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entitled

University Counseling Center Practices Regarding Guidance on the
Health Effects of Religious/Spiritual Involvement

by

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Submitted as partial fulfillment of the requirements for the
Doctor of Philosophy degree in Health Education

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An Abstract of
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This study assessed the perceptions and practices of mental health professionals at university counseling centers regarding their provision of guidance on the health effects of religious/spiritual involvement. The membership of the Association for University and College Counseling Center Directors was used to identify a national cross-section of university counseling centers. One licensed psychologist, professional counselor, or social worker from each counseling center was selected to survey \( N = 623 \). A valid and reliable survey instrument was developed, and a three-wave postal mailing procedure was used to maximize the return rate.

A total of 306 university counseling professionals (58%) responded. They agreed that religious/spiritual involvement has a positive influence on the health and well-being of college students (77%), but were unsure or disagreed (66%) that university counseling
professionals should advise clients as such. Approximately one-third (31%) had never seriously thought about doing so. The respondents were predominantly (52%) “unsure” that guidance on the health effects of religious/spiritual involvement would result in lower health risks; however, nearly half (48%) indicated that such guidance would promote recovery among their clients. Although slightly more than half (54%) of the responding university counseling professionals discussed the salutary influence of religiosity/spirituality with the majority of their clients (e.g., provides a means of coping with stress, offers social support, contributes to a sense of well-being), relatively few (21%) discussed the physical health effects of religious/spiritual involvement. The most frequently endorsed perceived barrier was that discussions of religiosity/spirituality and health “should occur only with clients who indicate that religion/spirituality is important to them” (67%). A plurality (35%) of the respondents had received no formal training in this area. Respondents who had received information/training from at least one source, as well as those who indicated higher levels of personal religiosity/spirituality, were significantly more likely to be in the action or maintenance stage and to report higher efficacy expectations and more positive outcome expectations regarding the provision of guidance on the health effects of religious/spiritual involvement. Implications and recommendations for clinical training, university counseling centers, and future research are discussed.
Dedication

This dissertation is dedicated to my wife Wendy. I simply could not have completed this process without you. Your affection, companionship, devotion, sensitivity, and tolerance have meant more to me than you probably know. I am truly thankful for you, and I look forward to spending the rest of our lives together.

This dissertation is also dedicated to my parents, Robert Mrdjenovich and Ruth Ann Mrdjenovich. You have modeled the value of education through your own pursuits. Thank you for teaching me to have empathy and compassion for others, and an optimistic but conscientious attitude. I cherish our relationship and wish continued health, personal peace, and longevity for both of you.

Finally, to my siblings, nieces, nephews, extended family, in-laws, and dear friends: I regret that I was not able to be with you more during my time as a graduate student. Perhaps now we can enjoy each other’s company again.
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I thank Dr. Joseph Dake for his wise counsel, good humor, and practical style as a dissertation advisor. He managed to provide just the right amount of breathing room when I needed it, all the while trusting my abilities and expediting the process.

I had the distinction of being among Dr. James Price’s last group of doctoral students. Learning from Dr. Price was truly a pleasure—he is a natural teacher and a genuine mentor. Here’s to an enjoyable and well deserved semi-retirement!

I worked closely with Dr. Timothy Jordan since my first days in Toledo. A productive graduate assistantship, a stimulating health behavior course, and our many conversations about life outside of academia have prepared me well for future endeavors.

I thank Dr. Jeanne Brockmyer, Distinguished University Professor, for serving as my advisor in Psychology. Dr. Brockmyer has been gracious with her time and expertise. Her involvement was especially meaningful given my professional interests and identity.

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Chapter One

Introduction

The purpose of this chapter is to establish a foundation for the present study by introducing the research problem. Information is provided concerning the religious/spiritual involvement of persons in the United States. A brief overview of relationships between religion/spirituality and health is presented. The perceptions of physicians and clinical psychologists are considered with respect to religion/spirituality and clinical practice. A number of perceived barriers to addressing religious/spiritual issues in clinical practice are described. Patient/client perspectives are also taken into account; specifically, the degree to which patients and clients perceive that their religious/spiritual needs are being met by the health care arena is discussed. Limitations of previous research are identified, and the significance of studies pertaining to religion/spirituality and health in the context of services offered at university counseling centers is addressed. The 5 A’s framework is adapted and introduced as a potentially useful strategy for counseling clients on the health effects of religious/spiritual involvement. This is followed by a statement of purpose, as well as a list of variables, research questions, and hypotheses. Numerous conceptual and operational definitions of religion and spirituality are delineated in conclusion. Finally, the delimitations and limitations of this study are identified.

Religion/Spirituality in the United States

Religion and spirituality play a significant role in the lives of human beings. A
recent national survey showed that 93% of Americans profess a belief in God(s) or a Higher Power; 89% report some affiliation with religion or acknowledge a need for spiritual growth; 83% indicate that religion/spirituality is an “important part” of their life; 75% pray at least once a week; 62% are members of a church, mosque, or synagogue; and 55% attend religious services at least once a month (Gallup Organization, 2007). In fact, the religious/spiritual interest and involvement of people in the United States was greater during the 1990s than it was at any other time in the previous two decades (Princeton Religion Research Center, 1999). Moreover, religious/spiritual involvement has tangible benefits for mental and physical health. With nearly 200 million church, mosque, and synagogue attendees in the United States, such benefits could have a significant public health impact (Chatters, 2000; Koenig, 2008b).

Religion/Spirituality and Mental Health

In a systematic review of more than 850 studies, Koenig and Larson (2001) concluded that the relationship between religious/spiritual factors and mental health is “overwhelmingly positive.” This conclusion is consistent with the findings from an earlier review of nearly 150 studies that were published in the *American Journal of Psychiatry* or *Archives of General Psychiatry* between 1978 and 1989, as well the results from larger and more recent meta-analyses (Larson et al., 1992; Hackney & Sanders, 2003). Indeed, religious/spiritual involvement (i.e., religious coping, the provision and receipt of social support in a religious/spiritual context; attitudes of compassion, forgiveness, gratitude, hope, and optimism) has been associated with a variety of positive outcomes for mental health including greater subjective well-being and life satisfaction, as well as lower rates of stress, anxiety, depression, substance abuse, and suicide (Bergin,
Religion/Spirituality and Physical Health

In a review of over 1,200 studies, Koenig, McCullough, and Larson (2001) concluded that religious/spiritual factors such as attendance at religious services and prayer or meditation contribute to better physical health including (a) lower rates of mortality, (b) protection against disease and disability, and (c) enhanced recovery from physical illness. People who involve themselves in religious/spiritual activities tend to have better physical health throughout the lifespan and experience slower rates of decline in physical health over time (McCullough & Laurenceau, 2005). Correspondingly, persons who are religiously/spiritually involved tend to require and consume fewer health care services (Koenig, George, Titus, & Meador, 2004; Koenig & Larson, 1998). Such findings are not exclusive to any single group or society. In fact, associations between religiosity/spirituality and physical health have been established across populations in at least 18 countries around the world (Saxena, 2006). These associations are not readily explained by other health-related factors, including a host of demographic variables (Koenig et al., 1999; Seybold & Hill, 2001).

Research Developments in the area of Religion/Spirituality and Health

A number of recent developments reflect a growing interest in religion/spirituality and health on the part of researchers from a variety of disciplines including behavioral medicine, epidemiology, gerontology, psychology, public health, and sociology. The idea that religiosity/spirituality can promote mental and physical health has led to a
“proliferation” of research in this area (Sherman & Plante, 2001, p. 381). In fact, more research on religion/spirituality and health has been published over the past seven to eight years than was published in the nearly 200 years prior (Koenig, 2008b). The National Institute for Health Care Research (NIHR) has funded several studies to examine associations between religious/spiritual factors and health outcomes (Plante & Sherman, 2001b). The Office of Behavioral and Social Science Research at the National Institutes of Health (NIH) has organized a panel of medical and behavioral scientists to monitor the relevant research evidence (Larson, Swyers, & McCullough, 1998; McCullough, Larson, & Worthington, 1998). Professional organizations have established special interest groups such as the Psychology of Religion Division of the American Psychological Association (Miller & Thoresen, 2003). The John Templeton Foundation has sponsored a series of scientific meetings that feature symposia and invited presentations on issues of religion/spirituality and health (Thoresen, Harris, & Oman, 2001). Recently, Koenig (2008b) provided testimony and recommendations to the U. S. House of Representatives Subcommittee on Research and Science Education regarding advanced training for researchers in this area, as well as continuing education for grant reviewers, institutional review board members, and journal editors. In sum, studies concerning religion/spirituality and health have received widespread attention.

Religion/Spirituality and Clinical Practice

Research findings concerning the protective and salutary influence of religious/spiritual involvement on mental and physical health have stimulated discussion regarding the role of religion/spirituality in several areas of clinical practice (e.g., medicine, nursing, clinical psychology, and social work) (Harris, Thoresen, McCullough, & Larson,
1999; Larson & Milano, 1995; Marwick, 1995; Matthews & Larson, 1997; Overvold, Weaver, Flannelly, & Koenig, 2005; Post, Puchalski, & Larson, 2000). More specifically, it has been suggested that the provision of basic religious/spiritual assessment and intervention is an appropriate and desirable activity for health care professionals (Larimore, Parker, & Crowther, 2002; Tan & Dong, 2001). Relevant to this suggestion, the perceptions and practices of providers, as well as the preferences of patients/clients, will be considered in this chapter.

Providers’ Perceptions and Practices of Incorporating Religion/Spirituality in Health Care

Perceived Benefits

According to the literature, many health care professionals believe religion/spirituality can be beneficial for health. The majority (82%) of pediatricians and medical residents in one study agreed that religiosity/spirituality has a positive influence on health (Armbruster, Chibnall, & Legett, 2003). Physicians in other studies have indicated that prayer and attendance at religious services (a) helps patients cope with illness (76%), (b) contributes to a positive state of mind (75%), and (c) offers social support (55%) (Curlin, Sellergren, Lantos, & Chin, 2007). Relative to physicians from other medical specialties, psychiatrists in one study were almost twice as likely to endorse the health benefits of religious/spiritual involvement (82% vs. 44% of N = 1,144) (Curlin, Lawrence et al., 2007). Likewise, clinical psychologists have acknowledged the positive influence of religious/spiritual involvement on emotional well-being (Shafranske, 2001).

The literature also suggests that many health care professionals believe it is important for clinicians to consider their patients’ religious/spiritual orientations. The
vast majority (91%) of pediatricians and medical residents in the Armbruster et al. (2003) study agreed that patients’ religious/spiritual beliefs were pertinent to clinical care. The majority (71%) of psychiatric residents in another study placed “high priority” on knowing their patients’ religious/spiritual beliefs (Roskes, Dixon, & Lehman, 1998). Almost half (47%) of the physicians and nurse practitioners from internal medicine, family medicine, or obstetrics/gynecology in one study agreed that routine physical examinations should include questions about patients’ religious/spiritual involvement (McCauley et al., 2005). In a separate study conducted at teaching hospitals in the United States, 68% of primary care physicians reported that PCPs should attend to their patients’ religious/spiritual needs (Monroe et al., 2003).

Similarly, clinical psychologists increasingly recognize the importance of incorporating religion/spirituality in the assessment and treatment of mental health problems (Richards & Bergin, 2000; Shafranske, 1996). The majority (78%) of clinical psychologists in one study indicated that psychotherapists should be aware of their clients’ religious/spiritual backgrounds (Shafranske, 2001). Shafranske and others have argued that clinical psychologists are obligated to consider their clients’ religious/spiritual orientations, just as they would any other cultural characteristic. With that, the current revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) identifies “religious or spiritual problem” as a condition that may be a focus of clinical attention (American Psychiatric Association [APA], 2000; Lukoff, Lu, & Turner, 1998; Turner, Lukoff, Barnhouse, & Lu, 1995).

Correspondingly, a considerable amount has been written about religious/spiritual issues in the context of psychotherapy (Cornet, 1998; Miller, 1999; Powell, Sandhu, &
Painter, 2000; Richmond, 2004). Although a detailed review of such issues is beyond the scope of this chapter, it should be noted that the literature consists of broad discussions concerning the influence of religion/spirituality on the therapeutic alliance and the process and outcome of psychotherapy (e.g., the need for objectivity, the relative effectiveness of various religious/spiritual interventions, and patient/client characteristics that are associated with treatment outcomes). Randomized clinical trials have shown that faith integrated psychotherapy with religious/spiritual clients is more effective than secular psychotherapies or no treatment at all (Koenig, 2005). Chirban (2001) suggested that discussions of religious/spiritual issues in psychotherapy allow clients an opportunity to process existential needs and concerns.

Clinical Practices

Despite the perceived benefits of incorporating religion/spirituality in clinical practice, it seems few health care professionals actually address religious/spiritual issues with their patients/clients. In the largest study of its kind to date, a stratified random sample of over 1,000 physicians representing numerous medical specialties was drawn from the membership of the American Medical Association to assess behaviors concerning religion/spirituality and clinical practice. Only 10% of the physicians in this study reported that they “often” or “always” addressed religious/spiritual issues with their patients (Curlin, Chin, Sellergren, Roach, & Lantos, 2006). Only 3% of physicians in the Armbruster et al. (2003) study said they took a religious/spiritual history as part of routine assessments. The majority (66%) of physicians in the Monroe et al. (2003) study said that they would be unwilling to ask about religious/spiritual concerns except with dying patients, and approximately one third indicated that they would be unwilling to
pray with patients even if they were dying.

In terms of mental health care, the evidence is that few psychotherapists systematically seek information about their clients’ religious/spiritual involvement (Richards & Bergin, 1997). A plurality (35%) of the clinical psychologists surveyed by Shafranske (2001) reported that they would not initiate a religious/spiritual assessment in the absence of a client’s request; just over 10% had prayed with a client; and only 6% had made referrals to clergy members. This is despite the fact that mental health professionals are more likely than other health care providers to encounter religious/spiritual issues in clinical practice (e.g., 92% of psychiatrists versus 74% of physicians from other medical specialties) (Curlin, Lawrence et al., 2007).

**Perceived Barriers**

If health care professionals believe religion/spirituality is beneficial for health, and agree that providers should consider their patients’ religious/spiritual orientations, this raises the question of why so few clinicians actually address topics such as the health effects of religiosity/spirituality with their patients and clients. Possible explanations are implied by the barriers that health care providers have cited in relation to incorporating religion/spirituality in clinical practice. Such barriers can be grouped into five categories: (1) lack of time, (2) lack of training, (3) low perceived self-efficacy, (4) low personal religiosity/spirituality, and (5) ethical issues. The first four categories are described below. For the purpose of organization, a discussion of ethical issues follows in a separate section.

**Lack of time.** The reason most often provided by health care professionals for not addressing religious/spiritual issues with their patients is lack of time. The vast majority
(95%) of physicians and nurse practitioners in the McCauley et al. (2005) study identified lack of time as the most significant barrier to discussing religion/spirituality with their patients. It has been suggested that any minute of discussion devoted to religious/spiritual issues results in a minute of not discussing other important issues such as tobacco use (Thoresen et al., 2001). On the other hand, the mortality risk associated with nonattendance at religious services ($RH = 1.50$, or 50% greater risk) is nearly as strong as the risk associated with smoking cigarettes ($RH = 1.63$, or 63% greater risk) (Hummer, Rogers, Nam, & Ellison, 1999). Therefore, some would argue that the average of 2.1 additional minutes it takes to evaluate patients for religious/spiritual concerns during an office visit is time well spent (Kristeller, Rhodes, Cripe, & Sheets, 2005).

**Lack of training.** The second most often cited barrier to incorporating religion/spirituality in clinical practice is lack of appropriate training (Curlin et al., 2006; McCauley et al., 2005). In a recent survey of palliative care physicians, 35% of respondents said they needed additional training on how to address their patients’ religious/spiritual concerns (Jordan, Oatis, Mrdjenovich, Coman, & Balls, 2009). Consistent with this observation is the fact that health care professionals have traditionally received little education on the topic of religion/spirituality as it relates to clinical practice (Larimore et al., 2002). A survey of psychiatric residency programs in Canada showed that only one-fourth of the responding programs required lectures on religious/spiritual issues (Grabovac & Ganesan, 2003). A related study found that only 11% of APA-accredited doctoral programs in clinical psychology offered courses pertaining to religion/spirituality (Robbins, 2001). Correspondingly, 85% of the clinical psychologists in one study reported that they had received “little” to “no” training on the
topic of religion/spirituality (Shafranske, 2000). Additionally, up to 90% of social work faculty have indicated that religious/spiritual issues were “never” or “rarely” covered by the curriculum in their graduate program (Sheridan, Wilmer, & Atcheson, 1994).

Low self-efficacy. Consistent with a lack of appropriate training, the literature suggests that many health care professionals believe they lack the necessary skills to address religious/spiritual issues with their patients and clients (Huguelet, Mohr, Borras, Gillieron, & Brandt, 2006). The majority (56%) of physicians in one study said they felt uncertain about how to determine which of their patients want to discuss religious/spiritual issues, and nearly half (49%) were unsure about how to handle their patient’s religious/spiritual concerns (Ellis, Vinson, & Ewigman, 1999). Only one-third of the clinical psychologists in another study expressed personal competence in counseling clients on matters of religion/spirituality (Shafranske & Maloney, 1996).

Low self-reported religiosity/spirituality. Whether health care professionals incorporate religion/spirituality in their work with patients and clients may be determined in part by their own religious/spiritual orientation (Wenger & Carmel, 2004). For instance, physicians with low personal religiosity/spirituality are less likely to believe that religion/spirituality has an influence on health (16% vs. 82%, p < .001) (Curlin, Sellergren et al., 2007). They are also less likely to make referrals to clergy members (Curlin, Odell et al., 2007). A related study found that 23% of physicians with low self-rated religiosity had ever asked patients about religious/spiritual issues, whereas 76% of physicians with high self-rated religiosity had done so (Curlin et al., 2006). Similarly, 30% of physicians in the low religiosity group had ever prayed with their patients, whereas 70% in the high religiosity group had done so (Curlin et al.).
With respect to mental health professionals, 70% of the clinical psychologists surveyed by Shafranske (2001) indicated that personal faith was not necessary in order to offer evidence-based, religious/spiritual interventions. More than one-third (36%) of the respondents in the same study agreed that psychotherapists should offer religiously/spiritually oriented interventions regardless of their personal belief system. Yet, the extent to which such interventions were actually utilized by the responding psychologists was a function of their personal religious/spiritual convictions.

**Ethical Issues as Potential Barriers to Incorporating Religion/Spirituality in Clinical Practice**

A number of ethical issues have been raised that could serve as barriers to the incorporation of religion/spirituality in clinical practice. Essentially, some authors have questioned the appropriateness of bringing religion/spirituality into health care (Sloan, Bagiella, & Powell, 2001). While skeptics may argue against the provision of clinical guidance on religious/spiritual issues, Smith (2001) commented, “This does not mean that such issues should be actively avoided in health care. Rather, it means that tentativeness, caution, and sensitivity are required” (p. 374). Several relevant ethical issues are discussed in the following sections.

**Patient/client privacy.** It has been suggested that religion and spirituality are personal matters and therefore asking patients or clients about religious/spiritual issues could surprise, confuse, upset, or offend them (VandeCreek, 1999). Yet, as Koenig (2007c) noted, all health related counseling runs the risk of making patients/clients feel uncomfortable. That is, clinicians may have to ask about many personal aspects of life (e.g., sexual history, marital status, socioeconomic status; smoking, drinking, and eating
habits, etc.). Given the documented influence of religious/spiritual involvement on mental and physical health, discussions of religious/spiritual issues are “within the domain of the provider’s responsibility” (Koenig, 2007c, p. 116). From this perspective, the fear of upsetting patients/clients should not stop providers from asking necessary questions.

Role conflict. A second ethical issue involves the opinion that discussions pertaining to religion/spirituality are simply inappropriate in the context of interactions between health care providers and their patients/clients. Consistent with this perspective, nearly half (45%) of the physicians in the Curlin et al. (2006) study reported that it was “usually” or “always” inappropriate for physicians to ask patients about religious/spiritual issues. With that, it has been suggested that patients who have religious/spiritual concerns should be referred to pastoral care, as members of the clergy do not have conflicting roles in these matters. Yet, the idea that patients should simply be referred to clergy members has been called into question. This is partly because hospitals have been reducing their pastoral care services under pressures to reduce costs. In fact, only 20% of hospitalized patients in the United States see a chaplain (Flannelly, Galek, & Handzo, 2005; Galek, Flannelly, Koenig, & Fogg, 2007). In one study, researchers examined the medical charts of 100 elderly hospitalized patients who were dealing with end-of-life decision making and found that only 6% of these patients had chaplain involvement documented in their charts (King & Wells, 2003). Moreover, “although community clergy often go to heroic extremes to see members of their congregation when they are ill . . . the time pressures they face are not much different from those that physicians and nurses encounter. . . . Furthermore, many patients may not be regular churchgoers and won’t have clergy to
visit them, and many patients will be receiving care at a location far from their local church. . . . If chaplains and clergy are unable to evaluate patients’ [religious/spiritual concerns], then someone else needs to” (Koenig, 2007c, p. 6).

Discrimination. It has been proposed that guidance on the health effects of religious/spiritual involvement should be offered only to patients and clients who indicate that religion/spirituality is personally important. This presents an ethical dilemma in light of the empirical evidence which demonstrates that religious/spiritual involvement is beneficial for health. Specifically, the question of how providers can—in good conscience— withhold recommendations from some patients/clients but not others has been raised (Sloan & Bagiella, 2001).

As a possible solution, Koenig (2007c) has recommended that knowledge concerning the mechanisms by which religion/spirituality influences health could be applied to benefit even non-religious/non-spiritual patients and clients within a secular framework (see Chapter 2 of this dissertation). For example, rather than speaking in terms of “religious/spiritual practices,” providers might simply ask patients/clients, “What brings meaning and purpose to your life?.” Instead of speaking about “congregational membership,” clinicians might inform their patients/clients about the health effects of prosocial behavior and social support. Using the term “meditation” instead of “prayer” is another example. Again, the goal is to promote health and well-being among all patients and clients—not just a segment thereof. According to Koenig, the promotion of health and well-being is a “secular goal, for which health professionals are responsible” (p. 116).

Coercion. It has also been suggested that—because health care professionals have
influence over patients/clients by virtue of their expertise—providers potentially abuse
their status when they depart from their specialty area to the provision of guidance
concerning religious/spiritual matters. It may be that some patients/clients would have
difficulty asserting their personal religious/spiritual preferences (Sloan, Bagiella,
VandeCreek, Hover, & Casalone, 2000).

Koenig (2008b) addresses what seems to be the key ethical question: Should
health care providers try to “make” their patients/clients more “religious/spiritual” for
health reasons? The reality is that providers do not have to. That is, the vast majority of
patients/clients will already be religiously/spiritually involved (Gallup Organization,
2007). This is encouraging in light of research which demonstrates that people will
experience the greatest benefits to their health when they are religiously/spiritually
involved for religious/spiritual reasons. In any event, Koenig (1999b) argues that
“prescribing” religion/spirituality for health reasons (e.g., suggesting to patients/clients
that they should read religious/spiritual materials or attend religious/spiritual services)
would be unethical, in part because such prescriptions involve the extrinsic use of
religion as a means to a non-spiritual end.

Nevertheless, Koenig (2007c) maintains that there are sensible ways in which
clinicians can integrate religion/spirituality in their professional practices. For this reason,
it is essential for providers to (a) learn more about the influence of religion/spirituality on
health, and (b) inform the public about it. “The majority of the U. S. population for whom
religion is important deserves to know [about the health benefits of religious/spiritual
involvement]. . . . Beyond that, patients and clients will need to make their own choices
in this regard, free from coercion or manipulation” (Koenig, 2008b, n. p.). Kirschner
(2003) seemed to concur: “During more than 50 years of public health and family medical practice, I’ve become acutely aware that my patients practice many different belief systems. . . . I practice secular humanism and ethical culture, but I respect my patients’ belief systems and I don’t try to convert them to mine” (p. 185).

Potential harm. Finally, some authors have cautioned that information regarding connections between religion/spirituality and health may be harmful to the degree that it reinforces a sense of guilt among religious/spiritual patients and clients who perceive their health condition as a personal or moral failure (Sloan, Bagiello, & Powell, 1999). Accordingly, Koenig (2007c) emphasizes the importance of communicating to patients and clients the fact that health conditions are likely to be caused by factors which are unrelated to personal or moral character: “Even the most devoutly religious people end up getting sick and dying” (p. 120). Thus, it should not make sense for a patient or client to conclude that their poor health is due to a lack of religious faith (e.g., “What did I ever do to deserve this?”).

Koenig (2007c) goes on to highlight the value of clinical judgment and sensitive timing in minimizing potential harm. For example, while a discussion of religious/spiritual issues would be perfectly suitable in the case of a patient who is near death and wishes to receive his or her last rites, such discussion may be premature and even infuriating for a patient who has just been diagnosed with terminal cancer and is desperately asking, “Why me?.” Likewise, mentioning the topic of religion/spirituality could produce great anxiety for a healthy patient who simply wants to have a routine check-up. In some cultures, such discussions occur only when patients are seriously ill.

Notwithstanding the issues described above, some would argue that no tangible
evidence exists to indicate that religious/spiritual interventions are actually harmful to patients/clients: “Beyond case reports and samples of fewer than 10 people, we have found no evidence that religious/spiritual interventions can harm health in representative samples of community residents or in systematically sampled clinical populations” (George, Larson, Koenig, & McCullough, 2000, p. 110). “Sensible religious interventions do not appear to worsen [symptoms]. In some cases, these interventions seem to produce benefits, especially if patients are religious to begin with” (Koenig, 2005, p. 153).

“Unless or until there is evidence of harm from a clinician’s provision of either basic religious/spiritual care or a religiously/spiritually sensitive practice, interested clinicians should learn to assess their patients’ spiritual health and to provide indicated and desired spiritual interventions. . . . Clinicians and health care systems should not, without compelling data to the contrary, deprive their patients of the spiritual support and comfort on which their hope, health, and well-being may hinge. . . . To encourage clinicians to ignore such needs seems to us senseless and uncaring” (Larimore et al., 2002, p. 69, 70, 71).

This does not mean that religious/spiritual interventions should be implemented with non-religious/non-spiritual patients and clients. Rather, it suggests that (a) the beliefs and practices of religious/spiritual patients and clients could be well utilized in their treatment and recovery, and (b) the aforementioned secular framework could be applied to benefit the health of non-religious/non-spiritual patients and clients. That said, Koenig (2008a) has identified a number of “do nots” in this area. Specifically, health care professionals should not:

- assume patients/clients are religious
• initiate a discussion of religious/spiritual issues with patients who have a specific agenda for their office visit (e.g., common cold, routine physical, etc.)

• initiate a discussion of religious/spiritual issues in cases where the patient and provider have never seen each other before, and will probably never see each other again (e.g., stitches in the emergency room)

• continue taking a religious/spiritual history if the patient or client indicates discomfort with such inquiry

• offer anything beyond support without informed consent

• pray with patients unless the patient asks

• pray with patients without taking a religious/spiritual history first

• provide religious/spiritual “advice” without the necessary training

• actively proselytize (“commonsense demands that providers not make patients feel bad because they’re not ‘religious’ enough”) (Koenig, 2007c, p. 121)

• seek to change patients’ religious/spiritual views

• argue with patients about religious/spiritual issues, even when such issues potentially conflict with health care.

Summary and Implications of Providers’ Perceptions and Practices

According to the literature, many health care professionals believe religiosity/spirituality is beneficial for health, and agree that clinicians should attend to their patients’ religious/spiritual needs (Larson & Milano, 1995). Yet, it seems few health care providers actually address religious/spiritual issues with their patients and clients (Curlin et al., 2006; Shafranske, 2001). A number of perceived barriers to incorporating religion/spirituality in clinical practice have been identified by practitioners (Sloan et al., 2001).
Such barriers are problematic given the benefits of religious/spiritual involvement for mental and physical health. Studies involving providers’ perceptions and practices in this area could inform efforts to reduce actual or perceived barriers among health care professionals, perhaps by enhancing the curricula of training programs and making recommendations relevant to the settings in which they practice.

*Patient/Client Perspectives on Religion/Spirituality and Health Care*

Like many health care professionals, patients/clients typically acknowledge associations between religion/spirituality and health (Daaleman, Cobb, & Frey, 2001; Emblen & Halstead, 1993; Koenig, Bearon, Hover, & Travis, 1991; Maugans & Wadland, 1991). Patients in one study ranked “being at peace with God” as second in importance only to pain control when it came to their personal health (Steinhauser, Christakis, & Clipp, 2000). In a separate study involving more than 1,000 community residents, 57% of respondents said they believed God could heal a sick patient even after physicians have determined that further medical efforts would be futile (Jacobs, Burns, & Bennett, 2008; see also King & Bushwick, 1994).

Moreover, patients often have religious/spiritual concerns and wish to communicate with health care providers about religious/spiritual issues (Daaleman & Nease, 1994; Ehman, Ott, Short, Ciampa, & Hansen-Flaschen, 1999; Holmes, Rabow, & Dibble, 2006; Miller, Pittman, & Strong, 2003). A survey of nearly 500 patients at primary care clinics and academic medical centers in the United States showed that two-thirds of respondents felt physicians should be aware of their patients’ religious/spiritual beliefs (MacLean et al., 2003). One third of the respondents in the same study wished to be asked about their religious/spiritual beliefs during routine office visits. Another survey
involving more than 400 members of various religious groups in the United States found that the majority (81%) of respondents would have greater trust in their physician if he or she took a religious/spiritual history (Hamilton & Levine, 2006). Patients in a separate study who received a religious/spiritual history intervention, which essentially involved providers asking patients about their religious/spiritual beliefs and practices, said they experienced a greater sense of interpersonal caring from their health care providers (Kristeller et al., 2005). Patients have also indicated a willingness to sacrifice time that would otherwise be spent on medical issues so that religious/spiritual concerns could be discussed. Such concerns have been shown to influence patients’ medical decisions, particularly at the end of life (MacLean et al.). For example, cancer patients have identified religious faith as the second most important factor influencing their medical decisions after oncologist recommendations (Silvestri, Knittig, Zoller, & Nietert, 2003).

Relevant findings have also been reported in the psychotherapy literature (Wyatt & Johnson, 1990). Among clients drawn from a variety of settings including community mental health centers, private psychology practices, and university counseling centers, the consensus has been that religious/spiritual issues are “not only acceptable and preferable for discussion in therapy, but are also important therapeutic factors central to the formation of worldview, personality, and human behavior” (Rose, Westefeld, & Ansley, 2001, p. 69).

Despite their belief in connections between religion/spirituality and health, and their desire to communicate with health care providers about religious/spiritual issues, the literature strongly suggests that patients’ religious/spiritual needs are minimally met by the health care arena. A report based on almost 2 million patients surveyed in 2001
showed that patient satisfaction with religious/spiritual care was among the lowest of all aspects of care (Clark, Drain, & Malone, 2003). A separate study found that up to three quarters of psychiatric inpatients had religious/spiritual needs that went unmet during their hospital stays (Fitchett, Burton, & Sivan, 1997). Thus, it appears that religious/spiritual care is a priority for quality improvement (Benjamins, 2006). Such improvement is crucial, as patients’ receipt of religious/spiritual support in the health care arena is a strong predictor of quality of life (Balboni et al., 2007).

**Statement and Significance of the Problem**

A fair amount of attention has been given to the perceptions and practices of physicians (in family medicine, internal medicine, neurology, oncology, palliative care, pediatrics, and psychiatry) and clinical psychologists in relation to religion/spirituality and clinical practice. Yet, little attention has been given to the perceptions and practices of other providers such as mental health professionals at university counseling centers. In fact, a comprehensive literature review conducted for this dissertation yielded only two previous studies that pertained to religious/spiritual factors in the context of services offered at university counseling centers (Johnson & Hayes, 2003; Kellems, 2005). These studies seemed to focus primarily on the religious/spiritual concerns of college students rather than the perceptions and practices of mental health professionals. Thus, the degree to which university counseling professionals are advising clients about the health effects of religious/spiritual involvement is unknown.

The lack of attention to religion/spirituality and health in the context of university counseling centers is surprising given the prevalence of mental health problems among the college student population and the potential for religious/spiritual involvement to
serve as a resource in addressing students’ mental health needs. College life entails numerous sources of stress including academic demands, financial concerns, family obligations, and peer relationships, not to mention the process of identity development that takes place at this stage of life (Heppner et al., 1994; Hyun, Quinn, Madon, & Lustig, 2006; Misra & Castillo, 2004). College students who experience higher levels of psychological distress tend to exhibit poorer self-esteem, weaker problem solving skills, poorer academic performance, and lower utilization of social support (Hudd et al., 2000; Largo-Wight, Peterson, & Chen, 2005; Mowbray et al., 2006). Moreover, the highest rate of mental illness in the United States exists among persons aged 18 to 25 (the range that has traditionally corresponded to the college years) (Substance Abuse and Mental Health Services Administration [SAMHSA], 2003). One study found that depression doubled and suicidal ideation tripled among college students in the Midwest over a 13-year period (S. A. Benton, S. L. Benton, Newton, K. L. Benton, & Robertson, 2004). Furthermore, some 24,000 college students attempt suicide and another 1,100 commit suicide each year (Joffe, 2008). Consistent with these observations, 81% of the university counseling center directors in a recent national survey reported that they were seeing more students with serious psychological problems compared to the previous five years (Gallagher, Zhang, & Taylor, 2003).

University administrators have cited a lack of resources in their attempt to meet the growing demand for mental health services on college campuses (Kiracofe, 1993). Economic constraints have placed stricter limits on campus based mental health care, and this has lead to an increase in referrals made to community agencies (Stone, Vespia, & Kanz, 2000). At issue is the fact that students may have limited resources to invest in
mental health care received off-campus (Price et al., 2009). With this in mind, Mowbray et al. (2006) offered a number of recommendations for improving campus-based responses to students’ mental health needs. Such recommendations reflected the potential for students to recover from mental health problems such as anxiety and depression, and primarily involved access to coordinated services. Notably absent in these recommendations, however, was any mention of the potential for religious/spiritual involvement to serve as a coping resource.

Propositions

Clients at university counseling centers have indicated that religious/spiritual issues are “acceptable and preferable” for discussion in counseling and psychotherapy (Rose et al., 2001, p. 69). With that, marked increases in the number of students who seek services at university counseling centers imply an opportunity for mental health professionals in this setting to address issues of religiosity/spirituality with their clients (Green, Lowry, & Kopta, 2003; Rudd, 2004; Schwitzer & Choate, 2007; Stukenberg, Dacey, & Nagy, 2006). Correspondingly, religious/spiritual involvement could serve as a resource in addressing clients’ mental health needs.

Given the fact that religiosity and spirituality encompass such an array of health influences (Koenig et al., 2001), discussions of mental health concerns and religious/spiritual issues could extend to discussions regarding the positive influence of religious/spiritual involvement on attitudes and behaviors that reduce physical health risks and promote healthier lifestyles. It seems especially important to address health related attitudes and behaviors during the college years as these are predictive of health related attitudes and behaviors later in life (Fritch, 2004; Martin, Kirkcaldy, & Siefen, 2003).
Furthermore, such interventions are consistent with (a) calls for the integration of behavioral and physical health services (Mrdjenovich & Moore, 2004; Roth-Roemer, Robinson-Kurpius, & Carmin, 1998), and (b) the paradigm and consumer movement that recognizes religiosity/spirituality as a key component of recovery from both mental and physical illness (Lubotsky, Petrila, & Hennessy, 2004; Ohio Department of Mental Health [ODMH], 2007; Ralph & Corrigan, 2005).

Potential Benefits of Clinical Guidance on the Health Effects of Religious/Spiritual Involvement

A means of coping with stress. Incorporating guidance on the health effects of religious/spiritual involvement in the treatment of clients at university counseling centers could offer students a means of coping with the stress of college life. The detrimental effects of stress on mental and physical health have been widely studied and well documented. With that, coping skills have been identified as positive adaptations that can improve psychological, social, and physical well-being (Lazarus, 2000). There is now a large body of empirical evidence which demonstrates that religious/spiritual methods of coping can buffer or reduce the harmful effects of stress (Ano & Vasconcelles, 2005; Pargament, 1997; Tix & Frazier, 1998). Hence, it does not seem surprising that college students who involve themselves in religious/spiritual activities tend to manage stress more effectively (Winterowd, Harris, Thomason, & Worth, 2005).

Positive effects on health related attitudes and behaviors. In combination with interventions designed to address mental health concerns, interventions could address attitudes and behaviors that may compromise physical health among clients at university counseling centers. For example, university counseling professionals might inform their
clients that—while the experience of negative affect/emotion tends to be detrimental for health—individuals who are religiously/spiritually involved (i.e., in meditation, positive coping behaviors, the provision and receipt of social support, etc.) tend to experience more positive emotions (e.g., feelings of compassion, forgiveness, gratitude, hope, and optimism) which, in turn, have a range of benefits for mental and physical health (Cohen & Pressman, 2006; Frederickson, 2002; Newberg, 2006; Salovey, Rothman, Detweiler, & Steward, 2000). University counseling professionals might also discuss evidence from the research literature which demonstrates that religious/spiritual involvement is related to the adoption and maintenance of positive health behaviors such as not smoking, consuming less alcohol, eating healthfully, exercising regularly, sleeping adequately, and undergoing health screenings routinely (Strawbridge, Shema, Cohen, & Kaplan, 2001). In this way, clients who might already have religion/spirituality operating in their lives may come to recognize their religious/spiritual involvement as a health promotive practice.

For non-religious/non-spiritual clients, the aforementioned secular framework could be applied to a similar positive end.

