.74				
Male	44	3.65				
Age				2,156	0.42	0.656
20-40	46	3.64				
41-50	68	3.81				
51-90	48	3.63				
Interaction				2,156	1.08	0.342
Female						
20-40	36	3.77				
41-50	48	3.67				
51-90	34	3.77				
Male						
20-40	10	3.50				
41-50	20	3.95				
51-90	14	3.50				
Total		3.72	1.05			

Note. Item 22: Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education.

Table 64

Two-Way Analysis of Variance for Item 22, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.03	0.856
Female	117	3.68				
Male	43	3.72				
Professional Status				2,154	1.13	0.327
Faculty	93	3.74				
Faculty/Admin	26	3.46				
Faculty/Admin/clin	41	3.88				
Interaction				2,154	3.08	0.049*
Female						
Faculty	70	3.83				
Faculty/Admin	17	3.71				
Faculty/Admin/clin	30	3.50				
Male						
Faculty	23	3.65				
Faculty/Admin	9	3.22				
Faculty/Admin/clin	11	4.27				
Total		3.73	1.05			

Note. Item 22: Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education.

Table 65

Two-Way Analysis of Variance for Item 22, Professional Status by Age

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
	Professional Status				2,151	0.89	0.414
	Faculty	93	3.79				
	Faculty/Admin	26	3.45				
	Faculty/Admin/Clin	41	3.66				
	Age				2,151	0.01	0.905
	20-40	45	3.56				
	41-50	67	3.67				
	51-90	48	3.66				
Interaction					4,151	0.59	0.671
20-40							
	Faculty	28	3.89				
	Faculty/Admin	4	3.25				
	Faculty/Admin/clin	13	3.54				
41-50							
	Faculty	40	3.75				
	Faculty/Admin	8	3.38				
	Faculty/Admin/clin	19	3.90				
51-90							
	Faculty	25	3.72				
	Faculty/Admin	14	3.71				
	Faculty/Admin/clin	9	3.56				
Total			3.73	1.05			

Note. Item 22: Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education.

interaction effect for variables age and professional status. The results for Tables 63 and 65 show that there were no significant differences for the independent variables age, gender, and professional status for item 22.

Table 64 shows no significant main effects for the independent variables gender and professional status. However, the table reports a significant interaction effect (p=0.049) between professional status and gender. The results showed that the smallest mean score difference was between male faculty and female faculty. The difference between male and female faculty showed that females had a more favorable response to item 22 (*Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education*) than males. An even larger difference was found between male and female faulty/administrators. Female faculty/administrators had a more favorable response than male faculty/administrators. The largest difference was between male and female faculty/administrator/clinicians. Male faculty/administrator/clinicians had a much more favorable response to including topics on one's spirituality and how it influences his or her health in physical therapy education than females.

Tables 66 to 68 show the results of a two-way ANOVA for item 23: *Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education.* Table 66 shows no significant main effects for gender and no interaction effect between gender and professional status on item 23. There was a significant main effect (p=0.015) for professional status. Faculty/administrator/clinicians were the highest group and faculty/administrators were the lowest.

Table 66

Two-Way Analysis of Variance for Item 23, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.10	0.752
Female	117	3.68				
Male	43	3.60				
Professional Status				2,154	4.32	0.015*
Faculty	93	3.75				
Faculty/Admin	26	3.15				
Faculty/Admin/Clin	41	4.04				
Interaction				2,154	2.07	0.129
Female						
Faculty	70	3.71				
Faculty/Admin	17	3.53				
Faculty/Admin/Clin	30	3.80				
Male						
Faculty	23	3.78				
Faculty/Admin	9	2.78				
Faculty/Admin/Clin	11	4.30				
Total		3.71	1.14			

Note. Item 23: Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education.

Table 67

Two-Way Analysis of Variance for Item 23, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	0.15	0.697
Female	118	3.72				
Male	44	3.64				
Age				2,156	0.26	0.774
20-40	46	3.66				
41-50	68	3.77				
51-90	48	3.61				
Interaction				2,156	1.05	0.353
Female						
20-40	36	3.61				
41-50	48	3.69				
51-90	34	3.85				
Male						
20-40	10	3.70				
41-50	20	3.85				
51-90	14	3.36				
Total		3.70	1.14			

Note. Item 23: Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education.

Table 68

Two-Way Analysis of Variance for Item 23, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,141	0.42	0.659
	20-40	45	3.41				
	41-50	67	3.63				
	51-90	48	3.66				
Professional Status					2,141	3.16	0.045*
	Faculty	93	3.75				
	Faculty/Admin	26	3.11				
	Faculty/Admin/Clin	41	3.84				
Interaction					4,141	1.45	0.222
20-40							
	Faculty	28	3.79				
	Faculty/Admin	4	2.75				
	Faculty/Admin/Clin	13	3.69				
41-50							
	Faculty	40	3.63				
	Faculty/Admin	8	3.00				
	Faculty/Admin/Clin	19	4.26				
51-90							
	Faculty	25	3.84				
	Faculty/Admin	14	3.57				
	Faculty/Admin/Clin	9	3.55				
Total			3.71	1.14			

Note. Item 23: Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education.

Table 67 shows no significant main effects or interaction effect for independent variables age and gender. The results for Tables 67 show that there were no significant differences for the independent variables age, gender, and professional status for item 23 (To*pics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education. Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education*).

Table 68 shows no significant main effect for age and no interaction effect for the independent variables age and professional status on item 23. There was a significant main effect (p=0.045) for professional status. Faculty/administrator/clinicians were the highest group and faculty/administrators were the lowest.

Tables 69 to 71 show the results of a two-way ANOVA for item 24: *Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body should be included in a physical therapy education.*

Table 69 show no significant main effect for gender and no interaction effect between gender and professional status on item 24. There was a significant main effect (p=0.030) for professional status. Faculty/administrator/clinician was the highest group, while faculty/administrators were the lowest group. Caution is taken in interpreting this result since no significant main effect for professional status was found in the two-way ANOVA with age and professional status.

Table 70 displays no significant main effects or interaction effect for the independent variables gender and age. Table 71 displays no significant main effects or interaction effect for the independent variables age and professional status. The results

Table 69

Two-Way Analysis of Variance for Item 24, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.64	0.424
Female	117	3.82				
Male	43	3.67				
Professional Status				2,154	3.59	0.030*
Faculty	93	3.65				
Faculty/Admin	26	3.47				
Faculty/Admin/Clin	41	4.12				
Interaction				2,154	2.82	0.063
Female						
Faculty	70	3.77				
Faculty/Amin	17	3.82				
Faculty/Admin/Clin	30	3.87				
Male						
Faculty	23	3.52				
Faculty/Admin	9	3.11				
Faculty/Admin/Clin	11	4.36				
Total		3.76	0.99			

Note. Item 24: Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body should be included in a physical therapy education.
*$p<.05$.

Table 70

Two-Way Analysis of Variance for Item 24, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	1.77	0.185
Female	118	3.81				
Male	44	3.57				
Age				2,156	0.39	0.675
20-40	46	3.59				
41-50	68	3.79				
51-90	48	3.69				
Interaction				2,156	0.65	0.522
Female						
20-40	36	3.78				
41-50	48	3.77				
51-90	34	3.88				
Male						
20-40	10	3.40				
41-50	20	3.80				
51-90	14	3.50				
Total		3.75	1.00			

Note. Item 24: Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body should be included in a physical therapy education.

Table 71

Two-Way Analysis of Variance for Item 24, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,151	0.25	0.778
	20-40	45	3.66				
	41-50	67	3.74				
	51-90	48	3.84				
Professional Status					2,151	1.60	0.206
	Faculty	93	3.71				
	Faculty/Admin	26	3.53				
	Faculty/Admin/Clin	41	3.99				
Interaction					4,151	0.61	0.654
20-40							
	Faculty	28	3.79				
	Faculty/Admin	4	3.50				
	Faculty/Admin/Clin	13	3.69				
41-50							
	Faculty	40	3.68				
	Faculty/Admin	8	3.38				
	Faculty/Admin/Clin	19	4.16				
51-90							
	Faculty	25	3.68				
	Faculty/Admin	14	3.71				
	Faculty/Admin/Clin	9	4.11				
Total			3.76	0.99			

Note. Item 24: Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body should be included in a physical therapy education.

show in Tables 69 and Table 70 that there were no significant differences for the independent variables age, gender, and professional status on item 24.

Tables 72 to 74 show the results of a two-way ANOVA for item 25: *Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education.*

Table 72 shows no significant main effect for gender and no interaction effect between gender and professional status on item 25. There was a significant main effect (p=0.028) for professional status. Faculty/administrators were the highest group, and faculty was the lowest. Caution is taken in interpreting this result since no significant main effect for professional status was found in the two-way ANOVA with age and professional status as independent variables.

Table 73 shows no significant main effects or interaction effects for the independent variables gender and age. Table 74 shows no significant main effects or interaction effects for the independent variables age and professional status group. The results show that, in Tables 72 and 74, that there were no significant differences for the independent variables age, gender, and professional status on item 25.

Tables 75 to 77 show the results of a two-way ANOVA for item 26: *Many persons have training or experience in teaching spirituality concepts. How important is experience in deciding who teaches spirituality concepts?* Table 75 shows no significant main effects or interaction effect for the independent variable gender and professional status. Table 76 shows no significant main effects or interaction effect for the independent variables age and professional status. Table 77 displays no significant main effects or interaction effect for the independent variables gender and age. Tables 75 to 77

Table 72

Two-Way Analysis of Variance for Item 25, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,154	0.28	0.599
Female	117	3.63				
Male	43	3.74				
Professional Status				2,154	3.65	0.028*
Faculty	93	3.63				
Faculty/Admin	26	3.32				
Faculty/Admin/Clin	41	4.10				
Interaction				2,154	1.98	0.141
Female						
Faculty	70	3.61				
Faculty/Admin	17	3.53				
Faculty/Admin/Clin	30	3.73				
Male						
Faculty	23	3.65				
Faculty/Admin	9	3.11				
Faculty/Admin/Clin	11	4.46				
Total		3.66	1.10			

Note. Item 25: Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education.
*$p<.05$

Table 73

Two-Way Analysis of Variance for Item 25, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,156	0.00	0.998
Female	118	3.65				
Male	44	3.65				
Age				2,156	0.78	0.461
20-40	46	3.49				
41-50	68	3.80				
51-90	48	3.66				
Interaction				2,156	1.97	0.144
Female						
20-40	36	3.58				
41-50	48	3.54				
51-90	34	3.82				
Male						
20-40	10	3.40				
41-50	20	4.05				
51-90	14	3.50				
Total		3.66	1.10			

Note. Item 25: Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education.

Table 74

Two-Way Analysis of Variance for Item 25, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,151	1.15	0.320
	20-40	45	3.32				
	41-50	67	3.64				
	51-90	48	3.74				
Professional Status					2,151	2.42	0.092
	Faculty	93	3.64				
	Faculty/Admin	26	3.20				
	Faculty/Admin/Clin	41	3.86				
Interaction					4,151	1.50	0.206
20-40							
	Faculty	28	3.68				
	Faculty/Admin	4	2.75				
	Faculty/Admin/Clin	13	3.54				
41-50							
	Faculty	40	3.53				
	Faculty/Admin	8	3.13				
	Faculty/Admin/Clin	19	4.26				
51-90							
	Faculty	25	3.72				
	Faculty/Admin	14	3.71				
	Faculty/Admin/Clin	9	3.78				
Total			3.66	1.10			

Note. Item 25: Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education.

Table 75

Two-Way Analysis of Variance for Item 26, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,150	0.07	0.789
Female	113	2.13				
Male	43	2.09				
Professional Status				2,150	0.76	0.472
Faculty	91	2.21				
Faculty/Admin	26	2.00				
Faculty/Admin/Clin	39	2.12				
Interaction				2,150	0.01	0.984
Female						
Faculty	68	2.24				
Faculty/Admin	17	2.00				
Faculty/Admin/Clin	28	2.14				
Male						
Faculty	23	2.17				
Faculty/Admin	9	2.00				
Faculty/Admin/Clin	11	2.09				
Total		2.16	0.70			

Note. Item 26: Many persons have training or experience in teaching spirituality concepts. How important is experience in deciding who teaches spirituality concepts?

Table 76

Two-Way Analysis of Variance for Item 26, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,147	0.11	0.894
	20-40	44	2.06				
	41-50	66	2.15				
	51-90	46	2.13				
Professional Status					2,147	0.76	0.468
	Faculty	91	2.21				
	Faculty/Admin	26	2.00				
	Faculty/Admin/Clin	39	2.13				
Interaction					4,147	0.05	0.996
20-40							
	Faculty	27	2.11				
	Faculty/Admin	4	2.00				
	Faculty/Admin/Clin	13	2.08				
41-50							
	Faculty	39	2.28				
	Faculty/Admin	8	2.00				
	Faculty/Admin/Clin	19	2.16				
51-90							
	Faculty	25	2.24				
	Faculty/Admin	14	2.00				
	Faculty/Admin/Clin	7	2.14				
Total			2.16	0.70			

Note. Item twenty-six: Many persons have training or experience in teaching spirituality concepts. How important is experience in deciding who teaches spirituality concepts?

Table 77

Two-Way Analysis of Variance for Item 26, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,152	0.07	0.786
Female	114	2.18				
Male	44	2.14				
Age				2,152	0.14	0.869
20-40	45	2.14				
41-50	67	2.20				
51-90	46	2.13				
Interaction				2,152	0.29	0.750
Female						
20-40	35	2.09				
41-50	47	2.26				
51-90	32	2.19				
Male						
20-40	10	2.20				
41-50	20	2.15				
51-90	14	2.07				
Total		2.17	0.71			

Note. Item 26: Many persons have training or experience in teaching spirituality concepts. How important is experience in deciding who teaches spirituality concepts?

show that there were no significant differences for the independent variables age, gender, and professional status for item 26.

Tables 78 to 80 show the results of a two-way ANOVA for item 27: *Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum*. Table 78 shows no significant main effect for gender and no interaction effect for the independent variables gender and professional status for item 27. There was a significant main effect (p=0.04) for professional status. Faculty/administrators were the highest group and faculty/administrator/clinicians were the lowest. Caution is taken in interpreting this result since no significant main effect for professional status was found in the two-way ANOVA with age and professional status.

Table 79 shows no significant main effect or interaction effect for the independent variables age and professional status. The results show in Tables 79 and 80 show that there were no significant differences for the independent variables age, gender, and professional status for item 27 (*Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum*).