*The 5 A’s Framework*

The 5 A’s framework, which is supported by the United States Preventive Services Task Force and the Agency for Health Care Policy and Research, offers a potentially useful strategy for providing guidance on the health effects of religious/spiritual involvement (Glasgow, Emont, & Miller, 2006; USPSTF, 2003). Among other contexts, the 5 A’s framework has been applied successfully to smoking cessation and obesity counseling (Bentz et al., 2007; Lichwala-Zyla, Price, Dake, Jordan, & Price, 2009; Price, Ambrosetti, Sidani, & Price, 2007). However, a thorough literature review
reveals that the 5 A’s have never been applied to or recommended for guidance on the health effects of religious/spiritual involvement. This is somewhat surprising given that the mortality risk associated with nonattendance at religious services ($RH = 1.50$, or 50% greater risk) is nearly as strong as the risk associated with smoking cigarettes ($RH = 1.63$, or 63% greater risk) (Hummer et al., 1999). Nonattendance at religious services is also comparable to physical inactivity in terms of its effect on mortality risk (Strawbridge, Cohen, & Shema, 2000).

The 5 A’s for providing guidance on the health effects of religious/spiritual involvement are as follows:

1. *Ask* – Identify the client’s religious/spiritual orientation and involvement (i.e., take a religious/spiritual history). The primary objectives are to (a) gain an understanding of the role that religion/spirituality may be playing in the client’s health, and (b) identify resources and support systems that may be available to the client within his or her religious/spiritual community. A routine procedure should be established in this regard. In fact, it may be important to inform the client that the religious/spiritual history is simply part of a routine intake assessment. The assessment should take just a few minutes to conduct. Koenig’s (2008a) brief screening tool could be utilized for this purpose. It consists of four questions: (1) Do your religious/spiritual beliefs provide comfort, or are these a source of stress?, (2) Do you have religious/spiritual beliefs that might influence decisions about your health?, (3) Are you a member of a religious/spiritual community and is it supportive to you?, (4) Do you have any other religious/spiritual needs that you’d like someone to address? (p. 161). If the client indicates discomfort with
any of these questions, the assessment should be discontinued. Finally, information gathered via a religious/spiritual history interview should be documented in the client’s file.

2. **Advise** –
   a. Help clients understand how their religious/spiritual beliefs and practices might influence their personal health (e.g., inform clients about research that indicates a connection between religious/spiritual involvement and better mental and physical health).
   b. Support the client’s involvement in religious/spiritual activities, just as one might support the client’s participation in other health promotive practices. The goal of such support is not to “make” the client more “religious/spiritual.” Instead, the goal is to reinforce the coping behaviors and health behaviors in which the client may already be engaged (Koenig, 2007c).

3. **Assess** – Determine the client’s receptiveness to religious/spiritual involvement as a health promotive practice (e.g., his or her stage of change). For some clients, it may be that they used to—but no longer—participate in religious/spiritual activities. Using care not to induce guilt, clinicians could explore (a) whether or not the client wishes to re-establish his or her involvement in this area, and (b) the ways in which the client might overcome any perceived or actual barriers. Koenig (2007c) recommends that the “lines of communication” should be kept open; however, a client’s decision to forgo religious/spiritual involvement should be respected.

4. **Assist** – Ensure access to resources by providing the client with referrals to
religious/spiritual leaders, programs, and organizations in the community. This is particularly important in cases where religious/spiritual needs or conflicts are identified that could influence the client’s health, but for which a given university counseling professional does not have sufficient background to address (Koenig, 2007c).

5. Arrange – If religious/spiritual needs were identified and the client was referred to a religious/spiritual resource, the clinician should schedule follow-up contact to see if the client’s needs were adequately addressed. The clinician might also develop a plan to ensure that continuity is maintained between the client, counseling center, and community resource (Ribisl & Humphreys, 1998).

Empirical Support for Propositions

The literature provides empirical support for the proposition of incorporating religion/spirituality in counseling and psychotherapy in general. Randomized clinical trials have shown that faith-integrated interventions with religious/spiritual clients are more effective than secular psychotherapies or no treatment at all. For example, such interventions can effectively reduce anxiety. Other studies have found that people who participate in religiously/spiritually oriented substance abuse programs are more likely to remain sober than those who receive professional treatment alone (Koenig, 2005). Religiosity/spirituality has also been linked to positive outcomes in the treatment of eating disorders (e.g., more positive attitudes toward eating, and fewer concerns related to body image), even among patients/clients whose family situations place them at risk for relapse (Forthun, Pidock, & Fisher, 2003; Smith, Hardman, Richards, & Fisher, 2003).

Empirical support also exists for the more specific proposition of incorporating
guidance on the health effects of religious/spiritual involvement in the treatment of clients at university counseling centers. For example, studies have demonstrated the salutary influence of religiosity/spirituality on college students’ health beliefs and behaviors (Nagel & Sgoutas, 2007; Nelms, Hutchins, Hutchins, & Pursley, 2007). Moreover, religious/spiritual involvement has been positively associated with subjective well-being, and inversely associated with substance use and suicide attempts among college students (Beckwith & Morrow, 2005; Donahue & Benson, 1995; Francis, Robbins, Lewis, Quigley, & Wheeler, 2004; Mahoney et al., 2005; Richards, 1991; Zaleski & Schiaffino, 2000).

Theoretical Basis for Propositions

The theoretical framework for this study is drawn from three sources:

1. The Transtheoretical Model (Prochaska, Redding, & Evers, 2002)
2. The Health Belief Model (Janz, Champion, & Strecher, 2002)
3. Self-Efficacy Theory (Bandura, 1977)

This framework will be applied to the perceptions and practices of university counseling professionals as opposed to the behaviors (i.e., religious/spiritual involvement) of clients.

Transtheoretical Model. The Transtheoretical Model (TTM) was developed based on a comparative analysis involving numerous approaches to psychotherapy and behavior change (Prochaska, 1979). The model was originally applied in studies of smoking cessation, but has since been applied to a broad range of health behaviors (DiClemente & Prochaska, 1982; Prochaska et al., 2002). TTM suggests that individuals progress through six discrete stages as they attempt to modify a given behavior (Prochaska & DiClemente 1983). The Stages of Change are as follows:
1. **Precontemplation** – the stage at which a person does not intend to change his/her behavior within the next six months. This stage implies a lack of awareness or avoidance of change.

2. **Contemplation** – the stage at which a person is seriously thinking about changing his/her behavior and intends to do so within the next six months. The contemplation stage is characterized by ambivalence and procrastination.

3. **Preparation** – the stage at which a person intends to take action within the next month. The individual typically has a plan in place at this stage, and s/he might begin to take some behavioral steps toward action.

4. **Action** – the stage at which a person has modified his/her behavior for a period of less than six months. The action stage involves overt behavioral changes and requires a commitment of time and energy.

5. **Maintenance** – the stage at which an individual has modified his/her behavior for a period of more than six months. At this stage, the person works to (a) prevent relapse, and (b) consolidate gains associated with action (Prochaska et al., 2002).

6. **Relapse** – the stage at which an individual used to, but no longer, engages in the modified or desired behavior.

According to TTM, behavior change is a process that occurs over time. The majority of people may not be ready for action. Therefore, they would not be well served by action oriented interventions. A second assumption of TTM is that people engage in various activities (i.e., *processes* of change) as they attempt to bring about behavioral change. Interventions can be tailored to a person’s stage of change through the application of specific processes at specific stages.
In terms of facilitating the provision of guidance on the health effects of religious/spiritual involvement, TTM suggests that a relevant goal would be to assist university counseling professionals to progress through the stages of change via processes applied at particular stages. For example, consciousness raising at earlier stages could result from the provision of information or training on the health effects of religious/spiritual involvement. Alternatively, it may be that some university counseling professionals used to—but no longer—provide guidance on the health effects of religious/spiritual involvement. The potential circumstances (e.g., regulations within one’s counseling center, discouragement from colleagues and/or supervisors) surrounding such a change will be considered in this study.

Health Belief Model. The Health Belief Model (HBM) was developed by a group of social psychologists during the 1950’s in an attempt to explain why so few people participated in programs designed to detect and prevent illness. HBM has been applied extensively to studies of health behavior (Janz et al., 2002). According to HBM, five constructs determine whether individuals will engage in a recommended action toward personal health:

1. Perceived susceptibility – The degree to which a person feels vulnerable to a given health risk or problem.
2. Perceived severity – Appraisals concerning the seriousness of a given health problem.
3. Perceived benefits – Beliefs regarding the effectiveness of actions available for reducing a health risk or problem (e.g., religious/spiritual involvement)
4. Perceived barriers – Impediments to engaging in recommended actions. Taken
together, the constructs of perceived benefits and perceived barriers are analogous to the decisional balance construct in TTM.

5. **Cues to action** – Strategies or events that are intended to trigger a person’s readiness for action.

HBM can be understood as a value-expectancy model, according to which *value* is placed on personal health with the *expectancy* that specific actions will have a positive impact on health. A meta-analysis involving the constructs of HBM showed that the best predictors of health behavior were perceived benefits and perceived barriers (Harrison, Mullen, & Green, 1992). Therefore, the constructs of perceived benefits and perceived barriers will be applied in this study. Specifically, HBM suggests that university counseling professionals would not engage clients in discussions concerning the health effects of religious/spiritual involvement unless they believed that doing so would have a positive influence on their clients’ attitudes and behaviors (perceived benefits) without excess difficulty or negative side effects (perceived barriers). Thus, the primary goals according to HBM would be to (a) increase the perceived benefits of religious/spiritual involvement, and (b) decrease perceived barriers to providing the recommended clinical guidance.

**Self-Efficacy Theory.** As a concept, self-efficacy essentially refers to the beliefs people maintain about their ability to carry out specific behaviors in specific contexts. The formal Theory of Self-Efficacy is rooted in Social Cognitive Theory, which emphasizes reciprocal determinism (i.e., an interaction between person, environment, and behavior) and personal agency (e.g., the idea that one is in control of his or her own behavior rather than a passive recipient of reinforcement) (Bandura, 1986, 2001). Self-
Efficacy Theory involves three primary constructs:

1. **Efficacy expectations** – Beliefs that one can perform a particular behavior to produce a specific outcome. Efficacy expectations are derived from (a) personal experience (e.g., guided practice, rehearsal, and successive mastery), (b) vicarious learning (i.e., observing the consequences of a model’s behavior), (c) verbal persuasion (e.g., instruction and encouragement), and (d) emotional arousal (e.g., positive emotions associated with a given behavior).

2. **Outcome expectations** – Beliefs that a particular behavior will actually result in a specific outcome.

3. **Outcome value** – Beliefs that the outcome of a particular behavior will be of value for the attainment of some goal.

According to Bandura (1997b), efficacy expectations and outcome expectations influence the courses of action people choose to pursue, how much effort they invest, and how long they persist in the face of difficulty. Past failures can serve as barriers to action among people who have low efficacy expectations or low outcome expectations. Conversely, positive expectations that come with success can lead individuals to (a) set greater challenges for themselves, and (b) experience greater interest in performing a behavior regardless of their ability.

Given the fact that changes in self-efficacy can predict changes in behavior, Self-Efficacy Theory has been widely applied in health behavior research. This includes studies of self-efficacy among clinicians (Gramling, Nash, Siren, Eaton, & Culpepper, 2004; Leganger, Kraft, & Roysamb, 2000; Litaker, Watts, Samaan, Ober, & Lawrence, 2007; Maibach & Murphy, 1995). The application of Self-Efficacy Theory in the present
study is as follows: Many health care professionals believe that religious/spiritual interventions can result in beneficial outcomes for their patients’ health (outcome expectations). In terms of actually incorporating religion/spirituality in clinical practice however, it seems that low perceived self-efficacy may serve as a potential barrier (efficacy expectations). Low self-efficacy is problematic in the sense that clinicians who perceive themselves as being less capable of providing guidance on the health effects of religious/spiritual involvement may not even attempt to do so. They might also give up easily in the face of challenges. On the other hand, if university counseling professionals believed that they could regulate their own behavior in relation to providing such guidance, then sufficient incentive might exist for them to engage in this practice. It follows that a relevant goal may be to increase self-efficacy on their part, perhaps through additional education and training.

In terms of outcome value, it is conceivable that a university counseling professional could (a) perceive his/herself as being capable of providing guidance on the health effects of religious/spiritual involvement (efficacy expectations), and (b) believe that such guidance will produce a specific outcome (outcome expectations), but if this outcome is not of particular value to the counseling professional, then he or she would be less motivated to engage in behaviors to produce it. This potentially complicates the provision of guidance concerning the health effects of religious/spiritual involvement to the degree that mental health professionals tend to place less importance on religion/spirituality than does the general public (Bergin & Jensen, 1990; Sheridan, Bullis, Adcock, Berlin, & Miller, 1992; see Chapter Two for historical background and context). For this reason, the religious/spiritual involvement of the responding university
counseling professionals will be considered in this study. Specifically, if participants who report lower levels of personal religiosity/spirituality are less likely to provide the proposed guidance, then outcome value provides a possible explanation.

**Summary of Introduction**

Research evidence demonstrates a connection between religious/spiritual involvement (e.g., attendance at religious services, prayer or meditation, the provision and receipt of social support in a religious/spiritual context; attitudes of compassion, forgiveness, gratitude, hope, and optimism; religious coping, etc.) and better mental and physical health (i.e., less stress, anxiety, depression, substance abuse, and suicide; greater subjective well-being and life satisfaction; lower rates of mortality; protection against disease and disability; and enhanced recovery from illness) (Koenig et al., 2001). Such evidence implies that the provision of basic religious/spiritual assessment and intervention is an appropriate and desirable activity for health care professionals (Larimore et al., 2002). According to the literature, many health care providers believe religiosity/spirituality is beneficial for health, and agree that clinicians should attend to their patients’ religious/spiritual concerns (Larson & Milano, 1995). Nevertheless, it seems few health care professionals actually address religious/spiritual issues with their patients and clients (Curlin et al., 2006). Correspondingly, patients indicate that their religious/spiritual needs are minimally met by the health care arena (Clark et al., 2003). A number of perceived barriers to incorporating religion/spirituality in clinical practice have been identified by practitioners (e.g., lack of time, lack of training, low self-efficacy, low personal religiosity/spirituality, and ethical concerns) (Sloan et al., 2001). Barriers to the provision of clinical guidance on the health effects of religious/spiritual involvement are
problematic given the well documented benefits of religiosity/spirituality for mental and physical health. Studies involving providers’ perceptions and practices in this area could inform efforts to reduce such barriers among health care professionals, perhaps by enhancing the curricula of training programs and making recommendations relevant to the settings in which they practice.

Attention has been given to the perceptions and practices of physicians and clinical psychologists in relation to religion/spirituality and clinical practice (Shafranske, 2001). Yet, little attention has been given to the perceptions and practices of mental health professionals at university counseling centers (Kellems, 2005). This is surprising given the prevalence of mental health problems among the college student population and the potential for religious/spiritual involvement to serve as a resource in addressing students’ mental health needs (Koenig, 2005; SAMHSA, 2003). Clients at university counseling centers have indicated that religious/spiritual issues are “acceptable and preferable” for discussion in counseling and psychotherapy (Rose et al., 2001, p. 69). This, and the fact that increasing numbers of students are seeking services at university counseling centers, implies an opportunity for university counseling professionals to address issues of religiosity/spirituality with their clients (Schwitzer & Choate, 2007). Moreover, discussions of mental health concerns and religious/spiritual issues could extend to discussions regarding the positive influence of religious/spiritual involvement on attitudes and behaviors that reduce physical health risks and promote healthier lifestyles. Empirical and theoretical support for these propositions has been presented in this chapter. The 5 A’s framework offers a potentially useful strategy for providing guidance on the health effects of religious/spiritual involvement. This strategy essentially
involves (1) conducting an assessment of the client’s religious/spiritual involvement, (2) conveying information that could help the client make connections between religious/spiritual involvement and health, (3) reinforcing existing coping behaviors, health behaviors, and sources of social support, (4) making referrals to community resources as appropriate, and (5) ensuring continuity of care.

Statement of Purpose

The purpose of this study is to assess the perceptions and practices of mental health professionals at university counseling centers in relation to their provision of guidance concerning the protective and salutary influence of religious/spiritual involvement on mental and physical health. To reiterate, the present study focuses primarily on guidance concerning the health effects of religious/spiritual involvement. Nevertheless, because the provision of guidance specific to health is not mutually exclusive with the broader function of incorporating religion/spirituality in counseling and psychotherapy in general, it was not possible to isolate these concepts for the purpose of this study. After all, empirical support exists for both propositions (i.e., general incorporation and specific guidance), and therefore it seemed important to address both domains in this chapter.

It should be noted, however, that this is not a study of faith-based counseling wherein clients’ religious/spiritual values and concerns constitute a focal point for treatment and interventions reflect a specific religious/spiritual tradition. Figure 1 depicts a continuum regarding the incorporation of religion/spirituality in counseling and psychotherapy, and specifies differences among three treatment approaches: (1) secular, (2) faith-integrated, and (3) faith-based. The provision of guidance on the health effects
Figure 1. Emphasis of the present study situated on a continuum regarding the incorporation of religion/spirituality in psychotherapy.
of religious/spiritual involvement falls at the meeting point between secular and faith-integrated approaches. A faith-integrated approach implies that the client’s religious/spiritual orientation is respectfully accepted, although religious/spiritual content is not actively elicited or explicitly addressed beyond (a) an appropriate assessment, (b) the provision of information and support, and (c) a referral to community resources. It is acknowledged that guidance pertaining to the health effects of religious/spiritual involvement could be offered as part of a faith-based treatment approach. However, this is not what the present study intends to imply in relation to university counseling centers.

Research Questions

The following research questions will be addressed in this study:

1. What proportion of university counseling professionals is discussing the health effects of religiosity/spirituality with their clients (i.e., action or maintenance stage versus precontemplation, contemplation, preparation, and relapse)?

2. What demographic and institutional factors characterize university counseling professionals who report being involved in discussions with clients concerning the health effects of religiosity/spirituality?

3. Do university counseling professionals believe religious/spiritual involvement has a positive influence on the health of college students?

4. Do university counseling professionals believe counselors/psychotherapists should advise clients about connections between religious/spiritual involvement and health?

5. Are the general clinical practices of university counseling professionals with respect to religious/spiritual issues associated with the provision of guidance on
the health effects of religious/spiritual involvement?

6. During counseling sessions with their clients, which topics do university counseling professionals cover in relation to the health benefits of religious/spiritual involvement?

7. What do university counseling professionals perceive as their most common barriers to discussing the health effects of religiosity/spirituality with clients?

8. How confident are university counseling professionals in their ability to apply the 5 A’s framework to the provision of guidance on the health effects of religious/spiritual involvement?

9. Do university counseling professionals believe that a discussion with their clients concerning the health effects of religious/spiritual involvement will produce outcomes such as a reduction in health risks and the promotion of recovery?

10. From which sources have university counseling professionals received information or training preparing them to counsel clients on the health effects of religious/spiritual involvement?

**Variables**

The independent variables in this study are as follows:

- **Sex** of university counseling professional
- **Age** of university counseling professional
- **Race/ethnicity** of university counseling professional (White/Caucasian, Black/African American, Hispanic/Latino, Asian, or Other)
- **Religious/spiritual involvement** of university counseling professional. Two survey items will assess the extent to which respondents consider themselves to
be “religious” and/or “spiritual” (four-point scale ranging from “Not at All” to “Very”). Responses to these items will be used to create a single variable with four groups: (1) religious-spiritual, (2) religious-not spiritual, (3) spiritual-not religious, and (4) not religious-not spiritual. Additional items will assess the respondents’ religious/spiritual beliefs, commitment, organizational religiousness, private religious practices, religious coping, and religious preference (Fetzer Institute/National Institute on Aging [Fetzer/NIA], 2003).

- **Self-rated health status** of university counseling professional. A subscale score will be calculated for this variable by averaging the responses to one, five-part item adapted from the *Short Form-36 Health Survey* (Horney, Ware, & Raczek, 1993; Ware & Sherbourne, 1992). Each part will use a five-point scale ranging from “Definitely True” to “Definitely False.” Items will be recoded so that a higher subscale score indicates better self-rated health.

- **Sources of information/training** on counseling clients regarding the health effects of religious/spiritual involvement (received information/training from any source versus has not received any information/training).

- **Number of years university counseling professional has been in practice**

- **Geographic region of academic institution.** In order to determine the geographic location of the counseling centers represented in this study, data were obtained from the Carnegie Foundation’s list of colleges and universities in the United States (2008). Based on the geographic regions identified in *Health, United States*, four categories will be created: Midwest, Northeast, South, and West (Centers for Disease Control and Prevention [CDC], 2008).
- **Religious affiliation of academic institution.** Data were obtained from the National Center for Education Statistics concerning the religious affiliation of academic institutions in the United States (NCES, 2008). Two categories will be created: religiously affiliated and *non*-religiously affiliated.

The **dependent** variables in this study are as follows:

- **Stage of change** in relation to discussing the health effects of religiosity/spirituality with clients (action or maintenance versus precontemplation, contemplation, preparation, and relapse)

- **General perceptions** of discussing the health effects of religiosity/spirituality with clients. Decisions to accept or reject the null hypotheses involving this variable will be made based on the percentages in each response category (“Strongly Disagree/Disagree,” “Unsure,” or “Agree/Strongly Agree”).

- Total number of **perceived barriers** to discussing the health effects of religious/spiritual involvement

- Level of **efficacy expectations** regarding the use of the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement. A subscale score will be calculated for this variable by averaging the responses to one, five-part survey item. Each part will use a five-point scale ranging from “Not Confident at All” to “Highly Confident.” A higher subscale score indicates a higher level of confidence.

- Level of **outcome expectations** regarding the use of the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement. A subscale score will be calculated for this variable by averaging the responses to
one, five-part survey item. Each part will use a five-point scale ranging from “Not Likely at All” to “Very Likely.” One item will be recoded so that a higher subscale score indicates more positive outcome expectations.

The following variables are included either for descriptive purposes, or for the non-response analysis:

- **General clinical practices** with respect to religious/spiritual issues. Decisions to accept or reject the null hypotheses involving this variable will be made based on the percentages in each response category (“Always/Most of the Time” versus “Sometimes/Seldom/Never,” and “Yes” versus “No”).

- Total number of topics covered during counseling sessions in relation to the health benefits of religious/spiritual involvement (**perceived benefits**)

- Level of **education** (masters or doctoral)

- Type of **license** (psychologist, counselor, or social worker)

- **Classification of academic institution** (public versus private) (Carnegie Foundation, 2008).

- **Size of enrollment at academic institution** (tertiles of 0-3817; 3,818-11,913; or 11,914+ students) (Carnegie Foundation, 2008).

*Hypotheses*

The following null hypotheses will be tested in this study:

**Research Question 1**

What portion of university counseling professionals is discussing the health effects of religiosity/spirituality with their clients?

1.1: The majority of university counseling professionals will not have thought
seriously about discussing the health effects of religiosity/spirituality with their clients (i.e., precontemplation stage).

Research Question 2

What demographic and institutional factors characterize university counseling professionals who report being involved in discussions with clients concerning the health effects of religiosity/spirituality?

2.1: There is no statistically significant difference by sex of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.2: There is no statistically significant difference by age of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.3: There is no statistically significant difference by race/ethnicity of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.4: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.5: There is no statistically significant difference by self-rated health status of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.6: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement...
and stage of discussing the health effects of religiosity/spirituality with clients.

2.7: There is no statistically significant difference by number of years university counseling professional has been in practice and stage of discussing the health effects of religiosity/spirituality with clients.

2.8: There is no statistically significant difference by geographic region of academic institution and stage of discussing the health effects of religiosity/spirituality with clients.

2.9: There is no statistically significant difference by religious affiliation of academic institution and stage of discussing the health effects of religiosity/spirituality with clients.

Research Question 3

Do university counseling professionals believe religious/spiritual involvement has a positive influence on the health of college students?

3.1: The majority of university counseling professionals will disagree that religious/spiritual involvement has a positive influence on the health and well-being of college students.

3.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and belief that religiosity/spirituality has a positive influence on the health of college students.

3.3: There is no statistically significant difference by self-rated health status of university counseling professional and belief that religious/spiritual involvement has a positive influence on the health and well being of college students.

3.4: There is no statistically significant difference by number of years university
counseling professional has been in practice and belief that religious/spiritual involvement has a positive influence on the health and well being of college students.

3.5: There is no statistically significant difference by religious affiliation of academic institution and belief that religious/spiritual involvement has a positive influence on the health and well being of college students.

Research Question 4

Do mental health professionals at university counseling centers believe university counseling professionals should advise clients about connections between religious/spiritual involvement and health?

4.1: The majority of mental health professionals at university counseling centers will disagree that university counseling professionals should advise clients about connections between religious/spiritual involvement and health.

4.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and belief that counselors/psychotherapists should advise clients about connections between religiosity/spirituality and health.

4.3: There is no statistically significant difference by self-rated health status of university counseling professional and belief that counselors/psychotherapists should advise clients about connections between religious/spiritual involvement and health.

4.4: There is no statistically significant difference by number of years university counseling professional has been in practice and belief that counselors/psychotherapists should advise clients about connections between religious/spiritual involvement and health.
spiritual involvement and health.

4.5: There is no statistically significant difference by religious affiliation of academic institution and belief that university counseling professionals should advise clients about connections between religious/spiritual involvement and health.

Research Question 5

Are the general clinical practices of university counseling professionals with respect to religious/spiritual issues associated with the provision of guidance on the health effects of religious/spiritual involvement?

5.1: The majority of university counseling professionals will not have a routine system for identifying their clients’ religious/spiritual involvement.

5.2: The majority of university counseling professionals will not share their own religious/spiritual experiences and ideas with clients most or all of the time.

5.3: The majority of university counseling professionals will not support clients in their own religious/spiritual beliefs and practices most or all of the time.

5.4: The majority of university counseling professionals will try to change the subject in a tactful way when religious/spiritual issues come up in discussions with their clients most or all of the time.

5.5: The majority of university counseling professionals will not pray with their clients most or all of the time.

5.6: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and general clinical practices with respect to religion/spirituality.

5.7: There is no statistically significant difference by number of years university
counseling professional has been in practice and general clinical practices with respect to religion/spirituality.

5.8: There is no statistically significant difference by religious affiliation of academic institution and general clinical practices with respect to religion/spirituality.

5.9: There is no statistically significant difference by general clinical practices with respect to religious/spiritual issues and stage of discussing the health effects of religiosity/spirituality with clients.

Research Question 6

During counseling sessions with their clients, which topics do university counseling professionals cover in relation to the health benefits of religious/spiritual involvement?

6.1: The majority of university counseling professionals will not discuss (with the majority of their clients) any topics concerning the health benefits of religious/spiritual involvement.

Research Question 7

What do university counseling professionals perceive as their most common barriers to discussing the health effects of religiosity/spirituality with their clients?

7.1: The majority of university counseling professionals will perceive there to be one or more barriers to discussing the health effects of religiosity/spirituality with their clients.

7.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and number of barriers to discussing the health effects of religiosity/spirituality.
7.3: There is no statistically significant relationship between years of professional practice and number of barriers to discussing the health effects of religious/spiritual involvement.

7.4: There is no statistically significant difference by religious affiliation of academic institution and number of barriers to discussing the health effects of religious/spiritual involvement.

7.5: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and number of barriers to discussing such effects.

Research Question 8

How confident are university counseling professionals in their ability to apply the 5 A’s framework to the provision of guidance on the health effects of religious/spiritual involvement?

8.1: The majority of university counseling professionals are not highly confident in their ability to ask clients about their religious/spiritual involvement.

8.2: The majority of university counseling professionals are not highly confident in their ability to advise clients about connections between religious/spiritual involvement and health.

8.3: The majority of university counseling professionals are not highly confident in their ability to assess clients’ receptiveness to religious/spiritual involvement as a health promotive practice.

8.4: The majority of university counseling professionals are not highly confident in their ability to assist clients with referrals to religious/spiritual resources (e.g.,
religious/spiritual leaders, programs, and organizations).

8.5: The majority of university counseling professionals are not highly confident in their ability to arrange follow up contact to see if clients’ religious/spiritual needs were adequately addressed.

8.6: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religiosity/spirituality.

8.7: There is no statistically significant relationship between years of professional practice and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

8.8: There is no statistically significant difference by religious affiliation of academic institution and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

8.9: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and efficacy expectations concerning the application of the 5 A’s framework.

Research Question 9

Do university counseling professionals believe that a discussion with their clients concerning the health effects of religious/spiritual involvement will produce outcomes such as a reduction in health risks and the promotion of recovery?
The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in fewer health risks for clients.

The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in the promotion of recovery for their clients.

The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in clients experiencing a greater sense of interpersonal caring from them.

The majority of university counseling professionals do think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in harm to their clients.

The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in greater professional satisfaction.

There is no statistically significant difference by religious/spiritual involvement of university counseling professional and level of outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religiosity/spirituality.

There is no statistically significant difference by self-rated health status of university counseling professional and level of outcome expectations regarding
the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

9.8: There is no statistically significant relationship between years of professional practice and level of outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

9.9: There is no statistically significant difference by religious affiliation of academic institution and level of outcome expectations concerning the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

9.10: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and level of outcome expectations concerning the application of the 5 A’s framework.

*Research Question 10*

From which sources have university counseling professionals received information or training preparing them to counsel clients on the health effects of religious/spiritual involvement?

10.1: The majority of university counseling professionals will not have received any information from any source preparing them to counsel clients on the health effects of religious/spiritual involvement.
Definitions

A lack of consensus exists with regard to conceptual and operational definitions of religion and spirituality. Definitions of these and related terms are not consistent across studies, and the mixture of terminology can make it difficult to gain an understanding of the literature in this area (Ervin-Cox, Hoffman, & Grimes, 2005). With regard to definitions used in health related literature, Chiu et al. (2004) remarked, “Ambiguous definitions [of religion and spirituality] limit scientific discussion, conceptual exploration, and model development. As a result, the formulation of common assumptions and research foci becomes problematic” (p. 421). Indeed, ambiguous or abstract definitions of religion and spirituality do not lend themselves to straightforward operationalization. Consequently, there have been a number of calls for the specification and standardization of terminology in this area.

Although definitions of religion and spirituality are still a subject of debate, there is at least some agreement about the general boundaries of the terms. In a consensus report of the NIHR, religion and spirituality are both seen as “reflecting the feelings, thoughts, experiences, and behaviors that arise from a search for the sacred” (Hill et al., 1998, p. 21). “Sacred” refers to a divine being, a Higher Power, and/or ultimate reality as perceived by an individual. “Search” refers to the process of identifying, articulating, understanding, and embodying the sacred. In other words, the sacred is not automatically apparent, nor does it necessarily impose itself on a person (George et al., 2000). Therefore, many religious/spiritual traditions emphasize the individual’s responsibility to seek God(s) or a Higher Power (Hill et al., 2000).

Further clarification regarding the constructs of religion and spirituality is
provided below. This is followed by a list of definitions for the terms used in this dissertation.

Religion

According to Plante and Sherman (2001b), most health researchers agree that studies of religious/spiritual involvement should consider several broad dimensions of religiosity. In relation to health, definitions of religiosity have focused on four primary dimensions (George, Ellison, & Larson, 2002):

1. Religious affiliation – e.g., Buddhist, Christian, Hindu, Jewish, Muslim
2. Public religious activities – e.g., attendance at religious services
3. Private religious practices – e.g., prayer or meditation
4. Psychosocial resources – e.g., social support and religious coping.

Such dimensions differ in terms of their emphasis on (a) institutional versus subjective factors, and (b) substantive versus functional perspectives. By some definitions, religion is primarily an institutional entity (public activities), whereas spirituality involves subjective experiences (private practices). The substantive perspective highlights the basic characteristics of religion such as beliefs about God (affiliation) and behaviors such as prayer, whereas the functional approach is concerned with how people make use of religion (e.g., as a means of social support and coping).

Spirituality

Chiu et al. (2004) conducted a thematic analysis of 73 research articles on spirituality that were published in health related journals between January 1990 and September 2000. They identified four essential themes reflected in contemporary definitions of spirituality:
1. *Transcendence* – Spirituality transcends the present context of reality and exists throughout time and space.

2. *Existential reality* – Spirituality constitutes a personal journey to discover meaning and purpose in life. It addresses questions about ultimate meaning, with the idea that there is more to life than we can see or fully understand (Fetzer/NIA, 2003).

3. *Connectedness* – Spirituality not only entails self-understanding and inner strength, it also entails a sense of community.


In sum, spirituality refers to a personal concern with transcendence, meaning, and connectedness (King, Speck, & Thomas, 1999; Lindgren & Coursey, 1995). It was traditionally viewed as an element and major function of organized religion (Elkins, Hedstrom, Hughes, Leaf, & Saunders, 1988). Over the past two decades however, spirituality has been distinguished from religiosity (Plante & Sherman, 2001b; Wuthnow, 1998). This distinction may be attributable in part to a sociocultural shift toward more pluralistic values (Myers, 2000). Specifically, the literature describes a shift away from the term “religion,” as its doctrinal and denominational characteristics connote intolerance or dogma for some members of society (Zinnbauer, Pargament, Cowell, Rye, & Scott, 1997). Hill and Hardeman (2003) suggest that “spirituality” might be the preferred term among contemporary health researchers to the degree that it emphasizes subjective experience. Currently, spirituality is also seen as the more inclusive construct, of which religion may or may not be a part (Pargament, 2002).
Assumptions

Several assumptions underlie the definitions listed in this dissertation for religion, spirituality, and related terms. First, despite conceptual distinctions, religion and spirituality are not independent constructs. Instead, there is considerable overlap between the two (Ervin-Cox et al., 2005). Scott’s (1997) content analysis involving over 70 different definitions of religion and spirituality that appeared in social scientific literature during the 20th century showed that definitions for both terms were evenly distributed across nine content categories. George et al. (2000) pointed to the fact that a large proportion of Americans describe themselves as being both religious and spiritual, “So long as most individuals do not distinguish between religion and spirituality, separating these concepts operationally will be impossible” (p. 104). Hill and Pargament (2003) argued, “The empirical reality is that most people . . . fail to see the distinction between these phenomena. The polarization of religion and spirituality may lead to needless duplication of concepts and measures” (p. 65). Thus, the evidence is that religiosity and spirituality can, and often do, co-occur (Marler & Hathaway, 2002). Consequently, the terms are presented jointly in this dissertation using a “/” (i.e., religion/spirituality, religiosity/spirituality, religious/spiritual, religiously/spiritually). An advantage of this approach is that it reduces the likelihood that terms are used in an overly restrictive manner.

A second assumption underlying the definitions listed in this dissertation is that religion and spirituality entail cognitive, affective, social-psychological, and cultural phenomena (e.g., insights and emotions related to human existence as experienced individually and collectively) (Hill et al., 1998; Zinnbauer & Pargament, 1998).
Third, all forms of religion can be viewed as variations of similar phenomena and therefore all religions are equally valid from a spiritual perspective (Hick, 1999). Although conceptualizations of religion/spirituality in health related studies have predominantly reflected Judeo-Christian frameworks, researchers are addressing the need for alternate conceptualizations that reflect the diversity of religions around the world (Levin, Taylor, & Chatters, 1994). In any case, relevant terminology should be broad enough to apply to many different cultures, belief systems, and religious/spiritual traditions.

Fourth, religion and spirituality are not dichotomous variables. In other words, the terms do not refer to attributes that are either present or absent in a person. Attempts to define religion or spirituality as such are “oversimplified and often misleading” (Miller & Thoresen, 2003, p. 28).

Fifth, religion and spirituality do not refer exclusively to fixed traits or stable characteristics such as religious affiliation (e.g., Christian or Jewish) or denomination (e.g., Catholic or Protestant). While religious affiliation and denomination may be useful for classification purposes, such categories constitute a “serious distortion and depreciation of religion, which overlooks the dynamic, personal quality of religious experience” (Hill et al., 2000, p. 56). Instead, religion and spirituality refer to process-oriented and functional phenomena (i.e., how people think and feel, and what they say or do in a given context) (Thoresen et al., 2001). This clarification is especially important because there is less variation in health outcomes by variables such as religious affiliation and denomination than there is by overt behaviors such as attendance at religious services (Jensen, Johnson, & Wiederhold, 1993).
Sixth, religion and spirituality are complex, multidimensional constructs. Some dimensions of religion/spirituality can be easily observed (e.g., attendance at religious services), whereas other dimensions have latent qualities that are not readily observable (e.g., feeling close to God or a Higher Power) (Thoresen et al., 2001).

Finally, health researchers do not test religious doctrine or theological positions. Instead, they study the medical status and psychosocial functioning of people engaged in religious/spiritual pursuits (Hood, Spilka, Hunsberger, & Gorsuch, 1996; Plante & Sherman, 2001a).

List of Terms

- **Affect** – “A pattern of observable behavior that is the expression of a subjectively experienced feeling state or emotion” (APA, 2000, p. 819).

- **Allostatic load** – The “wear and tear that the body experiences as it tries to maintain homeostasis and optimal physiological levels” (Seybold, 2007, p. 307; see also Maselko, Kubzansky, Kawachi, Seeman, & Berkman, 2007; McEwen & Stellar, 1993).

- **Altruistic activities** – Activities carried out for the benefit of others without the anticipation of external reward (Ritzema, 1979).

- **Anxiety disorders** – Mental disorders involving the “apprehensive anticipation of future danger or misfortune accompanied by feelings of dysphoria or somatic symptoms of tension” (APA, 2000, p. 820).

- **Behavioral medicine** – “The interdisciplinary field concerned with the development and integration of behavioral and biomedical science, knowledge, and techniques relevant to health and illness, and the application thereof to prevention, diagnosis,
treatment, and rehabilitation” (Schwartz & Weiss, 1978, p. 250).

- **Benefit finding** – A process of concluding that one has benefited from the experience of illness (Lechner, Carver, Antoni, Weaver, & Phillips, 2006).

- **Body sanctification** – Ascribing sacred qualities to the physical body (Pargament & Mahoney, 2005).

- **Chaplain** – A clergyperson who provides religious/spiritual services in settings such as hospitals (Galek et al., 2007).

- **Clergy member** – A person ordained for religious service (e.g., minister, rabbi, monk, etc.) (Simpson & Weiner, 2009).