Table 80 shows no significant main effect for gender and no interaction effect for the independent variables gender and age on item 27. There was a significant main effect (p=0.030) for age. Age group 51-90 was the highest group and age group 20-40 was the lowest. Caution is taken in interpreting this result since no significant main effect for age was found in the two-way ANOVA with age and professional status as independent variables.

Tables 81 to 83 show the results of a two-way ANOVA for item 28: *How many PT faculty members should be involved in teaching spirituality concepts?* Table 81

Table 78

Two-Way Analysis of Variance for Item 27, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,146	0.66	0.418
Female	109	3.13				
Male	43	3.02				
Professional Status				2,146	3.10	0.048*
Faculty	90	2.95				
Faculty/Admin	24	3.34				
Faculty/Admin/Clin	38	2.94				
Interaction				2,146	3.06	0.050
Female						
Faculty	67	3.12				
Faculty/Admin	15	3.13				
Faculty/Admin/Clin	27	3.15				
Male						
Faculty	23	2.78				
Faculty/Admin	9	3.56				
Faculty/Admin/Clin	11	2.73				
Total		3.07	0.70			

Note. Item 27: Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum?

Table 79

Two-Way Analysis of Variance for Item 27, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,143	0.53	0.593
	20-40	43	3.01				
	41-50	65	3.17				
	51-90	44	3.21				
Professional Status					2,143	1.20	0.303
	Faculty	90	3.01				
	Faculty/Admin	24	3.30				
	Faculty/Admin/Clin	38	3.08				
Interaction					4,143	0.49	0.743
20-40							
	Faculty	27	2.85				
	Faculty/Admin	3	3.33				
	Faculty/Admin/Clin	13	2.85				
40-50							
	Faculty	39	3.18				
	Faculty/Admin	7	3.29				
	Faculty/Admin/Clin	19	3.05				
51-90							
	Faculty	24	3.00				
	Faculty/Admin	14	3.29				
	Faculty/Admin/Clin	6	3.33				
Total			3.07	0.70			

Note. Item 27: Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum?

Table 80

Two-Way Analysis of Variance for Item 27, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,148	3.38	0.068
Female	110	3.12				
Male	44	2.89				
Age				2,148	3.58	0.030*
20-40	44	2.75				
41-50	66	3.11				
51-90	44	3.16				
Interaction				2,148	1.91	0.152
Female						
20-40	34	3.00				
41-50	46	3.26				
51-90	30	3.10				
Male						
20-40	10	2.50				
41-50	20	2.95				
51-90	14	3.21				
Total		3.08	0.70			

Note. Item 27: Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum?

Table 81

Two-Way Analysis of Variance for Item 28, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,140	0.55	0.459
Female	105	2.36				
Male	41	2.22				
Professional Status				2,140	3.27	0.041*
Faculty	85	2.06				
Faculty/Admin	23	2.23				
Faculty/Admin/Clin	38	2.58				
Interaction				2,140	2.82	0.063
Female						
Faculty	64	2.17				
Faculty/Admin	14	2.57				
Faculty/Admin/Clin	27	2.33				
Male						
Faculty	21	1.95				
Faculty/Admin	9	1.89				
Faculty/Admin/Clin	11	2.82				
Total		2.24	0.93			

Note. Item 28: How many PT faculty members should be involved in teaching spirituality concepts?
*$p<.05$.

Table 82

Two-Way Analysis of Variance for Item 28, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,142	1.33	0.250
Female	106	2.29				
Male	42	2.09				
Age				2,142	0.59	0.559
20-40	44	2.10				
41-50	63	2.31				
51-90	41	2.16				
Interaction				2,142	2.15	0.121
Female						
20-40	34	2.21				
41-50	44	2.21				
51-90	28	2.46				
Male						
20-40	10	2.00				
41-50	19	2.42				
51-90	13	1.85				
Total		2.24	0.94			

Note. Item 28: How many PT faculty members should be involved in teaching spirituality concepts?

Table 83

Two-Way Analysis of Variance for Item 28, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects							
Age					2,137	0.35	0.704
	20-40	43	2.31				
	41-50	62	2.49				
	51-90	41	2.34				
Professional Status					2,137	2.04	0.134
	Faculty	85	2.15				
	Faculty/Admin	23	2.50				
	Faculty/Admin/Clin	38	2.49				
Interaction					4,137	2.35	0.057
20-40							
	Faculty	27	2.19				
	Faculty/Admin	3	2.67				
	Faculty/Admin/Clin	13	2.08				
41-50							
	Faculty	38	1.97				
	Faculty/Admin	6	2.83				
	Faculty/Admin/Clin	18	2.67				
51-90							
	Faculty	20	2.30				
	Faculty/Admin	14	2.00				
	Faculty/Admin/Clin	7	2.71				
Total			2.24	0.93			

Note. Item 28: How many PT faculty members should be involved in teaching spirituality concepts?

displays no significant main effect for the independent variable gender. It also displayed no significant interaction effect for the independent variables gender by professional status. However, there is a significant main effect (p=0.041) for the independent variable professional status. Caution is given in interpreting results since there was no significant main effect for the independent variables age by professional status. Consequently, the lowest mean score was displayed by faculty, while the second highest mean score is displayed by the faculty/administrators. The highest mean score is displayed by the faculty/administrator/clinicians. The results may suggest that professional status had the greatest impact on how the respondents answered item 28 on the survey instrument. Table 82 displays no significant main effect or interaction effect for the independent variables gender and age.

Table 83 displays no significant main effect or interaction effect for the independent variables age and professional status. For Tables 82 and 83, the results may suggest that the respondents' age, gender, and professional status had no impact on how they responded to item 28 on the survey instrument.

Tables 84 to 86 show the results of a two-way ANOVA for item 29: *Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts?* Table 84 shows no significant main effect for professional status and no interaction effect for the independent variables gender and professional status on item 29. There was a significant main effect (p=0.049) for gender. Females were the highest group, and males were the lowest.

Table 85 shows no significant main effect for age and no interaction effect for age

Table 84

Two-Way Analysis of Variance for Item 29, Gender by Professional Status

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,137	3.93	0.049*
Female	103	2.92				
Male	40	2.74				
Professional Status				2,137	1.32	0.272
Faculty	83	2.81				
Faculty/Admin	23	2.74				
Faculty/Admin/Clin	37	2.94				
Interaction				2,137	0.88	0.417
Female						
Faculty	63	2.87				
Faculty/Admin	14	2.93				
Faculty/Admin/Clin	26	2.96				
Male						
Faculty	20	2.75				
Faculty/Admin	9	2.56				
Faculty/Admin/Clin	11	2.91				
Total		2.86	0.45			

Note. Item 29: Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts.

Table 85
Two-Way Analysis of Variance for Item 29, Gender by Age

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Main Effects						
Gender				1,139	4.17	0.043*
Female	104	2.91				
Male	41	2.74				
Age				2,139	0.81	0.445
20-40	42	2.87				
41-50	61	2.86				
51-90	42	2.75				
Interaction				2,139	3.07	0.050
Female						
20-40	32	2.94				
41-50	43	2.84				
51-90	29	2.97				
Male						
20-40	10	2.80				
41-50	18	2.89				
51-90	13	2.54				
Total		2.86	0.45			

Note. Item 29: Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts?
*$p<0.05$.