- **College/university counseling center** – A unit that provides mental health services such as diagnostic assessment and counseling/psychotherapy on the campus of a college or university.

- **Compassion (empathy)** – Sharing the suffering of another person with the inclination of providing support (Duriez, 2004; Steffen & Masters, 2005).

- **Confounding variable** – A variable that is related simultaneously with a risk factor and a health outcome, but which is not part of a proposed pathogenic process (Powell, Shahabi, & Thoresen, 2003). For example, age and ethnicity are confounding variables in the relationship between religiosity/spirituality and life expectancy because older people and ethnic minorities are (a) more likely to be religious, and (b) at greater risk for mortality (Ainlay, Royce, & Swigert, 1992). Sex is a confounding variable because women tend to be more religious/spiritual than men, and they tend to live longer than men do (Levin et al., 1994). Functional ability and education are confounders as more functionally able and better educated people are more likely to
(a) attend religious services and (b) live longer (Lantz et al., 1998).

- **Daily religious/spiritual experiences** – Experiences of religion/spirituality in day-to-day life (Underwood & Teresi, 2002).

- **Depression** – A mental disorder involving depressed mood, anhedonia; changes in appetite, weight, and sleep; psychomotor retardation, concentration difficulties; feelings of worthlessness, hopelessness and guilt; and suicidal ideation or suicide attempts (APA, 2000).

- **Distant healing** – “A conscious, dedicated act of meditation or prayer that attempts to benefit another person’s well-being” (Sicher, Targ, Moore, & Smith, 1998, p. 356).

- **Extrinsic religiosity** – Using religion as a means to some other end (e.g., for personal or social benefit) (Pargament, 2002).

- **Faith-based treatment** – Treatment (counseling and psychotherapy) in which clients’ religious/spiritual beliefs and values are actively elicited and explicitly addressed. Faith-based interventions reflect a specific religious/spiritual belief system (Koenig, 2005).

- **Faith-integrated health promotion and disease prevention** – Health services offered as part of a support network within a religious/spiritual context (Catanzaro, Meador, Koenig, Kuchibhatla, & Clipp, 2007).

- **Faith-integrated treatment** – Treatment in which there is a respectful acceptance of clients’ religious/spiritual values, beliefs, and practices (Koenig, 2005).

- **Forgiveness** – Overcoming negative affect/emotion by viewing a transgressor with compassion and kindness (Enright & North, 1998). “The prevention of unforgiving emotions by experiencing strong, positive, love-based emotions as one recalls a
transgression” (Worthington, Berry, & Parrot, 2001, p. 109).

- **General clinical practices with respect to religious/spiritual issues** – e.g., sharing personal religious/spiritual experiences and ideas with clients; supporting clients in their own religious/spiritual beliefs and practices; praying with clients if asked.

- **General perceptions of discussing the health effects of religious/spiritual involvement** – Beliefs about whether university counseling professionals should advise clients about connections between religious/spiritual involvement and better health.

- **Gratitude** – The state of being grateful; thankfulness (Emmons & McCullough, 2004).

- **Guidance on the health effects of religious/spiritual involvement** – (1) conducting a routine assessment of clients’ religious/spiritual involvement, (2) conveying information that could help clients make connections between religious/spiritual involvement and health, (3) reinforcing clients’ existing coping behaviors, health behaviors, and sources of social support, (4) making referrals to community resources as appropriate, and (5) ensuring continuity of care.

- **Healing** – To restore to health and wholeness (Simpson & Weiner, 2009).

- **Health effects of religious/spiritual involvement** – Less stress, anxiety, depression, substance abuse, and suicide; greater subjective well-being and life satisfaction; lower rates of mortality; protection against disease and disability; and enhanced recovery from illness.

- **Health related quality of life** – “A complex construct that encompasses psychological well-being, social functioning, physical symptoms, and functional
capacity” (Sherman & Plante, 2001, p. 385).

- **Health status** – Operationalized for this study using a subscale derived from the Short Form-36 Health Survey (McHorney et al., 1993).

- **Hope** – A wish or desire accompanied by the confident expectation of its fulfillment (Snyder, 2000).

- **Intercessory prayer** – Prayer said on behalf of another person who, in some cases, is a stranger or lives far away (Masters & Spielmans, 2007).

- **Intrinsic religiosity** – Internalized personal faith. Having concern for the quality of one’s personal connectedness with God. Intrinsic religiosity implies a “depth of religiousness” or “religious maturity” (Kirkpatrick & Hood, 1990).

- **Latent construct** – A construct that must be observed through indicators that are not, in and of themselves, equivalent to the construct (Berry, 2005). An “entity that is not observed directly but can be inferred from observations of some of its component dimensions” (Miller & Thoresen, 2003, p. 28).

- **Locus of control** – A generalized belief about the causes of events in one’s life (i.e., whether the causes are within or beyond one’s personal control) (Lazarus, 2000).

- **Meaning in life** – A reassuring sense that life is coherent, orderly, and purposeful (Park & Folkman, 1997).

- **Mechanism** – A variable in the causal path between a risk factor and a health outcome (Berry, 2005).

- **Mediator** – A variable (e.g., attending religious services) that can reduce or eliminate the association between two other variables (e.g., religious denomination and altered risk for mortality), suggesting that the mediator accounts for the relationship (Baron
Meditation – A practice through which one attempts to achieve a deeper state of relaxation and a higher state of consciousness. Meditation may be practiced within or outside a given religious/spiritual tradition, and often involves focusing on a single point of reference (Davidson et al., 2003).

Mental health – “The successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and cope with adversity; from early childhood until late life, mental health is the springboard of thinking and communication skills, learning, emotional growth, resilience, and self esteem” (United States Department of Health and Human Services [USDHHS], 1999).

Mental health parity – Legislation designed such that insurance benefits for mental health conditions cannot be more restrictive than coverage provided for physical conditions (Buchmueller, Cooper, Jacobson, & Zuvekas, 2007).

Mental health professional (clinician, practitioner, provider) – A licensed clinical or counseling psychologist, professional counselor, or clinical social worker who provides mental health services such as diagnostic assessment and counseling/psychotherapy.

Mental health services – “Diagnostic, treatment, and preventive care that helps improve how persons with mental illness feel both physically and emotionally as well as how they interact with other persons. Such services also help persons who have a strong risk of developing a mental illness” (USDHHS, 2000, p. 24). Mental health services include psychotherapy, pharmacotherapy, case management, social and
educational services, and advocacy (Fallot, 1998; Koenig, 2005).

- **Mental illness** – A term that refers to all diagnosable mental disorders. “Conditions characterized by alterations in thinking, mood, or behavior, which are associated with distress and/or impaired functioning and spawn a host of human problems that may include disability, pain, or death” (USDHHS, 2000, p. 3).

- **Moderator** – A variable that specifies conditions under which the direction or strength of an association between two other variables fluctuates (Baron & Kenny, 1986).

- **Multidimensionality** – Requires that dimensions composing a construct of interest be identified, because the construct is sufficiently complex to be unidentifiable by any single dimension (Berry, 2005).

- **Negative religious coping** – Conflict or movement away from religious/spiritual resources in response to a stressor (e.g., blaming God for negative life events, pleading with God for help) (Pargament, Smith, Koenig, & Perez, 1998).

- **Odds ratio** – A ratio of the odds of an event (mortality) occurring in one group (non-religious/non-spiritual people) to the odds of it occurring in another group (religious/spiritual people). \( OR > 1 \) indicates that the event is more likely in the first group. \( OR < 1 \) indicates that the event is less likely in the first group.

- **Optimism** – A tendency or disposition to expect a positive outcome and to focus on hopeful aspects of a situation (Ciarrocchi & Deneke, 2006; Scheier & Carver, 1992).

- **Personality** – “An enduring pattern of perceiving, relating to, and thinking about the environment and oneself” (APA, 2000, p. 826).

- **Place of worship** – e.g., a church, mosque, synagogue, temple, etc.
• **Positive psychology** – The study of ways in which people develop and maintain characteristics such as courage, hope, perseverance, and wisdom in the face of significant stress (Seligman & Csikszentmihalyi, 2000).

• **Positive religious coping** – Movement toward religious resources in response to a stressor (e.g., looking to God for strength, support, and guidance) (Pargament et al., 1998).

• **Prayer** – Communication with God(s) (Masters & Spielmans, 2007).

• **Private/non-organizational religious activities (practices)** – Activities such as praying, reading scriptures, or watching religious television programs that occur outside the context of a religious organization. People typically engage in these activities informally, either alone or with family members in the home (Fetzer/NIA, 2003).

• **Public/organizational religious activities (practices)** – Activities such as volunteering in a religious organization that occur as part of a collective experience in a formal place of worship (Fetzer/NIA, 2003).

• **Recovery** – A strengths based approach to understanding and treating mental illness that emphasizes community reintegration and respect for consumers’ rights and interests. “A journey of healing and transformation enabling a person with a mental health problem to live a meaningful life in a community of his or her choice while striving to achieve his or her full potential” (SAMHSA, 2008). “A personal process of overcoming the negative impact of psychiatric disability despite its continued presence” (ODMH, 2007, n. p.; see also Deegan, 1997).

• **Relative hazard** – A measure of relative risk that represents the strength of
association between a risk factor (lack of religious involvement) and an outcome (disease). Whereas an odds ratio compares the relative odds of an event, RH compares the relative probability of an event.

- For example, \( RH = \frac{\text{the rate of disease in a non-religious group}}{\text{the rate of disease in a religious group}} \)
  - \( RH = 1 \) indicates no relationship (the rate of disease is the same in both groups).
  - \( RH > 1 \) indicates that a religious factor protects against disease (the rate of disease in the non-religious group is higher than that in the religious group).
  - The farther \( RH \) is from 1, the stronger the relationship. For example, \( RH = 1.63 \) (equivalent to a 63% increase from 1.0) is stronger than \( RH = 1.50 \) (a 50% increase from 1.0).

- Alternatively, \( RH = \frac{\text{the rate of disease in a religious group}}{\text{the rate of disease in a non-religious group}} \)
  - \( RH < 1 \) indicates that a religious factor protects against disease (the rate of disease in the religious group is lower than that in the non-religious group).
  - \( RH = 0.5 \) (equivalent to a 50% reduction from 1.0) is stronger than \( RH = 0.8 \) (a 20% reduction from 1.0) (Powell et al., 2003).

- **Religion** – The word religion comes from the Latin root *religio*, which signifies “a bond between humanity and some greater than human power” (Hill et al., 2000, p. 56). Religion refers to the theological beliefs, commitments, practices, and
congregational activities of an organized institution (Plante & Sherman, 2001a).

- **Religiosity** – The extent to which institutionalized religious beliefs and practices play a central role in a person’s life as indicated by a belief in God(s) and activities such as prayer and attendance at religious services (Wink, Larsen, & Dillon, 2005).

- **Religious affiliation** – Membership in or preference for a specific religious group or tradition (e.g., Buddhist, Christian, Hindu, Jewish, Muslim).

- **Religious/spiritual beliefs** – The cognitive dimension of religion/spirituality (e.g., beliefs in God, a Higher Power, an afterlife, etc.) (Schaefer & Gorsuch, 1991).

- **Religious/spiritual commitment** – Adherence to religious/spiritual guidelines (Fetzer/NIA, 2003).

- **Religious/spiritual concerns (discontentment, needs, problems, struggles)** – Distressing experiences that involve loss or questioning of faith, problems associated with conversion to a new faith, or questioning of religious/spiritual values (APA, 2000, p. 741; see also Exline & Rose, 2005).

- **Religious conviction (faith)** – A belief in religious ideas and values that does not rest on logical proof or material evidence (Plante & Sherman, 2001a).

- **Religious coping** – Ways in which religious beliefs and practices are used to cope with stressful experiences, both in daily life and under extraordinary circumstances such as illness or trauma (Pargament, 1997).

- **Religious denomination** – e.g., Catholic or Protestant. This term is sometimes combined with religious affiliation and referred to as “religious preference.”

- **Religious fellowship** – The condition of being together and sharing similar interests and experiences with other members of a religious community (Larson et al., 1998).
• **Religious/spiritual health locus of control** – Refers to the belief that God or a Higher Power has control over one’s personal health status (Lester, Cheng, Song, Choi, & Frisby, 2006).

• **Religious/spiritual history** – Religious/spiritual involvement across the lifespan including religious/spiritual upbringing, the duration of participation in religious/spiritual groups, and life changing religious/spiritual experiences (Larson et al., 1998).

• **Religious/spiritual involvement** – An umbrella term that may refer to any combination of religious/spiritual activities, beliefs, experiences, practices, and values (e.g., attendance at religious services, prayer or meditation, the provision and receipt of social support in a religious/spiritual context; attitudes of compassion, forgiveness, gratitude, hope, and optimism; religious coping, etc.).

• **Religiousness** – The “theistic beliefs, practices, and feelings that are often, but not always, expressed institutionally and denominationally” (Richards & Bergin, 2000, p. 13).

• **Religious orientation** – A tendency to use religion as an “overarching framework that orients one to the world and provides motivation and direction for living” (Hill & Pargament, 2008, p. 7).

• **Religious salience** – The subjective degree of importance placed on religion (Hill & Pargament, 2008).

• **Religious services** – This term generally refers to worship services held weekly (e.g., Sunday mass at a Catholic church), but in a broader sense includes other ceremonies such as baptisms, confirmations, weddings, funerals, etc.
- **Religious support** – Tangible and intangible forms of social support offered by members of one’s religious community.

- **Religious/spiritual values** – e.g., (a) a sense of meaning and in life, (b) a vision for the betterment of the world, (c) an altruistic attitude toward others, (d) a balanced appreciation of material values, and (e) an awareness of the tragic side of life (Elkins et al., 1988).

- **Right mindfulness** – A state of ultimate happiness or nirvana according to Buddhist philosophy (Cattan & Tillford, 2006).

- **Sacred** – Refers to a divine being, a Higher Power, and/or ultimate reality as perceived by an individual (George et al., 2000).

- **Search** – Refers to the process of identifying, articulating, understanding, and embodying the sacred (Hill et al., 2000).

- **Secular treatment** – Treatment that is not provided in a religious/spiritual context.

- **Self-reported religiosity** – The extent to which a person indicates that institutionalized religious beliefs and practices play a central role in his or her life (Wink et al., 2005).

- **Self-reported spirituality** – The extent to which a person indicates that non-institutionalized spiritual beliefs and practices play a central role in his or her life (Moberg, 2002; Shahabi et al., 2002; Woods & Ironson, 1999).

- **Social network** – “A person centered web of social relationships” (Heany & Israel, 2002, p. 187).

- **Social support** – “Aid and assistance exchanged through social relationships and interpersonal transactions” (Heany & Israel, 2002, p. 187). Social support might
entail expressions of caring, empathy, love, and trust (emotional support); tangible aid and service (instrumental support); or advice, suggestions, and information (informational support).

- **Sources of information/training** – e.g., professional journals, continuing education, conferences, etc.

- **Spirituality** – The word spirituality is derived from the Latin root *spiritus*, which means breath of life. The animating or vital features of life that are distinct from the body or tangible material things (Simpson & Weiner, 2009). The transcendent and emotional qualities of life in relation to ultimate meaning (Frankl, 2000). A sense of connectedness with God(s), nature, or a Higher Power (Richards & Bergin, 2000).

- **Stress** – The inability to cope with perceived or actual threats to one’s physical, mental, or spiritual well-being, which results in a series of physiological responses and adaptations (Lazarus, 1999).

- **Substance abuse** – “A maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances” (APA, 2000, p. 191).

- **Transcendence** – An awareness or perspective that extends beyond ordinary physical boundaries (Chiu et al., 2004).

- **University counseling professional** – A mental health professional who practices at a college/university counseling center.

- **Well-being** – Refers to various general conceptions of positive mental health including positive affect/emotion and life satisfaction (Robbins & Kliwer, 2000). Positive aspects of functioning promoted by strong attachment relationships; age-
appropriate cognitive, interpersonal, and coping skills; and empowering environments (Diener, Sus, Lucas, & Smith, 1999).

Delimitations

This study is delimited to:

- a national cross-section of mental health professionals (i.e., licensed psychologists, professional counselors, and social workers). Findings may not represent the views of mental health professionals from other disciplines (e.g., psychiatrists).

- mental health professionals in practice at college or university counseling centers. Findings may not represent the views of mental health professionals who practice in other settings.

- mental health professionals who do not serve as Director of the counseling center in which they practice. This delimitation controlled for the possibility that directors would provide socially desirable responses.

- colleges and universities in the United States. Results may not be typical of colleges and universities outside the United States.

- colleges and universities recognized by the Carnegie Foundation (2008) that offer at least a Baccalaureate degree. This includes theological seminaries, medical schools, and schools in the health professions, but does not include Associate’s colleges and specialized institutions (i.e., schools of art, design, business, engineering, law, music, and technology). This delimitation allowed the researcher to classify academic institutions by geographic region, size, and religious affiliation for the purpose of data analysis.
counseling centers that appear on the Association for University and College Counseling Center Directors membership list (2008). Findings may not represent the views of clinicians from non-member centers.

Limitations

The limitations of this study should be considered in the interpretation of its findings:

- The cross-sectional design limits the ability to derive causal inferences.
- To the degree that non-respondents are significantly different from respondents in terms of their perceptions and practices, a threat to external validity is present (i.e., non-response bias). However, the return rate in this study was adequate (52%), and a series of analyses showed that non-respondents did not differ significantly from respondents on a number of relevant variables.
- The self-reported data are subject to recall bias and social desirability.
- The monothematic nature of the survey instrument may have influenced the respondents by creating a unique mindset concerning the provision of guidance on the health effects of religious/spiritual involvement.
- The survey instrument designed for this study is closed in format/structure and therefore may not list all of the perceptions that could influence the dependent variables. To the extent that important items are not listed on the questionnaire, systematic bias to the internal validity of the findings is present (i.e., measurement error). It should be noted, however, that the instrument was reviewed for content by a panel of experts in the area of religion/spirituality and health. Moreover, several respondents supplied additional handwritten comments on their surveys,
which proved to be quite useful for the discussion.

Overview of Contents

This dissertation consists of five chapters. An introduction to the research problem and a statement of purpose, as well as a list of research questions, variables, hypotheses, and definitions has been provided in Chapter One. Chapter Two consists of a comprehensive literature review, wherein further background is established concerning the research topic. A description of the research methods utilized for this study is provided in Chapter Three. The results of the study are presented in Chapter Four. Relevant conclusions, implications, and recommendations are discussed in Chapter Five.
Chapter Two

Literature Review

The purpose of this chapter is to provide a comprehensive literature review in the area of religion/spirituality and health. This chapter is divided into eleven major sections. The first section contains information regarding the religious/spiritual involvement of persons in the United States. Section two addresses the burden of mental illness in the United States, as well as the interrelationship between mental health and physical health. Section three establishes additional background by considering religion/spirituality and health in a cultural and historical context. Characteristics of the contemporary research literature on religion/spirituality and health are described in section four. Sections five and six focus on the potential outcomes of religious/spiritual involvement for mental and physical health. In section seven, various models of the relationship between religion/spirituality, mental health, and physical health are presented. Section eight explores specific behavioral, psychosocial, and physiological mechanisms that help to explain how the relationship between religion/spirituality and health occurs. In section nine, the influence of health on religiosity/spirituality is considered (i.e., relationships in this area are reciprocal). Finally, sections ten and eleven address a number of measurement issues and methodological concerns in the study of religion/spirituality and health.

The following questions will be addressed in this literature review:

• What is the prevalence and distribution of religious/spiritual involvement in the United States?
• How might the prevalence and burden of mental illness in the United States be summarized?

• How might the interrelationship between mental health and physical health be summarized?

• What cultural factors are involved with religion/spirituality as it relates to health?

• What are some of the significant historical events in the study of religion/spirituality and health?

• How might the contemporary research literature on religion/spirituality and health be characterized? (e.g., What are the key resources?, Which populations have been studied?, Which dimensions of religion/spirituality have been examined?, Which indicators of health status are typically employed?, What type of research designs have been utilized?, Which covariates have been controlled for in the data analyses?, etc.)

• Do people who are religiously/spiritually involved tend to experience better mental health?

• Is religious/spiritual involvement associated with altered risk for morbidity and mortality?

• Does religiosity/spirituality influence the way people adapt to or recover from physical illness?

• Could religiosity/spirituality be harmful to one’s health?

• Which psychosocial factors could account for the relationships observed between religion/spirituality and health? (e.g., Does religiosity/spirituality influence the way people experience emotion or cope with stress?)
• Does religiosity/spirituality play a role in health behavior?
• How might religious/spiritual factors affect physiological functioning?
• How does the experience of illness or disability affect one’s religiousness/spirituality?
• How is religion/spirituality typically measured? Which instruments are available for this purpose? What are the psychometric properties of these instruments?
• How might researchers maintain the methodological quality of studies involving religion/spirituality and health?

Religion/Spirituality in the United States

Prevalence Data

Gallup polls show that 93% of Americans profess a belief in God(s) or a Higher Power. This figure has never dropped below 90% during the past 50 years. Additionally, 89% of Americans report some affiliation with religion and/or acknowledge a need for spiritual growth; 83% indicate that religion is an “important part” of their life; 75% pray at least once a week (58% pray once per day); 62% are members of a church, mosque, or synagogue; and 55% attend religious services at least once a month (42% attend religious services once a week or more). The majority (72%) of religiously/spiritually affiliated persons in the United States are Christian (i.e., 49% Protestant and 23% Catholic). The remaining proportion is either Jewish (2%), Mormon (1%), non-denominational (12%), or “other” (12%) (Gallup Organization, 2007).

Demographic Information

Sex. Women tend to report higher levels of religious faith and spiritual conviction than men do. Specifically, women are more likely to be members of a church or
synagogue, more likely to take part in religious/spiritual activities, and more likely to pray (Wink & Dillon, 2002).

*Age*. People tend to experience an increase in religiosity/spirituality between middle and late adulthood. Thus, compared to their younger counterparts, older adults tend to report higher levels of religious/spiritual involvement. In fact, surveys have shown that up to 50% of elderly persons in the United States attend religious services at least once a week (Levin et al., 1994; McFadden, 1995).

*Race/ethnicity*. In general, religious/spiritual commitment tends to be stronger among racial/ethnic/cultural minorities. The level of religious/spiritual involvement among African-Americans, for example, has been shown to exceed that observed among European-Americans (Levin et al., 1994).

*Socioeconomic status*. Religious/spiritual commitment tends to be stronger among persons who are less educated and less wealthy (Gallup Organization, 2007).

*Geographic region*. A state-by-state analysis of religious/spiritual affiliation showed that the southern states are largely Protestant. The highest proportions of Protestants were found in Alabama, Mississippi, and West Virginia. New England is largely Catholic. In fact, Rhode Island has a higher proportion of Catholic residents than any other state in the country. Residents of New York and New Jersey are predominantly Jewish. The northwestern states, particularly Idaho, Oregon, and Washington, have the highest proportion of non-religious/non-spiritual residents (Gallup Organization, 2007).

*Mental Health in the United States*

*Prevalence Data*

Approximately one out of every four adults in the United States meets the *DSM-*
IV criteria for a mental disorder (USDHHS, 2000). This corresponds to roughly 22 percent of the adult population, or 40 million people (Center for Mental Health Services [CMHS], 2006). The lifetime prevalence of mental disorders was recently estimated at 50% of the general population (Kessler & Wang, 2008). The highest rate of mental illness in the United States exists among persons aged 18 to 25 (SAMHSA, 2003).

Mental disorders occur among people from all racial/ethnic groups, socioeconomic levels, and geographic regions. Genetic, biological, social, and environmental factors interact in the etiology of mental illness. Variables that influence the prevalence and course of mental disorders include sex, age, family environment, social environment, low educational attainment, unemployment, poverty, deprivation, homelessness, racism, and major physical illness (World Health Organization [WHO], 2001).

Anxiety and depression are among the most commonly occurring mental disorders. To be exact, Generalized Anxiety Disorder (GAD), Obsessive-Compulsive Disorder (OCD), Panic Disorder, Post-Traumatic Stress Disorder (PTSD), and Specific Phobias affect more than 19 million adults in the United States each year (USDHHS, 2000). In addition, approximately 6% of men and 10% of women will experience a major depressive episode during any given year. In fact, Major Depressive Disorder is now the leading cause of disability among adults in developed nations (WHO, 2001). One study found that depression doubled among college students in the Midwest over a 13-year period (Benton et al., 2004). Consistent with this observation, 81% of university counseling center directors in a recent national survey reported that they were seeing more students with serious mental health concerns compared to the previous five years.
The increasing levels of anxiety and depression in the United States have been attributed in part to the accelerated pace of life and the lack of time to develop and maintain satisfying interpersonal relationships. Thoresen (1998) suggested that religion/spirituality can provide a viable means of addressing anxiety and depression.

The Burden of Mental Illness

Despite the availability of effective treatments for mental illness (i.e., receiving treatment is superior to not receiving treatment in approximately 80% of cases), only about two-thirds of Americans who experience mental health problems seek professional help. Moreover, there is no diagnostic category of mental illness for which the majority of afflicted persons in the United States receive professional help (Chambless, 2007; Goodwin, Hoven, Lyons, & Stein, 2002; Wampold, 2000). Correspondingly, mental illness has a significant impact on individuals and communities. Among the effects of mental illness are the pain of stigma, discrimination, lost opportunities, decreased productivity, disruption of life activities, and diminished quality of life, not to mention attempted and completed suicide (Corrigan, Markowitz, & Watson, 2004; Mendlowicz & Stein, 2000; WHO, 2001). In fact, as many as 80% of individuals who engage in suicide related behaviors meet the DSM-IV criteria for a mental disorder (Kessler, Berglund, Borges, Nock, & Wang, 2005).

Mental illness accounts for 2.9% of total Disability Adjusted Life Years (DALY). This is greater than the 2.8% DALY for cardiovascular disease, the leading cause of death in the United States. Persons with mental illness die an average of 8.8 years prematurely (i.e., 14.1 years of life is lost due to premature death for men and 5.7 YPLL
for women (Dembling, Chen, & Vachon, 1999; Dickey, Dembling, Azeni, & Normand, 2004; Leff et al., 2004).

Direct costs for the treatment of mental illness including hospitalizations and medications total some $67 billion annually. Indirect costs include $63 billion in lost productivity (e.g., $12 billion due to premature death including suicide; $11 billion in Social Security Disability Insurance benefits paid to 1.3 million people; $11 billion in Supplemental Security Income benefits paid to 2 million people), as well as $6 billion for the incarceration of more than 250,000 inmates with mental illness (USDHHS, 2000).

Developments such as the appointment, investigation, and report of former President George W. Bush’s New Freedom Commission have called attention to the significant burden of mental illness, and deemed improvements in mental health care as a national priority (Iglehart, 2004). Other positive developments include the implementation of partial to full mental health parity in all but two of the 50 United States (Buchmueller et al., 2007). Such legislation has the potential to moderate the false dichotomy that has been perpetuated between physical and mental illness.

Relationships with Physical Health

The World Health Organization’s (2001) report entitled Mental Health: New Understanding, New Hope emphasizes “how inseparable mental and physical health are, and how their influence on each other is complex and profound.” Indeed, mental health is “fundamentally interconnected with physical functioning” (WHO, 2001, p. ix, 5). Over the past twenty years, evidence from behavioral medicine has consistently demonstrated this interconnection. Just one of many illustrations of the mind-body interaction is the negative impact of emotional distress on physical health (Lazarus, 2000). Depression, for
example, is predictive of heart disease (Smith, Kendall, & Keefe, 2002).

In sum, our thoughts, feelings, and behaviors have a tremendous influence on physical health. Equally, poor physical health has a significant impact on mental health. Thus, a prevailing theme of this chapter is that religious/spiritual involvement could help to address the burden of mental illness and physical illness.

**Contextual Influences on Religion/Spirituality and Health**

**Culture**

Cultures from ancient to modern times have viewed health and illness as being directly related to a variety of religious/spiritual beliefs and practices (Rosen, 1993). Across cultures, religion/spirituality is closely tied to the concept of healing, which is an integral part of health (Levin, 2001; Rayburn, 2004). In some Eastern cultures, for example, the sick and disabled seek out a “faith healer” (Easterbrook, 1999). In Western cultures, faith communities were once the primary organization that cared for the sick and needy. In the United States, religious/spiritual organizations were among the first to provide services for persons living with mental illness (Koenig & Larson, 2001; Larimore, 2001). Several religious/spiritual groups in the United States now support the spiritual healing movement, which borrows practices from Eastern cultures as well as various Western traditions (Ervin-Cox et al., 2005).

Although a detailed review of specific cultures and religions is beyond the scope of this chapter, it should be noted that the experience of health and illness is informed by a variety of religious/spiritual traditions around the world (Smith, 1991; see also Koenig, 2007c, for a discussion of specific religious/spiritual traditions with respect to birth and contraception, dietary requirements, death and dying, etc.). For example, the general
belief in Islam is that health is achieved by maintaining a balance between the body’s desire for physical pleasure on the one hand, and adherence to Islamic values on the other. According to Islam, the purification of thought brings people closer to God which, in effect, keeps them healthy. Similarly, health is thought to involve an appropriate balance between the mind, body, and soul in Hinduism. More specifically, it is believed that an unhealthy mind contributes to diseases of the body, even if the soul is pure. Likewise, “right mindfulness” is seen as a necessary precursor to health according to Buddhist philosophy. In Christianity, true health implies that one has the “right relationship” with God (Cattan & Tillford, 2006).

History

**Historical figures.** Social scientists, physicians, and psychologists have actually been addressing issues of religion/spirituality and health for over 100 years. In the late 1800s, Sir Francis Galton made statistical inquiries into the health of missionaries (McCormick, 2004). Johns Hopkins physician and founder of modern cardiology Sir William Osler (1910) wrote about the “power of faith” and advised physicians to utilize patients’ belief in God as a healing factor in medical treatment. William James (1902/1985) commented on the role of religion in overall health. Carl Jung (1933) suggested that spirituality was necessary for psychological health. Victor Frankl advocated for an approach to mental health that embraces the spiritual nature of life in *Man’s Search for Meaning*, which he first published in 1946 (Frankl, 2000). Gordon Allport (1950) identified religious/spiritual factors as a major source of human motivation, and introduced the ideas of intrinsic and extrinsic religiosity. Namely, Allport described two distinct styles of religious involvement: (1) *intrinsic* (i.e., having concern
for the quality of one’s personal faith and connection with God), and (2) extrinsic (e.g.,
experiencing religion by making social connections within one’s congregation, serving
on church committees, etc.). Allport also developed one of the first quantitative measures
of religiosity, the Religious Orientation Scale, which served as an impetus for the study
of individual differences in religion/spirituality and health.

Early research studies. Studies of possible connections between religion/
spirituality and health began to appear during the early 20th century. At that time,
religiosity/spirituality was often measured categorically in the form of denominational
membership. Thus, initial observations in this area were of relationships between
religious denomination and disease. Eventually, researchers moved away from religious
denomination and began to examine the influence of specific religious/spiritual behaviors
on physical and mental health. For this purpose, religion/spirituality was typically
operationalized through behavioral frequency counts such as the number of times a
person attended religious services per month or the amount of time a person spent
praying per week (Berry, 2005).

During the 1970s and 1980s, several controlled empirical studies were conducted
in the area of religion/spirituality and health. A widely cited study of over 50,000 adults
found that people who attended religious services more frequently had lower relative risk
for cardiovascular disease and anxiety, even after controlling for sex, age, race, marital
status, and smoking (Comstock & Partridge, 1972). Religious service attendance was also
examined in relation to all-cause mortality. One study found that death rates among
members of the Seventh Day Adventist Church in California were lower than those
among other Californians (Phillips, Lemon, Beeson, & Kuzma, 1978). In a related study,
the rate of death from cancer was 50% lower for Seventh Day Adventists than it was for non-smoking Californians (Phillips, Kuzma, Beeson, Lotz, 1980). Similar findings were reported in studies involving members of the Amish community (Hammond, Barancik, & Lilienfeld, 1981).

As Comstock and Partridge (1972) originally noted however, attendance at religious services was not seen as influencing health directly. Instead, it was regarded as a nonspecific factor in diminishing disease. Consequently, researchers undertook examinations of more specific behavioral and psychosocial factors that could help to explain the relationship between religious service attendance and health. For example, perhaps religious/spiritual people spent more time in social contact and followed rules in relation to healthy behaviors due to the opportunities and expectations provided by their religious/spiritual community. The recognition of such factors represented a more advanced approach to the study of religion/spirituality and health (Thoresen et al., 2001).

*Paradigm shift.* Although research in the area of religion/spirituality and health has existed for more than a century, Levin (1994) suggested that it did not officially “catch on” among social and biomedical scientists until the early 1990s. It was during this time that research initiatives were launched within the NIH. Such initiatives included extramural programs of the National Center for Complementary and Alternative Medicine and the National Institute on Aging (Miller & Thoresen, 2003).

A possible explanation for the delay described by Levin (1994) is the fact that, historically, science and religion were regarded as separate domains (H. Aguinis & M. Aguinis, 1995). The philosophical assumptions of materialism and empiricism suggested that religion could not, and should not, be studied scientifically (Miller & Thoresen,
While the body was viewed as being an appropriate focus for science, the soul was left to the church. Accordingly, religious faith was a controversial issue for physicians during the late 19th century, and many physicians disregarded religion/spirituality altogether (Plante & Sherman, 2001b).

In the areas of psychiatry and clinical psychology, attitudes toward religion were originally quite pessimistic. After all, mental illness was once thought to result from demon possession. (Reports that equate psychopathology with demon possession or imply that exorcism is an effective treatment for psychosis have “apparently fallen off over the years” [Koenig, 2005, p. 118]). During the early to mid 20th century, religion was regarded by some as (a) a fantasy derived from unconscious wishes for protection, (b) a way to assuage guilt over sexual or aggressive impulses and a consolation for not acting on these, (c) a means of repressing death anxiety, and (d) a set of irrational beliefs that contributed to emotional disturbances (Ellis, 1971; Freud, 1927/1961, as cited in Paloutzian & Park, 1997). As recently as 1980, religious/spiritual influences had been completely removed from psychiatric services offered at a number of prominent hospitals in the United States (Koenig).

Thus, the interest in relationships between religion/spirituality and health that has emerged over the past several decades represents a significant paradigm shift (Plante & Sherman, 2001b). Such a shift is consistent with Engel’s (1977) call for the biopsychosocial model, in which he challenged Cartesian views that separate mind, body, and spirit. Indeed, the medical model has since given way to broader considerations concerning the psychological, social, environmental, and behavioral determinants of health—including religiosity/spirituality (Hawks, 1994; Hoffman & Driscoll, 2000;
Masters, 2007; Ryff & Singer, 1998). As Smith (2001) observed, “despite common wisdom which encourages us to avoid discussions of religion in many settings for fear of the deeply held differences of opinion that may emerge—in polite company, we should stick to safer topics—the discussion of religious faith and health is open and active” (p. 356).

Societal Trends

Contemporary interest in relationships between religion/spirituality and health could also reflect a number of societal trends (Johnstone, 1997; McGwire, 1993). First, the large proportion (83%) of Americans who identify religion/spirituality as an important aspect of life implies that careful attention to religious/spiritual issues in clinical research and practice is a worthwhile goal (Gallup Organization, 2007).

Second, the ever greater levels of stress experienced by Americans (such as that induced by the recent economic downturn) and the negative effects of stress on health, coupled with the potential for religion/spirituality to be utilized as a coping resource, have created considerable interest in this area (Koenig, 2008b). This is noteworthy given the fact that relatively little progress has been made toward the Healthy People 2010 objectives involving chronic stress exposure and coping behaviors.

Third, Koenig (2008a) points to the rapid growth of the elderly population and the issue of providing health care for increasing numbers of people. With less abundant resources and rising treatment costs, the care of people who are physically or mentally ill has increasingly fallen to the community. This has implications for collaboration between the health care arena and religiously/spiritually-oriented community organizations in terms of early detection, disease prevention, and the direct provision of services.
Moreover, religiously/spiritually-sensitive health care practices and concurrent religious/spiritual involvement may reduce the demand for services and contribute to lower rates of consumption. According to Koenig (2007c), this could moderate the economic costs of chronic disease and disability: “As health care systems learn about connections between religion and health, and if future studies demonstrate that addressing spiritual needs improves health outcomes, reduces service use, and improves patient satisfaction, then perhaps health professionals and health care systems will be compensated for the extra time spent inquiring about these issues, a practice that, in the long run, may result in better care at lower cost” (p. 107).

Overview of the Research Literature

Key Resources

The literature on religion/spirituality and health “spans an enormously broad terrain” (Sherman & Plante, 2001, p. 381). Indeed, this is a vast area that by some estimates includes anywhere from 1,600 to 3,000 publications (Koenig, 2008b). Currently, there are at least nine academic journals that deal specifically with relationships between religion/spirituality and some aspect of health (e.g., Journal of Religion and Health). Relevant articles have appeared in American Journal of Physical Medicine and Rehabilitation, American Psychologist, Annals of Behavioral Medicine, Counseling and Values, Health Education and Behavior, Journal of Health Psychology, Journal for the Scientific Study of Religion, and Psycho-Oncology.

Perhaps the most extensive work on religion/spirituality and health published to date is the edited textbook entitled Handbook of Religion and Health (Koenig et al., 2001). Dr. Harold Koenig, psychiatrist and Founder of the Center for Spirituality,
Theology, and Health at Duke University Medical Center, has published several related books entitled *Is Religion Good for Your Health?* (1999a), *The Healing Power of Faith* (1999b), *Faith and Mental Health* (2005), *Spirituality in Patient Care* (2007c), and *Medicine, Religion, and Health* (2008a). Other key resources include (a) the comprehensive edited textbook entitled *Faith and Health* (Plante & Sherman, 2001a), (b) a consensus report of the NIHR entitled *Scientific Research on Spirituality and Health* (Larson et al., 1998), and (c) a report published by the Fetzer Institute and National Institute on Aging entitled *Multidimensional Measurement of Religiousness/Spirituality for use in Health Research* (2003).