Table 86

Two-Way Analysis of Variance for Item 29, Age by Professional Status

Source		*N*	*M*	*SD*	*df*	*F*	*P*
Main Effects							
Age					2,134	0.33	0.723
	20-40	41	2.95				
	41-50	60	2.85				
	51-90	42	2.86				
Professional Status					2,134	0.77	0.466
	Faculty	83	2.85				
	Faculty/Admin	23	2.85				
	Faculty/Admin/Clin	37	2.96				
Interaction					4,134	0.34	0.860
20-40							
	Faculty	26	2.85				
	Faculty/Admin	3	3.00				
	Faculty/Admin/Clin	12	3.00				
41-50							
	Faculty	36	2.83				
	Faculty/Admin	6	2.83				
	Faculty/Admin/Clin	18	2.89				
51-90							
	Faculty	21	2.86				
	Faculty/Admin	14	2.71				
	Faculty/Admin/Clin	7	3.00				
Total			2.86	0.45			

Note. Item 29: Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts?

and gender on item 29. There was a significant main effect (p=0.043) for gender. Females were the highest group, and males were the lowest.

Table 86 shows no significant main effect or interaction effect for the independent variables age and professional status.

Conclusion

The following can be concluded from the analyzed data about the null hypotheses below.

Hypothesis 1: There is no difference among physical therapy educators in the perception of the inclusion of spirituality in physical therapy curriculum based on age.

There is a significant difference among physical therapy educators in the perception toward the inclusion of spirituality in physical therapy curriculum based on age for item 14 (*Including topics in spirituality will require the creation of only one new* course) and 27 (*Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum?*) based on age by gender. In both cases, the age group 51-90 was the highest group. The null hypothesis is rejected for items 14 and 27 and retained for all remaining items as no other significant differences were found based on age.

Hypothesis 2: There is no difference among physical therapy educators in the perception of the inclusion of spirituality in a physical therapy curriculum by gender.

There is a significant difference among physical therapy educators in the perception of the inclusion of spirituality in a physical therapy curriculum based on gender for item 29 (*Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts?*) based on gender by professional status and

gender by age. It was found that the female respondents were more favorable to item 29 than the male respondents. The null hypothesis is rejected for item 29 and retained for all remaining items as no other significant differences were found based on gender.

Hypothesis 3: There is no difference among physical therapy educators in the perception of the inclusion of spirituality in a physical therapy curriculum by ethnicity.

Hypothesis 3 was not tested since 97% of the respondents were Caucasian/White, and the remaining 1.2% was divided equally between Asian American and Hispanic or Latino respondents.

Hypothesis 4: There is no difference among physical therapy educators in the perception of the inclusion of spirituality in a physical therapy curriculum by professional status.

There is a significant difference among physical therapy educators in the perception of the inclusion of spirituality in a physical therapy curriculum based on professional status for item 6 (*Physical therapists possess the knowledge and skills to assist clients in spiritual matters);* item 8 (*Every physical therapy education program should include spirituality concepts in its curriculum*); item 13 (*Spirituality should be included as a topic in more than one existing physical therapy course*); item 23 (*Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy* education); item 24 (*Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body, should be included in a physical therapy education);* item 25 (*Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education);* item 27 (*Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality*

concepts in the PT curriculum); and item 28 (*How many PT faculty members should be involved in teaching spirituality concepts?)* based on gender by professional status. It was found in every case, with exception of items 11, 23 and 25, the faculty/administrator/clinicians were the highest group. In items 25 and 23, the faculty/administrators were the highest group and in item 11, faculty was the highest group. Significant difference was also found in responses to item 11 (*Knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist*), and item 23 (*Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy* education) based on age by professional status. The null hypothesis is rejected for items 6, 8, 11, 13, 23, 24, 25, 27, and 28 retained for all other items.

Hypothesis 5: There is no interaction in the perception of the inclusion of spirituality between ethnicity, gender, age, and professional status.

There is significant interaction between gender and professional status group for items 5, 8, 10, and 22. The null hypothesis is rejected for item 5 (*Physical therapy education should prepare therapists to address the spiritual needs of patients*), item 8 (*Every physical therapy education program)*, item10 (*Spirituality concepts should NOT be included in the Physical Therapy education curriculum*), and item 20 (*All topics in spirituality should be taught only in professional development courses offered after the completion of a PT program*) based on gender and professional status only, but retained for all other items. A pattern of response was found for items 5, 8, and 22 were female faculty were the smallest group, female faculty/administrators were the second largest group, and male faculty/administrator/clinicians were the largest group. However, in

item 10 the respondents answered differently. The male faculty/administrators were the smallest group, male faculty were the second largest group, and female faculty/administrator/clinicians were the highest group.

Chapter V

DISCUSSIONS AND CONCLUSIONS

The profession of physical therapy continues to evolve based on societal needs in order to provide effective rehabilitative services. Patient compliance, participation, and motivation all play a role in how effective an intervention plan will be. It has been determined that the general population when faced with calamity tends to depend on a supernatural entity (Cohen et al., 2000; Knight, 1996; Mayer, 1992). Society is made up of individuals who are spiritual in nature and want spirituality to be included in the delivery of their healthcare (Mayer, 1992). Many medical and nursing schools have now included spirituality in their curriculum to better train their graduates to meet the spiritual demands of society (Fayer, K., Holderby, M., & Geiske, K., 2001; Groer et al., 1996; Knight, 1996; Leach, 1999; Schaub & Schaub, 1999; Sloan et al., 1999; Taylor et al., 2000).

The physical therapy profession functions as part of a healthcare team that includes but is not limited to physicians and nurses. It is of great importance to maintain the patient's continuity of care between various healthcare providers. If patients are receiving healthcare that incorporates a form of spirituality from the physicians and nurses, then it should be continued through other aspects of their healthcare, including their intervention plan (Highfield & Osterhues, 2003).

Previous research suggested few physical therapy programs trained their graduates to incorporate spirituality in the practice of physical therapy (Highfield & Osterhues, 2003; Le Postollec, 2000). Neither the Commission on Accreditation of Physical Therapy Education nor the American Physical Therapy Association requires programs to integrate spirituality topics in physical therapy education (www.apta.org). There is limited research available on the importance of integrating spirituality in the physical therapy curriculum as well as within the profession (Highfield &Osterhues, 2003). No studies were found by the researcher that has analyzed the perceptions of physical therapy faculty members in the inclusion of spirituality topics in the curriculum and profession. It is the purpose of this study to examine the perception of physical therapy faculty members on the inclusion of spirituality in physical therapy education. The following research and curriculum questions as outlined below were analyzed.