**Patterns and Consensus**

The dominant pattern in the literature is one in which religious/spiritual involvement has a positive, rather than negative, influence on health. The sheer volume and consistency of research findings in this area is strongly suggestive of that direction. In fact, over 35 separate reviews have all concluded that the health benefits of religious/spiritual involvement outweigh the risks (Matthews et al., 1998). For example, Koenig et al. (2001) examined 100 studies that addressed the relationship between religiosity/spirituality and well-being. The vast majority (79%) of studies found a positive relationship; 13% found no relationship (Koenig et al. suggested that these studies also involved poor research designs and/or small samples); 7% found a complex relationship (e.g., there was evidence of advantages and disadvantages to some forms of religion); and only 1% found a negative relationship. Thus, studies that have identified harmful effects of religious/spiritual involvement are in the distinct minority.
Typical Research Designs

The vast majority of research conducted in the area of religion/spirituality and health has been epidemiological in nature (i.e., it consists of studies conducted among large community samples followed over time to see if religious/spiritual factors predict health status while controlling for many other health related variables). The balance of studies have been cross-sectional and correlational. Such studies typically examine religious/spiritual factors as independent predictors or moderators of health status. Of course, prediction does not imply causation. It has been suggested that experimental studies, which could establish causal relationships, are less prevalent in this area due to the inherent difficulty of manipulating religious/spiritual variables (Worthington, Kurusu, McCullough, & Sandage, 1996). In any case, the following sections of this dissertation describe empirical evidence for a “nonrandom” and “nontrivial” association between religious/spiritual factors and health (Thoresen & Harris, 2002, p. 7). The relationships reported here are based on well-controlled research studies and were found to be statistically significant unless otherwise noted.

Mental Health Outcomes of Religious/Spiritual Involvement

Religious/spiritual involvement has been associated with greater mental health and well-being. Such involvement has been shown to (a) prevent the onset of mental health problems, and (b) promote recovery among persons who are experiencing mental illness (Koenig & Larson, 2001). More specific outcomes of religious/spiritual involvement for mental health are discussed in the following sections.

Reduction in Anxiety

Koenig and Larson (2001) reviewed 76 cross-sectional studies that examined
relationships between religion/spirituality and anxiety, including GAD, OCD, Panic Disorder, PTSD, and Specific Phobias. The findings were mixed: 35 studies found lower anxiety among persons who were more religious/spiritual; 24 studies found no relationship between religiosity/spirituality and anxiety; and 10 studies found greater anxiety among people who were more religious/spiritual (see also Koenig, Ford, George, Blazer, & Meador, 1993; Trenholm, Trent, & Compton, 1998). Four out of the five longitudinal studies that examined the relationship between religion/spirituality and anxiety prior to the year 2000 found that people who are more religious/spiritual tend to experience less anxiety over time (Koenig, 2005). In other studies, perceiving God as benevolent and loving was associated with lower levels of trait anxiety (Shaeffer & Gorsuch, 1993). Religious/spiritual involvement has also been shown to buffer the effects of state anxiety (Hughes et al., 2004). Still other studies involving more than 3,500 women and 2,000 men who were receiving mental health services through the Veterans Administration found that high religious service attendance predicted better mental health and fewer symptoms of PTSD among trauma victims (Chang, Skinner, & Boehmer, 2001; Chang, Skinner, Zhou, & Kazis, 2003). It has been suggested that religious/spiritual involvement can moderate anxiety through the sense of comfort and control it offers. The possibility that religiosity/spirituality may cause or exacerbate anxiety will be considered in a subsequent section of this dissertation.

Lower Severity and Faster Remission of Depression

The most widely researched area in relation to religion/spirituality and mental health is depression (Meador et al., 1992; Koenig, George, & Peterson, 1998). In a recent meta-analysis of 147 studies ($N = 98,975$) pertaining to religion/spirituality and
depression, the average effect size was $r = -0.10$ (Smith, McCullough, & Poll, 2003). Although this effect might seem quite small, it is equivalent to the effect size for gender in other meta-analyses of depression studies.

A number of religious/spiritual factors (e.g., lower intrinsic religiosity, less religious service attendance, less prayer, and less scripture reading) are significantly and inversely associated with depressive symptoms (Alderete, Juarbe, Kaplan, Pasick, & Perez-Stable, 2006; Koenig, 2007a; Lonczak, Clifasefi, Marlatt, Blume, & Donovan, 2006; Murphy, Ciarrocchi, Piedmont, Cheston, & Peyrot, 2000). A recent longitudinal study found that religiousness/spirituality buffered against depression associated with poor physical health in later life (Wink et al., 2005). In a related study, Koenig (2007b) examined the influence of religiosity/spirituality on time to remission of depression among medical inpatients over the age of 50 ($N = 1,000$). The combination of high intrinsic religiosity, frequent religious service attendance, and frequent prayer predicted a 53% increase in speed of remission. Thus, patients who are religious/spiritual by multiple indicators tend to experience less severity and faster remission of depression.

Less Substance Abuse

The literature on religion/spirituality and substance abuse is comprised of approximately 140 studies, 90% of which have found lower rates of substance abuse among people who are more religious/spiritual. The National Center on Addiction and Substance Abuse conducted a two-year study and found that adults and teens who (a) attend religious services on a weekly basis, and (b) indicate that religion/spirituality is “very important” in their lives are far less likely to smoke cigarettes, abuse alcohol, and take illegal drugs (Koenig, 2005).
Lower Rates of Suicide

Koenig & Larson (2001) identified 68 studies that examined the relationship between religiousness/spirituality and suicide. The vast majority (84%) of these studies found lower rates of suicide and/or more negative attitudes toward suicide among people who were more religious/spiritual. For example, terminally ill patients in one study who indicated higher levels of spiritual well-being also tended to report significantly less suicidal ideation (McClain, Rosenfeld, & Breitbart, 2003). In a separate study involving nearly 400 psychiatric inpatients who had been diagnosed with major depression, lack of religious/spiritual affiliation was associated with a significantly higher number of lifetime suicide attempts. Non-religiously/spiritually affiliated patients in the same study reported fewer reasons for living and fewer moral objections to suicide (Dervic et al., 2004). In other research, more than 1,000 adolescents were asked to rate the probability that they would die by suicide. After controlling for several known suicide risk factors, religious/spiritual beliefs emerged as the strongest inverse predictor of self-rated likelihood of death by suicide (Greening & Stoppelbein, 2002).

Improved Cognitive Functioning

Still other studies have examined the influence of religiosity/spirituality on the rate of cognitive decline in Alzheimer’s disease. Controlling for age, sex, education, and baseline cognitive functioning, Alzheimer’s patients in one study who scored higher on private religious/spiritual practices showed a significantly slower rate of cognitive decline. In fact, 17% of the variance in cognitive decline was explainable by private religious/spiritual practices (Kaufman, Anaki, Binns, & Freedman, 2007). In a related study, religiousness/spirituality was shown to predict better cognitive functioning among
general medical patients over the age of 50 (Koenig, George, Titus, & Meador, 2004).

Harmful Effects

The vast majority of research has shown that religious/spiritual involvement is beneficial for mental health (Koenig & Larson, 2001). To be exact, only 6% of the 850 studies reviewed by Koenig et al. (2001) found poorer mental health among people who were more religious/spiritual. Thus, it is no longer justifiable to equate religion/spirituality with psychopathology as it once was (Schumaker, 1992).

Nevertheless, some features of religiosity/spirituality may have adverse effects on mental health. For example, fears of retribution concerning real or imagined sins; thoughts of Hell and the devil; dogmatic thinking, ritualistic prayer, intense mysticism, obedience to a single charismatic leader, and even watching religious/spiritual television shows or listening to religious/spiritual programs on the radio have been associated with poorer mental health (e.g., exaggerated guilt, excessive dependency, obsessional thinking, compulsive behaviors, and perfectionism) (Glik, 1990; Koenig, George, & Titus, 2004; Steketee, Quay, & White, 1991; Yossifova & Loewenthal, 1999). Pruyser (1997) noted that aspects of religion/spirituality that have been used to justify discrimination, hatred, hypocrisy, prejudice, and self-righteousness may lead to “virtuous strivings” and/or a sense of personal condemnation. People who perceive God as being impersonal and unpredictable tend to report feelings of being punished by God (Larson & Larson, 2003). They are also more likely to struggle with poor self esteem, loneliness, anxiety, and suicidality (Exline, 2002; Exline, Yali, & Lobel, 1999; Richards, Smith, & Davis, 1991; Schwab & Peterson, 1990).

Some religious/spiritual orientations may be more harmful to mental health than
others. For example, although intrinsically motivated religion has consistently been associated with greater subjective well-being, *extrinsic* religiosity is negatively associated with well-being. Individuals with high extrinsic religiosity are more likely to see negative life events as being beyond their personal control. Consequently, they might experience higher levels of psychological distress. In one study, participants who tended to use religion/spirituality for their own self-interest or personal gain were more likely to experience depression. This effect remained significant after controlling for educational level, employment status, and marital status (Parks & Murgatroyd, 1998).

*Treatment issues.* Whereas some studies suggest that religious/spiritual persons may delay seeking treatment for mental health concerns (Moss, Fleck, & Strakowski, 2006), other studies have found that religiosity/spirituality is positively associated with the *utilization* of available outpatient mental health care (*N* = 49,902 from the 2001-2003 National Survey on Drug Use and Health) (Harris, Edlund, & Larson, 2006). In either case, religion/spirituality may be closely tied to a patient or client’s manner of relating in the world. Consequently, religion/spirituality can become “hopelessly entangled in the psychotherapeutic relationship and lead to arguments or other therapeutically unhelpful interactions” (Koenig, 2007c, p. 165). Koenig (2005) observed that patients and clients might utilize religion/spirituality as a defense during psychotherapy (e.g., to avoid making changes that provoke anxiety but are nevertheless necessary for personal growth). Thus, religious/spiritual beliefs may block important insights that could help clients change maladaptive patterns and achieve greater intimacy in their relationships with others. For these reasons, discussions between university counseling professionals and clients on the topic of religion/spirituality and health may need to touch not only on the
positive effects of religious/spiritual involvement, but also on the potentially harmful effects thereof.

Future Directions

A number of important directions for future research have been identified in relation to religion/spirituality and mental health. For example, the degree to which children’s religious/spiritual involvement influences their susceptibility to mental illness in adulthood is unknown. In addition, Koenig (2005) has recommended research to examine the ways in which religious/spiritual beliefs and practices might interact with psychotropic medications among persons with severe and persistent mental illness.

Physical Health Outcomes of Religious/Spiritual Involvement

In addition to its many influences on mental health, religious/spiritual involvement has numerous implications for physical health. Studies involving religion/spirituality and physical health have focused on three primary outcomes: (1) lower rates of mortality, (2) protection against disease and disability, and (3) enhanced recovery from physical illness. Findings regarding each of these outcomes are described in the following sections.

Lower Mortality Rates

The strongest and most consistent evidence for a relationship between religion/spirituality and physical health is the link between religious/spiritual involvement and mortality rates. An often cited meta-analysis based on 42 separate samples totaling nearly 126,000 people showed that religious/spiritual involvement is associated with lower all-cause mortality (OR = 1.29 - 1.39 at 95% CI) (McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000). One particularly large study involving 141,683 persons aged 45-89 who
lived in 882 separate communities and were followed over a 9½ year period showed that men and women living in religiously/spiritually affiliated neighborhoods had lower rates of all-cause mortality, $OR = 0.75$ (95% CI = 0.67 - 0.84) and $OR = 0.86$ (95% CI = 0.67 - 0.96), respectively (Jaffe, Eisenbach, Neumark, & Manor, 2005). A separate study involving the highly religious Mormon population of Cache County, Utah (the county with the longest life expectancy in the United States) found that residents who attended religious services had significantly lower rates of mortality ($RH = 0.47 - 0.79$ at 95% CI) (Ostbye et al., 2006).

Indeed, the indicator of religious/spiritual involvement that has most consistently been associated with lower all-cause mortality is attendance at religious services (Bagiella, Hong, & Sloan, 2005). People who attend religious services at least once a week tend to have a roughly 25% reduction in their risk of death from any cause (Oman & Reed, 1998; Powell et al., 2003; Strawbridge, Cohen, Shema, & Kaplan, 1997). One study found that persons who attended religious services once a week or more experienced a 33% reduction in their risk of death over a 7½ year period ($RH = 0.65 - 0.69$ at 95% CI) (Musick, House, Williams, 2004). Another study of more than 3,000 African Americans found that participants who attended religious services on a weekly basis were twice as likely as those who never attended religious services to survive during a nine year follow-up period (Ellison & Hummer, 2000). A related study involving 21,200 participants from the Cancer Risk Factor Supplement of the 1987 National Health Interview Survey found gaps in life expectancy of over seven years between persons who attended religious services at least once a week and those who never attended religious services (Hummer et al., 1999). The life expectancy gap
associated with religious service attendance among African-Americans in the same study was nearly 14 years.

Analyses in this area are often adjusted for numerous potential confounders (e.g., sex, age, race/ethnicity, geographic region, education, employment status, income, marital status, health behavior, health history, functional ability, etc.) (Musick et al., 2004). Even when 12 or more control variables are included in the data analyses, nonattendance at religious services is still associated with greater risk of mortality ($RH = 1.50$, or 50% greater risk) (Hummer et al., 1999). This is nearly as strong as the risk associated with smoking cigarettes ($RH = 1.63$, or 63% greater risk). The effect of weekly religious service attendance on mortality in other studies has been comparable to that of alcohol abuse and physical inactivity (Strawbridge et al., 2000).

Two additional points should be noted. First, in addition to public religious/spiritual activities such as attendance at religious services, private religious/spiritual activities have been shown to predict a nearly 50% reduction in all-cause mortality (Helm, Hays, Flint, Koenig, & Blazer, 2000). Second, in addition to its relationship with all-cause mortality, religious/spiritual involvement has been associated with lower rates of mortality due to specific causes such as cardiovascular disease and cancer (McCullough, 2001).

**Protection against Disease and Disability**

*Morbidity.* The majority (78%) of studies reviewed in the NIHR consensus report connect religious/spiritual involvement with lower rates of disease (e.g., cardiovascular disease, cancer, hypertension, etc.) (Larson et al., 1998; Matthews, Koenig, Thoresen, & Friedman, 1998). More recent studies confirm that hypertension, for example, is less
prevalent among Americans who attend religious services ($N = 14,475$ in The Third National Health and Nutrition Examination Survey) (Gillum & Ingram, 2006).

Among the indicators of religious/spiritual involvement, lack of attendance at religious services is the strongest predictor of morbidity. For example, less than weekly attendance at religious services is associated with significantly higher rates of circulatory disorders ($RH = 1.21$, 95% CI $= 1.02$ - $1.45$), respiratory disorders ($RH = 1.66$, 95% CI $= 0.92$ - $3.02$), and digestive disorders ($RH = 1.99$, 95% CI $= 0.98$ - $4.03$) (King, Mainous, & Pearson, 2002; Oman, Kurata, Strawbridge, & Cohen, 2002). Less than monthly attendance at religious services is associated with a 67% increase in the likelihood of advanced stage of colon cancer at diagnosis among Caucasians, and a 21% increase among African Americans (Kinney et al., 2003). Never attending religious services was associated with elevated risk for respiratory disease ($p < .05$) and marginally greater risk ($p < .10$) for cancer, circulatory diseases, and diabetes in the Hummer et al. (1999) study.

**Disability.** Research has also demonstrated significant relationships between religious/spiritual involvement and physical disability. In a series of studies conducted among elderly persons in the United States, religious service attendance was associated with decreases in functional disability (Idler & Castle, 1992, 1997). Focusing on nonphysical aspects of the self such as religious/spiritual commitment might help elderly persons to become less consumed by thoughts of their deteriorating physical body (Idler, 1995).

**Enhanced Recovery from Physical Illness**

In addition to its protective benefits for healthy people, religious/spiritual involvement can influence outcomes for persons who are acutely, chronically, or
terminally ill. Compared with their less religious/spiritual counterparts, individuals who have a religious/spiritual belief system may show increased tolerance for pain and better treatment adherence (Harrison et al., 2005; Parsons, Cruise, Davenport, & Jones, 2006; Wachholtz & Keith, 2006). “Drawing strength from religious faith” is associated with patient survival and improved health after heart transplant and other cardiac surgeries (Harris et al., 1995; Oxman, Freeman, & Manheimer, 1995). Religiousness/spirituality is a powerful predictor of CD-4 cell preservation and better control of viral load among patients receiving treatment for HIV/AIDS (Ironson, Stuetzie, & Fletcher, 2006; see also Lorenz et al., 2005; Remle & Koenig, 2001; Szaflarski et al., 2006). Self-reported religiosity/spirituality has also been associated with benefit finding and greater quality of life among women with breast or ovarian cancer, and fewer urinary problems and less sexual dysfunction among men being treated for prostate cancer (Canada et al., 2006; Krupski, Kwan, & Fink, 2006; Lechner et al., 2006).

**Harmful Effects**

Although the vast majority of research shows that religiosity/spirituality has a positive influence on physical health, this is not always the case (Meisenhelder & Chandler, 2000a, 2000b). For instance, religious/spiritual communities may have differing beliefs and practices when it comes to accessing health care. In some cases, religion/spirituality may be utilized *instead of* medical care (e.g., an individual might stop taking his or her medication after attending a healing service).

In other cases, religion/spirituality may *conflict with* medical care. For example, Jehovah’s Witnesses have been known to refuse blood transfusions and organ transplants due to their belief that Jehovah will abandon persons who receive blood products. Koenig
(2007c) urges providers to consider the logic behind such refusals. From the perspective of a Jehovah’s Witness, a few years of suffering on Earth is preferable to the risk of being ostracized by family and friends or alienated from a belief system that gives meaning and purpose to life—not to mention the threat of eternal damnation. From this perspective, it might make sense to refuse certain medical procedures.

There is also some evidence that religiously/spiritually motivated medical neglect may be harmful for physical health. For instance, the rejection of conventional medical care on the part of parents in favor of faith healing for their children has been implicated in a range of circumstances from child neglect to child fatalities. Members of certain fundamentalist religious groups may not seek prenatal care, which greatly increases the risk of infant and maternal mortality. Others may refuse childhood vaccinations, which has resulted in outbreaks of infectious disease (Koenig, 2007c). Asser and Swan (1998) reported that 172 children died between 1975 and 1995 from parental withholding of medical care on religious/spiritual grounds. However, Koenig cautioned that Asser and Swan’s methodology makes it almost impossible to predict whether these children would have survived if medical care had been provided. It might also be important to note that the total membership of the religious/spiritual groups from which these children came accounts for less than 1% of the American population.

Finally, religious/spiritual convictions might contribute to the hazardous avoidance of health care. Research has examined whether religiosity/spirituality could have a negative impact on the early detection of cancer, for example, by fostering beliefs that lead people to avoid medical care (e.g., the belief that physical healing is exclusively in the hands of God) (Sherman & Simonton, 2001b). Relevant studies have focused on
racial/ethnic minorities and elderly persons living in rural areas of the United States. In general, religious/spiritual involvement does not appear to contribute to the low rates of cancer screening observed among these populations (Erwin, Spatz, Stotts, & Hollenberg, 1999; Paskett, Case, Tatum, Velez, & Wilson, 1999; Powe, 1997). In a related study of women at an outpatient breast surgery clinic, greater religiousness/spirituality was actually one of the strongest inverse predictors of delay in seeking medical care (Friedman et al., 2006). In other research however, nearly 700 women aged 40 and over were asked what they would do if they discovered a lump in their breast. A plurality (44%) of these women indicated that they would trust God to cure their cancer more so than they would trust medical treatment. In fact, 13% indicated that only a “religious miracle” could cure cancer (Mitchell, Lannin, Mathews, & Swanson, 2002). Such perspectives serve to illustrate the potential impact of religiosity/spirituality on the detection and treatment of serious illnesses.

In sum, religion/spirituality may (a) serve as a substitute for medical care, (b) conflict with medical care, (c) result in medical neglect, and/or (d) contribute to the hazardous avoidance of preventive care. Research suggests that these scenarios are not very common; however, they do occur and are generally followed by negative consequences (Koenig, 2007c). This is one reason why patients and clients should be invited to discuss religious/spiritual issues with their health care providers.

Models of the Relationship between Religion/Spirituality and Health

Although relationships between religious/spiritual factors and health outcomes have been well documented, it has been suggested that much less is known about how these relationships occur (Kier & Davenport, 2004). Powell et al. (2003) noted that
approximately 25% of the variance in physical health outcomes typically remains unexplained in studies pertaining to religion/spirituality. Similarly, although the literature demonstrates that religious/spiritual involvement has a positive influence on mental health, this depends on the form and extent of religious/spiritual behavior, as well as a host of other personal, contextual, and environmental factors (McCullough et al., 1998).

Some would argue that knowledge concerning the existence of a relationship between religious/spiritual involvement and health is sufficient, citing health promotive practices that were implemented for years without an understanding of how or why one factor lead to change in another (e.g., eating citrus fruit to prevent scurvy, taking aspirin to reduce pain) (Thoresen et al., 2001). Whereas others emphasize the fact that even well-controlled, population-based studies in this area fail to clarify the mechanisms involved (Ellison & Levin, 1998). Thus, many researchers see it as a priority to elucidate the mechanisms by which religion/spirituality influences physical and mental health (Miller & Thoresen, 2003). In other words, there is a need to clarify which types of religious/spiritual involvement are associated with which health outcomes under what circumstances and for whom (e.g., Why does attending religious services predict lower mortality? How does religious coping enhance physical health? Who among members of a religious/spiritual community will experience greater subjective well-being?).

Accordingly, a number of models have been proposed in an effort to elucidate the relationship between religion/spirituality and health. Several important points should be noted about these models. First, it is unlikely that all religious/spiritual factors would benefit health under all circumstances (Thoresen et al., 2001). Some aspects of religiosity/spirituality can diminish health under certain conditions.
Second, while direct relationships between variables of religion/spirituality and health may exist, “very few” of these relationships are likely to be unmediated (Berry, 2005). For example, religious denomination (being Catholic) may be directly related to physical health (less morbidity), but if religious service attendance is added to the model, the proportion of variance in physical health explained by religious denomination goes away. In other words, you need religious service attendance (the mediator in this case) in order for the relationship between religious denomination and physical health to occur.

Third, direct relationships between religion/spirituality and health are likely to be moderated by third variables (see Baron & Kenny, 1986). For example, members of a church, mosque, or synagogue might experience the health benefits of providing social support to members of their religious/spiritual community, but only if they are not particularly overburdened (Oman, Thoresen, & McMahon, 1999; Schwartz, Meisenhelder, Ma, & Reed, 2003). In this case, there is an interaction between providing social support and feeling overburdened. Thus, feeling overburdened is a moderator of the relationship between helping others and better personal health.

Fourth, the influence of religion/spirituality on health might occur indirectly through other variables (Levin & Chatters, 1998). Two basic models involving both direct and indirect relationships between religiosity/spirituality and health have been proposed in the literature:

1. Religiosity/Spirituality → Physical Health → Mental Health

In the first model, religiosity/spirituality is directly related to physical health, but not to mental health. That is, religiosity/spirituality has a positive influence on physical health; physical health, in turn, influences mental health. Said another way, religiosity/
spirituality influences mental health indirectly through its influence on physical health (e.g., a religious/spiritual person who is not sick feels happy).

2. Religiosity/Spirituality → Mental Health → Physical Health

In the second model, religiosity/spirituality is directly related to mental health, but not to physical health. According to this model, religiosity/spirituality may have a role in improving physical health to the degree that it improves mental health (e.g., a religious/spiritual person copes more effectively and thus experiences less stress-related physical illness).

On the one hand, the second model may seem like the less probable of the two given research which has demonstrated that the relationship between religiosity/spirituality and physical health often remains significant even when the relationship between religiosity/spirituality and mental health is not (Koenig et al., 2001).

Nevertheless, a closely related and generally accepted model suggests that behaviors such as prayer and attendance at religious services influence distal psychosocial factors, which affect proximate physiological processes, which ultimately have an impact on physical health (Oman & Thoresen, 2002; Park, 2007; Seybold, 2007). This more comprehensive model is based on four premises:

1. Variables of religion/spirituality overlap with two categories of psychosocial factors: (a) personality characteristics, and (b) features of the social environment (Smith, 2001).

2. Personality characteristics (e.g., attitudes of compassion, empathy, forgiveness, gratitude, humility, hope, and optimism) and features of the social environment (e.g., the provision and receipt of social support), as well as coping behaviors,
influence physical health through the biophysiological correlates of stress and negative affect/emotion (Lovallo, 1997).

3. Stress and negative affect/emotion render some individuals at greater risk for physical illness by altering the frequency or magnitude of physiological arousal (Smith, 2001).

4. The effects of psychosocial factors on stress and emotion are evident in three areas of physiological functioning: the cardiovascular system, the endocrine system, and the immune system (Radin, 1999; Rozanski, Blumenthal, & Kaplan, 1999).

The mechanisms involved in the comprehensive model are elaborated on in the following section.

**Mechanisms in the Relationship Between Religion/Spirituality and Health**

Whereas previous sections of this literature review have focused primarily on outcomes of the relationship between religion/spirituality and health (e.g., greater subjective well-being and life satisfaction; less stress, anxiety, depression, substance abuse, and suicide; lower mortality rates, less disease and disability, and enhanced recovery from illness), the present section focuses on relevant mechanisms. Mechanisms are defined as variables in the causal path between religion/spirituality and health that help to explain how and why relationships occur in this area. This section is organized around four types of mechanisms:

1. **Behavioral** mechanisms (religious service attendance, health behaviors, and prayer/meditation)

2. **Social** mechanisms (altruism and social support)
3. **Psychological** mechanisms (e.g., positive affect/emotion and religious coping)

4. **Biophysiological** mechanisms (brain involvement; cardiovascular, neuroendocrine, and immune system functioning).

As a preface, it might be useful to reiterate that the relationship between religion/spirituality and health is complex. There are multiple indicators of religious/spiritual involvement, which have effects for mental and physical health (which are not mutually exclusive), among healthy people and people who are ill, both in daily life and under stressful life circumstances. Such effects occur through multiple, interrelated pathways (Figure 2). In some cases, these are theorized pathways and therefore Park (2007) and others have cautioned that relationships in this area must be rigorously tested.

**Behavioral Mechanisms**

*Attendance at religious services.* Frequency of attendance at religious services is the behavioral component of religiosity/spirituality that has most consistently been associated with better mental and physical health, even after controlling for numerous biopsychosocial factors (Schmied & Jost, 1994). When people attend religious services, they become involved in shared rituals that may influence health in a variety of ways. They place themselves within a group of concerned individuals who provide support for one another in times of need. This could contribute to a sense of well-being. Further, regular participation in communal worship might regulate health behaviors in a way that lessens the risk of disease. More specifically, attendance at religious services may provide opportunities to observe persons who model behaviors that are conducive to a healthy lifestyle (Powell et al., 2003).
**Behavioral Mechanisms**
- Attendance at religious services
- Health behaviors
- Prayer and meditation

**Social Mechanisms**
- Altruism
- Social support

**Biophysiological Mechanisms**
- Brain involvement
- Cardiovascular, endocrine, and immune system functioning

**Psychological Mechanisms**
- Attitudes and beliefs
- Personality traits
- Positive affect/emotion
- Religious coping
- Locus of control
- Meaning in life

**Mental Health**
- Mental disorders
- Well-being

**Physical Health**
- Morbidity and Mortality
- Recovery

*Figure 2.* Theorized pathways from religious/spiritual involvement to mental and physical health.
Health behaviors. The relationship between religious/spiritual involvement and altered risk for morbidity and mortality could be attributable to the fact that people who are more religious/spiritual tend to engage in healthier behaviors (Levin & Vanderpool, 1991; Merrill & Thygerson, 2001; Roff et al., 2005; Waite, Hawks, & Gast, 1999). Indeed, some religions strictly prohibit behaviors that contribute to poor health (e.g., violence, substance abuse), and explicitly prescribe behaviors that contribute to positive health (e.g., healthy eating, regular exercise, adequate sleep, and preventive measures such as vaccinations, flu shots, cholesterol screening, cancer screening, etc.) (Hart, Tinker, Bowen, Satia-Abouta, & McLerran, 2004; Kendler, Gardner, & Prescott, 1997; Koenig, George, Meador, Blazer, & Ford, 1994; Reindl-Benjamins & Brown, 2004).

In some religions, the physical body is seen as having religious/spiritual significance (i.e., “body sanctification”). Consequently, faith traditions tend to encourage healthy lifestyles (Emmons & Crumpler, 1999; Pargament & Mahoney, 2005). In the Islamic faith, for example, healthy behaviors are promoted through modeling. Under Islamic law, fathers are generally held responsible for the actions of their children—even so far as to face punishment themselves. In this way, fathers are compelled to model and encourage positive, healthful behaviors (Frank & Kendall, 2001).

Religious/spiritual factors (i.e., religious affiliation, salience, and upbringing; attendance at religious services; attitudes toward religion, etc.) had positive effects on health related behaviors in the vast majority (84%) of relevant studies conducted among adolescents between 1998 and 2003 (Rew & Wong, 2006). More specifically, religious/spiritual teenagers are less likely than their non-religious/non-spiritual peers to (a) smoke cigarettes, (b) consume alcohol, (c) take illegal drugs, (d) carry weapons, and (e) engage
in physical violence (Nonnemaker, McNeely, & Blum, 2003; Timberlake et al., 2006; Wallace & Forman, 1998; Willis, Wallston, & Johnson, 2001; Wills, Yaeger, & Sandy, 2003). Religiosity/spirituality is also associated with less permissive attitudes about sex, delayed initiation of sexual activity, and lower rates of pregnancy among teens (Fehring, Cheever, German, & Philpot, 1998; Jeynes, 2003; Rostosky, Wilcox, Wright, & Randall, 2004; Whitehead & Wilcox, 2001).

Findings have also been reported concerning the religious/spiritual involvement and health behaviors of adults. Among a national random sample of over 1,500 community residents, weekly attendance at religious services was associated with not smoking ($OR = 2.03$, 95% CI = 1.52 - 2.71), only occasional or moderate drinking ($OR = 2.82$, 95% CI = 1.65 - 4.81), regular exercise ($OR = 1.84$, 95% CI = 1.34 - 2.52), good sleep hygiene ($OR = 1.49$, 95% CI = 1.03 - 2.15), greater frequency of physical exams ($OR = 1.65$, 95% CI = 1.21 - 2.23), greater frequency of dental exams ($OR = 1.56$, 95% CI = 1.16 - 2.10), regular vitamin use ($OR = 1.68$, 95% CI = 1.24 - 2.24), and regular seatbelt use ($OR = 2.20$, 95% CI = 1.26 - 3.85) (Hill, Burdette, Ellison, & Musick, 2006).

**Prayer and meditation.** Prayer and meditation are central tenets of religious/spiritual traditions around the world (Masters & Spielmans, 2007; Lewis, Breslin, & Dein, 2008). Prayer is also a commonly used health intervention in some cultures (Edman & Koon, 2000). In the United States, prayer is among the most widely utilized complimentary and alternative treatments for illness (Barnes, Powell, McFann, Nahin, 2002; Tracy et al., 2005).

Based on the responses obtained from more than 500 community residents, Paloma and Pendleton (1991) identified four types of prayer:
1. *Petitioner* prayer involves requests for material things.

2. *Colloquial* prayer entails requests for personal guidance and/or forgiveness.

3. *Ritualistic* prayer is that which is recited from memory.

4. *Meditative* prayer focuses on one’s personal relationship with God(s).

Different types of prayer have differing relationships with health. Whereas colloquial and meditative prayer are associated with subjective well-being, ritualistic and petitioner prayer are predictive of greater depression and loneliness (Paloma & Pendleton).

Other studies in this area have focused on the recipients of prayer. For example, patients with rheumatoid arthritis who received a *hands-on* prayer intervention showed significantly less arthritis severity over the course of one year (Matthews, Marlowe, & McNutt, 2000). Byrd’s (1988) often cited double-blind study concerning the effects of *intercessory* prayer among patients recovering from acute myocardial infarction showed that participants in the prayer condition did substantially better than control patients on a number of outcomes (i.e., 7% fewer antibiotics required at discharge, 6% less need for intubation, 6% less pulmonary edema, 5% less congestive heart failure, and 5% less need for subsequent cardiopulmonary resuscitation) (see also Harris et al., 1999). A separate double-blind study found significant improvement among HIV/AIDS patients who received a distant healing intervention (e.g., fewer outpatient visits, fewer hospitalizations, and less illness severity at six month follow-up) (Sicher et al., 1998). The effects of intercessory prayer in a more recent study, however, were indiscernible (Benson et al., 2006).

There are a number of pathways through which prayer/meditation could influence health. For instance, prayer/meditation may serve as a means of coping with stress...
This could benefit mental health by providing a sense of control and meaning in life. Similarly, prayer/meditation may contribute to physical health by altering physiological responses and reducing stress in the body. To be exact, prayer/meditation can elicit the relaxation response (i.e., a shift to parasympathetic relaxation from sympathetic arousal), thus reducing muscle tension and decreasing activity in the autonomic nervous system (e.g., lower blood pressure, heart rate, and respiration) (Yehuda & McEwen, 2004). In sum, people who pray or meditate on a regular basis tend to experience less stress, more positive affect/emotion, and lower cardiovascular reactivity (Grossman, Niemann, Schmidt, & Walach, 2004).

**Social Mechanisms**

*Altruism.* Given connections that exist between religion/spirituality and altruism on the one hand (Zook, Kashmider, Kaufmann, & Zehr, 1982) and the association of altruism with better physical and mental health on the other hand (Brown, Neese, Vinokur, & Smith, 2003), altruistic activities have been identified as a mechanism through which religiosity/spirituality influences health. Altruism is central to the rationale of virtually all of the world’s major religions (Luks & Payne, 1992). Among the central tenets of Christianity, for example, is the value of behaving toward others in a kind manner and the belief that human beings will ultimately be judged based on their efforts to help others. Thus, religious/spiritual communities and organizations might encourage altruistic activities on the part of their members as an expression of faithfulness within a given religious/spiritual tradition. Recent work in the sociology of religion suggests that offerings of time and money are especially useful indicators of religious/spiritual commitment as these represent the sacrifice of resources that could be invested otherwise.
The evidence is that persons who participate in altruistic activities tend to experience better physical and mental health (Krause, Ingersoll-Dayton, & Liang, 1999). Volunteering in the community, for example, is predictive of lower mortality rates (Oman et al., 1999). Providing support for others in a church setting can buffer the effects of financial stress on mortality (Krause, 1997). In a related study, providing support was more potent in buffering the effects of stress on mortality than was receiving support (Krause, 2006a). Similarly, providing support is a stronger predictor of mental health than is receiving support, even after controlling for several demographic and psychospiritual factors (Schwartz et al., 2003). Thus, altruistic activities have health benefits for both the giver and the receiver. With that, it has been suggested that health care providers may wish to reinforce helping and benevolent behaviors on the part of their patients and clients (Post, 2005).

_Social support._ Systems of social support tend to be especially well developed in religious/spiritual communities. Indeed, there are few places where such diverse groups of people congregate on a regular basis such as they do in religious/spiritual communities (Koenig, 2005). Thus, it does not seem surprising that religious/spiritual involvement is associated with larger and stronger social networks and increased social contact (Bradley, 1995). Further, people who participate in organizational religious/spiritual activities tend to report higher levels of satisfaction with the social support they receive (Ellison & George, 1994).

Aspects of social support, in turn, lead to a range of outcomes for mental and physical health. One’s membership and participation in religious/spiritual groups...
provides a foundation for developing social bonds outside the nuclear family. Attachment theorists have likened God and members of one’s religious/spiritual community to attachment figures, or sources of protection and affirmation (Ainsworth, 1991; Baumeister & Leary, 1995; Bowlby, 1988; Hazan & Shaver, 1994). Correspondingly, people who report a secure connection with their religious/spiritual community tend to experience greater comfort and confidence in everyday life, and a sense of acceptance and belonging which increases the capacity for well-being (Kirkpatrick, 1995).

Moreover, emotional support received from religious/spiritual congregations may counter the negative effects of stressful or traumatic life events (Krause & Wulff, 2005).

Religious/spiritual congregations not only serve as a source of social contact and emotional support, they might also offer instrumental support to members who are ill (Patel, Shah, Peterson, & Kimmel, 2002). Such assistance may take the form of health information or access to medical care through referral networks, and even transportation to medical appointments (Idler et al., 2003). A related finding from the literature is that members of religious congregations are significantly more likely to have continuity with a medical provider (King & Pearson, 2003). Such continuity could ultimately extend the lifespan for members of religious/spiritual groups, particularly among racial/ethnic/cultural minorities who may not have easy access to health care (Koenig, 2005; Krause, 2006a).

**Psychological Mechanisms**

*Beliefs, attitudes, and personality.* One of the central features of religion/spirituality is the cognitive dimension of belief (Dull & Skokan, 1995). The belief in a benevolent God or Higher Power who rules the universe and responds to human needs—
not to mention the belief in an afterlife—may extend to a generally positive or optimistic worldview (Ai, Peterson, Tice, Bolling, & Koenig, 2004; Flannelly, Koenig, Ellison, Galek, & Krause, 2006). Such beliefs and attitudes can have a powerful influence on personality (MacDonald, 2000; Paloutzian, Richardson, & Rambo, 1999). In terms of the Five-Factor Model, persons who are high in self-reported spiritual well-being tend to score lower on neuroticism and higher on extraversion, agreeableness, and conscientiousness (Ramanaiah, Rielage, & Sharpe, 2001). Additionally, religious coping is associated with personality traits such as lower aggressiveness, dominance, hostility, and compulsivity; and higher responsibility, concern for moral standards, composure, and tranquility as measured by the 16-PF (Koenig, Siegler, Meador, & George, 1990).

Worthington et al. (2001) suggested that religiosity/spirituality is associated with a “pro-virtue constellation” of personality characteristics such as empathy, humility, and forgiveness (p. 107). Forgiveness is central to the Judeo-Christian tradition, as evidenced by the celebration of Yom Kippur and Easter. According to Worthington et al., religiosity/spirituality can influence the experience of forgiveness which, in turn, influences mental and physical health. Specifically, forgiveness is thought to enhance mental health by reducing stress through the resolution of conflict (Fetzer/NIA, 2003). Conversely, unforgiving responses such as chronic anger, bitterness, hostility, resentment, and rumination are thought to diminish physical health by increasing allostatic load (Kaplan, Monroe-Blum, & Blazer, 1993; McCullough, Pargament, & Thoresen, 2000; Thoresen, Harris, & Luskin, 2000; Worthington, 1998).

*Positive affect/emotion.* Individuals who report higher levels of religiosity/spirituality tend to experience higher levels of positive affect/emotion (e.g., feelings of
compassion, gratitude, and hope) (Frederickson, 2002). Research in the area of positive psychology has, in turn, established the benefits of positive affect/emotion for mental and physical health (Seligman & Csikszentmihalyi, 2000). Thus, religiosity/spirituality may promote mental health to the degree that it fosters an ability to set negative emotions aside (e.g., one might experience forgiveness rather than hostility, compassion as opposed to anger, and hope instead of hopelessness) (Park, 2007). In terms of physical health, positive affect/emotion is associated with elevated immune function, decreased morbidity and pain, and better adjustment over the course of serious illness (Newberg, 2006; Salovey et al., 2000).

By maximizing exposure to positive emotion and minimizing exposure to negative emotion, religious/spiritual involvement might also promote effective coping (Pargament, 1997). Attention is given to religious coping in the following section.

Religious coping. A major function of religion/spirituality is to help people cope more effectively with life’s inevitable stressors (Pargament, 1997). “Religious coping” refers to the ways in which people (a) seek comfort from religion/spirituality, and (b) experience personal growth through stressful life situations (Young, Cashwell, & Scherbakova, 2000). It is the most frequently used of all coping strategies among a wide variety of populations (Koenig, George, & Siegler, 1998).

The foremost research on religious coping has been conducted by Pargament and colleagues. Pargament’s research began with a description of three religious coping styles:

1. **Deferring or passive coping** – Individuals with a passive coping style exert relatively little effort toward problem solving. They tend to rely on God(s) or a
Higher Power to resolve their problems.

2. *Self-directive* coping – Persons with a self-directive coping style tend to seek control through their own initiative, as opposed to seeking help from God.

3. *Collaborative* coping – The collaborative style of coping is one in which people see themselves as working in partnership with God toward the resolution of their problems (Pargament et al., 1988; Pargament & Olsen, 1992).

These styles translate into specific methods of religious coping such as (a) *benevolent religious reappraisal* (redefining a stressor as benevolent and potentially beneficial), (b) *religious purification* (searching for comfort and reassurance through God’s love and care), (c) *punishing God reappraisal* (redefining the stressor as a punishment from God), and (d) *reappraisal of God’s power* (redefining God’s powers to influence a stressful situation) (Pargament, Koenig, & Perez, 2000; Pargament, Koenig, Tarakeshwar, & Hahn, 2004).

Religious coping methods have implications for people in crisis, particularly when the stressor is an illness, trauma, or loss. A large body of empirical evidence has established that religious coping can serve as a resource for managing physical and mental illness (Koenig, Pargament, & Nielsen, 1998). Nine out of 10 hospitalized patients in one study said they use religion/spirituality to cope with illness, and over 40% identified religion/spirituality as the single most important factor that keeps them going (Koenig et al., 2001). Across studies involving diverse types of cancer, patients have identified religious/spiritual activities as their most frequently used coping resource (Norum, Risberg, & Solberg, 2000; Tarakeshwar et al., 2006; Thuné-Boyle, Stygall, Keshtgar, & Newman, 2006). Religious methods of coping are also common among
persons living with serious and persistent mental illness (Reger & Rogers, 2002). In a study of over 400 patients with schizophrenia or schizoaffective disorder, 80% of respondents indicated that they use religion/spirituality to help them cope (Tepper, Rogers, Coleman, & Maloney, 2001). Additionally, religious coping is associated with better psychological adjustment in response to situations over which little direct control is possible (e.g., experiences of victimization, the death of a loved one, etc.) (Maynard, Gorsuch, & Bjork, 2001; Pargament et al., 1999; Park & Cohen, 1993; M. P. Thompson & Vardaman, 1997). In a related study of bereavement, surviving family members and friends who reported the use of religious coping were better able to resolve their grief progressively over a 14 month period (Walsh, King, Tookman, & Blizard, 2002).

In later research, Pargament et al. (1998) identified two patterns of religious coping through exploratory and confirmatory factor analyses:

1. **Positive** religious coping, which utilizes methods of benevolent religious reappraisal, collaborative religious coping, and religious purification.

2. **Negative** religious coping, which is characterized by punishing God reappraisal and reappraisal of God’s powers.

Such patterns have differing relationships with health. Specifically, positive religious coping is generally associated with favorable outcomes such as better post-operative functioning among cardiac patients and lower severity of depression among elderly psychiatric inpatients (Ai, Peterson, Bolling, & Rodgers, 2006; Ai, Tice, Huang, Rodgers, & Bolling, 2008; Bosworth & Park, 2003; Harrison, Koenig, Hays, Eme-Akwari, & Pargament, 2001). More recently, positive religious coping has been associated with the receipt of life-prolonging medical care (Phelps et al., 2009). Conversely, negative
religious coping is generally associated with worse health outcomes such as increased likelihood of anxiety and depression (Ai, Park, Huang, Rodgers, & Tice, 2007; McConnell, Pargament, Ellison, & Flannelly, 2006; Pearce, Singer, & Prigerson, 2006; Schanowitz & Nicassio, 2006).

Locus of control. Religious/spiritual involvement may foster a sense of personal control which, in turn, has been associated with better health across the lifespan (Bandura, 1997a; Welton, Adkins, Ingle, & Dixon, 1996). There is some evidence that having a “religious/spiritual health locus of control” can serve a protective function (Holt, Clark, Kreuter, & Rubio, 2003). Such a locus of control was shown to have a positive impact on attention to breast cancer information and communication about breast cancer issues among African-American women (Lester et al., 2006). Perceived control is also associated with more favorable adaptation following exposure to stressful life circumstances including illness (Lazarus, 2000). A serious illness such as cancer, for example, is marked by uncertainty and “presents challenges to implicit assumptions about personal control. Religious faith may provide or restore a sense of control, thus reducing feelings of helplessness and enhancing health” (Musick, Koenig, Larson, & Matthews, 1998, p. 784).

Meaning in life. Religiosity/spirituality may promote health by providing a foundation of existential meaning (i.e., a reassuring sense that life is coherent, orderly, and purposeful) (Park & Folkman, 1997). Indeed, 15 out of the 16 studies conducted in this area during the 20th century found significantly greater purpose and meaning among persons who were more religious/spiritual (Koenig et al., 2001). George et al. (2000) made reference to the “coherence hypothesis,” which suggests that religion/spirituality
enables people to understand the purpose of life and their role in the world. Similarly, Ervin-Cox et al. (2005) commented, “Religion . . . provides goals to achieve, values to satisfy . . . purposes for daily living and . . . something meaningful to accomplish” (p. 288).

Religion/spirituality also provides resources for making sense of stressful or tragic life events. In Judaism, for example, it is believed that every event has an ultimate purpose which is known only to God. This belief might help people come to a state of acceptance. In addition, religion/spirituality offers a variety of ways to make sense of illness situations. For example, an illness might be regarded as being “part of God’s larger plan” rather than an event of misfortune (Park, 2005). Finally, religion/spirituality may provide meaning at the end of the lifecycle (Koenig, 1994; Krause, 2004b; McClain et al., 2003; Wink & Scott, 2005). A recent study found that intrinsic religiosity was associated with fewer fears about dying and more accepting attitudes toward death among hospice patients (Ardelt & Koenig, 2006).

Meaning, in turn, is one of the strongest predictors of health and well-being (Compton, 2000; Krause, 2004a). In fact, measures of coherence have explained up to 30% of the variance in health outcomes, as opposed to 10% for health behavior and 10% for social support (George et al., 2000). Chamberlain and Zika (1988) found that meaning was a primary moderator of the relationship between religiosity/spirituality and health. This suggests that religion/spirituality must provide some form of meaning in order for it to benefit health.

**Biophysical Mechanisms**

*Brain involvement.* Several studies have demonstrated the involvement of the
brain in religious/spiritual experience (e.g., increased bilateral blood flow, increased left hemisphere activity; increased levels of dopamine, melatonin, and serotonin) (Lazar et al., 2000). Religious/spiritual practices such as prayer and meditation activate frontal lobe structures, which are associated with prosocial behavior, sensitivity to social context, optimism, and meaning construction (McNamara, 2002). One study used functional magnetic resonance imaging (fMRI) to examine parts of the brain that are active during religiously/spiritually based decisions to make charitable donations (Moll et al., 2006). It was found that such decisions coincide with activity in the anterior prefrontal cortex, a part of the brain that makes us uniquely human as it evolved most recently. Such brain activity can actually help people cope more effectively with stress (Seybold, 2007). In this way, processes in the brain may influence health through the cardiovascular, neuroendocrine, and immune systems (Ader & Kelley, 2007).

Cardiovascular, neuroendocrine, and immune system functioning. Religious/spiritual practices are associated with less blood pressure reactivity under challenge, lower cholesterol, lower stress hormone levels, less oxidative stress, and better immune function (Koenig et al., 1998; Masters, Hill, Kircher, Benson, & Fallon, 2004; Schneider et al., 1995; Wenneberg et al., 1997; Woods, Antoni, Ironson, & Kling, 1999). Consequently, religious/spiritual involvement may decrease host vulnerability to disease by reducing allostatic load (i.e., blood pressure, blood glucose, cholesterol; cortisol, epinephrine, norepinephrine, and other stress hormone levels, etc.) (Seeman, Dubin, & Seeman, 2003). Given the detrimental effects of stress on the cardiovascular, metabolic, and immune systems, any process—including prayer, social support, and religious coping—that serves to reduce allostatic load is likely to have beneficial effects for health.
Summary and Implications of Mechanisms

Ultimately, research on the relationship between religion/spirituality and health arrives at the conclusion that the majority of relevant mechanisms involve some sort of stress buffering or stress reducing effect. Religious coping emerges as a central mechanism for reducing stress in daily life, which may decrease allostatic load, risk of disease, and rates of mortality in general, and may serve to enhance recovery from physical illness. In terms of mental health, religious coping can be especially beneficial in the face of negative life events to the degree that it fosters a sense of control, meaning, and purpose in life. This, in turn, could enhance subjective well-being and prevent the onset of mental health problems, or promote recovery among persons who are experiencing mental illness.

According to Sherman and Plante (2001), it will be important to continually develop and test causal models that reflect the complexity of the relationship between religion/spirituality and health. An example of this complexity lies in the temporal sequence of events by which religion/spirituality influences health (e.g., Does positive affect/emotion precede religious coping and thus allow it to occur, or is positive emotion a byproduct of religious coping?). Greater attention to psychological factors such as socially-situated cognitions and self-evaluative processes might also help to clarify the pathways through which religiosity/spirituality is associated with health (Sherman & Plante). Finally, Smith (2001) has recommended further laboratory based studies to examine associations between religious/spiritual factors and physiological processes.

In terms of clinical practice, it has been suggested that knowledge concerning the
mechanisms by which religion/spirituality influences health could be applied to benefit even non-religious/non-spiritual patients and clients within a secular framework. It may be that various secular behaviors are capable of producing health effects similar to those of religious/spiritual involvement. It is important to note, however, that religious/spiritual behaviors may produce unique health effects in some cases. For example, religious coping has been shown to explain proportions of the variance in health outcomes above and beyond that which is explained by non-religious methods of coping (Pargament, 1997). In a related study, religiously/spiritually-based social support buffered the effects of stress on self-reported health, whereas social support received from secular sources did not (Krause, 2006b). Such findings imply that certain mechanisms may need to operate within a religious/spiritual context in order to impart health benefits. Thus, relevant clinical guidance may need to reflect this information.

*The Impact of Health on Religiosity/Spirituality*

Thus far, this literature review has focused on the ways in which religious/spiritual factors influence health. Another interesting question is that of how health related factors might influence religiosity/spirituality (e.g., How might poor mental health or the receipt of a cancer diagnosis alter one’s religious faith/spiritual beliefs?).

*Poor Mental Health*

Poor mental health may lead to increased religious/spiritual involvement as people attempt to cope in times of emotional distress (Koenig & Larson, 2001). However, other studies have shown that emotional distress is associated with decreases in religious/spiritual activity (Chen & Koenig, 2006; McColl et al., 2000). In a related discussion, Koenig (2005) observed, “severe psychological distress or trauma can shake a person’s
religious/spiritual worldview so seriously that it becomes inaccessible as a source of comfort. [One might ask,] how could a loving God who is in control allow such a horrible thing to happen?” (p. 87).

In any case, relationships in this area are reciprocal. Much of the research has explored the degree to which religious/spiritual involvement may prevent mental illness, restore mental health, or even cause poor mental health. Yet, it is also true that mental health potentially influences religiosity/spirituality. That is, people might become religiously/spiritually involved as a result of experiencing mental health problems.

*Life Threatening Illnesses*

Experiences with life threatening illnesses tend to intensify religiosity/spirituality (Cotton et al., 2006; Sherman & Simonton, 2001b). Cancer patients have reported a strengthening of religious faith and greater satisfaction with spirituality after receiving their diagnosis (Fehr & Maly, 1999; Hamrick & Diefenbach, 2006; Moschella, Pressman, Pressman, & Weissman, 1997). Similarly, a multi-site survey of 450 outpatients with HIV/AIDS found that 45% of patients had experienced an increase in religiosity/spirituality following their diagnosis.

*The Measurement of Religion/Spirituality in Health Research*

A substantial portion of the literature on religion/spirituality and health is comprised of discussions concerning measurement issues. The book *Measures of Religious Behavior* reveals that well over 100 instruments have been designed to assess variables of religion/spirituality (Hill & Hood, 1999). Several related reviews imply significant progress in the development and adaptation of such instruments for use in health related contexts (Egbert, Mickley, & Coeling, 2004; Fornaciari, Sherlock, Ritchie,
& Dean, 2005; Gorsuch & Miller, 1999; Hill, Sarazin, Atkinson, Cousineau, & Hsu, 2003; King & Crowther, 2004; MacDonald, Freidman, & Kuentzel, 1999; Reitsma, Scheepers, & Janssen, 2007; Williams, 1994). Indeed, researchers and clinicians have an array of options to choose from when it comes to the measurement of religiosity/spirituality and health.

In this section, a number of relevant instruments are described. Attention is given to the conceptual background and psychometric properties of the *Multidimensional Measure of Religiousness/Spirituality for use in Health Research* (Fetzer/NIA, 2003). The limitations of existing measures are considered in conclusion.

**Illustrative Instruments**

Quantitative measures of religiosity/spirituality can be grouped into four categories:

1. Measures of *general religiousness*
2. Measures of *religious coping*
3. Measures of *spiritual well-being*
4. *Other* measures (e.g., measures of forgiveness, locus of control, etc.) (Sherman & Simonton, 2001a).

A general overview of each category is provided in the following sections.

*Measures of general religiousness.* Measures of general religiousness are designed to assess the respondent’s typical level of religious/spiritual involvement and the importance s/he places on religion/spirituality (Hatch, Burg, Naberhaus, & Hellmich, 1998). For example, the *Santa Clara Strength of Religious Faith Questionnaire* includes items such as, “I look to my faith as a source of inspiration” (Freiheit, Sonstegard,
Schmitt, & Vye, 2006). Also included under measures of general religiousness are instruments designed to assess religious motivation. These are among the most widely used instruments in the field. Just one example is the *Duke Religiousness Index*, which assesses intrinsic religiosity as well as two dimensions of general religious involvement: (1) public/organizational religious expression, and (2) private/non organizational religious expression (Koenig, Meador, & Parkerson, 1997).

*Measures of religious coping.* Measures of religious coping are designed to assess the ways in which individuals draw on religion/spirituality in response to a specific stressor. Compared with measures of general religiousness, measures of religious coping are typically better predictors of health outcomes. The most comprehensive measure of religious coping is the RCOPE, which assesses two global *patterns* of religious coping (i.e., positive versus negative) and 17 factor-derived *methods* of religious coping (e.g., benevolent religious reappraisal, religious purification, etc.) (Pargament et al., 2000). A brief form of the RCOPE is also available (Pargament et al., 1998).

*Measures of spiritual well-being.* Although the vast majority of measures in this area focus on religiousness, measures of spiritual well-being focus on *spirituality* and existential aspects of well-being (e.g., “I feel very fulfilled and satisfied with my life”) (Brady, Peterman, Fitchett, Mo, & Cella, 1999). Among all of the instruments mentioned in a recent review of 73 studies on spirituality, the *Spiritual Well-Being Scale* had the highest reported reliability (Chiu et al., 2004). A newer instrument, the *Spirituality Index of Well-Being*, has been used for research involving cancer patients and AIDS patients (Daaleman & Frey, 2004; Frey, Daaleman, & Peyton, 2005).

*Other measures.* A number of instruments have been designed to assess constructs
such as forgiveness and religious/spiritual health locus of control. For example, the *Trait Forgiveness Scale* measures the disposition to forgive under various circumstances, with the assumption that forgiveness confers health benefits. The *Multidimensional Health Locus of Control Scales* assess the degree to which respondents believe their health condition is controlled by (a) God, (b) chance or fate, (c) their own behavior, (d) the behavior of doctors, and (e) the behavior of others excluding doctors (e.g., “Whatever happens to my condition is God’s will”) (Wallston, 2005).

*A Multidimensional Measure of Religiousness/Spirituality for use in Health Research*

Perhaps the most comprehensive product of research on the measurement of religiosity/spirituality and health is the document entitled *Multidimensional Measurement of Religiousness/Spirituality for use in Health Research*, which was produced by a national group of experts with the support and collaboration of the Fetzer Institute and National Institute on Aging (2003). The purpose of the report was to facilitate research on religion/spirituality and health; however, it has been used for clinical practice and teaching as well. The document includes both long and short forms of a survey instrument that was developed and evaluated in 1998 as part of the nationally representative *General Social Survey* (*N* = 1,445). Items were adapted from the short form of the instrument for purposes of the present study.

*Conceptual background.* The objectives of the Fetzer/NIA workgroup were to (a) identify the domains of religion/spirituality that are most likely to influence health, (b) suggest potential mechanisms whereby religiosity/spirituality influences health, and (c) provide a multidimensional survey of religious/spiritual concepts for use in health research (Idler et al., 2003). In meeting these objectives, the workgroup addressed a
number of problems that had been reported by health researchers. First, it was evident that dimensions of religiosity/spirituality were best examined separately in terms of their effects on health; yet, there were no widely available measures for this purpose. Second, although much of the existing literature had addressed the salutary effects of religious/spiritual involvement, it was apparent that certain religious/spiritual beliefs and practices could undermine health and well-being. Accordingly, the workgroup included items to assess religious/spiritual attitudes and behaviors that may be associated with poorer health. Third, due to limited resources, it was not always feasible to collect data on the wide range of religious/spiritual factors that pertain to health. Consequently, the workgroup sought to assist health researchers by developing a brief measure that included select items from several different domains. Finally, considering that some Americans participate in spiritual activities outside the context of churches, mosques, and synagogues, the workgroup included a number of items to assess private spiritual practices (Traphagan, 2005). In sum, the Fetzer/NIA instrument is “multidimensional to allow investigation of multiple possible mechanisms of effect, brief enough to be included in clinical or epidemiological surveys, and inclusive for both traditional religiousness and non-institutionally based spirituality” (Idler et al., 2003, p. 327).

Domains of measurement. The Fetzer/NIA workgroup identified twelve domains of religiousness/spirituality that are relevant to health. Subsequently, they developed several items for each domain. A brief description of each domain is provided below.

1. **Beliefs** – Items in this domain assess a variety of beliefs that may differ between or within religious/spiritual traditions (e.g., members of the same religious/spiritual group might vary in the strength of their beliefs or disagree about what
those beliefs should be): “I believe in a God who watches over me” (1 = strongly agree, 4 = strongly disagree).

2. **Commitment** – Items in this domain are designed to assess the importance people place on religious/spiritual beliefs, and their commitment to upholding those beliefs: “I try hard to carry my religious beliefs over into all of my other dealings in life” (1 = strongly agree, 4 = strongly disagree).

3. **Daily spiritual experiences** – This domain evaluates the influence of religion/spirituality in daily life (as opposed to its influence under extraordinary circumstances such as near death experiences or out of body experiences): “I feel a deep inner peace or harmony” (1 = many times a day, 6 = almost never).

4. **Forgiveness** – This domain entails five dimensions of forgiveness: (1) confession, (2) feeling forgiven by God, (3) feeling forgiven by others, (4) forgiving others, and (5) forgiving oneself: “Because of my religious or spiritual beliefs, I have forgiven myself for things that I have done wrong” (1 = always, 4 = never).

5. **Meaning** – Items in this domain assess the respondent’s level of success or failure in the search for meaning: “The events of my life unfold according to a divine or greater plan” (1 = strongly agree, 4 = strongly disagree).

6. **Organizational religiousness** – This domain assesses the respondent’s involvement within a formal, public religious institution. Organizational religiousness may be reflected in beliefs about how well one “fits in” with a religious congregation, or in behaviors such as participation in choir practice, youth group activities, etc.: “Besides religious services, how often do you take part in other activities at a place of worship?” (1 = more than once a week, 6 =
7. *Private religious practices* – This domain taps into private/non-organizational religious practices: “How often are prayers or grace said before or after meals in your home?” (1 = at all meals, 5 = never).

8. *Religious coping* – These items assess positive and negative patterns of religious coping: “To what extent is your religion involved in understanding or dealing with stressful situations in any way?” (1 = very involved, 4 = not involved at all).

9. *Religious/spiritual history* – Items in this domain are intended to distinguish people whose religious/spiritual involvement has been steady and lifelong from those whose experience has been marked by conversion or a deepening of religious/spiritual commitment: “Did you ever have a religious or spiritual experience that changed your life?” (yes or no).

10. *Religious preference* – This domain consists of a single item designed to ascertain the religious/spiritual tradition or denomination with which an individual identifies: “What is your current religious preference?” (list of religious preferences).

11. *Religious support* – This domain focuses on two dimensions of social relations that occur between people in a shared place of worship: (1) perceived support (subjective evaluations of support) and (2) enacted support (the amount of tangible help that is actually provided by others): “If you were ill, how much would the people in your congregation help you out?” (1 = a great deal, 4 = none).

12. *Values* – This domain assesses the extent to which an individual’s behavior typically reflects the expression of religiousness/spirituality as an ultimate value:
“I feel a deep sense of responsibility for reducing pain and suffering in the world”

(1 = strongly agree, 4 = strongly disagree).

The Fetzer/NIA instrument can be used to examine the effects of select domains or the interplay between multiple domains. The following domains of religiousness/spirituality will be assessed in the present study: Beliefs, commitment, organizational religiousness, private religious practices, religious coping, and religious preference.

*Psychometric properties.* The concurrent and discriminant validity of the Fetzer/NIA instrument have been supported by factor analyses. Reliability analyses have shown that the instrument has acceptable stability and moderate to good internal consistency (alphas > .70) (Neff, 2006; Stewart & Koeske, 2006).

*Limitations of Existing Measures*

According to Plante and Sherman (2001b), the conceptual challenges associated with the measurement of religion/spirituality have left some researchers asking, “How can one approach scientifically something as ineffable, intangible, and mysterious as religious experience?” (p. 2). A related editorial was entitled “How can you measure a sunbeam with a ruler?” (Lederberg & Fitchett, 1999). In response, Sherman & Simonton (2001a) suggested that the task for health researchers is to “remain firmly anchored in sound methodology without losing sight of the sunbeam—not an easy feat” (p. 139).

Three primary limitations have been identified concerning the measurement of religiosity/spirituality in health related studies. The first limitation involves a tendency to assess relatively narrow aspects of religious/spiritual involvement such as religious denomination using a small number of items on a single occasion. Such approaches (a) attenuate the association between religion/spirituality and health, and (b) provide limited
information about temporal stability (Hill & Pargament, 2008). This results in a smaller effect size than would be observed if variables were assessed using more reliable measures. Further, religious/spiritual involvement is a “life course phenomenon,” which is likely to show significant variability over time. Thus, it may be important to include items designed to assess whether a lifetime of religious/spiritual involvement produces greater health benefits than does religious/spiritual involvement experienced over a shorter period of time (Fetzer/NIA, 2003).

Second, many studies in this area have focused on behavioral aspects of religiosity/spirituality such as attendance at religious services and prayer or meditation. More comprehensive measures such as those of the attitudes and beliefs that lead to religious attendance and prayer have been the exception rather than the rule (Hill & Hood, 1999). Ellison and Levin (1998) suggested that greater emphasis on the functional roles of religion/spirituality would help to shed light on the mechanisms by which religious/spiritual involvement influences health. For example, knowing that a cancer patient goes to church (behavior) is less informative than knowing why she goes, what she seeks from the experience, and whom she prays for while there (functional role) (Sherman & Simonton, 2001a). Correspondingly, there is some argument that differences in religious/spiritual attitudes and beliefs are more important than differences in religious/spiritual behaviors when it comes to the prediction of general health (Dezutter, Soenens, & Hutsebaut, 2006). Ellison (1991) found that the relationship between religious/spiritual beliefs and well-being, for example, remained significant after controlling for the protective behavioral aspects of being religious/spiritual. This suggests that religious/spiritual beliefs confer health benefits above and beyond those conferred by
religious/spiritual behaviors. Therefore, it may be important to include items that tap into religious/spiritual beliefs.

Third, some studies have failed to disaggregate the multiple dimensions of religios/it/spirituality. Combining different dimensions of religiousness/spirituality into a total score tends to obscure differences among dimensions (Hill, 2005).

Recommendations for addressing the limitations described above, as well as other methodological issues in the study of religion/spirituality and health, are identified in the following section.

**Methodological Issues in the Study of Religion/Spirituality and Health**

Powell et al. (2003) applied a “strength of evidence” approach to the evaluation of studies involving religion/spirituality and health based on the following criteria: (a) construct measurement, (b) research design, and (c) statistical methods. The authors concluded that enhanced research designs and more adequate controls in future studies could yield an increased understanding of relationships between religion/spirituality and health. A number of relevant recommendations are summarized in Table 1.

**Summary of Literature Review**

Several conclusions can be drawn from the preceding literature review:

- A large proportion (83%) of Americans have identified religion/spirituality as an important aspect of life. This implies that careful attention to religious/spiritual issues in clinical research and practice is a critical and worthwhile goal.
- Religious/spiritual commitment appears to be stronger among women and ethnic minorities. It also tends to increase with age.
<table>
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<th>Construct Measurement</th>
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<tr>
<td>• Use clear, standardized terminology in referring to aspects of religion/spirituality.</td>
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<td>• Specify which characteristics of religion/spirituality are being measured.</td>
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<tr>
<td>• Specify why specific features of religion/spirituality are being measured.</td>
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<tr>
<td>• Avoid mixing different dimensions of religiousness/spirituality.</td>
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<tr>
<td>• Utilize measures that are sufficiently broad to assess individuals from diverse cultural and religious/spiritual backgrounds.</td>
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<td>• Use brief measures to minimize patient burden as necessary.</td>
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<td>• Conduct multiple assessments as religiosity/spirituality may change over time.</td>
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<th>Research Designs</th>
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<tr>
<td>• Employ experimental and repeated measures designs (to the degree that religious/spiritual factors can be manipulated).</td>
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<tr>
<td>• Conduct prospective/longitudinal studies to examine changes in religiosity/spirituality over time.</td>
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<td>• Conduct intervention studies. Such studies could serve to (a) test theoretical propositions about underlying mechanisms, and (b) inform the development of treatment strategies.</td>
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<th>Data Analyses</th>
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<tr>
<td>• Rule out the effects of potential confounders.</td>
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<td>• Correct for multiple comparisons.</td>
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*Note.* See George et al., 2002; Hill & Pargament, 2008; Lawrence, 2002; McCullough et al., 2000; Mills, 2002; Sherman Simonton, 20001a; Sloan et al., 2001; Thoresen & Harris, 2004.
• The burden of mental illness in the United States is considerable. College students experience a disproportionate share of mental illness (i.e., the highest rate of mental illness in the United States exists among persons aged 18-25).

• Mental health is fundamentally interconnected with physical functioning. Religious/spiritual involvement could help to address the burden of mental illness and physical illness.

• Cultures from ancient to modern times have viewed health and illness as being directly related to a variety of religious/spiritual beliefs and practices.

• Physicians and psychologists have been commenting on issues of religion/spirituality and health for over 100 years. Nevertheless, research in this area did not officially “catch on” until the early 1990s, owing to the assumptions of materialism, empiricism, and the medical model. Contemporary sociocultural trends may have contributed to the increased interest in relationships between religion/spirituality and health.

• A substantial amount of literature is available on the topic of religion/spirituality and health. Much of this literature describes epidemiological studies.

• The dominant pattern in the literature is one in which religious/spiritual involvement has a positive, rather than negative, influence on health.

• Religious/spiritual involvement can enhance coping among mentally healthy people, prevent the onset of mental health problems, and promote recovery among persons experiencing mental illness.

• Religious/spiritual involvement is associated with greater longevity. The indicator of religious/spiritual involvement that has most consistently been associated with
lower mortality rates is attendance at religious services, even when a dozen or more control variables are included in the analyses.

- Religious/spiritual involvement serves as a protective resource that prevents the onset of disease and disability among healthy people. Lack of attendance at religious services is associated with significantly higher rates of disease.

- Religious/spiritual involvement increases the likelihood that persons will recover from physical illness.

- A generally accepted model suggests that behaviors such as prayer and attendance at religious services influence distal psychosocial factors, which affect proximate physiological processes, which ultimately have an impact on physical health.

- Numerous mechanisms have been identified in an effort to explain how the relationship between religion/spirituality and health potentially occurs. Such mechanisms include the (a) reduction of behavioral risk factors, (b) expansion of social support, and (c) enhancement of coping skills. Religious/spiritual involvement may also reduce host vulnerability to disease through its effects on the cardiovascular, neuroendocrine, and immune systems.

- The detrimental effects of chronic stress have been widely studied and well documented. To the extent that religiosity/spirituality is involved in reducing stress, a possible explanation for the associations observed between religious/spiritual factors and health can be offered.

- Some aspects of religion/spirituality (e.g., religiously/spiritually motivated medical neglect, the use of religion/spirituality for self-interest or personal gain) can be harmful to health.
• The experience of poor mental health and/or life threatening illness tends to intensify one’s religiousness/spirituality.

• Several instruments have been designed to assess aspects of general religiousness, religious coping, and spiritual well-being. The most comprehensive is the Fetzer/NIA Multidimensional Measure of Religiousness/Spirituality for use in Health Research, which assesses twelve domains of religiosity/spirituality: beliefs, commitment, daily spiritual experiences, forgiveness, meaning, organizational religiousness, private religious/spiritual practices, religious coping, religious/spiritual history, religious/spiritual preference, religious/spiritual support, and values. Other instruments in this area have (a) assessed relatively narrow behavioral aspects of religion/spirituality, or (b) failed to disaggregate the multiple dimensions of religiosity/spirituality.

• Recommendations have been offered for maintaining the methodological quality of studies on religion/spirituality and health (Table 1, p. 132).

The research literature, which has stimulated discussion concerning the role of religion/spirituality in clinical practice, has been reviewed in this chapter. The fact that religiosity/spirituality encompasses such an array of risk moderators and coping responses makes barriers to the provision of clinical guidance on the health effects of religious/spiritual involvement problematic. Studies involving providers’ perceptions and practices in this area could inform efforts to reduce such barriers among health care professionals, perhaps by enhancing the curricula of training programs and making recommendations relevant to the settings in which they practice. The aforementioned lack of attention to religion/spirituality and health in the context of services offered at
university counseling centers is surprising given the prevalence of mental health problems among the college student population and the potential for religious/spiritual involvement to serve as a resource in meeting students’ mental health needs. Discussions of mental health concerns and religious/spiritual issues that take place between university counseling professionals and their clients could extend to discussions regarding the positive influence of religious/spiritual involvement on attitudes and behaviors that reduce physical health risks and promote healthier lifestyles. Accordingly, the present study was conducted to assess the perceptions and practices of university counseling professionals in relation to their provision of guidance concerning the protective and salutary influence of religious/spiritual involvement on mental and physical health. A description of the research methods utilized for this study is provided in Chapter Three.
Chapter Three

Methods

The purpose of this chapter is to provide a description of the research methods utilized for this study with respect to: Selection of Participants, Survey Development, Psychometric Evaluation of Survey, Procedures, and Data Analyses. The research protocol described in this chapter was approved by the Human Subjects Institutional Review Board (Appendix A).

Selection of Participants

The membership of the Association for University and College Counseling Center Directors was used to identify a national cross-section of university counseling centers (AUCCD, 2008). The entire population of AUCCD member centers that met the selection criteria was included (see Delimitations in Chapter 1). Of the 745 counseling centers on the AUCCD list, 85 centers (11%) were eliminated because they were located in countries other than the United States (n = 40) or at institutions that were not recognized by the Carnegie Foundation (n = 45). This yielded an initial population of 660 counseling centers. An additional 37 centers (5%) were eliminated because the director was the only staff member. This yielded a final population of 623 counseling centers, from which the names of 623 mental health professionals (one licensed psychologist, professional counselor, or social worker per center) were acquired via internet (77%) or telephone (23%). The names of doctoral level clinicians (Ph.D. or Psy.D.) were obtained except in cases where the director was the only doctoral level staff member (n = 19), or when the
center did not employ doctoral level providers \((n = 109)\). For these centers, the names of master’s level clinicians were acquired (i.e., MA, MS, and MSW). In cases where more than one practitioner at a given counseling center met the selection criteria, one name was chosen at random.

**Survey Development**

A survey instrument was developed for this study based on a comprehensive review of the literature on religion/spirituality and health. The theoretical framework for the survey was drawn from the Transtheoretical Model, Health Belief Model, and Self-Efficacy Theory as described in Chapter One (Bandura, 1977; Janz et al., 2002; Prochaska et al., 2002). An initial pool of approximately 40 items was assembled. Some of the items were adapted from the *Brief Multidimensional Measure of Religiousness/Spirituality for use in Health Research* or the *Short Form-36 Health Survey* (Fetzer/NIA, 2003; McHorney et al., 1993; see Chapter Two for a discussion of the conceptual background and psychometric properties of the Fetzer measure). Items with similar content were reduced to a single, exemplary item. The final version of the instrument was four pages long and consisted of 23 items designed to assess mental health professionals’ perceptions and practices of discussing the health effects of religiosity/spirituality with their clients at university counseling centers (Appendix B). More specifically, items were designed to assess the respondents’:

- *stage of change* in relation to discussing the health effects of religious/spiritual involvement (item #1)

- *general perceptions* of providing guidance on the health effects of religious/spiritual involvement (e.g., “If it were empirically demonstrated that a specific
religious/spiritual intervention was effective at promoting health, then university counseling professionals should offer that intervention”) (items #4-5)

- *general clinical practices* with respect to religious/spiritual issues (e.g., whether or not the respondents routinely identify and document their clients’ religious/spiritual involvement) (items #6-7)

- *perceived benefits* of religious/spiritual involvement (e.g., promotes healthier lifestyles, promotes hope/optimism, etc.) (item #8)

- *perceived barriers* to discussing the health effects of religious/spiritual involvement (e.g., lack of time, lack of personal expertise, etc.) (item #9)

- *efficacy expectations* regarding the use of the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement (item #10)

- *outcome expectations* concerning the use of the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement (item #11)

- *receipt of information/training* in relation to counseling clients on the health effects of religious/spiritual involvement (e.g., from sources such as journals, professional conferences, workshops, etc.) (item #12).

In addition, items were designed to assess the following demographic and background characteristics: sex, age, race/ethnicity, level of education, type of license, number of years in professional practice, health status; and religious/spiritual preference, involvement, and self-ranking (#13-23). Respondents were asked to rate their level of agreement with the items using Likert-type (endorsement and frequency) scales, as well as multiple response formats. Demographically sensitive items were placed at the end of the survey.
Psychometric Evaluation of Survey

Validity

Face validity of the instrument was established by way of a comprehensive literature review on religion/spirituality and health. Content validity was established via an expert panel review process. Specifically, the instrument was reviewed by a panel of experts in the area of religion/spirituality and health or survey research methods ($N = 6$) (Appendices C and D). Minor revisions were made to the survey based on the panel’s recommendations. For example, the item designed to assess health status was repositioned so that it appeared before the items concerning religion/spirituality. This change was recommended as a means of minimizing potential bias associated with the order in which the items were presented (e.g., the potential for religious/spiritual respondents to overemphasize their health status to the degree that they equate being religious/spiritual with being healthy; or the potential for non-religious/non-spiritual respondents to overemphasize their health status as compensation for a lack of religious/spiritual involvement). Other revisions involved the separation of religious concepts from spiritual concepts (item #21).

An exploratory principal components analysis (PCA) was conducted to assess the construct validity of the instrument. Prior to performing the PCA, an assessment was made to ensure that the data were suitable for factor analysis. The correlation matrix revealed 155 coefficients of .30 and above. Bartlett’s test of sphericity ($p < .05$) and the Kaiser-Meyer-Oklin value ($>.60$) supported the factorability of the correlation matrix. PCA revealed the presence of seven components with eigenvalues of greater than 1.00 (Kaiser-Guttman criterion). These components explained 62.49% of the variance in item responses. Using Catell’s scree test, the decision was made to retain three components for
further investigation (i.e., the scree plot showed a clear break between factors three and four). Varimax rotation was performed to assist with the interpretation of the components. The rotated solution yielded simple structure, with three components showing a number of strong loadings, and variables loading on only one component (Table 2). The three factor solution explained 43.76% of the variance in item responses (Component 1 = 21.24%, Component 2 = 11.51%, and Component 3 = 11.00%). This solution is consistent with constructs of the Health Belief Model and Self-Efficacy Theory. Specifically, outcome expectations and perceived benefits loaded on Component 1, and efficacy expectations loaded on Component 2. Component 3 consisted of the items designed to assess personal health status. In sum, PCA provided support for the use of the outcome expectations, efficacy expectations, and health status items as separate subscales in this study.