Research Question 1: *To what extent is spirituality currently included in physical therapy curriculum?*

Research Question 2: *What beliefs do physical therapists have about inclusion of different aspects of spirituality based on the physical therapy curriculum questions?*

Curriculum Question 1: *Do physical therapy faculty perceive inclusion of spirituality concepts in the physical therapy curriculum as an important issue?*

Curriculum Question 2: *How should spirituality concepts be included in the existing or a revised physical therapy curriculum?*

Curriculum Question 3: *What core spirituality topics should be included in a PT program?*

Curriculum Question 4: *Who should teach spirituality concepts in a physical therapy curriculum?*

Curriculum Question 5: *Which teaching strategies should be used for teaching spirituality?*

Curriculum Question 6: *When should spirituality concepts be included in the PT curriculum?*

Research Question 3: *What differences exist in responses based on ethnicity, age, professional status, and gender?*

Review of Related Literature

Involvement of Spirituality in a Physician's Practice and Education

Physicians are at times faced with incidences that involve unexplained improvements or even cures that occur with their patients' health. Patients in turn view these unexplained recoveries or healing as miracles. Physicians are then placed in situations that involve discussions with their patients around spiritual perspectives and beliefs. Some patients outwardly display spirituality whenever their health is in jeopardy. Some medical schools have identified this increasing societal demand for the inclusion of spirituality in healthcare practice (Koenig, et al., 1999; Leach, 1999). Some of the medical schools have responded by including various topics of spirituality that incorporate spiritual assessment as well as therapeutic spiritual intervention training. These spirituality topics or courses have been developed by the use of evidence-based research since spirituality has been correlated with a patient's health status (Anadarajah, 2001, Cohen, et al., 2000, Koenig, Idler et al., 1999).

Nursing has adopted a similar educational format in that their curriculum also educates their students to perform spiritual assessments to better assist physicians. The spiritual assessments can reveal spiritual distress, desire to have therapeutic spiritual intervention, or other spiritual needs of the patient (Mayer, 1992).

Spirituality and Allied Health Professions

Some of the allied health professions have begun discussions on the inclusion of spirituality in their practice. The occupational therapy profession has taken the lead in the allied health professions in performing research on the inclusion of spirituality in their practice. However, the American Occupational Therapy Association has not yet recognized spirituality as an integral part of occupational therapy practice and is requiring more evidence on its effectiveness. Taylor, et al., (2000) reported that spirituality was important to patients who received occupational therapy. The patients identified what form of spirituality intervention they preferred along with how they would like to be approached on the topic.

Le Postollec (2000) postulates that the physical therapy profession should take heed and address societal needs, such as spirituality, which have been documented by research studies. He also mentions that the profession should be aware that there are several research links to the improvement of one's health status and spirituality. It can be deduced that if the profession embraces its responsibility to meet societal needs, including the spiritual needs of patients, the profession must equip physical therapy graduates with the necessary skill sets.

The athletic training profession can be considered as part of the allied health profession since trainers are responsible for providing interventions to injured players.

Their intervention plans are similar to sports physical therapy. Udermann (2000) reported that this profession has not yet identified spirituality as a need within their domain. The athletic trainers do not recognize a correlation between restoration of health and spirituality. Consequently, spirituality concepts are not discussed within their curriculum.

Spirituality and Age

In a study by Cavendish et al. (2001), the researcher found evidence that the young adult population between ages 18-35 may want spirituality included in their healthcare. This dispelled the argument that it is only the dying and elderly populations that desire spirituality interventions. The young adult population tends to view spirituality as a means to find true meaning to their lives. When faced with tragedy or a life-changing experience, the youth tend to become more spiritual (Webber, 2002).

The adult and elderly populations share the perception of young adults and the elderly that spirituality should be included in their healthcare. It can be summarized that the young adults, adults, middle-aged adults, and the elderly population all are in favor of the use of spirituality interventions (Cavendish et al., 2001; Oman & Reed, 1998; Webber, 2002).

Spirituality and Gender

Women tend to be more spiritual in nature than men during their young adult to adult stage of life (Lindholm, 2003). However, as the two genders grow older, differences in how women and men view and incorporate spirituality within their lives disappear. Both genders seek spiritual guidance during a crisis, especially when it affects

their health (Ferraro & Kelley-Moore, 2000). Both genders tend to believe that there is a supernatural being that can assist in their road to recovery or heal them from their illness.

Spirituality and Ethnicity

Perceptions of the importance of spirituality may vary across ethnic groups. As spirituality can be shaped by culture, healthcare curricula should help increase cultural competency within the various professions. Musgrave, et al., (2002) identify Hispanic females as being very spiritual. This population believes that a person's mind, body, and spirit are as one. They believe that a person's health and wellness includes their spiritual being. Musgrave et al. (2002) also indicated that ethnic women of color generally integrate their healthcare and spirituality.

Understanding the importance of the inclusion of spirituality in healthcare for the various ethnicities can aid in decreasing health disparities while increasing a person's health status (Musgrave et al., 2002). Having the knowledge and skill set to deal with spiritual issues within the context of ethnic differences may increase the patient's motivation, participation, and physical outcome.

Within the physical therapy profession, it is imperative that a patient is compliant with their intervention plan and that the physical therapist is culturally compliant. Spirituality and ethnicity are both correlated with culture (Cole, 2002), and if a therapist does not recognize that spirituality is important to their patient, the compliance level may decrease. This can cause reduced rapport between patient and physical therapist, thus decreasing trust in the physical therapist (Kraemer, 2001). The end result may be a decrease in functional outcomes or an increase in treatment time to achieve functional outcomes.

It now becomes clearer that in the attempt to teach cultural competence in a physical therapy curriculum, spirituality topics should be addressed within the cultural milieu.

Spirituality in Physical Therapy Curriculum

Currently, physical therapy programs address treating the patient's body and mind. The spirit of the patient is not really addressed. Graduates are taught how to perform techniques that would improve the person's physical abilities. They are also instructed on how to provide and improve the continuity of care from one discipline to the next when dealing with the body and mind (Highfield & Osterhues, 2003). However, an inherent problem occurs when the continuity of care, in terms of spirituality, is interrupted. Patients' functional outcomes decline, and their length of time with their health or physical problems is lengthened. The continuity of care is broken when physicians and nurses integrate spirituality interventions with the patients and these are not passed on to the next discipline. The physical therapist should be able to continue the spirituality intervention if it is within their scope of practice. If it is not, the therapist should know to which discipline they might refer patients.

It becomes an alarming problem if physical therapy graduates do not know how to address the spirituality needs of the patient. Very little literature and educational programs provide them with adequate information to address these needs (Highfield & Osterhues, 2003). It cannot be assumed that students are able to address these spiritual needs if they have not been addressed in their physical therapy curriculum. It is understood that some patients may or may not have any spiritual needs, but students

should be equipped to perform a spirituality assessment to determine the need and then provide appropriate intervention or referral.

Method

Participants

Every second accredited physical therapy program was chosen from an alphabetic list of 202 accredited physical therapy programs in the United States of America that was posted on the American Physical Therapy Association web site (www.apta.org, 2003). Five physical therapy faculty members were then systematically chosen from each of the selected list of 101 accredited physical therapy programs giving a total of 505 physical therapy faculty members.

Data Collection Protocol

Each physical therapy faculty member received an electronic mail (e-mail) outlining the objectives of the study, amount of time required to take the survey, explanation of consent and confidentiality, and the survey instrument. The participants were instructed to fill out the survey instrument on-line and submit it back to the researcher electronically.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Frequencies were taken on the demographics and items of the survey instrument to determine the number and percentage of respondents that represent each demographic. Finally, a two-way analysis of variance was utilized on the data to determine if there were

any statistical differences between the given groups and if there were any interaction effects on the independent variables age, gender and professional status.

Results and Discussion

The greatest number of respondents were females (77%) and those between the ages of 41 and 50 (42.6%). The professional status of the majority of the respondents was faculty members (58.4%) followed by faculty/clinician (19.3%), faculty/administration (15.7%), and faculty/administration/clinician (5.4%). Of those returning surveys, 1.2% indicated they were retired. Only 0.6% of the respondents were Hispanic/Latino, and 0.6% were Asian/American. The remaining 97.0% of the respondents were Caucasian/White.