Reliability

Stability (test-retest) reliability was evaluated based on the responses of a pilot sample obtained by convenience from the Department of Psychology and the Department of Counselor Education and School Psychology at The University of Toledo ($N = 15$). The sample consisted of faculty members ($n = 10$) and graduate students ($n = 5$). Graduate student participants were actively engaged in treating clients by way of a psychotherapy practicum. Faculty members were contacted by e-mail, whereas graduate students were contacted through their clinical supervisor. Participants received a cover letter (Appendix E or F) and a copy of the survey. The cover letter informed the participants that they would be asked to respond to the survey again after a two-week interval, at which time a second letter (Appendix G) and another copy of the survey were
Table 2

Principal Components Analysis of Survey Instrument

<table>
<thead>
<tr>
<th>Item</th>
<th>Component/Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Outcome</td>
</tr>
<tr>
<td>11a. [Using the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement would result in] a reduction of health risks for my clients.</td>
<td>.771</td>
</tr>
<tr>
<td>11b. [Using the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement would result in] enhanced recovery for my clients.</td>
<td>.800</td>
</tr>
<tr>
<td>11c. Clients would attribute a greater sense of trust and caring to me.</td>
<td>.694</td>
</tr>
<tr>
<td>11d. Clients would be harmed by this intervention.</td>
<td>.522</td>
</tr>
<tr>
<td>11e. I would feel more complete and satisfied in my professional life.</td>
<td>.773</td>
</tr>
<tr>
<td>8. During counseling sessions, which of the following topics do you discuss with the majority (&gt;50%) of your clients as being a potential health benefit of religious/spiritual involvement?</td>
<td>.713</td>
</tr>
<tr>
<td>10a. [How confident are you in your ability to] Ask my clients about their religious/spiritual involvement.</td>
<td>.696</td>
</tr>
<tr>
<td>10b. Advise my clients about connections between religious/spiritual involvement and health.</td>
<td>.554</td>
</tr>
<tr>
<td>10c. Assess my clients’ receptiveness to religious/spiritual involvement as a health promotive practice.</td>
<td>.697</td>
</tr>
<tr>
<td>10d. Assist my clients with referrals to religiously/spiritually based resources.</td>
<td>.719</td>
</tr>
<tr>
<td>10e. Arrange follow up contact to see if my clients’ religious/spiritual needs were adequately addressed.</td>
<td>.736</td>
</tr>
<tr>
<td>19a. I seem to get sick a little easier than other people do.</td>
<td>.805</td>
</tr>
<tr>
<td>19b. I am as healthy as anybody I know.</td>
<td>.806</td>
</tr>
<tr>
<td>19c. I expect my health to get worse within the next month.</td>
<td>.602</td>
</tr>
<tr>
<td>19d. My health is excellent.</td>
<td>.752</td>
</tr>
<tr>
<td>19e. During the past four weeks, my physical or emotional problems have interfered with my regular daily activities.</td>
<td>.571</td>
</tr>
</tbody>
</table>

Note. Orthogonal (Varimax) rotation of a three factor solution was performed. Variance explained = 43.76%.
forwarded. On both occasions, the respondents returned their completed survey using a self-addressed manila envelope provided by the researcher. Surveys were coded for matching purposes. The completion/match rate was 100%. Pearson product-moment correlation coefficients ($r$) were used to evaluate the test-retest reliability of continuously scaled items, as well as items with a multiple response format. Percent agreement and Cohen’s Kappa ($\kappa$) were used for dichotomously scaled items. As presented in Table 3, acceptable to strong stability was demonstrated over the two-week interval, with statistically significant reliability coefficients ranging from .57 to .95 for all items except those designed to assess perceived barriers ($r = .40, p = .13$). There was 80% agreement between responses on the stages of change item at the first and second administration. In addition, Cohen’s Kappa was within the acceptable range ($\kappa = .60$).

Internal consistency reliability was evaluated based on the responses of participants in the main study. Cronbach’s alpha ($\alpha$) was used to assess the internal reliability of scales with continuous items; Kuder-Richardson 20 (KR 20) was used for dichotomously scaled items. The efficacy expectations, outcome expectations, and health status subscales all showed adequate to good internal consistency with alphas of .79, .84, and .77, respectively (Table 3). Although the items designed to measure perceived benefits (#8a-l), sources of information/training (#12a-h), and religious/spiritual involvement (#21a-j) were not treated as subscales, these items also showed adequate to good internal consistency (KR 20 = .88, .57, and .86, respectively). Given the low internal reliability of the general clinical practices subscale ($\alpha = .40$) and the fact that multiple chi-square tests would have been necessary in order to examine demographic interactions involving each of the four separate items on the scale (thus inflating the
<table>
<thead>
<tr>
<th>Scale (number of items)</th>
<th>Stability (N = 15)</th>
<th>Internal Consistency (n = 280)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 a-d. General clinical practices (4)</td>
<td>0.66**</td>
<td>0.40</td>
</tr>
<tr>
<td>10 a-e. Efficacy expectations (5)</td>
<td>0.84**</td>
<td>0.79</td>
</tr>
<tr>
<td>11 a-e. Outcome expectations (5)</td>
<td>0.65**</td>
<td>0.84</td>
</tr>
<tr>
<td>19 a-e. Self-rated health status (5)</td>
<td>0.57*</td>
<td>0.77</td>
</tr>
<tr>
<td>8 a-l. Perceived benefits (12)</td>
<td>0.90**</td>
<td>- -</td>
</tr>
<tr>
<td>9 a-p. Perceived barriers (16)</td>
<td>0.40</td>
<td>- -</td>
</tr>
<tr>
<td>21 a-j. Religious/spiritual involvement (10)</td>
<td>0.95**</td>
<td>- -</td>
</tr>
</tbody>
</table>

Note.

\( r = \) Pearson product moment correlation coefficient

\( \alpha = \) Cronbach alpha

KR 20 = Kuder-Richardson 20

\(*p < .05, ** p < .01\)
probability of Type 1 error), hypotheses 5.6 – 5.9 were ultimately not tested.

**Procedures**

For the main study, potential respondents were contacted by U. S. mail (Appendices H-J). A three-wave mailing procedure was used to maximize the return rate. The first mailing included: (1) a personalized cover letter hand-signed in blue ink and printed on university letterhead, which briefly introduced the study, requested the recipient’s confidential participation, and provided directions for returning the survey (i.e., recipients were asked to disregard the survey and return only the cover letter in the event that they did not currently treat clients in a college or university counseling center), (2) a copy of the survey instrument printed on light blue paper in booklet format, (3) a crisp $1.00 bill as an incentive for participation, and (4) a return envelope addressed to the researcher’s advisor with a first-class postage stamp (King, Pealer, & Bernard, 2001). For the purpose of tracking non-respondents, return envelopes were coded with an identification number. A second mailing consisting of a revised cover letter, another copy of the survey, and a self-addressed stamped envelope was sent to potential participants who did not respond to the initial request after two weeks. A third mailing consisting of a reminder letter, another copy of the survey, and a self-addressed stamped envelope was sent to potential participants who had still not responded after an additional two weeks. Simultaneously, a reminder was sent by e-mail to all non-respondents for whom an accurate and functional e-mail address could be obtained ($n = 143$). No further contact was made with non-respondents after this point.

**Data Analyses**

The data were analyzed using the Statistics Package for Social Sciences (SPSS)
The following variables were **dichotomized** for the purposes of data analysis:

- **Stages of change** in relation to discussing the health effects of religious/spiritual involvement (action or maintenance versus precontemplation, contemplation, preparation, and relapse). This variable was dichotomized because the vast majority (93%) of cases fell into one of two categories (precontemplation or maintenance), leaving few to no cases in the other categories to consider.

- **Sources of information/training** on counseling clients regarding the health effects of religious/spiritual involvement (received information/training from any source versus has not received any information/training)

- **Self-rated health status** of university counseling professional. A subscale score was calculated for this variable by averaging the responses to items #19a-e. Items were recoded so that a higher score indicates better self-rated health. The distribution of health scores was negatively skewed (−1.48) (i.e., scores clustered toward the high end). Therefore, non-parametric tests were utilized for the relevant data analyses. Scores were converted to categories of 0 – 4.40 or 4.41+(median split) for this purpose.

- **Classification of academic institution** was dichotomized into public versus private (Carnegie Foundation, 2008).

- **Religious affiliation of academic institution** was dichotomized into religiously affiliated versus non-religiously affiliated (NCES, 2008).

The **categorical** variables were as follows:

- **General perceptions** of discussing the health effects of religiosity/spirituality
with clients. Decisions to accept or reject the null hypotheses involving this variable were made based on the percentages in each response category (“Strongly Disagree/Disagree,” “Unsure,” or “Agree/Strongly Agree”).

- **General clinical practices** with respect to religious/spiritual issues. Decisions to accept or reject the null hypotheses involving this variable were made based on the percentages in each response category (“Always/Most of the Time” versus “Sometimes/Seldom/Never,” and “Yes” versus “No” in the case of routine charting on clients’ religious/spiritual involvement).

- **Race/ethnicity** of university counseling professionals were grouped into:
  White/Caucasian, Black/African American, Hispanic/Latino, Asian, or Other.

- **Religious/spiritual involvement of university counseling professional**
  Two survey items (#22-23) assessed the extent to which respondents considered themselves to be “religious” or “spiritual” (four-point scale ranging from “Not at All” to “Very”). Responses to these items were used to create a single variable with four groups: (1) religious-spiritual, (2) religious-not spiritual, (3) spiritual-not religious, and (4) not religious-not spiritual.

- **Geographic region of academic institution** was categorized into four regions:
  Midwest, Northeast, South, or West (CDC, 2008)

- **Size of enrollment at academic institution** was divided into tertiles of 0-3,817; 3,818-11,913; or 11,914+ students (Carnegie Foundation, 2008).

The **continuous** variables were:

- Total number of **perceived barriers** to discussing the health effects of religious/spiritual involvement. One outlier ($X = 10$) was identified in this distribution. The
5% trimmed mean of 1.76 ($SD = 1.41$) did not differ substantially from the mean of 1.84 ($SD = 1.41$) for the entire distribution. Therefore, the outlying case was retained in the data file.

- Level of **efficacy expectations** regarding the use of the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement. A subscale score was calculated for this variable by averaging the responses to items #10a-e. A higher subscale score (i.e., scores of four or five on a five-point scale) indicates a higher level of confidence.

- Level of **outcome expectations** regarding the use of the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement. A subscale score was calculated for this variable by averaging the responses to items #11a-e. One item was recoded so that a higher subscale score (i.e., scores of four or five on a five-point scale) indicates more positive outcome expectations.

- **Age** of university counseling professional.

- Number of **years in professional practice**. One outlier ($X = 50$) was identified in this distribution. The 5% trimmed mean of 15.06 ($SD = 9.61$) did not differ substantially from the mean of 15.47 ($SD = 9.61$) for the entire distribution. Therefore, the outlying case was retained in the data file.

The distributions of continuously scaled variables were assessed to ensure that the normality assumption was met for the use of parametric statistical tests. Outcome expectations, years of professional practice, and age were normally distributed. The distribution of perceived barriers was positively skewed, with or without the outlier ($+1.29$ and $+.73$, respectively). Scores on the efficacy expectations subscale were slightly
negatively skewed (−.429) (i.e., scores clustered toward the high-end). Thus, nonparametric statistical tests were used for the data analyses involving perceived barriers and efficacy expectations.

The following statistical procedures were utilized to test the hypotheses:

- Descriptive statistics (i.e., frequencies, percentages, or mean and standard deviation) for hypotheses: 1.1, 3.1, 4.1, 5.1 − 5.5, 6.1, 7.1, 8.1 − 8.5, 9.1 − 9.5, and 10.1
- Pearson chi-square ($\chi^2$) tests of independence for hypotheses: 2.1, 2.3 − 2.6, 2.8, 2.9, 3.2, 3.3, 3.5, 4.2, 4.3, and 4.5
- Mann-Whitney U tests for hypotheses: 7.4, 7.5, 8.8, and 8.9
- Independent samples t-tests for hypotheses: 2.2, 2.7, 3.4, 4.4, 9.7, 9.9, and 9.10
- Kruskal-Wallis H tests for hypotheses: 7.2 and 8.6
- One-way analysis of variance (ANOVA) and post-hoc Tukey HSD tests for hypothesis 9.6

The research questions and hypotheses are matched with the corresponding survey items and data analyses on the matrix in Appendix K.

Statistical tests of significance were conducted for 34 out of the 59 hypotheses listed above. Decisions to accept or reject the remaining hypotheses were made based on the descriptive data. Level of significance was adjusted using the Bonferroni method. An adjusted alpha of .05 / 34, or $p \leq .001$ was considered to be overly conservative. Consequently, alphas were adjusted familywise (Table 4).
Table 4

*Bonferroni Corrections for Multiple Statistical Tests*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Bonferroni Correction</th>
<th>Adjusted alpha ((p \leq))</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>None</td>
<td>- -</td>
</tr>
<tr>
<td>2.</td>
<td>.05 / 9</td>
<td>.005</td>
</tr>
<tr>
<td>3.</td>
<td>.05 / 4</td>
<td>.012</td>
</tr>
<tr>
<td>4.</td>
<td>.05 / 4</td>
<td>.012</td>
</tr>
<tr>
<td>5.</td>
<td>None</td>
<td>- -</td>
</tr>
<tr>
<td>6.</td>
<td>None</td>
<td>- -</td>
</tr>
<tr>
<td>7.</td>
<td>.05 / 4</td>
<td>.012</td>
</tr>
<tr>
<td>8.</td>
<td>.05 / 4</td>
<td>.012</td>
</tr>
<tr>
<td>9.</td>
<td>.05 / 8 (^a)</td>
<td>.006</td>
</tr>
<tr>
<td>10.</td>
<td>None</td>
<td>- -</td>
</tr>
</tbody>
</table>

*Note.* The conventional alpha of .05 was divided by the number of statistical tests conducted per research question. “None” denotes that only one statistical test was conducted for a given research question, in which case it was not necessary to adjust the alpha level.

\(^a\) This includes three post-hoc comparison tests.
Chapter Four

Results

The results of the current study are presented in this chapter, which is divided into the following sections: Return Rate, Power Analyses, Analysis of Non-Respondents, Characteristics of University Counseling Centers, Characteristics of University Counseling Professionals, Stages of Change, General Perceptions, General Clinical Practices, Perceived Benefits, Perceived Barriers, Efficacy Expectations, Outcome Expectations, Sources of Information and Training, Hypotheses Tests, and Summary of the Findings.

Return Rate

Surveys were mailed to 623 university counseling professionals. A total of 280 completed surveys were received. The number of non-deliverable surveys ($n = 47$ or 7%) plus the number of ineligible recipients (i.e., those who returned only the cover letter indicating that they did not currently treat clients in a college or university counseling center: $n = 38$ or 6%) was subtracted from the denominator in calculating the return rate. Prior to making this subtraction, a random sample of 25 non-deliverable envelopes was cross checked via internet or telephone to confirm that the addressee was no longer at the respective counseling center. This was confirmed in all 25 cases. Accordingly, the return rate for this study was $280 / (623 - [47 + 38] = 538)$, or 52%.

In cases where a religiously affiliated academic institution did not provide a usable response (i.e., when a survey was returned blank or when a dollar bill was returned
without a survey) \((n = 4)\), an alternate counseling professional at the same institution was identified via internet. In three cases, two separate practitioners at the same counseling center returned a blank survey. This finding will be discussed in Chapter Five.

A total of 26 completed surveys were received after the data analysis was conducted. The late-arriving surveys will be added to the analysis prior to submitting a manuscript for publication. The adjusted return rate was \(306 / (623 - [56 + 40] = 527)\), or 58%. This is comparable to the 59% return rate in a recently published study involving the same population (Price, Mrdjenovich, Thompson, & Dake, 2009).

**Power Analyses**

Three separate power analyses were conducted for this study: one for the entire population of AUCCD member centers that met the selection criteria \((N = 623)\), a second for member centers at *non*-religiously affiliated academic institutions \((n = 449 \text{ or } 72\%)\), and a third for member centers at *religiously affiliated* academic institutions \((n = 174 \text{ or } 28\%)\). The results were as follows:

1. Based on a total population of 623 counseling centers and a 50/50 split with regard to the perceptions and practices of interest, it was determined that an \(N\) of 239 would be needed to make inferences to the total population of counseling centers with a sampling error of \(\pm 5\%\) at the 95% confidence level \((239/623 = 38\% \text{ return rate needed for power})\) (Price et al., 2005).

2. Based on a total population of 449 *non*-religiously affiliated counseling centers and a 50/50 split with regard to the perceptions and practices of interest, it was determined that an \(N\) of 208 would be needed to make inferences to the total population of non-religiously affiliated counseling centers with a sampling error
of ± 5% at the 95% confidence level (208/449 = 46% return rate needed for power).

3. Based on a total population of 174 religiously affiliated counseling centers and a 50/50 split with regard to the perceptions and practices of interest, it was determined that an $N$ of 121 would be needed to make inferences to the total population of religiously affiliated counseling centers with a sampling error of ± 5% at the 95% confidence level (121/174 = 69% return rate needed for power).

Thus, the final $N$ of 280 in this study yields adequate power to make inferences to the total population of counseling centers with a sampling error of ± 5% at the 95% confidence level. However, inferences cannot be made specifically to the subpopulation of religiously affiliated counseling centers (final $n$ of 77/174 = 44%). (With the addition of the late arriving surveys, it will be possible to make inferences to the subpopulation of non-religiously affiliated counseling centers.)

**Analysis of Non-Respondents**

A series of Pearson chi-square ($\chi^2$) tests were conducted to determine whether non-respondents differed significantly from respondents by the geographic region (Midwest, Northeast, South, or West), size of enrollment (tertiles of 0-3,817; 3,818-11,913; or 11,914+ students), classification (public versus private), and/or religious affiliation (religiously affiliated versus non-religiously affiliated) of the academic institution at which a given counseling center is located. Non-respondents did not differ significantly from respondents by geographic region ($\chi^2[3] = 1.45, p = .69$), size of enrollment ($\chi^2[2] = 1.75, p = .41$), classification ($\chi^2[2] = 1.45, p = .48$), or religious affiliation ($\chi^2[1] = .001, p = .97$).
Characteristics of University Counseling Centers

The counseling centers at which the respondents practiced were located predominantly at non-religiously affiliated (72%) academic institutions in the Northeastern (32%) or Southern (25%) United States, with an average enrollment of 10,208 students (SD = 9,785). The proportions of non-religiously affiliated (72%) and religiously affiliated (28%) academic institutions in this study were similar to those in the total population of colleges and universities in the United States (i.e., 65% and 35%, respectively) (NCES, 2008). Additionally, the counseling centers were equally distributed across public and private colleges/universities.

Characteristics of University Counseling Professionals

Descriptive statistics were calculated to describe the responding university counseling professionals and their answers to the survey (Table 5). The respondents were predominantly female (66%), Caucasian (88%), and Protestant (27%), with a mean age of 45.92 years (SD = 10.07). The majority had earned a Ph.D. (58%) and were licensed psychologists (63%). They had been in clinical practice for an average of 15.47 years (SD = 9.61).

Self-Reported Religiosity and Spirituality

The respondents were asked to select all that applied from a list of ten indicators of religious/spiritual involvement. The majority (70%) reported a belief in God(s) or a Higher Power; 39% considered religion to be an important part of their life; 79% considered spirituality to be an important part of their life; 29% said they “try hard to carry their religious beliefs over into all of their other dealings in life;” 64% said they “try hard to carry their spiritual beliefs over into all of their other dealings in life;” 41%
<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female</td>
<td>186</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>94</td>
<td>34</td>
</tr>
<tr>
<td>Age</td>
<td>20-29</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>(M = 45.92, SD = 10.07)</td>
<td>30-39</td>
<td>83</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>82</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>80</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>60-69</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>70+</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>Caucasian</td>
<td>239</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Hispanic/Latino</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Degree</td>
<td>MA/MS</td>
<td>63</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>MSW</td>
<td>18</td>
<td>7</td>
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<td></td>
<td>Ph.D.</td>
<td>161</td>
<td>58</td>
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<td>Psy.D.</td>
<td>35</td>
<td>13</td>
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<tr>
<td>License</td>
<td>Psychologist</td>
<td>171</td>
<td>63</td>
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<tr>
<td></td>
<td>Counselor</td>
<td>59</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Social Worker</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Other: e.g., Addictions Specialist, Marriage and Family Therapist</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>Years in Practice</td>
<td>1-5</td>
<td>53</td>
<td>19</td>
</tr>
<tr>
<td>(M = 15.47, SD = 9.61)</td>
<td>6-10</td>
<td>57</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>11-15</td>
<td>44</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>16-20</td>
<td>35</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>21+</td>
<td>85</td>
<td>31</td>
</tr>
<tr>
<td>Religious Preference</td>
<td>Protestant</td>
<td>75</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Other: e.g., Mormon (n=6), non-denominational (n=5), Taoist (n=2)</td>
<td>61</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Catholic</td>
<td>48</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Agnostic</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Buddhist</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Jewish</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Atheist</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>2</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>
### Table 5 (cont.)

**Demographic/Background Characteristics of Responding University Counseling Professionals**

<table>
<thead>
<tr>
<th>Variable/Item</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-reported Religiosity and Spirituality</strong></td>
<td></td>
</tr>
<tr>
<td>To what extent do you consider yourself to be a religious person?</td>
<td>97 (35) 73 (26) 77 (28) 30 (11) - -</td>
</tr>
<tr>
<td>To what extent do you consider yourself to be a spiritual person?</td>
<td>6 (2) 47 (17) 123 (45) 99 (36) - -</td>
</tr>
<tr>
<td><strong>Self-rated Health Status</strong></td>
<td></td>
</tr>
<tr>
<td>“I seem to get sick a little easier than other people.”</td>
<td>6 (2) 12 (4) 10 (4) 105 (38) 145 (52)</td>
</tr>
<tr>
<td>“I am as healthy as anybody I know.”</td>
<td>101 (36) 138 (50) 17 (6) 16 (6) 7 (3)</td>
</tr>
<tr>
<td>“I expect my health to get worse within the next month.”</td>
<td>1 (&lt;1) 2 (&lt;1) 19 (7) 57 (21) 199 (72)</td>
</tr>
<tr>
<td>“My health is excellent.”</td>
<td>102 (37) 147 (53) 13 (5) 13 (5) 4 (1)</td>
</tr>
<tr>
<td>“During the past four weeks, my physical or emotional problems have interfered with my regular daily activities.”</td>
<td>8 (3) 14 (5) 7 (3) 92 (31) 156 (56)</td>
</tr>
</tbody>
</table>

*N* = 280

*Note.* Percentages may not equal 100% due to rounding.
indicated that they attend religious services at least once a month; 29% indicated that they participate in public spiritual activities on a monthly basis; 61% said they pray or meditate at least once a week; 39% endorsed the use of religion to understand or deal with stressful situations; and 74% endorsed the use of spirituality to understand or deal with stressful situations. In addition, two survey items assessed the extent to which the respondents considered themselves to be “a religious person” and/or “a spiritual person.” Based on their answers to these items, the respondents were assigned to one of four mutually exclusive categories: (1) religious and spiritual (38%), (2) religious but not spiritual (<1%), (3) spiritual but not religious (42%), or (4) not religious-not spiritual (19%). Given that less than one percent of the respondents identified themselves as “religious but not spiritual,” this category was not included in the data analyses involving post-hoc comparison tests. This allowed the researcher to interpret the mean differences between the other three groups.

Self-Rated Health Status

The respondents rated their level of agreement with five statements designed to assess their personal health status. The majority agreed (“Definitely True” or “Mostly True”) with the statements: “I am as healthy as anybody I know” (86%), and “My health is excellent” (90%). The majority disagreed (“Mostly False” or “Definitely False”) with the statements: “I seem to get sick a little easier than other people” (90%), “I expect my health to get worse within the next month” (93%), and “During the past four weeks, my physical or emotional problems have interfered with my regular daily activities” (87%).
Stages of Change with Respect to Discussing the Health Effects of Religious/Spiritual Involvement

The university counseling professionals were asked to select the response that best described their current practice of discussing the health effects of religiosity/spirituality with their clients (Table 6). The majority (62%) of respondents indicated that they had been engaging in this practice for a period of at least six months (i.e., maintenance stage), whereas approximately one-third (31%) said they had “never seriously thought about” doing so. The remaining stages of change (contemplation, preparation, and relapse) accounted for less than 3% of the responses. Respondents who described themselves as “religious-spiritual” (74%) or “spiritual-not religious” (66%) were significantly more likely than respondents who described themselves as “not religious-not spiritual” (39%) to place themselves in the action or maintenance stage with respect to discussing the health effects of religious/spiritual involvement ($\chi^2[3] = 20.50, p < .001$). The stages of change did not differ significantly by sex ($\chi^2[1] = .61, p = .43$), age ($t[274] = -.13, p = .89$), race/ethnicity ($\chi^2[4] = 1.06, p = .90$), health status ($\chi^2[1] = .40, p = .52$), or years of professional practice ($t[271] = -.30, p = .75$), nor the geographic region ($\chi^2[3] = .23, p = .97$) or religious affiliation ($\chi^2[1] = 1.16, p = .28$) of the academic institutions from which the counseling professionals responded.

General Perceptions of Providing Guidance on the Health Effects of Religious/Spiritual Involvement

The respondents’ general perceptions of providing guidance on the health effects of religious/spiritual involvement were assessed via their level of agreement with two statements (Table 7). The majority (66%) of respondents “disagreed/strongly disagreed”
Table 6

*Stages of Change with Respect to Discussing the Health Effects of Religious/Spiritual Involvement*

<table>
<thead>
<tr>
<th>Stage</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Precontemplation:</strong></td>
<td></td>
</tr>
<tr>
<td>“I have never seriously thought about discussing the health effects of religiosity/spirituality with my clients.”</td>
<td>87 (31)</td>
</tr>
<tr>
<td><strong>Contemplation:</strong></td>
<td></td>
</tr>
<tr>
<td>“I have been seriously thinking about discussing the health effects of religiosity/spirituality with my clients, but I have not yet done so.”</td>
<td>9 (&lt;1)</td>
</tr>
<tr>
<td><strong>Preparation:</strong></td>
<td></td>
</tr>
<tr>
<td>“Within the next couple of months, I plan to start discussing the health effects of religiosity/spirituality with my clients.”</td>
<td>0 (0)</td>
</tr>
<tr>
<td><strong>Action:</strong></td>
<td></td>
</tr>
<tr>
<td>“I have been discussing the health effects of religiosity/spirituality with my clients for less than six months.”</td>
<td>5 (2)</td>
</tr>
<tr>
<td><strong>Maintenance:</strong></td>
<td></td>
</tr>
<tr>
<td>“I have been discussing the health effects of religiosity/spirituality with my clients for longer than six months.”</td>
<td>173 (62)</td>
</tr>
<tr>
<td><strong>Relapse:</strong></td>
<td></td>
</tr>
<tr>
<td>“I used to, but no longer, discuss the health effects of religiosity/spirituality with my clients.”</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

*Note.* Percentages may not equal 100% due to rounding and/or non-reported answers.

*N = 280*
Table 7

*University Counseling Professionals’ General Perceptions of Providing Clinical Guidance on the Health Effects of Religious/Spiritual Involvement*

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Agree n (%)</th>
<th>Agree n (%)</th>
<th>Not Sure n (%)</th>
<th>Disagree n (%)</th>
<th>Strongly Disagree n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“University counseling professionals should advise clients about connections between religious/spiritual involvement and better health.”</td>
<td>17 (6)</td>
<td>68 (25)</td>
<td>95 (31)</td>
<td>71 (26)</td>
<td>25 (9)</td>
</tr>
<tr>
<td>“If it were empirically demonstrated that a specific religious/spiritual intervention was effective at promoting health, then university counseling professionals should offer that intervention.”</td>
<td>28 (10)</td>
<td>98 (35)</td>
<td>72 (26)</td>
<td>56 (20)</td>
<td>20 (7)</td>
</tr>
</tbody>
</table>

N = 280

*Note.* Percentages may not equal 100% due to rounding and/or non-reported answers.
or were “unsure” that mental health professionals at university counseling centers should advise clients about connections between religious/spiritual involvement and health. However, nearly half (45%) “agreed” or “strongly agreed” with the statement, “If it were empirically demonstrated that a specific religious/spiritual intervention was effective at promoting health, then university counseling professionals should offer that intervention.”

Respondents who described themselves as “religious-spiritual” (63%) or “spiritual-not religious” (45%) were significantly more likely than respondents who described themselves as “not religious-not spiritual” (15%) to believe that university counseling professionals should advise clients about connections between religiosity/spirituality and health ($\chi^2[3] = 21.85, p < .001$). Although respondents from university counseling centers at religiously affiliated academic institutions were considerably more likely (59%) than respondents at non-religiously affiliated institutions (42%) to believe that university counseling professionals should advise clients as such ($\chi^2[1] = 4.03, p = .04$), the relevant hypothesis was accepted based on a corrected alpha of $p \leq .012$. The belief that university counseling professionals should advise clients about connections between religious/spiritual involvement and health did not differ significantly by self-rated health status ($\chi^2[1] = .53, p = .50$) or years of professional practice ($t[160] = .69, p = .49$).

**General Clinical Practices with Respect to Religious/Spiritual Issues**

The majority (66%) of respondents indicated that they routinely identify and document their clients’ religious/spiritual involvement. In addition, the respondents indicated that they engage in the following clinical practices with the majority of their
clients “most” or “all” of the time: 92% support clients in their own religious/spiritual beliefs and practices; 18% pray with clients if asked; 4% share their personal religious/spiritual experiences and ideas with clients; and <1% try to change the subject in a tactful way when religious/spiritual issues come up in discussions with clients (Table 8).

Perceived Benefits: Topics Discussed in Relation to the Health Effects of Religious/Spiritual Involvement

The majority (77%) of the university counseling professionals in this study “agreed” or “strongly agreed” that religious/spiritual involvement has a positive influence on the health and well-being of college students. Respondents who described themselves as “spiritual-not religious” (97%) or “religious-spiritual” (96%) were significantly more likely than respondents who described themselves as “not religious-not spiritual” (83%) to believe that religious/spiritual involvement has a positive influence on the health and well-being of college students ($\chi^2[3] = 12.37, p = .006$). This belief did not differ significantly by self-rated health status ($\chi^2[1] = .06, p = .79$), years of professional practice ($t[217] = 2.35, p = .02$) (hypothesis accepted based on a corrected alpha of $p \leq .012$), or religious affiliation of the academic institutions ($\chi^2[1] = .02, p = .87$).

Additionally, the respondents were asked to select all that applied from a list of 11 topics regarding the health benefits of religious/spiritual involvement that they potentially discussed with their clients (Table 9). Slightly more than three quarters (76%) of the respondents identified at least one topic/benefit that they discussed with the majority of their clients. The median number of topics endorsed was 3.00. Three topics were endorsed by more than 50% of the responding university counseling professionals: (1) “provides a means of coping with stress” (59%), (2) “contributes to a sense of well-
<table>
<thead>
<tr>
<th>Practice</th>
<th>Always n (%)</th>
<th>Most of the time n (%)</th>
<th>Sometimes n (%)</th>
<th>Seldom n (%)</th>
<th>Never n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I share my own religious/spiritual experiences and ideas with my clients.”</td>
<td>3 (1)</td>
<td>9 (3)</td>
<td>47 (17)</td>
<td>155 (55)</td>
<td>66 (24)</td>
</tr>
<tr>
<td>“I support clients in their own religious/spiritual beliefs and practices.”</td>
<td>147 (52)</td>
<td>111 (40)</td>
<td>16 (6)</td>
<td>4 (1)</td>
<td>2 (&lt;1)</td>
</tr>
<tr>
<td>“When religious/spiritual issues come up in discussions with my clients, I try to change the subject in a tactful way.”</td>
<td>2 (&lt;1)</td>
<td>1 (&lt;1)</td>
<td>5 (2)</td>
<td>66 (24)</td>
<td>206 (74)</td>
</tr>
<tr>
<td>“I pray with my clients if they request.”</td>
<td>33 (13)</td>
<td>13 (5)</td>
<td>6 (2)</td>
<td>49 (19)</td>
<td>161 (60)</td>
</tr>
</tbody>
</table>

*N = 280*

*Note.* Percentages may not equal 100% due to rounding and/or non-reported answers.
Table 9

Perceived Benefits: Topics Discussed with Clients in relation to the Health Effects of Religious/Spiritual Involvement

<table>
<thead>
<tr>
<th>Topic/Perceived Benefit</th>
<th>n (% )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a means of coping with stress</td>
<td>165 (59)</td>
</tr>
<tr>
<td>Contributes to a sense of well-being</td>
<td>157 (56)</td>
</tr>
<tr>
<td>Offers social support</td>
<td>152 (54)</td>
</tr>
<tr>
<td>Promotes hope/optimism</td>
<td>124 (44)</td>
</tr>
<tr>
<td>Enhances recovery from mental illness</td>
<td>85 (30)</td>
</tr>
<tr>
<td>Fosters forgiveness</td>
<td>77 (28 )</td>
</tr>
<tr>
<td>Leads to greater life satisfaction</td>
<td>73 (26)</td>
</tr>
<tr>
<td>Promotes healthier lifestyle behaviors</td>
<td>58 (21)</td>
</tr>
<tr>
<td>Reduces risk behaviors</td>
<td>57 (21)</td>
</tr>
<tr>
<td>Prevents anxiety and/or depression</td>
<td>50 (18)</td>
</tr>
<tr>
<td>Improves recovery from physical illness</td>
<td>42 (15)</td>
</tr>
<tr>
<td>Other: e.g., provides meaning and purpose (n = 9)</td>
<td>36 (13)</td>
</tr>
</tbody>
</table>

N = 280

Note. Respondents could select all topics/perceived benefits that applied.
being” (56%), and (3) “offers social support” (54%). Relatively few (21%) respondents discussed the physical health effects of religiosity/spirituality with their clients (e.g., “promotes healthier lifestyle behaviors,” “reduces risk behaviors”), and only 18% identified “prevents anxiety and/or depression” as a perceived benefit of religious/spiritual involvement. An “other” category allowed the respondents to identify additional perceived benefits: e.g., provides meaning and purpose \( (n = 9) \), promotes overall wellness \( (n = 4) \), facilitates self-exploration and self-awareness \( (n = 4) \), lowers the risk of suicide \( (n = 4) \), promotes a sense of community and encourages participation in organizations that offer practical resources \( (n = 3) \), and helps clients cope with grief and loss \( (n = 3) \).

**Perceived Barriers to Discussing the Health Effects of Religious/Spiritual Involvement**

The university counseling professionals were asked to select all that applied from a list of 15 perceived barriers to the provision of guidance on the health effects of religious/spiritual involvement (Table 10). Nearly three quarters (73%) of the respondents identified one or more barriers to discussing the health effects of religiosity/spirituality with the majority of their clients. The median number of perceived barriers endorsed was 2.00. The most frequently endorsed barrier was, “Such discussion should occur only with clients who indicate that religion/spirituality is important to them” (67%). An “other” category allowed the respondents to identify additional perceived barriers: e.g., “the topic does not seem relevant for some clients” \( (n = 8) \), “the issue does not come up” \( (n = 7) \), “separation of church and state” \( (n = 4) \), and “clients may have had negative experiences with religion/spirituality in the past” \( (n = 3) \). The number of perceived barriers endorsed did not vary significantly by personal religious/spiritual
Table 10

*Perceived Barriers to Discussing the Health Effects of Religious/Spiritual Involvement*

<table>
<thead>
<tr>
<th>Barrier</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Such discussion should occur only with clients who indicate that religion/spirituality is important to them.</td>
<td>188 (67)</td>
</tr>
<tr>
<td>Referrals are made to clergy, who do not have conflicting roles in religious/spiritual matters.</td>
<td>61 (22)</td>
</tr>
<tr>
<td>My clients do not wish to communicate with me about religious/spiritual issues.</td>
<td>55 (20)</td>
</tr>
<tr>
<td>My clients do not believe that participation in religious/spiritual activities has an impact on health.</td>
<td>42 (15)</td>
</tr>
<tr>
<td>My lack of personal expertise on religion/spirituality in relation to health</td>
<td>37 (13)</td>
</tr>
<tr>
<td>Other: e.g., the topic does not come up or does not seem relevant (n = 15)</td>
<td>36 (13)</td>
</tr>
<tr>
<td>Lack of time to spend on this topic</td>
<td>19 (6)</td>
</tr>
<tr>
<td>Asking clients about religious/spiritual issues is inappropriate.</td>
<td>18 (6)</td>
</tr>
<tr>
<td>Clients might use religion/spirituality to avoid taking personal responsibility for their mental health.</td>
<td>16 (6)</td>
</tr>
<tr>
<td>Religion/spirituality may cause negative emotions that lead to increased client suffering.</td>
<td>13 (5)</td>
</tr>
<tr>
<td>Religion/spirituality may lead clients to resist or delay other indicated interventions.</td>
<td>8 (3)</td>
</tr>
<tr>
<td>My personal religious/spiritual beliefs</td>
<td>7 (3)</td>
</tr>
<tr>
<td>Such discussion is discouraged by my colleagues and/or supervisors.</td>
<td>7 (3)</td>
</tr>
<tr>
<td>Potential liability (e.g., lawsuits)</td>
<td>5 (2)</td>
</tr>
<tr>
<td>Referrals are made to providers at the student medical center.</td>
<td>3 (1)</td>
</tr>
</tbody>
</table>

\(N = 280\)

*Note.* Respondents could select all barriers that applied.
involvement ($H[2] = 1.33, p = .51$), years or professional practice ($r = -.03., p = .55$), or religious affiliation of the academic institutions ($U = 7210.00, p = .39$).