Research Question 1

Research Question 1 asked: *To what extent is spirituality currently included in physical therapy curriculum?*

Almost half (49.0%) of the respondents reported that their physical therapy curriculum does cover topics of spirituality, while 39.9% of the respondents reported that their curriculum does not cover topics of spirituality and 11% of the respondents reported a neutral response. Results from this study indicate that almost half of the physical therapy programs that were represented in this study indicated that they include spirituality topics within their curriculum even though it is not a required topic by the accrediting organization. This is different from the reported research which suggests only a few physical therapy programs integrate spirituality topics in their curriculum.

Currently, there is a growing number of physical therapy programs that are including spirituality in the curriculum.

Of those respondents who reported their curriculum included topics of spirituality, 40.9% indicated that their physical therapy curriculum included issues related to spirituality topics in one or more classes. Only 17.1% of the respondents indicated that their physical therapy curriculum had at least one course focused on spirituality.

The data indicated that the inclusion of spirituality topics across one or more classes is the most common curriculum approach that is currently used. The data also showed that less than one fifth of the physical therapy faculty members within this study reported that their program in physical therapy has at least one course focused on spirituality.

Research Question 2

Research Question 2 asked: *What beliefs do physical therapists have about inclusion of different aspects of spirituality based on the physical therapy curriculum questions?*

Curriculum Question 1*: Do physical therapy faculty perceive inclusion of spirituality concepts in the physical therapy curriculum as an important issue?*

Descriptive analysis was performed on items 5 to 11 of the survey instrument to answer this curriculum question. The results revealed that a little more than half (55.0%) of the respondents indicated that spiritual concepts should be included in the physical therapy curriculum. More than half of the respondents (65.7%) believed that having knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist. When asked if a good physical therapy practice should

address the spiritual needs of a patient, 45.1% agreed, while 28.4% disagreed with the statement. It is concluded that physical therapists in academia believe that having a knowledge base of spirituality beliefs and practices is important in the practicing of physical therapy.

More than half of the respondents (56.0%) indicated that they believed spirituality concepts should be included in physical therapy education and that every physical therapy program should include it in their curriculum. A small percentage (17.8%) of the respondents thought that it was not necessary to include spirituality concepts into the curriculum. It can be concluded that the majority of the respondents agree that spirituality topics/concepts should be addressed in a physical therapy program.

The results provide evidence that physical therapy educators believe that graduates should be equipped to integrate their spiritual knowledge within the practice of physical therapy. However, the results of the study do not suggest that the inclusion of spirituality in a physical therapy practice makes a good practice, but it suggests that it will enhance the quality of care within that physical therapy practice.

Curriculum Question 2*: How should spirituality concepts be included in the existing or a revised physical therapy curriculum?*

The respondents (45.6%) indicated that spirituality should be included as a topic in more than one existing physical therapy course. However, there was also a neutral response from almost a third of the respondents (32.1%). A majority of respondents (65.9%) were in agreement that a course should not be created for topics in spirituality.

It can be induced that respondents prefer to integrate topics of spirituality within existing physical therapy courses. Respondents revealed that these topics should be

included in more than one existing course and not just one existing course. The respondents did not favor the creation of a new course for the purpose of teaching spirituality. This could be due to the amount of required courses that are already allotted for a physical therapy program. The addition of new courses would increase the credit hours of the physical therapy program, thereby possibly changing the number of semesters that are required to complete the physical therapy program.

Curriculum Question 3*: What core spirituality concepts should be included in a PT program?*

The respondents reported almost equally that topics on one's spirituality and how it influences his or her health should be included in a physical therapy education (74.9%), disease and disability and how they can affect a patient's spirituality (72.4%); holistic treatment that includes mind, body, and spirit (70.5%); and spirituality as a fundamental aspect of being human (67.5%) should be included in a physical therapy education. The respondents (43.5%) were NOT in favor of including topics of gathering information about a patient should be a part of a physical therapy assessment.

Curriculum Question 4*: Who should teach spirituality concepts in a physical therapy curriculum?*

The respondents (54.8%) reported that a basic level of experience is needed before faculty members can effectively teach spirituality concepts, while only 24.1% felt that experience is important, but not necessary, for preparing faculty members to teach spirituality concepts. A small number of respondents (13.9%) did not think it was necessary to have a high level of experience to teach spirituality concepts. It can be

concluded that faculty members should have a basic understanding of teaching spirituality before spirituality topics are integrated into courses.

When asked if spiritual leaders (for example, a pastor, priest, rabbi, or imam) should be involved in teaching spirituality concepts in the physical therapy curriculum, 49.4% of the respondents felt that physical therapy faculty should lead out in teaching spirituality concepts in the physical therapy program and involve spiritual leaders in the process. They did not think that spiritual leaders should be the only persons teaching spirituality concepts in the physical therapy program. Just over one-fourth of the respondents (26.5%) reported that spiritual leaders do not need to be involved in teaching spirituality concepts in the physical therapy program. It can be concluded that physical therapists in an academic setting prefer physical therapy faculty to be the primary instructor on teaching spiritual topics but they should consult spiritual leaders on the content of those topics.

When respondents were asked, should full-time/part-time faculty influence which physical therapy faculty members should teach spirituality concepts? a high percentage (79.5%) of the respondents reported that all faculty members, whether full-time, part-time, or adjunct, should be allowed to teach spirituality concepts.

In conclusion, physical therapists in academia believe that all faculty members including full-time, part-time, or adjuncts should be allowed to teach spirituality concepts. These faculty members should be the primary instructor but should seek assistance from spiritual leaders. Only a few faculty members need to be assigned to teach these concepts, but they should have at least a basic level of experience in teaching spirituality concepts.

Curriculum Question 5*: What teaching strategies should be used for teaching spirituality?*

The respondents (95.4%) reported that they perceive collaborative discussions as a very effective approach to teaching spirituality concepts. The effectiveness of the rest of the strategies was ranked as followed: case studies (86.3%), presentations by students (78.3%), simulations (71.1%), role play (70.4%), clinical education (64.9%), classroom lecture (46.7%) and on-line pedagogy (32.4%).

Curriculum Question 6*: When should concepts be included in the physical therapy curriculum?*

The respondents (55.5%) reported that all topics should be taught throughout a physical therapy program. They strongly disagreed/disagreed that topics of spirituality should not only be taught during the first year of the MSPT program (58.6%), only during the second year of the MSPT program (57.2%), only in a DPT program (80.2%), or only in professional development courses offered after the completion of a physical therapy program (71.7%).

Research Question 3

Research Question 3 asked: *What differences exist in responses based on ethnicity, age, professional status and gender?*

The answer to Research Question 3 was found by testing the following null hypotheses. Each hypothesis was tested using two-way analysis of variance.

Null hypothesis 1 stated: There is no difference among physical therapy educators in the perception of the inclusion of spirituality based on age. Based on the results of the two-way ANOVA, hypothesis 1 was retained for all items except for item

14 (*Including topics in spirituality will require the creation of only one new course*) and item 27 (*Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum).* Both items showed significance based on age by gender. The results showed the age group 51-90 was more favorable to items 14 and 27. The results of items 14 and 27 are interpreted with caution because significance was not found when the two items were analyzed with age by professional status. There was no difference found on how the respondents answered the remaining items on the survey instrument based on age.

Null hypothesis 2 stated: There is no difference among physical therapy educators in the perception of the inclusion of spirituality based on gender. Based on the results of the two-way ANOVA, hypothesis 2 was retained for all items on the survey instrument with the exception of item 29 (*Should full-time/part-time status of the faculty members teach spirituality concepts?*). Females were found to be more favorable than males in response to item 29.

Null hypothesis 3 stated: There is no difference among physical therapy educators in the perception of inclusion of spirituality based on ethnicity. This null hypothesis was not tested since there was inadequate variability in the respondents' ethnicity.

Null hypothesis 4 stated: There is no difference among physical therapy educators in the perception of the inclusion of spirituality based on professional status. Based on the results of the two-way ANOVA, hypothesis 4 was rejected for the following items; item 6 (*Physical therapists possess the knowledge and skills to assist clients in spiritual matters*); item 8 (*Every physical therapy education program should include spirituality*

concepts in its curriculum), item 11 (*Knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist*), item 13 (*Spirituality should be included as a topic in more than one existing physical therapy course*), item 23 (*Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy* education), item 24 (*Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body, should be included in a physical therapy education*), item 25 (*Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education*), item 27 (*Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT* curriculum),and item 28 (*How many PT faculty members should be involved in teaching spirituality concepts?*). The results showed that for every case, with the exception of items 25 and 27, the faculty/administrator/clinicians were much more favorable in their response to the items (6, 8, 13, 23, 24, and 28) when analyzed with independent variables gender by professional status. The faculty/administrator/clinicians were also much more favorable in their response to items 11 and 23 when analyzed with independent variables age by professional status. The hypothesis was retained for all other remaining items. The results of items 25 and 27 indicated that the faculty/administrators were much more favorable in response when analyzed with the independent variables gender by professional status.

Lastly, for null hypothesis 5, there is an interaction in the perceptions of physical therapy educators between ethnicity, gender, age groups, and professional status. It was rejected for the following items: item 5 (*Physical therapy education should prepare therapists to address the spiritual needs of patients),* item *8* (*Every physical therapy*

education program should include spirituality concepts in its curriculum), item 10 (*Spirituality concepts should not be included in physical therapy education curriculum)*, and 22 (*Topics on one's spirituality and how it influences his or her health should be included in a physical therapy assessment*) when an interaction was displayed between the independent variables gender and professional status. The results indicated that male faculty/administrator/clinicians were much more favorable in their response to the items (5, 8, and 22) and female faculty/administrator/clinicians were much more favorable in their response to item 10. The hypothesis was retained for all other items of the survey instrument.

Conclusions

Just under half of the physical therapy programs represented by respondents to this study have topics of spirituality integrated into their curriculum. Physical therapy faculty members deem it necessary for spirituality to be taught within the curriculum to better address society's spiritual needs within a healthcare environment.

The topics of spirituality that would be included in physical therapy education should be intertwined with existing courses instead of creating new ones. These topics should include topics of disease and disability, and how they can affect a patient's spirituality, and topics in holistic treatment and how spirituality is a fundamental aspect of being a human being. Full-time, part-time, or adjunct faculty should teach these courses with assistance from spiritual leaders. Respondents believed the best teaching strategies to use to develop spiritual awareness in students are collaboration, discussions, case studies, student presentations, simulations, role-playing, and clinical education.

In the current curriculum guidelines, students are required to learn how to address the issue of death and dying (APTA, 2005). During these times, many patients reach out for spiritual healing, comfort, and/or guidance. Physical therapy students should be able to address any spiritual needs, directly or indirectly. Physical therapy students will not be expected to function as clergymen, but they should be skilled in knowing when to refer and when to incorporate it as part of the intervention plan. It is possible that through the integration of spirituality in the physical therapy curriculum, students will be better prepared to handle or refer patients with spiritual needs.

It can be hypothesized that by the inclusion of spirituality in a physical therapy intervention, patients may have an increased potential of recovering from their injury a little faster. This could decrease the length of stay in the hospital or rehabilitation setting if the therapist addresses the spiritual needs of the patient. The same applies to skilled nursing facilities as well as outpatient clinics. This reduction in the amount of physical therapy treatments or length of stay in an inpatient facility would ultimately have a positive financial impact for those facilities and insurance companies. This positive effect will only occur if physical therapy graduates are equipped to handle patients that desire inclusion of spirituality in their healthcare.

The continuity of care for the patient should improve with more members of the healthcare team incorporating spirituality in the intervention plan. Some medical professions, physicians, and nurses are already utilizing spirituality methods. It only makes sense to continue these throughout the patient's entire intervention plan as outlined by the healthcare team.

The literature reports that females in general tend to be more spiritual than men (Ferraro & Kelley-Moore, 2000). In my study on all items related to spirituality, male and female agreed that spirituality should be taught in the physical therapy curriculum. The only difference indicated by the results was that females (74.0%) were more likely to believe that all faculty should be considered for teaching spirituality (item 29).

Ethnicity was not analyzed in the study due to low participation of different ethnic groups. Therefore, it was not possible to determine if ethnicity influenced the respondents' responses on the survey instrument.

It is concluded that the professional status of the respondents had an influence on how they responded to some of the statements on the survey instrument. Faculty who held the professional status of faculty/administrator/clinician had a more favorable response to the inclusion of spirituality in physical therapy education, including spirituality in several existing physical therapy courses, what core spirituality concepts to include in a physical therapy curriculum, and how many physical therapy faculty should teach spirituality concepts. This could largely be due to the amount of involvement that each faculty member has with implementing curricula content and developing/revising the curriculum. It is also postulated that this faculty group still actively practices physical therapy and recognizes that patients have spiritual needs. The other items did not demonstrate any other significant difference. It can be concluded that physical therapy faculty members represented in this study believe that it is important and necessary to include spirituality in physical therapy education.

Possible limitations of the study include low ethnic group participation. This may have been as a result of the low pool of ethnic faculty members. Another limitation to

consider is that the respondents may have misinterpreted questions on the survey instrument. There was no independent verification of the returned responses or any way to regulate the factor of misinterpretation of questions on the survey instrument.

Recommendations

More research should be conducted to determine if there is a correlation between the inclusion of spirituality in physical therapy intervention and a reduction in physical therapy visits. The research should also determine if overall inpatient and outpatient facility expenses decrease as a result of including spirituality in physical therapy. Further research should investigate physical therapy graduates who have received spirituality training in their physical therapy education and how it has affected their intervention outcomes, rapport with patients, and patient compliance.

It is recommended that CAPTE give study to including objectives that address topics of spirituality objectives to the Normative Model of Physical Therapist Professional Education as well as the Guide to Physical Therapist Practice to require physical therapy programs to include topics of spirituality within their curriculum. This would give physical therapy programs a guide for integrating topics of spirituality within their curricula. All programs will then produce a physical therapy graduate who is capable of addressing the spiritual needs of patients.

It is also recommended for the American Physical Therapy Association adopt a principle of addressing the spiritual needs of patients in the Standards of Practice for Physical Therapy for physical therapists. This principle should also correlate with the Code of Ethics for Physical Therapists.