**Efficacy Expectations Regarding Guidance on the Health Effects of Religious/Spiritual Involvement**

The university counseling professionals were asked to indicate their level of confidence in using the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement (Table 11). They reported a high level of self-efficacy (i.e., scores of four or five on a five-point efficacy expectations scale) regarding their ability to (1) *ask* clients about their religious/spiritual involvement (86%), (2) *advise* clients about connections between religious/spiritual involvement and health (43%), (3) *assess* clients’ receptiveness to religious/spiritual involvement as a health promotive practice (58%), (4) *assist* clients with referrals to religious/spiritual resources (77%), and (5) *arrange* follow up contact to see if clients’ religious/spiritual needs were adequately addressed (55%). Respondents who described themselves as “religious-spiritual” were significantly more likely to report high efficacy expectations regarding the application of the 5 A’s framework than were respondents who identified themselves as “not religious-not spiritual” ($H[2] = 20.78, p < .001$). Efficacy expectations did not vary significantly by years of professional practice ($r = .08., p = .19$) or religious affiliation of the academic institutions ($U = 5910.50, p = .02$) (hypothesis accepted based on a corrected alpha of $p \leq .012$).

**Outcome Expectations Regarding Guidance on the Health Effects of Religious/Spiritual Involvement**

The respondents were asked to indicate their outcome expectations regarding the
Table 11

*University Counseling Professionals’ Efficacy Expectations Regarding the Provision of Guidance on the Health Effects of Religious/Spiritual Involvement*

<table>
<thead>
<tr>
<th>Item</th>
<th>High Confidence</th>
<th>Moderate Confidence</th>
<th>No Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>How confident are you in your ability to do the following actions?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asking my clients about their religious/spiritual involvement.</td>
<td>183 (66)</td>
<td>57 (20)</td>
<td>33 (12)</td>
</tr>
<tr>
<td>Advising my clients about connections between religious/spiritual involvement and health.</td>
<td>54 (20)</td>
<td>61 (23)</td>
<td>98 (36)</td>
</tr>
<tr>
<td>Assessing my clients’ receptiveness to religious/spiritual involvement as a health promotive practice.</td>
<td>67 (25)</td>
<td>88 (33)</td>
<td>75 (28)</td>
</tr>
<tr>
<td>Assisting my clients with referrals to religious/spiritual resources (e.g., religious/spiritual leaders, organizations, programs; chaplains; pastoral counselors).</td>
<td>125 (45)</td>
<td>89 (32)</td>
<td>43 (16)</td>
</tr>
<tr>
<td>Arranging follow up contact to see if my clients’ religious/spiritual needs were adequately addressed.</td>
<td>75 (28)</td>
<td>74 (27)</td>
<td>71 (26)</td>
</tr>
</tbody>
</table>

*N = 280*

*Note.* Percentages may not equal 100% due to rounding and/or non-reported answers.
application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement (Table 12). The majority (66%) of respondents indicated that applying the 5 A’s framework as such was “unlikely” or “not at all likely” to harm their clients. They were predominantly (52%) “unsure” that applying the 5 A’s would result in fewer health risks; however, nearly half (48%) indicated that this approach was “likely” or “very likely” to promote recovery for their clients. Slightly more than half (51%) of the respondents were “unsure” about whether the application of the 5 A’s would lead clients to attribute a greater sense of trust and caring to them. Nearly half (48%) indicated that applying the 5 A’s framework was “unlikely” or “not at all likely” to result in greater professional satisfaction.

Respondents who described themselves as being “religious-spiritual” \( (M = 3.65, \ SD = .70) \) indicated significantly more positive outcome expectations regarding the application of the 5 A’s framework than did respondents in the “spiritual-not religious” group \( (M = 3.25, \ SD = .56) \) or the “not religious-not spiritual” group \( (M = 2.90, \ SD = .50) \) \( (F[2] = 25.83 , p < .001, \eta^2 = .17) \). Outcome expectations did not vary significantly by self-rated health status \( (t[265] = .22 , p = .82) \), years of professional practice \( (r = -.009, p = .88) \), or religious affiliation of the academic institutions \( (t[268] = −1.41, p = .16) \).

Sources of Information and Training Preparing Respondents to Provide Guidance on the Health Effects of Religious/Spiritual Involvement

In order to determine the sources of information and/or training the respondents had received on counseling clients regarding the health effects of religious/spiritual involvement, they were asked to check all that applied from a list of seven resources (Table 13).
Table 12

*University Counseling Professionals’ Outcome Expectations Regarding the Provision of Guidance on the Health Effects of Religious/Spiritual Involvement*

<table>
<thead>
<tr>
<th>Item</th>
<th>Not Likely at All</th>
<th>Unlikely</th>
<th>Not Sure</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>How likely do you think that using the 5 A’s framework to provide guidance on the health effects of religious/spiritual involvement would result in the following outcomes?</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced health risks for my clients</td>
<td>5 (2)</td>
<td>17 (6)</td>
<td>141 (52)</td>
<td>88 (33)</td>
<td>20 (7)</td>
</tr>
<tr>
<td>Enhanced recovery for my clients</td>
<td>2 (&lt;1)</td>
<td>12 (4)</td>
<td>127 (47)</td>
<td>106 (39)</td>
<td>24 (9)</td>
</tr>
<tr>
<td>“Clients would attribute a greater sense of trust and caring to me.”</td>
<td>10 (4)</td>
<td>21 (8)</td>
<td>136 (51)</td>
<td>90 (33)</td>
<td>17 (6)</td>
</tr>
<tr>
<td>“Clients would be harmed by this intervention.”</td>
<td>55 (20)</td>
<td>126 (46)</td>
<td>86 (32)</td>
<td>5 (2)</td>
<td>1 (&lt;1)</td>
</tr>
<tr>
<td>“I would feel more complete and satisfied in my professional life.”</td>
<td>51 (19)</td>
<td>80 (29)</td>
<td>81 (29)</td>
<td>49 (18)</td>
<td>15 (5)</td>
</tr>
</tbody>
</table>

*N = 280*

*Note.* Percentages may not equal 100% due to rounding and/or non-reported answers.
Table 13

Sources of Information and Training Preparing University Counseling Professionals to Provide Guidance on the Health Effects of Religious/Spiritual Involvement

<table>
<thead>
<tr>
<th>Source</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional journals</td>
<td>119 (42)</td>
</tr>
<tr>
<td>Continuing education classes or workshops</td>
<td>117 (41)</td>
</tr>
<tr>
<td>Professional meetings/conferences</td>
<td>104 (37)</td>
</tr>
<tr>
<td>Not received any formal training on this topic</td>
<td>99 (35)</td>
</tr>
<tr>
<td>Training in graduate school</td>
<td>77 (28)</td>
</tr>
<tr>
<td>Religious/spiritual group or organization</td>
<td>64 (22)</td>
</tr>
<tr>
<td>Other: e.g., personal religious/spiritual experiences and practices (n = 10), peer consultation (n = 10), work setting (n = 7), clinical supervision (n = 5), university chaplain (n = 3)</td>
<td>46 (16)</td>
</tr>
<tr>
<td>The popular media</td>
<td>25 (9)</td>
</tr>
</tbody>
</table>

N = 280

Note. Respondents could select all sources of information/training that applied.
The respondents identified an average of approximately two sources of information/training that they had received ($M = 1.97$, $SD = 1.61$). The most frequently endorsed sources were professional journals (42%) and continuing education classes or workshops (41%). These responses were followed closely by “[I have] not received any formal training on this topic” (35%). An “other” category allowed the respondents to identify additional sources of information/training: e.g., “my own religious/spiritual practices and experiences” ($n = 10$), peer consultation ($n = 10$), “my work setting” (e.g., a religiously affiliated academic institution) ($n = 7$), clinical supervision ($n = 5$), university chaplains ($n = 3$), and books ($n = 3$). Respondents who had received information/training from at least one source were significantly more likely to be in the action or maintenance stage ($\chi^2[1] = 37.68$, $p < .001$) and to report higher efficacy expectations ($U = 4661.50$, $p < .001$) and more positive outcome expectations ($t[268] = 1.99$, $p = .004$) regarding the provision of guidance on the health effects of religious/spiritual involvement.

**Hypotheses Tests**

In this section, the decision to accept or reject each of the null hypotheses stated in Chapter One is explained. Pearson chi-square ($\chi^2$) tests, Mann-Whitney $U$ tests, independent samples $t$-tests, Kruskal-Wallis $H$ tests, one-way analysis of variance (ANOVA) with post hoc Tukey tests, and Pearson product-moment correlation coefficients ($r$) were used to test the hypotheses.

**1.1: The majority of university counseling professionals will not have thought seriously about discussing the health effects of religiosity/spirituality with their clients.**

The majority (62%) of the university counseling professionals in this study placed
themselves at the maintenance stage in relation to discussing the health effects of religiosity/spirituality with their clients (i.e., they reported that they had been engaging in this practice for “longer than six months”). Therefore, this hypothesis was rejected.

2.1: There is no statistically significant difference by sex of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

Males were no more likely than females to place themselves in the action or maintenance stage of discussing the health effects of religiosity/spirituality with their clients (60% vs. 65%) ($\chi^2[1] = .61, p = .43$). Therefore, this hypothesis was accepted.

2.2: There is no statistically significant difference by age of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

Respondents in the action or maintenance stage ($M = 45.94, SD = 10.09$) did not differ significantly by age from respondents in the precontemplation, contemplation, preparation, or relapse stage ($M = 45.77, SD = 10.04$) ($t[274] = –.13, p = .89$). Therefore, this hypothesis was accepted.

2.3: There is no statistically significant difference by race/ethnicity of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

The stages of change did not differ significantly by the race/ethnicity of the university counseling professionals ($\chi^2[4] = 1.06, p = .90$). Therefore, this
hypothesis was accepted.

2.4: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

Respondents who described themselves as “religious-spiritual” (74%) or “spiritual-not religious” (66%) were significantly more likely than respondents who described themselves as “not religious-not spiritual” (39%) to place themselves in the action or maintenance stage with respect to discussing the health effects of religious/spiritual involvement ($\chi^2[3] = 20.50$, $p < .001$). Therefore, this hypothesis was rejected.

2.5: There is no statistically significant difference by self-rated health status of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

Respondents who reported greater personal health were no more likely than those who reported worse health to place themselves in the action or maintenance stage of discussing the health effects of religiosity/spirituality with their clients (65% vs. 61%) ($\chi^2[1] = .40$, $p = .52$). Therefore, this hypothesis was accepted.

2.6: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and stage of discussing the health effects of religiosity/spirituality with clients.

Respondents who had received information/training from at least one source were significantly more likely to place themselves in the action or maintenance stage with respect to discussing the health effects of religious/spiritual involvement
(77% vs. 39%) \( \chi^2[1] = 37.68, p < .001 \). Therefore, this hypothesis was rejected.

2.7: There is no statistically significant difference by number of years university counseling professional has been in practice and stage of discussing the health effects of religiosity/spirituality with clients.

Respondents in the action or maintenance stage \( (M = 15.56, SD = 9.44) \) did not differ significantly from respondents in the precontemplation, contemplation, preparation, or relapse stage \( (M = 15.19, SD = 9.44) \) by years of professional practice \( (t[271] = -.30, p = .75) \). Therefore, this hypothesis was accepted.

2.8: There is no statistically significant difference by geographic region of academic institution and stage of discussing the health effects of religiosity/spirituality with clients.

The stages of change did not differ significantly by the geographic region of the academic institutions \( (\chi^2[3] = .23, p = .97) \). Therefore, this hypothesis was accepted.

2.9: There is no statistically significant difference by religious affiliation of academic institution and stage of discussing the health effects of religiosity/spirituality with clients.

Respondents from university counseling centers at religiously affiliated academic institutions were no more likely than respondents at non-religiously affiliated institutions to place themselves in the action or maintenance stage with respect to discussing the health effects of religious/spiritual involvement \( (62\% \text{ vs. } 69\%) \) \( (\chi^2[1] = 1.16, p = .28) \). Therefore, this hypothesis was accepted.
3.1: The majority of university counseling professionals will disagree that religious/spiritual involvement has a positive influence on the health and well-being of college students.

The majority (77%) of respondents “agreed” or “strongly agreed” that religious/spiritual involvement has a positive influence on the health and well-being of college students. Therefore, this hypothesis was rejected.

3.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and belief that religiosity/spirituality has a positive influence on the health and well-being of college students.

Respondents who described themselves as “spiritual-not religious” (97%) or “religious-spiritual” (96%) were significantly more likely than respondents who described themselves as “not religious-not spiritual” (83%) to believe that religious/spiritual involvement has a positive influence on the health and well-being of college students ($\chi^2[3] = 12.37, p = .006$). Therefore, this hypothesis was rejected.

3.3: There is no statistically significant difference by self-rated health status of university counseling professional and belief that religious/spiritual involvement has a positive influence on the health and well-being of college students.

Respondents who reported greater personal health were no more likely than those who reported worse health to believe that religious/spiritual involvement has a positive influence on the health and well-being of college students (95% vs. 96%) ($\chi^2[1] = .06, p = .79$). Therefore, this hypothesis was accepted.
3.4: There is no statistically significant difference by number of years university counseling professional has been in practice and belief that religious/spiritual involvement has a positive influence on the health and well being of college students.

Respondents who agreed that religious/spiritual involvement has a positive influence on the health and well being of college students had been in professional practice for considerably fewer years ($M = 15.43, SD = 9.56$) than respondents who disagreed that religious/spiritual involvement influences college students as such ($M = 22.45, SD = 11.29$) ($t[217] = 2.35, p = .02$). However, this hypothesis was accepted based on a corrected alpha of $p \leq .012$.

3.5: There is no statistically significant difference by religious affiliation of academic institution and belief that religious/spiritual involvement has a positive influence on the health and well being of college students.

Respondents from university counseling centers at religiously affiliated academic institutions were no more likely than respondents at non-religiously affiliated institutions to believe that religious/spiritual involvement has a positive influence on the health and well being of college students (96% vs. 95%) ($\chi^2[1] = .02, p = .87$). Thus, this hypothesis was accepted.

4.1: The majority of mental health professionals at university counseling centers will disagree that university counseling professionals should advise clients about connections between religious/spiritual involvement and health.

Although a plurality (35%) of respondents “disagreed” or “strongly disagreed” that university counseling professionals should advise clients about connections between religious/spiritual involvement and health, this did not constitute the
majority. Therefore, this hypothesis was rejected.

4.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and belief that counselors/psychotherapists should advise clients about connections between religiosity/spirituality and health.

Respondents who described themselves as “religious-spiritual” (63%) or “spiritual-not religious” (45%) were significantly more likely than respondents who described themselves as “not religious-not spiritual” (15%) to believe that university counseling professionals should advise clients about connections between religiosity/spirituality and health ($\chi^2[3] = 21.85, p < .001$). Therefore, this hypothesis was rejected.

4.3: There is no statistically significant difference by self-rated health status of university counseling professional and belief that counselors/psychotherapists should advise clients about connections between religious/spiritual involvement and health.

Respondents who reported greater personal health were no more likely than those who reported worse health to believe that counselors/psychotherapists should advise clients about connections between religious/spiritual involvement and health (45% vs. 50%) ($\chi^2[1] = .53, p = .50$). Therefore, this hypothesis was accepted.

4.4: There is no statistically significant difference by number of years university counseling professional has been in practice and belief that university counseling professionals should advise clients about connections between religious/spiritual involvement and health.
Respondents who agreed that university counseling professionals should advise clients about connections between religious/spiritual involvement and health ($M = 15.98$, $SD = 8.38$) did not differ significantly from respondents who disagreed that university counseling professionals should advise clients as such ($M = 17.07$, $SD = 9.95$) by years of professional practice ($t[160] = .69$, $p = .49$). Therefore, this hypothesis was accepted.

4.5: There is no statistically significant difference by religious affiliation of academic institution and belief that university counseling professionals should advise clients about connections between religious/spiritual involvement and health.

Although respondents from university counseling centers at religiously affiliated academic institutions were considerably more likely than respondents at non-religiously affiliated institutions to believe that university counseling professionals should advise clients about connections between religion/spirituality and health (59% vs. 42%) ($\chi^2[1] = 4.03$, $p = .04$), this hypothesis was accepted based on a corrected alpha of $p \leq .012$.

5.1: The majority of university counseling professionals will not have a routine system for identifying their clients’ religious/spiritual involvement.

The majority (66%) of respondents indicated that they routinely identify and document their clients’ religious/spiritual involvement. Therefore, this hypothesis was rejected.

5.2: The majority of university counseling professionals will not share their own religious/spiritual experiences and ideas with clients most or all of the time.

The vast majority (96%) of respondents indicated that they did not share their
personal religious/spiritual experiences and ideas with clients “most” or “all” of the time. Therefore, this hypothesis was accepted.

5.3: The majority of university counseling professionals will not support clients in their own religious/spiritual beliefs and practices most or all of the time.

The majority (92%) of respondents indicated that they support clients in their own religious/spiritual beliefs and practices “most” or “all” of the time. Therefore, this hypothesis was rejected.

5.4: The majority of university counseling professionals will try to change the subject in a tactful way when religious/spiritual issues come up in discussions with clients most or all of the time.

Only 1% of the respondents indicated that they try to change the subject in a tactful way when religious/spiritual issues come up in discussions with their clients “most” or “all” of the time. Therefore, this hypothesis was rejected.

5.5: The majority of university counseling professionals will not pray with their clients most or all of the time.

The majority (60%) of respondents indicated that they “never” pray with clients when asked. Therefore, this hypothesis was accepted.

6.1: The majority of university counseling professionals will not discuss (with the majority of their clients) any topics concerning the health benefits of religiosity/spirituality.

The majority (76%) of respondents identified at least one topic that they discussed with most (>50%) of their clients in relation to the health benefits of religious/spiritual involvement. Therefore, this hypothesis was rejected.
7.1: The majority of university counseling professionals will perceive there to be one or more barriers to discussing the health effects of religiosity/spirituality with their clients.

The majority (73%) of respondents identified one or more barriers to discussing the health effects of religiosity/spirituality with most (>50%) of their clients. Therefore, this hypothesis was accepted.

7.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and number of barriers to discussing the health effects of religiosity/spirituality.

The number of perceived barriers endorsed did not differ significantly by the religious/spiritual involvement of the university counseling professionals ($H[2] = 1.33, p = .51$). Therefore, this hypothesis was accepted.

7.3: There is no statistically significant relationship between years of professional practice and number of barriers to discussing the health effects of religious/spiritual involvement.

There was no statistically significant relationship between the number of years respondents had practiced and the number of perceived barriers endorsed ($r = -.03, p = .55$). Therefore, this hypothesis was accepted.

7.4: There is no statistically significant difference by religious affiliation of academic institution and number of barriers to discussing the health effects of religious/spiritual involvement.

Respondents from university counseling centers at religiously affiliated academic institutions did not differ significantly from respondents at non-religiously
affiliated institutions in terms of the number of perceived barriers to discussing the health effects of religious/spiritual involvement ($U = 7210.00, p = .39$). Therefore, this hypothesis was accepted.

7.5: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and number of barriers to discussing such effects.

Respondents who had received information/training did not differ significantly from respondents who had not received information/training by the number of perceived barriers endorsed ($U = 7889.00, p = .17$). Therefore, this hypothesis was accepted.

8.1: The majority of university counseling professionals are *not* highly confident in their ability to ask clients about their religious/spiritual involvement.

The majority (86%) of the university counseling professionals in this study reported a high level of confidence (i.e., a score of four or five on a five-point efficacy expectations scale) in their ability to ask clients’ about their religious/spiritual involvement. Therefore, this hypothesis was rejected.

8.2: The majority of university counseling professionals are *not* highly confident in their ability to advise clients about connections between religious/spiritual involvement and health.

A plurality (43%) of respondents indicated a high level of confidence in their ability to advise clients about connections between religious/spiritual involvement and health. A lesser proportion (36%) indicated moderate confidence in this area (i.e., a score of three on a five-point scale). Based on this combination of
8.3: The majority of university counseling professionals are not highly confident in their ability to assess clients’ receptiveness to religious/spiritual involvement as a health promotive practice.

The majority (58%) of respondents were highly confident in their ability to assess their clients’ receptiveness to religious/spiritual involvement as a health promotive practice. Therefore, this hypothesis was rejected.

8.4: The majority of university counseling professionals are not highly confident in their ability to assist clients with referrals to religious/spiritual resources (e.g., religious/spiritual leaders, programs, organizations).

The majority (77%) of respondents indicated a high level of confidence in their ability to assist clients with referrals to religious/spiritual resources. Therefore, this hypothesis was rejected.

8.5: The majority of university counseling professionals are not highly confident in their ability to arrange follow up contact to see if clients’ religious/spiritual needs were adequately addressed.

The majority (55%) of respondents had high efficacy expectations regarding their ability to arrange follow-up contact to see if clients’ religious/spiritual needs were adequately addressed. Therefore, this hypothesis was rejected.

8.6: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religiosity/spirituality.
Respondents who identified themselves as being “religious-spiritual” were significantly more likely to report high efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement ($H[2] = 20.78, p < .001$). Therefore, this hypothesis was rejected.

8.7: There is no statistically significant relationship between years of professional practice and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

There was no statistically significant relationship between the number of years respondents had been in practice and their efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement ($r = .08, p = .19$). Therefore, this hypothesis was accepted.

8.8: There is no statistically significant difference by religious affiliation of academic institution and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

Respondents from university counseling centers at religiously affiliated academic institutions did not differ significantly from respondents at non-religiously affiliated institutions in terms of their efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement ($U = 5910.50, p = .02$). This hypothesis was accepted based on a corrected alpha of $p \leq .012$. 
8.9: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and efficacy expectations concerning the application of the 5 A’s framework.

Respondents who had received information/training from one or more sources were significantly more likely to report high efficacy expectations regarding the application of the 5 A’s framework to the provision of guidance on the health effects of religious/spiritual involvement (\(U = 4661.50, p < .001\)). Therefore, this hypothesis was rejected.

9.1: The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in fewer health risks for clients.

The majority (52%) of respondents were “unsure” that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement would result in fewer health risks for their clients. Therefore, this hypothesis was rejected.

9.2: The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in the promotion of recovery for their clients.

Only a small fraction (4%) of the respondents indicated that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement was “unlikely” or “not at all likely” to result in the promotion of recovery for their clients. Therefore, this hypothesis was rejected.
9.3: The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in clients experiencing a greater sense of interpersonal caring from them.

The majority (51%) of respondents were “unsure” about whether the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement would result in clients experiencing a greater sense of caring from them. Therefore, this hypothesis was rejected.

9.4: The majority of university counseling professionals do think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in harm to their clients.

Only a small fraction (2%) of the respondents indicated that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement was “likely” or “very likely” to result in harm to their clients. Therefore, this hypothesis was rejected.

9.5: The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in greater professional satisfaction.

Although nearly half (48%) of the respondents indicated that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement was “unlikely” or “not at all likely” to result in greater professional satisfaction, this did not constitute the majority. Therefore, this hypothesis was rejected.
9.6: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and level of outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religiosity/spirituality.

This hypothesis was rejected ($F[2] = 25.83, p < .001, \eta^2 = .17$). Post-hoc Tukey tests showed that respondents in the “religious-spiritual” group ($M = 3.65, SD = .70$) indicated significantly more positive outcome expectations regarding the application of the 5 A’s framework to guidance on the health effects of religious/spiritual involvement than did respondents in the “spiritual-not religious” group ($M = 3.25, SD = .56$) or the “not religious-not spiritual” group ($M = 2.90, SD = .50$). The mean difference of 0.35 between the “spiritual-not religious” and the “not religious-not spiritual” group was also statistically significant ($p < .001$).

9.7: There is no statistically significant difference by self-rated health status of university counseling professional and level of outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spirituality.

Outcome expectations did not differ significantly by self-rated health status of the university counseling professionals ($t[265] = .22, p = .82$). Therefore, this hypothesis was accepted.

9.8: There is no statistically significant difference relationship between years of professional practice and level of outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/
spiritual involvement.

There was no statistically significant relationship between the number of years respondents had been in practice and their outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement ($r = -0.009$, $p = .88$). Therefore, this hypothesis was accepted.

9.9: There is no statistically significant difference by religious affiliation of academic institution and level of outcome expectations concerning the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

Respondents from university counseling centers at religiously affiliated academic institutions ($M = 3.43$, $SD = .71$) did not differ significantly from respondents at non-religiously affiliated institutions ($M = 3.30$, $SD = .65$) in terms of their outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement ($t[268] = -1.41$, $p = .16$). Therefore, this hypothesis was accepted.

9.10: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and level of outcome expectations concerning the application of the 5 A’s framework.

Respondents who had received information/training from at least one source ($M = 3.39$, $SD = .70$) were significantly more likely than respondents who had not received any information/training ($M = 3.22$, $SD = .60$) to report positive outcome expectations regarding the application of the 5 A’s framework to the provision of
guidance on the health effects of religious/spiritual involvement ($t[268] = 1.99, p = .004$). Therefore, this hypothesis was rejected.

10.1: The majority of university counseling professionals will not have received any information from any source preparing them to counsel clients on the health effects of religious/spiritual involvement.

The majority (65%) of respondents had received information or training on counseling clients regarding the health effects of religious/spiritual involvement from at least one source. Therefore, this hypothesis was rejected.

Summary of the Findings

A total of 280 university counseling professionals (52%) responded. Adequate power was achieved to make inferences to the total population of AUCCD counseling centers with a sampling error of ± 5% at the 95% confidence level. Non-respondents did not differ significantly from respondents by the geographic region, size of enrollment, classification, or religious affiliation of the academic institution at which a given counseling center was located ($p$ values ranged from .41 to .97).

The counseling centers in which the respondents practiced were located predominantly at non-religiously affiliated (72%) academic institutions in the Northeastern (32%) or Southern (25%) United States, with an average enrollment of 10,208 students ($SD = 9,785$). The proportions of non-religiously affiliated (72%) and religiously affiliated (28%) academic institutions in this study were similar to those in the total population of colleges and universities in the United States (65% and 35%, respectively) (NCES, 2008). Additionally, the counseling centers were equally distributed across public and private academic institutions.
The responding university counseling professionals were predominantly female (66%), Caucasian (88%), and Protestant (27%), with a mean age of 45.92 years ($SD = 10.07$). The majority had earned Ph.D.s (58%) and were licensed psychologists (63%). They had practiced for an average of 15.47 years ($SD = 9.61$). The respondents considered themselves to be spiritual but not religious (42%), both religious and spiritual (38%), or neither religious nor spiritual (19%). The median score on the five-point health status subscale was 4.40, with higher scores reflecting better self-rated health.

The respondents agreed that religious/spiritual involvement has a positive influence on the health and well-being of college students (77%), but were unsure or disagreed (66%) that university counseling professionals should advise clients as such. Approximately one-third (31%) had never seriously thought about doing so. They were predominantly “unsure” that guidance on the health effects of religious/spiritual involvement would result in a reduction of health risks (52%); however, nearly half (48%) indicated that such guidance would enhance recovery for their clients. Although slightly more than half (54%) discussed the salutary influence of religiosity/spirituality with the majority of their clients (e.g., provides a means of coping with stress, offers social support, contributes to a sense of well-being), relatively few (21%) discussed the physical health effects of religious/spiritual involvement (e.g., “promotes healthier lifestyle behaviors,” “reduces risk behaviors”). The most frequently endorsed perceived barrier was that discussions of religiosity/spirituality and health “should occur only with clients who indicate that religion/spirituality is important to them” (67%). A plurality (35%) of the respondents had received no formal training on this topic. Respondents who had received information/training from at least one source, as well as those who indicated
higher levels of personal religiosity/spirituality, were significantly more likely to be in the action or maintenance stage and to report higher efficacy expectations and more positive outcome expectations regarding the provision of guidance on the health effects of religious/spiritual involvement (p values ranged from <.000 to .006).

The stages of change did not differ significantly by sex, age, race/ethnicity, self-rated health status, and years of professional practice, nor the geographic region or religious affiliation of the academic institutions from which the counseling professionals responded (p values ranged from .28 to .97). General perceptions, outcome expectations, and efficacy expectations did not vary significantly by self-rated health status, years of professional practice, or religious affiliation of the academic institutions (p values ranged from .02 to .88).

The results of the present study have been reported and summarized in this chapter. Relevant conclusions, implications, and recommendations are discussed in Chapter Five.
Chapter Five

Conclusions

This chapter is divided into the following sections: Summary of the Study, Discussion, Implications and Recommendations, and Conclusion.

Summary of the Study

An extensive literature base consisting of some 1,600 to 3,000 publications has demonstrated connections between religious/spiritual involvement and better mental and physical health (Koenig et al., 2001). Such evidence implies that the provision of basic religious/spiritual assessment and intervention is an appropriate and desirable activity for mental health professionals (Koenig, 2007; Larimore et al., 2002). Accordingly, attention has been given to the perceptions and practices of psychiatrists and clinical psychologists in relation to religion/spirituality and clinical practice (Curlin et al., 2007; Shafranske, 2001). Yet, little attention has been given to the perceptions and practices of other mental health professionals such as those in practice at university counseling centers (Kellems, 2005). The lack of attention to religion/spirituality and health in the context of university counseling centers is surprising given the prevalence of mental health problems among the college student population and the potential for religious/spiritual involvement to serve as a resource in addressing students’ mental health needs (Koenig, 2005; SAMHSA, 2003).

Based on the empirical evidence and theoretical framework presented in Chapters One and Two, it was proposed that discussions of mental health concerns and religious/
spiritual issues that take place between university counseling professionals and their clients could extend to discussions regarding the positive influence of religious/spiritual involvement on attitudes and behaviors that reduce physical health risks and promote healthier lifestyles. It was further proposed that studies involving providers’ perceptions and practices in this area could inform efforts to enhance the curricula of training programs. Accordingly, the purpose of this study was to assess the perceptions and practices of university counseling professionals in relation to their provision of guidance concerning the protective and salutary influence of religious/spiritual involvement on mental and physical health. More specifically, the following research questions were addressed:

1. What proportion of university counseling professionals is discussing the health effects of religiosity/spirituality with their clients (i.e., action or maintenance stage versus precontemplation, contemplation, preparation, and relapse)?

2. What demographic and institutional factors characterize university counseling professionals who report being involved in discussions with their clients concerning the health effects of religiosity/spirituality?

3. Do university counseling professionals believe religious/spiritual involvement has a positive influence on the health of college students?

4. Do university counseling professionals believe counselors/psychotherapists should advise clients about connections between religious/spiritual involvement and health?

5. Are the general clinical practices of university counseling professionals with respect to religious/spiritual issues associated with the provision of guidance on
the health effects of religious/spiritual involvement?

6. During counseling sessions with their clients, which topics do university counseling professionals cover in relation to the health benefits of religious/spiritual involvement?

7. What do university counseling professionals perceive as their most common barriers to discussing the health effects of religiosity/spirituality with clients?

8. How confident are university counseling professionals in their ability to apply the 5 A’s framework to the provision of guidance on the health effects of religious/spiritual involvement?

9. Do university counseling professionals believe that a discussion with their clients concerning the health effects of religious/spiritual involvement will produce outcomes such as a reduction in health risks and the promotion of recovery?

10. From which sources have university counseling professionals received information or training preparing them to counsel clients on the health effects of religious/spiritual involvement?

The membership of the Association for University and College Counseling Center Directors was used to identify a national cross-section of university counseling centers. One licensed psychologist, professional counselor, or social worker from each counseling center was selected to survey (N = 623). A valid and reliable survey instrument was developed, and a three-wave postal mailing procedure was used to maximize the return rate.

A total of 280 university counseling professionals (52%) responded. The respondents were predominantly female (66%), Caucasian (88%), and Protestant (27%),
with a mean age of 45.92 years ($SD = 10.07$). The majority had earned a Ph.D. (58%) and were licensed psychologists (63%). They had practiced for an average of 15.47 years ($SD = 9.61$). The respondents considered themselves to be in good personal health (i.e., the median score on the five-point health status subscale was 4.40, with higher scores reflecting better self-rated health). In addition, they described themselves as being spiritual but not religious (42%), both religious and spiritual (38%), or neither religious nor spiritual (19%).

**Accepted Hypotheses**

The following 25 out of 55 null hypotheses (45%) were accepted:

2.1: There is no statistically significant difference by sex of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.2: There is no statistically significant difference by age of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.3: There is no statistically significant difference by race/ethnicity of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.5: There is no statistically significant difference by self-rated health status of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.7: There is no statistically significant difference by number of years university counseling professional has been in practice and stage of discussing the health
effects of religiosity/spirituality with clients.

2.8: There is no statistically significant difference by geographic region of academic institution and stage of discussing the health effects of religiosity/spirituality with clients.

2.9: There is no statistically significant difference by religious affiliation of academic institution and stage of discussing the health effects of religiosity/spirituality with clients.

3.3: There is no statistically significant difference by self-rated health status of university counseling professional and belief that religious/spiritual involvement has a positive influence on the health and well being of college students.

3.4: There is no statistically significant difference by number of years university counseling professional has been in practice and belief that religious/spiritual involvement has a positive influence on the health and well being of college students (accepted based on a corrected alpha of $p \leq .012$).

3.5: There is no statistically significant difference by religious affiliation of academic institution and belief that religious/spiritual involvement has a positive influence on the health and well being of college students.

4.3: There is no statistically significant difference by self-rated health status of university counseling professional and belief that counselors/psychotherapists should advise clients about connections between religious/spiritual involvement and health.

4.4: There is no statistically significant difference by number of years university counseling professional has been in practice and belief that counselors/
Psychotherapists should advise clients about connections between religious/spiritual involvement and health.

4.5: There is no statistically significant difference by religious affiliation of academic institution and belief that university counseling professionals should advise clients about connections between religious/spiritual involvement and health (accepted based on a corrected alpha of $p \leq .012$).

5.2: The majority of university counseling professionals will not share their own religious/spiritual experiences and ideas with clients most or all of the time.

5.5: The majority of university counseling professionals will not pray with their clients most or all of the time.

7.1: The majority of university counseling professionals will perceive there to be one or more barriers to discussing the health effects of religiosity/spirituality with their clients.

7.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and number of barriers to discussing the health effects of religiosity/spirituality.

7.3: There is no statistically significant relationship between years of professional practice and number of barriers to discussing the health effects of religious/spiritual involvement.

7.4: There is no statistically significant difference by religious affiliation of academic institution and number of barriers to discussing the health effects of religious/spiritual involvement.

7.5: There is no statistically significant difference by receiving any information on
counseling clients regarding the health effects of religious/spiritual involvement and number of barriers to discussing such effects.

8.7: There is no statistically significant relationship between years of professional practice and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

8.8: There is no statistically significant difference by religious affiliation of academic institution and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement (accepted based on a corrected alpha of $p \leq .012$).

9.7: There is no statistically significant difference by self-rated health status of university counseling professional and level of outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

9.8: There is no statistically significant relationship between years of professional practice and level of outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

9.9: There is no statistically significant difference by religious affiliation of academic institution and level of outcome expectations concerning the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

**Rejected Hypotheses**
The following 26 out of 55 null hypotheses (47%) were rejected:

1.1: The majority of university counseling professionals will not have thought seriously about discussing the health effects of religiosity/spirituality with their clients.

2.4: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and stage of discussing the health effects of religiosity/spirituality with clients.

2.6: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and stage of discussing the health effects of religiosity/spirituality with clients.

3.1: The majority of university counseling professionals will disagree that religious/spiritual involvement has a positive influence on the health and well-being of college students.

3.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and belief that religiosity/spirituality has a positive influence on the health of college students.

4.1: The majority of mental health professionals at university counseling centers will disagree that university counseling professionals should advise clients about connections between religious/spiritual involvement and health.

4.2: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and belief that counselors/psychotherapists should advise clients about connections between religiosity/spirituality and health.

5.1: The majority of university counseling professionals will not have a routine system
for identifying their clients’ religious/spiritual involvement.

5.3: The majority of university counseling professionals will not support clients in their own religious/spiritual beliefs and practices most or all of the time.

5.4: The majority of university counseling professionals will try to change the subject in a tactful way when religious/spiritual issues come up in discussions with their clients most or all of the time.

6.1: The majority of university counseling professionals will not discuss (with the majority of their clients) any topics concerning the health benefits of religious/spiritual involvement.

8.1: The majority of university counseling professionals are not highly confident in their ability to ask clients about their religious/spiritual involvement.

8.2: The majority of university counseling professionals are not highly confident in their ability to advise clients about connections between religious/spiritual involvement and health.

8.3: The majority of university counseling professionals are not highly confident in their ability to assess clients’ receptiveness to religious/spiritual involvement as a health promotive practice.

8.4: The majority of university counseling professionals are not highly confident in their ability to assist clients with referrals to religious/spiritual resources (e.g., religious/spiritual leaders, programs, and organizations).

8.5: The majority of university counseling professionals are not highly confident in their ability to arrange follow up contact to see if clients’ religious/spiritual needs were adequately addressed.
8.6: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religiosity/spirituality.

8.9: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and efficacy expectations concerning the application of the 5 A’s framework.

9.1: The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in fewer health risks for clients.

9.2: The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in the promotion of recovery for their clients.

9.3: The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in clients experiencing a greater sense of interpersonal caring from them.

9.4: The majority of university counseling professionals do think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in harm to their clients.

9.5: The majority of university counseling professionals do not think it is very likely that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement will result in fewer health risks for clients.
religious/spiritual involvement will result in greater professional satisfaction.

9.6: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and level of outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religiosity/spirituality.