Lastly, it is recommended to directors of physical therapy programs to equip their faculty members with a basic knowledge of spirituality beliefs and practices to allow them to gain the proper experience that is needed to teach topics of spirituality. This will allow graduates to become equipped to handle not only discussions of spirituality that may be brought up by patients, but also be equipped to provide therapeutic spiritual interventions along with the assessment of the patient.

APPENDIX

PERCEPTIONS TOWARD INCLUSION OF SPIRITUALITY IN PHYSICAL THERAPY CURRICULUM SURVEY

For the purpose of this survey Spirituality is defined as the individuals' view of relating to something greater than self. It refers to anything that gives meaning, wholeness, and direction of life.

The following statements listed below are about spirituality and how you feel about it or react to it. Some items are specific to spirituality in the physical therapy curriculum. Use the numbers below to indicate how much you agree or disagree with each statement.

1= Strongly Disagree 2=Disagree 3= Neutral 4=Agree
5= Strongly Agree

Questions

Current Coverage of Spirituality in the PT Curriculum	1	2	3	4	5
1. The physical therapy education program I currently work in does *NOT* cover the topic of spirituality.	○	○	○	○	○
2. The physical therapy education program I currently work in covers issues related to spirituality as a topic in *one or more* required course.	○	○	○	○	○
3. The physical therapy education program I currently work in includes at least one course focused on the topic of spirituality.	○	○	○	○	○
4. There is no need to include spirituality concepts in the physical therapy education curriculum.	○	○	○	○	○
Importance of Including Spiritual Concepts	1	2	3	4	5
5. Physical therapy education should prepare therapists to address the spiritual needs of patients.	○	○	○	○	○
6. Physical therapists possess the knowledge and skills to assist clients in spiritual matters.	○	○	○	○	○
7. My life experiences prepared me to address the spiritual needs of patients.	○	○	○	○	○
8. Every physical therapy education program should include spirituality concepts in its curriculum.	○	○	○	○	○
9. Good physical therapy practice should address the spiritual needs of patients.	○	○	○	○	○
10. Spirituality concepts should *NOT* be included in the Physical Therapy education curriculum.	○	○	○	○	○
11. Knowledge of spirituality beliefs and practices is essential when working with patients as a physical therapist.	○	○	○	○	○
How to fit Spirituality in the Existing Curriculum	1	2	3	4	5
12. Spirituality should be included as a topic in *only one* existing physical therapy course.	○	○	○	○	○

13. Spirituality should be included as a topic in *more than one* existing physical therapy course.	☐	☐	☐	☐	☐

How to fit Spirituality in a Revised Curriculum

14. Including topics in spirituality will require the creation of *only one* new course.	☐	☐	☐	☐	☐
15. Including topics in spirituality will require the creation of *more than one* new course.	☐	☐	☐	☐	☐

When should spirituality concepts be included in the PT curriculum?	1	2	3	4	5
16. All topics in spirituality should be taught during the first year of the MSPT program.	☐	☐	☐	☐	☐
17. All topics in spirituality should be taught during the second year of the MSPT program.	☐	☐	☐	☐	☐
18. All topics in spirituality should be taught only in a DPT program.	☐	☐	☐	☐	☐
19. All topics in spirituality should be taught throughout a PT program.	☐	☐	☐	☐	☐
20. All topics in spirituality should be taught only in professional development courses offered after the completion of a PT program.	☐	☐	☐	☐	☐

What core spirituality concepts should be included in a PT curriculum?	1	2	3	4	5
21. Gathering spiritual information about a patient should be a part of a physical therapy assessment.	☐	☐	☐	☐	☐
22. Topics on one's spirituality and how it influences his or her health should be included in a physical therapy education.	☐	☐	☐	☐	☐
23. Topics on disease and disability and how it can affect a patient's spirituality should be included in physical therapy education	☐	☐	☐	☐	☐
24. Topics in holistic treatment that include the mind, body, and spirit, and not just the mind and body should be included in a physical therapy education.	☐	☐	☐	☐	☐
25. Topics in spirituality as a fundamental aspect of being human should be included in a physical therapy education.	☐	☐	☐	☐	☐

Who should teach spirituality concepts?

26. Many persons have training or experience in teaching spirituality concepts. How important is experience in deciding who teaches spirituality concepts?

☐ 1 Only highly experienced persons should teach spirituality concepts

☐ 2 A basic level of experience is needed before faculty members can effectively teach spirituality concepts

☐ 3 Experience is important, but not necessary for preparing faculty members to teach spirituality concepts

☐ 4 All faculty members should teach spirituality concepts even if they have no experience

27. Should spiritual leaders (for example, a pastor, priest, rabbi, or imam) be involved in teaching spirituality concepts in the PT curriculum?

☐ 1 Spiritual leaders should be the ONLY persons teaching spirituality concepts in the PT program

☐ 2 Spiritual leaders should lead out in teaching spirituality concepts in the PT program and involve PT faculty in the process

☐ 3 PT faculty should lead out in teaching spirituality concepts in the PT program and involve spiritual leaders in the process

☐ 4 Spiritual leaders do not need to be involved in teaching spirituality concepts in the PT program

28. How many PT faculty members should be involved in teaching spirituality concepts?

☐ 1 Primarily one faculty member should teach spirituality concepts

☐ 2 A few faculty members should teach spirituality concepts

☐ 3 Most faculty members should teach spirituality concepts

☐ 4 All faculty members should teach spirituality concepts

29. Should full-time/part-time status of the faculty influence which PT faculty members teach spirituality concepts?

☐ 1 Only full-time, tenure track faculty members should be allowed to teach spirituality concepts

☐ 2 Only full-time faculty members (tenure track and no-tenure track) should be allowed to teach spirituality concepts

☐ 3 All faculty members, whether full-time, part-time or adjunct should be allowed to teach spirituality concepts

What Teaching Strategies Should be Used for Teaching Spirituality?

Please use the following scale to indicate how effective you consider each of the following teaching strategies for presenting spirituality concepts in a physical therapy education program.

0=Not familiar with this teaching strategy
1= Very Ineffective
2= Ineffective
3= Neutral Response
4= Effective
5= Very Effective

	0	1	2	3	4	5
30. Classroom lecture	☐	☐	☐	☐	☐	☐
31. Collaborative discussions	☐	☐	☐	☐	☐	☐

32. Presentations by students	☐	☐	☐	☐	☐	☐
33. Simulations	☐	☐	☐	☐	☐	☐
34. Role play	☐	☐	☐	☐	☐	☐
35. Case studies	☐	☐	☐	☐	☐	☐
36. On-line pedagogy	☐	☐	☐	☐	☐	☐
37. Clinical education	☐	☐	☐	☐	☐	☐

Demographics

Please check at on the appropriate lines below.

Gender: ☐ Male ☐ Female

Age: ☐ 20-30 y/o ☐ 41-50y/o ☐ 61-70y/o ☐ 31-40 y/o ☐ 51-60 y/o ☐ 71-90 y/o

Ethnicity:

☐ Hispanic or Latino

☐ African-American/Black

☐ Caucasian/White,

☐ Asian American

☐ American Indian

☐ Pacific Islander

☐ Other

Professional Status:

☐ Faculty ☐ Administrator ☐ Clinician

☐ Faculty/Administrator ☐ Faculty/Clinician ☐ Faculty/Administrator/Clinician

☐ Administrator/Clinician ☐ Retired

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