9.10: There is no statistically significant difference by receiving any information on counseling clients regarding the health effects of religious/spiritual involvement and level of outcome expectations concerning the application of the 5 A’s framework.

10.1: The majority of university counseling professionals will not have received any information from any source preparing them to counsel clients on the health effects of religious/spiritual involvement.

Unanswered Hypotheses

The following 4 out of 55 null hypotheses (7%) are currently unanswered:

5.6: There is no statistically significant difference by religious/spiritual involvement of university counseling professional and clinical practices with respect to religion/spirituality.

5.7: There is no statistically significant difference by number of years university counseling professional has been in practice and general clinical practices with respect to religion/spirituality.

5.8: There is no statistically significant difference by religious affiliation of academic institution and general clinical practices with respect to religion/spirituality.

5.9: There is no statistically significant difference by general clinical practices with
respect to religious/spiritual issues and stage of discussing the health effects of religiosity/spirituality with clients.

Hypotheses 5.6 – 5.9 are unanswered due to the low internal reliability of the clinical practices subscale and the fact that multiple chi-square tests would have been necessary in order to examine interactions involving each of the four separate items on the subscale, thus inflating the probability of Type 1 error.

Discussion

University Counseling Professionals’ Perceptions of Providing Guidance on the Health Effects of Religious/Spiritual Involvement

Perceived benefits of religious/spiritual involvement. The majority (77%) of the university counseling professionals in this study “agreed” or “strongly agreed” that religious/spiritual involvement has a positive influence on the health and well-being of college students. Likewise, more than half of the respondents endorsed the following perceived benefits of religious/spiritual involvement: (1) “provides a means of coping with stress” (59%), (2) “contributes to a sense of well-being” (56%), and (3) “offers social support” (54%). Such findings are consistent with previous studies involving physicians and clinical psychologists, in which practitioners have indicated that prayer and attendance at religious services “helps patients cope with illness” (76%), “contributes to a positive state of mind” (75%), and “offers social support” (55%) (Curlin, Sellergren et al., 2007; Shafranske, 2001). Indeed, the empirical literature demonstrates that religious/spiritual involvement is predominantly beneficial for mental and physical health (Koenig et al., 2001). The expansion of social support and enhancement of coping skills are among the mechanisms that have been identified in efforts to explain how the
relationship between religion/spirituality and health occurs (Krause, 2006a; Pargament, 1997).

*Outcome expectations regarding the provision of clinical guidance.* The majority (66%) of respondents indicated that applying the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement was “unlikely” or “not at all likely” to harm their clients. In fact, almost half (48%) of the respondents indicated that such an approach was “likely” or “very likely” to promote recovery for their clients. Indeed, “beyond case reports and samples of fewer than 10 people, [there is little tangible evidence to suggest that] religious/spiritual interventions can harm health in representative samples of community residents or in systematically sampled clinical populations” (George et al., 2000, p. 110). Instead, religious/spiritual involvement is recognized as a key component of recovery from mental and physical illness (Lubotsky et al., 2004; ODMH, 2007; Ralph & Corrigan, 2005).

*General perceptions and empirically validated interventions.* While the majority (77%) of respondents acknowledged that religious/spiritual involvement has a positive influence on the health and well-being of college students, it may be that they experience more ambivalence when it comes to religiously/spiritually oriented interventions. That is, despite their endorsement of perceived benefits, the respondents were predominantly (52%) “unsure” about whether the aforementioned 5 A’s approach would result in fewer health risks for their clients. Moreover, approximately one-third (31%) of the respondents were “unsure” that mental health professionals at university counseling centers should advise clients about connections between religious/spiritual involvement and health. Conversely, nearly half (45%) “agreed” or “strongly agreed” with the statement, “If it
were empirically demonstrated that a specific religious/spiritual intervention was effective at promoting health, then university counseling professionals should offer that intervention.”

As it happens, the effectiveness of faith-integrated health promotion and disease prevention activities has been established in a number of empirical studies (Chatters, Levin, & Ellison, 1998; Daniels, Juarbe, Moreno-John, & Perez-Stable, 2007; Falcone, Brentley, Ricketts, Allen, & Garcia, 2006; Maton & Wells, 1995; Young & Stewart, 2006). Furthermore, randomized clinical trials have shown that faith-integrated interventions as utilized with religious/spiritual clients are more effective than secular psychotherapies or no treatment at all. Such interventions can (a) reduce generalized anxiety, (b) decrease the probability of relapse among clients with a history of substance abuse, and (c) ease concerns related to body image among persons with eating disorders (Forthun et al., 2003; Koenig, 2005). Nevertheless, one respondent commented, “I don’t think this [guidance on the health effects of religious/spiritual involvement] is on the list of empirically validated treatments.” Thus, to the degree that additional evidence regarding the effectiveness of religiously/spiritually integrated clinical interventions would promote the provision of guidance pertaining to health effects, it may be important to conduct and disseminate further intervention studies in this area (i.e., to establish whether relevant guidance consistently leads to the involvement which is known to produce health benefits).

Recovery versus risk prevention. Overall, the responding university counseling professionals seemed to emphasize the role of religiosity/spirituality in recovery rather than risk prevention. For instance, whereas nearly half (48%) of the respondents indicated
that guidance on the health effects of religious/spiritual involvement was “likely” or “very likely” to promote recovery for their clients, they were predominantly (52%) “unsure” about whether such guidance would result in a reduction of health risks. Similarly, while 30% of the respondents discussed (with the majority of their clients) the potential for religious/spiritual involvement to enhance recovery from mental illness, only 18% identified religiosity/spirituality as a means of preventing anxiety and/or depression. Although the research findings pertaining to religion/spirituality and anxiety have been mixed, the findings regarding depression have been fairly consistent (Koenig & Larson, 2001). Specifically, research has shown that religious/spiritual factors have a buffering effect rather than a protective influence on depression (Koenig, 2007a, 2007b; Smith et al., 2003). The responses of participants in this study may be reflective of such findings.

The Practices of University Counseling Professionals in Relation to the Health Effects of Religious/Spiritual Involvement

General clinical practices. Concerning their general clinical practices with respect to religious/spiritual issues, the responding university counseling professionals indicated that they do the following “most” or “all” of the time: (a) provide support for clients in terms of their own religious/spiritual beliefs and practices (92%), (b) identify and document clients’ religious/spiritual involvement (66%), (c) make referrals to clergy members (22%), and (d) pray with clients if asked (18%). These findings were somewhat unexpected given the results of previous research. For example, a plurality (35%) of the clinical psychologists surveyed by Shafranske (2001) reported that they would not initiate a religious/spiritual assessment in the absence of a client’s request; just over 10% had
prayed with a client; and only 6% had made referrals to clergy members. The fact that Shafranske’s study was conducted eight years ago in a medical/rehabilitation setting as opposed to a university counseling center setting provides a possible explanation for the discrepancies observed.

Guidance pertaining to health effects. Nearly two thirds (64%) of the responding university counseling professionals placed themselves at the action or maintenance stage with respect to discussing the health effects of religious/spiritual involvement. This finding must be interpreted in light of the fact that 31% said they had never seriously thought about engaging in this practice. In addition, relatively few respondents discussed (with the majority of their clients) the physical health effects of religious/spiritual involvement such as the reduction of risk behaviors (21%) and promotion of healthier lifestyles (21%).

University Counseling Professionals’ Perceived Barriers to Discussing the Health Effects of Religious/Spiritual Involvement

If mental health professionals at university counseling centers (a) agree that religious/spiritual involvement has a positive influence on the health and well-being of college students (77%), (b) agree that university counseling professionals should offer religiously/spiritually oriented interventions that are shown to be effective at promoting health (45%), and (c) believe that such interventions would enhance recovery among their clients (48%), then it makes sense that almost two thirds (64%) of the university counseling professionals in this study placed themselves at the action or maintenance stage with respect to discussing the health effects of religious/spiritual involvement. Yet, such perceptions also raise the question of why some counseling professionals (a) had
never seriously thought about discussing the health effects of religiosity/spirituality with their clients (31%), (b) were unsure or disagreed that university counseling professionals should advise clients about connections between religious/spiritual involvement and health (66%), and (c) did not regularly discuss with clients the potential for religious/spiritual involvement to reduce risk behaviors and promote healthier lifestyles (79%).

Contrary to previous research involving other groups of practitioners (Ellis et al., 1999; Huguelet et al., 2006), low perceived self-efficacy did not appear to be an issue for the responding university counseling professionals as it relates to religion/spirituality and clinical practice. Specifically, the respondents reported a high level of confidence in their ability to (1) ask clients about their religious/spiritual involvement (86%), (2) advise clients about connections between religious/spiritual involvement and health (43%), (3) assess clients’ receptiveness to religious/spiritual involvement as a health promotive practice (58%), (4) assist clients with referrals to religious/spiritual resources (77%), and (5) arrange follow up contact to see if clients’ religious/spiritual needs were adequately addressed (55%).

While the findings of this study may not be attributable to low self-efficacy, the respondents identified a number of other perceived barriers that provide insights into their clinical practices. The most frequently endorsed barrier was, “Such discussion [concerning religious/spiritual involvement and health] should occur only with clients who indicate that religion/spirituality is important to them” (67%). Consistent with this perception, several interrelated issues are considered below: (a) the relevance of religion/spirituality and health for clients, (b) the significance of neutrality and
professional boundaries in counseling and psychotherapy, and (c) the separation of church and state. This is followed by a discussion of two additional perceived barriers: (1) low self-reported religiosity/spirituality, and (2) lack of information/training.

Relevance. Some of the respondents identified perceived barriers such as “the issue [of religion/spirituality and health] does not come up” \((n = 7)\), and “the topic does not seem relevant for clients” \((n = 8)\). Granted, even if a client is religiously/spiritually oriented, this does not mean that his or her presenting problem would necessarily involve religious/spiritual issues that could open a window for the discussion of health effects. Yet, a study of over 5,000 university students found that 1 in 4 students had religious/spiritual concerns (Johnson & Hayes, 2003). Such concerns could play a role in the health of students who seek services at university counseling centers. This is why it is important to include questions about religious/spiritual involvement as part of routine intake assessments. Indeed, the majority (66%) of respondents in this study reported that they routinely identify and document their clients’ religious/spiritual involvement.

Counselor influence and professional boundaries. Whereas concerns about relevance may be more consistent with the ethical issue of patient privacy, matters of counselor influence and professional boundaries correspond to the ethical issue of coercion. Specifically, some of the respondents supplied handwritten comments which suggested that—while they were “not necessarily opposed to” providing guidance on the health effects of religious/spiritual involvement—they were “reluctant to discuss such issues” as this might “impose an agenda.” One respondent made the observation, “It’s really important to follow the client’s lead.” Another respondent commented, “I make it clear that I am no religious or spiritual expert. I don’t advocate for a particular
religious/spiritual perspective . . . and I certainly don’t evangelize.” Correspondingly, only 4% of the university counseling professionals in this study indicated that they share their personal religious/spiritual experiences and ideas with clients “most” or “all” of the time.

These findings may very well reflect a legitimate and necessary condition of neutrality, which can be conducive to the counseling process (Koenig, 2005; Teyber, 2000). Despite the significance of neutrality and appropriate self-disclosure however, the issue of “imposing an agenda” becomes somewhat of a moot point to the extent that clients who seek services at university counseling centers are already religiously/spiritually involved. That is, American college students report high levels of religious/spiritual interest and indicate that religion/spirituality is an important part of their lives (Knox, Langehough, Walters, & Rowley, 1998). In a recent national survey, 81% of college students reported that they attend religious services; 80% discussed religion/spirituality with their friends; 71% considered religion/spirituality to be personally helpful; 67% said it was important for colleges/universities to assist students in the development of personal values; and 48% said it was “essential” or “very important” for colleges/universities to encourage personal expressions of spirituality (Astin, 2003). Thus, the question becomes one of why some university counseling professionals are not aware of statistics such as these (i.e., why the “disconnect” in their knowledge exists).

Moreover, previous research has shown that clients at university counseling centers consider religious/spiritual issues to be “acceptable and preferable” for discussion in counseling and psychotherapy (Rose et al., 2001, p. 69). Correspondingly, only 20% of the respondents in the present study reported that their clients “do not wish to
communicate” with them about religious/spiritual issues. In fact, contrary to the opinion that questions about religious/spiritual issues could surprise, confuse, upset, or offend clients (e.g., Sloan et al., 2000), respondents from some of the religiously affiliated institutions offered feedback such as, “It is normative for students at our institution to be active religiously/spiritually. . . . I think they expect that these issues will be discussed in counseling.”

Thus, a goal for clients who are religiously/spiritually involved might be to reinforce the coping behaviors and health behaviors in which they are already engaged. This is much different from imposing an agenda by trying to “make” clients more “religious/spiritual.”

Separation of church and state. Although there were no statistically significant differences found by the religious affiliation of academic institutions and the number of perceived barriers endorsed, some of the respondents (n = 4) cited “separation of church and state” or the fact that they practiced at secular institutions as a barrier to the provision of guidance on the health effects of religious/spiritual involvement. For example, one respondent wrote, “I work at a secular institution that does not sanction this topic as a primary focus.”

As mentioned in Chapter One, various secular behaviors are capable of producing health effects similar to those of religious/spiritual involvement. Therefore, Koenig (2007c) has recommended that knowledge concerning the mechanisms by which religion/spirituality influences health could be applied to benefit even non-religious/non-spiritual clients within a secular framework. For example, rather than speaking in terms of “religious/spiritual practices,” university counseling professionals might simply ask
their clients, “What brings meaning and purpose to your life?” Instead of discussing “congregational membership,” university counseling professionals might inform their clients about the health effects of social support and altruistic activities. An advantage of the secular approach is that it serves to address the potential ethical dilemma of withholding health related information from clients who indicate during a routine intake assessment that religion/spiritually is not personally important.

Perhaps Koenig’s (2007c) recommendation could extend to university counseling centers at non-religiously affiliated academic institutions. This seems entirely plausible given that the university counseling professionals in this study discussed perceived benefits of religious/spiritual involvement such as “offers social support” (54%) and “provides meaning and purpose” (n = 9) with the majority of their clients. In short, Koenig’s secular framework (i.e., using secular terminology to refer to secular behaviors that are capable of producing health effects) is recommended for non-religious/non-spiritual clients, whereas the 5 A’s framework (see Chapter 1) is recommended for religious/spiritual clients.

Low self-reported religiosity/spirituality. Although the variation observed in the respondents’ general perceptions, perceived barriers, efficacy expectations, outcome expectations, and stage of change was not attributable to the religious affiliation of the academic institutions at which they practiced, their personal level of religious/spiritual involvement was found to have a significant influence in this study. The relevant findings are discussed below.

The majority (70%) of the university counseling professionals in this study reported a belief in God(s) or a Higher Power (vs. 93% of the general population); 61%
said they pray or meditate at least once a week (vs. 75% of the general population); and 41% indicated that they attend religious services at least once a month (vs. 55% of the general population). Approximately one-fifth (19%) of the respondents identified themselves as “not at all” religious or spiritual (vs. roughly 7% of the general public); 10% were Agnostic, and 6% were Atheist.

Thus, the self-reported religiosity/spirituality of the responding university counseling professionals was lower than that which is typically observed among the general population (Gallup Organization, 2007). On the one hand, this is not surprising given the literature, which suggests that—as a group—mental health professionals tend to describe themselves as being less religious/spiritual than does the general public. For example, less than one third of the clinical psychologists surveyed by Shafranske (2001) agreed that their “approach to life” was based on religion/spirituality (vs. roughly 80% of the general population). Possible explanations for such findings include (a) the philosophical assumptions of materialism and empiricism (Miller & Thoresen, 2003), (b) the fact that science and religion have historically been regarded as separate domains (H. Aguinis & M. Aguinis, 1995), and (c) the initial pessimism toward religion/spirituality in the fields of psychiatry and clinical psychology (Ellis, 1971; Freud, 1927/1961), which could have spilled over into the socialization processes of mental health professionals during their clinical training. On the other hand, previous research has suggested that attitudes are changing in this area among mental health professionals (Bilgrave & Deluty, 1998). The fact that 70% of the respondents reported a belief in God(s) or a Higher Power is suggestive of such an attitudinal shift.

It was also interesting to note that a plurality (42%) of respondents described
themselves as being spiritual but not religious. In fact, compared to those who identified *religion* as “an important part of life” (39%), twice as many respondents identified *spirituality* as such (79%). This could reflect the trend by which spirituality has been distinguished from religiosity over the past two decades. Namely, “spirituality” might be the preferred term for some people to the extent that it emphasizes subjective experience over doctrinal and/or denominational characteristics (Hill & Hardeman, 2003; Myers, 2000; Pargament, 2002).

The question of whether university counseling professionals who indicate lower levels of personal religiosity/spirituality would be less likely to provide guidance on the health effects of religious/spiritual involvement was of particular interest in this study. The survey revealed that only 3% of the respondents identified their “personal religious/spiritual beliefs” as a perceived barrier to providing such guidance. While it is entirely possible that a plurality of respondents are adept at keeping their personal religious/spiritual beliefs from unduly influencing their work with clients (in which case such beliefs would not constitute a perceived barrier), the results of this study suggest something different. That is, respondents who described themselves as “not religious-not spiritual” were significantly less likely than respondents who described themselves as “religious-spiritual” or “spiritual-not religious” to:

- be in the action or maintenance stage with respect to discussing the health effects of religious/spiritual involvement
- believe that religious/spiritual involvement has a positive influence on the health and well-being of college students
- believe that university counseling professionals should advise clients about
connections between religious/spiritual involvement and health

- report high efficacy expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement

- report positive outcome expectations regarding the application of the 5 A’s framework to discussions concerning the health effects of religious/spiritual involvement.

Such findings are consistent with previous research. Specifically, the degree to which health care professionals incorporate religion/spirituality in their clinical practice may be determined in part by their own religious/spiritual orientation (Wenger & Carmel, 2004). For instance, physicians with low personal religiosity/spirituality are less likely to believe that religion/spirituality has an influence on health (16% vs. 82%; \( p < .001 \)) (Curlin, Sellergren et al., 2007). They are also less likely to make referrals to members of the clergy (Curlin, Odell et al., 2007). A related study found that 23% of physicians with low self-rated religiosity had ever asked patients about religious/spiritual issues, whereas 76% of physicians with high self-rated religiosity had done so (Curlin et al., 2006).

Moreover, even though 36% of the clinical psychologists surveyed by Shafranske (2001) agreed that psychotherapists should offer religiously/spiritually oriented interventions regardless of their personal belief system, the extent to which such interventions were actually utilized by the responding psychologists was a function of their personal religious/spiritual convictions.

Regarding the inconsistency of some of the findings (i.e., self-reported religiosity/spirituality was not statistically significantly associated with the number of
perceived barriers endorsed in this study; yet, all of the other interactions involving self-reported religiosity/spirituality were statistically significant), there are at least three possible explanations: (1) some respondents did not endorse their personal religious/spiritual beliefs as a perceived barrier in the interest of providing a socially desirable response, (2) some respondents were not aware that their personal religious/spiritual beliefs may serve as a barrier, or (3) some respondents literally did not perceive their religious/spiritual beliefs as a barrier; instead, they choose not to provide guidance on the health effects of religious/spiritual involvement. As an illustration, it is conceivable that a university counseling professional could (a) perceive his/herself as being capable of providing guidance in this area, and (b) believe that such guidance would produce a specific outcome (i.e., religious/spiritual involvement and associated health effects). Yet, if that outcome was not of particular value for the counseling professional, then s/he would be less motivated to engage in behaviors to produce it. In light of the fact that mental health professionals as a group tend to place less importance on religion/spirituality than does the general public, such perceptions could serve as a barrier to the provision of relevant clinical guidance (Gallup Organization, 2007; Shafranske, 2001).

Indeed, the qualitative findings of this study suggest that personal convictions may in fact serve as a barrier to the provision of guidance on the health effects of religious/spiritual involvement. For example, one respondent wrote, “I think religion is a prehistoric superstition that I hope we will evolve out of . . . this stuff [clinical practices with respect to religion/spirituality and health] really has no place in the behavioral sciences.” Another respondent commented, “I have seriously thought about discussing these issues with my clients, but I decided it would be unethical because I am an atheist.”
Although the exact nature of the ethical dilemma implied by this statement is ambiguous, it is possible that the respondent was referring to the issue of role conflict, especially considering that s/he endorsed the following perceived barriers: “Asking clients about religious/spiritual issues is inappropriate,” and “Referrals are made to clergy, who do not have conflicting roles in religious/spiritual matters.” In any case, the statement “I decided it would be unethical because I am an atheist” is potentially much different from saying that one has decided to forego the provision of guidance on the health effects of religious/spiritual involvement because it could be harmful for clients. Again, the most frequently endorsed perceived barrier in this study was, “Such discussions should occur only with clients who indicate that religion/spirituality is important to them.” If the concern is one of not imposing bias or a particular agenda, it seems this should operate in both directions. That is, not discussing the health effects of religious/spiritual involvement due to one’s personal religious/spiritual belief system or lack thereof may very well constitute bias, and could be construed by some as “an agenda” or even “discrimination” (Sloan & Bagiella, 2001; Koenig, 2007c).

As discussed in Chapter Two, religion/spirituality has been a fairly controversial issue for health care providers as far back as the late 19th century. Particularly in the fields of psychiatry and clinical psychology, attitudes toward religion and spirituality were originally quite pessimistic (Ellis, 1971; Freud, 1927/1961). From this perspective, not to mention ongoing debates about relationships between science and religion (e.g., Aguinis & Aguinis, 1995), the handwritten observations provided by some of the respondents in this study are to be expected. Nevertheless, the following pieces of information imply an opportunity for mental health professionals at university counseling
centers to discuss the health effects of religious/spiritual involvement with their clients, even in cases where personal belief systems differ between clients and counseling professionals:

- The majority (71%) of college students find religion/spirituality to be personally helpful (Astin, 2003).

- The number of students who seek services at university counseling centers has markedly increased (Schwitzer & Choate, 2007; Stukenberg et al., 2006; Rudd, 2004).

- Clients at university counseling centers have indicated that religious/spiritual issues are “acceptable and preferable” for discussion in counseling and psychotherapy (Rose et al., 2001).

- Mental health problems are prevalent among the college student population (Benton et al., 2004; Gallagher et al., 2003; Joffe, 2008; SAMHSA, 2003).

- Religious/spiritual involvement could serve as a resource in meeting clients’ mental health needs. This is considering that religious/spiritual involvement has been associated with greater subjective well-being and life satisfaction, as well as lower rates of stress, anxiety, depression, substance abuse, and suicide among a variety of populations including college students (Francis et al., 2004; Koenig & Larson, 2001; Mahoney et al., 2005).

**Lack of information/training.** Presumably, in order for mental health professionals at university counseling centers to engage in the provision of guidance on the health effects of religious/spiritual involvement, they must have access to relevant information and training. Yet, a plurality (35%) of the responding university counseling professionals
had received no formal training on this topic. Correspondingly, 13% identified their “lack of personal expertise on religion/spirituality in relation to health” as a perceived barrier to the provision of relevant clinical guidance. In fact, a lack of information and training was roughly equivalent to low personal religiosity/spirituality in terms of its influence on the stages of change, efficacy expectations, and outcome expectations in this study.

Such findings are consistent with the literature. Historically, health care professionals have received minimal education on the topic of religion/spirituality as it relates to health and clinical practice (Larimore et al., 2002). A survey of psychiatric residency programs in Canada showed that only one-fourth of the responding programs required lectures on religious/spiritual issues (Grabovac & Ganesan, 2003). A related study found that only 11% of APA-accredited doctoral programs in clinical psychology offered courses pertaining to religion/spirituality (Robbins, 2001). Correspondingly, 85% of the clinical psychologists in one study reported that they had received “little” to “no” training on the topic of religion/spirituality (Shafranske, 2000). In addition, up to 90% of social work faculty members have indicated that religious/spiritual issues were “never” or “rarely” covered by the curriculum in their graduate program (Sheridan et al., 1994).

Thus, it does not seem surprising that a “lack of appropriate training” is the second most often cited barrier to incorporating religion/spirituality in various areas of clinical practice (Curlin et al., 2006; McCauley et al., 2005).

Several professional organizations have either called for or explicitly mandated greater sensitivity and enhanced training with respect to religion/spirituality and clinical practice (e.g., the Accreditation Council for Graduate Medical Education, American Academy of Family Physicians, American College of Physicians, American Psychiatric
Association, American Psychological Association, Association of American Medical Colleges, Council on Social Work Education, and Joint Commission on Accreditation of Healthcare Organizations) (APA, 1990, 1992; Larimore et al., 2002). Accordingly, medical schools and graduate programs in the helping professions have begun to provide learners with information on how to incorporate religion/spirituality in their work with patients and clients (Shafranske, 2001). The most recent estimates indicate that 72 medical schools and 50 social work programs in the United States offer courses on religion/spirituality (Puchalski, Larson, & Lu, 2001; Russel, 2001). Additionally, the George Washington University School of Medicine co-administers an annual conference on religion/spirituality and medical education (Puchalski et al., 2001). The NIHR and the John Templeton Foundation have established the “Spirituality and Medicine Award for Psychiatric Residency Training Programs” in an effort to support the incorporation of religious/spiritual content in psychiatric residency training. Since its inception in 2001, 16 psychiatric residency programs in the United States have received the award. Among the features of the award winning programs are:

- A mandatory religion/spirituality and health curriculum ranging from 12 to 81 hours that spans the length of the residency and includes both clinical and didactic components
- The integration of psychological theories concerning religious/spiritual development and health across the lifespan
- Readings from the literature on religion/spirituality and health (e.g., journal clubs)
- Lectures with opportunities for discussion
- Instruction concerning religious/spiritual assessment
Clinical case conferences and group supervision in relation to actual patients
Panel presentations made by patients and clergy from a variety of religious/spiritual traditions
Formal collaboration with chaplains
Visits to various religious/spiritual organizations in the community
Rotations through focus group meetings that pertain to religion/spirituality and health.

Despite positive developments in the area of clinical training, only 28% of the university counseling professionals in this study had received relevant information/training in graduate school, and less than 1% (n = 2) had received such training as part of their clinical practica or internship. Considering that they had practiced for an average of 15.47 years (SD = 9.61), the majority of respondents would have received their clinical training during the early to mid 1990s. Thus, it may be that some respondents graduated just as professional organizations were beginning to call for greater awareness and enhanced training with respect to religion/spirituality and clinical practice. As it turns out however, respondents who were newer to the field (i.e., those who had practiced for less than 15 years) were no more likely than respondents who had practiced for 15+ years to have received information or training on this topic ($\chi^2[1] = .27, p = .59$). The fact that the majority of respondents were discussing issues of religion/spirituality and health with their clients when a plurality had never been formally trained to do so is troublesome.

**Implications and Recommendations**

In addition to the implications and recommendations alluded to in the previous section, a number of more specific recommendations for clinical training, university
counseling centers, and future research can be offered based on the findings of this study. Such recommendations are discussed in the following sections from an ecological perspective, which not only emphasizes individual behavior change, but also recognizes the influence of the surrounding environment (McLeroy, Bibeau, Steckler, & Glanz, 1988; Sallis & Owen, 2002).

**Intrapersonal Level: Insights from Theories and Models of Health Behavior**

*Proceed from precontemplation to action and maintenance.* Approximately one third (31%) of the responding university counseling professionals placed themselves at the precontemplation stage with respect to discussing the health effects of religious/spiritual involvement. At earlier stages of change, processes of consciousness raising and environmental reevaluation could be applied to foster behavioral change (e.g., obtaining information about the potential implications of discussing the health effects of religious/spiritual involvement; making a cognitive and affective assessment of how such guidance might influence clients). For the 64% of respondents who placed themselves in the action or maintenance stage, processes of stimulus control and contingency management may be more appropriate (e.g., adding environmental cues to the provision of relevant guidance and rewarding oneself for engaging in this practice, thus increasing the probability that the behavior will continue to occur).

*Increase perceived benefits.* Slightly more than three-quarters (76%) of the university counseling professionals in this study identified at least one perceived benefit of religious/spiritual involvement that they discuss with the majority of their clients. However, the fact that relatively few respondents endorsed perceived benefits such as “promotes healthier lifestyle behaviors” (21%), “reduces risk behaviors” (21%), and
“improves recovery from physical illness” (15%) implies an opportunity to increase perceived benefits by clarifying associations between religious/spiritual factors and better physical health. Consistent with a biopsychosocial or holistic perspective/approach, university counseling professionals may wish to consider the following benefits of religious/spiritual involvement for physical health:

- Religious/spiritual involvement is associated with greater longevity (Bagiella et al., 2005; Hummer et al., 1999; McCullough et al., 2000).
- Religious/spiritual involvement serves as a protective resource that prevents the development of disease and disability among healthy people (Idler & Castle, 1997; Matthews et al., 1998).
- Religious/spiritual involvement can in fact reduce risk behaviors (e.g., Hart et al., 2004; Hill et al., 2006; Merrill & Thygerson, 2001; Reindl-Benjamins & Brown, 2004; Strawbridge et al., 2001).
- Religious/spiritual involvement increases the likelihood that persons will recover from physical illness (Koenig et al., 2001).

Reduce perceived barriers. The majority (73%) of respondents identified one or more barriers to discussing the health effects of religiosity/spirituality with the majority of their clients. This finding, coupled with the qualitative findings of this study, implies an opportunity to reduce perceived barriers by correcting various pieces of misinformation. Although it was evident from the handwritten comments that some of the respondents were well versed in this area (e.g., one respondent made reference to a number of relevant authors and organizations), other remarks suggested that particular respondents were not as well informed (e.g., “I would have to see the research literature
in order to answer these questions”). One respondent commented, “I find these items to be biased toward the faulty assumption that religiosity is good and health promoting . . . this is somewhat insulting to my intelligence.”

In other cases, it appeared that respondents were not familiar with the distinction between faith-based and faith-integrated treatment approaches. One respondent inquired, “Isn’t this [guidance on the health effects of religious/spiritual involvement] what pastoral counseling offers?.” Incidentally, “pastoral counseling” refers to a faith-based treatment wherein the client’s religious/spiritual values constitute the focal point for discussion and intervention strategies reflect a specific religious/spiritual tradition. This is not what the present study intends to imply in relation to university counseling centers. Instead, “guidance on the health effects of religious/spiritual involvement” implies a faith-integrated approach, according to which the client’s religious/spiritual orientation is respectfully accepted; however, religious/spiritual content is not actively elicited or explicitly addressed beyond (a) a routine assessment, (b) the provision of information and support, and (c) a referral to community resources as appropriate.

Thus, one strategy for reducing perceived barriers in this area might be to explicitly convey concepts such as those represented in Figure 1 (p. 37). It might also be important to consider how the idea that sensible and legitimate clinical applications exist in relation to religion/spirituality could be presented to practitioners and potential research participants in a way that is palatable for the broadest audience. In this way, future studies could inform the development and enhancement of relevant treatment strategies.

The process of reducing perceived barriers to the provision of guidance on the
health effects of religious/spiritual involvement may necessitate more than just correcting misinformation. That is, knowledge alone may be insufficient, especially considering that 27% of the respondents in this study “disagreed” or “strongly disagreed” that university counseling professionals should offer religiously/spiritually oriented interventions, even if empirical research demonstrated that such interventions were effective at promoting health. Thus, it may be important to address various environmental, social, and affective considerations as well (Welle, Russell, & Kittleson, 1995).

For example, whereas a favorable professional environment might contribute to the provision of guidance on the health effects of religious/spiritual involvement, a disapproving professional atmosphere could discourage such practices. Although only a small fraction (3%) of the responding university counseling professionals indicated that discussions concerning religion/spirituality and health were discouraged by their colleagues and/or supervisors, it was interesting to note that—in the case of three prominent religiously affiliated academic institutions—two separate practitioners at the same counseling center returned a blank survey. This, and the fact that another respondent commented, “I have the right to discuss issues [of religion/spirituality and health] with clients at my counseling center,” raises the question of whether university counseling professionals at other centers may not be at liberty to discuss these issues. If explicit or implicit policies exist in relation to what staff members “should” or “should not” discuss with their clients, it seems this could extend to policies regarding the kinds of surveys to which staff members are “encouraged” or “not encouraged” to respond. That said, it may be important to reiterate that non-respondents did not differ significantly from respondents by the religious affiliation of the academic institution at which a given
counseling center was located.

The discourse on religion/spirituality and health tentatively implies that modifications in clinical practice may require the unlearning of stereotypes (e.g., the term “religion” may connote dogma or intolerance for some providers) in favor of a more complete understanding of how religion/spirituality is actually experienced by patients and clients in relation to their health. To the degree that perceived barriers exist among university counseling professionals owing to personal convictions or reactions, it may be important to raise awareness and encourage tolerance in this area (Myers, 2000; Zinnbauer et al., 1997). It should be emphasized, however, that the vast majority (92%) of university counseling professionals in this study reported that they do in fact support clients’ own religious/spiritual beliefs and practices “most” or “all” of the time.

Enhance self-efficacy. Overall, the responding university counseling professionals indicated a high level of self-efficacy regarding the application of the 5 A’s framework to clinical guidance on the health effects of religious/spiritual involvement. The area in which they reported the least confidence was “advising clients about connections between religious/spiritual involvement and health.” In fact, compared to the 86% of respondents who were highly confident in their ability to “ask clients about their religious/spiritual involvement,” half as many respondents (43%) were highly confident in relation to the advising function.

Considering that university counseling professionals may develop their efficacy expectations during their clinical training experiences, they might learn more about the advising function through direct experience (e.g., rehearsal and repetition of incremental, successive tasks) and the opportunity to observe program faculty, clinical supervisors,
and colleagues modeling this behavior. This implies that program faculty and clinical supervisors need to create educational environments and utilize teaching methods that will facilitate students’ use of skills in this area (e.g., guided practice, frequent evaluation, and positive reinforcement). As a result, learners might develop even greater confidence in their ability to advise clients about connections between religious/spiritual involvement and health.

**Interpersonal Level: Clinical Training**

*Graduate programs.* Given the documented health benefits of religious/spiritual involvement (Koenig et al., 2001) and the fact that a plurality of patients/clients wish to communicate with health care providers about religious/spiritual issues (Hamilton & Levine, 2006; Holmes et al., 2006; Kristeller et al., 2005; Rose et al., 2001), not to mention that the receipt of information/training was associated with action/maintenance, higher efficacy expectations, and more positive outcome expectations in the present study, it is essential for graduate programs that prepare students for the provision of mental health services in university counseling centers to address issues of religion/spirituality and health as part of their curricula. Training guidelines that have been developed for psychiatrists could be tailored to the needs of mental health professionals in practice at university counseling centers (Larson, Lu, & Swyers, 1997; Puchalski & Larson, 1998; Puchalski et al., 2001). Considering that doctoral programs in counseling psychology have traditionally focused on preparing students for practice in the university counseling center setting, these programs constitute a natural forum for the adoption of such guidelines (Neimeyer, Bowman, & Stewart, 2001; Samler, 1980).

Although specific competencies in this area are not reflected under the guidelines
for accreditation by the American Psychological Association (2000), persons responsible for the development and delivery of graduate programs in counseling psychology may wish to consider curricular objectives such as those suggested in Figure 3. These objectives were adapted in part from recommendations made by a consensus panel of psychiatrists as well as the best practices of award winning psychiatric residency programs (Puchalski et al., 2001). In addition, the widely cited multicultural counseling competencies have been adapted here for the recommended training of university counseling professionals (Sue, Arredondo, & McDavis, 1992). After all, religion and spirituality encompass a broad range of beliefs and practices. If university counseling professionals are to treat clients from diverse religious/spiritual backgrounds in relation to their personal health, then training in this area must reflect a pluralistic perspective.

If resources or other considerations do not allow for the full integration of content such as that presented in Figure 3, then perhaps an elective seminar could be made available to students. The development and implementation of such a seminar might entail collaboration among faculty members from several different disciplines/academic departments. At the very least, learners should be advised of connections between religious/spiritual involvement and better mental and physical health, just as they might be advised of any other health supportive practice. With that, learners should understand:

- why discussing issues of religion/spirituality and health with clients is important (e.g., because the majority of Americans indicate that religion/spirituality is personally relevant; a plurality of clients wish to communicate with service providers about religious/spiritual issues; religious/spiritual involvement entails
Learners should demonstrate competence in the following areas:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand historical and sociocultural trends regarding religion/spirituality and health.</td>
<td>Utilize the 5 A’s and/or a secular framework to provide guidance on the health effects of religious/spiritual involvement.</td>
<td>Have awareness of one’s own religious/spiritual orientation and its impact on personal health, identity, and worldview.</td>
</tr>
<tr>
<td>Understand the influence of religiosity/spirituality on mental and physical health throughout the lifespan (e.g., understand mechanisms research).</td>
<td>Elicit a complete and accurate religious/spiritual history.</td>
<td>Maintain a nonjudgmental attitude in eliciting a religious/spiritual history.</td>
</tr>
<tr>
<td>Understand a variety of ethical issues concerning religion/spirituality and clinical practice.</td>
<td>Recognize when clients’ religious/spiritual views and practices may be harmful to their mental or physical health.</td>
<td>Respect clients’ religious/spiritual beliefs and values around health and personal recovery.</td>
</tr>
<tr>
<td>Seek out educational and consultative experiences to improve one’s understanding and effectiveness in working with religiously/spiritually diverse clients on issues of personal health.</td>
<td>Offer appropriate referrals to religious/spiritual resources in the community.</td>
<td>Experience comfort with differences that exist between oneself and one’s clients in terms of religious/spiritual beliefs, experiences, and values around personal health.</td>
</tr>
</tbody>
</table>

*Figure 3. Sample objectives for training university counseling professionals to provide guidance on the health effects of religious/spiritual involvement.*

*Note. Adapted in part from Grabovac & Ganesan, 2003; Koenig, 2007c; Puchalski et al., 2001; Sue et al., 1992.*

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an array of risk moderators and coping mechanisms) (Clark et al., 2003; Gallup Organization, 2007; Koenig et al., 2001)

- *how* to engage clients in discussions of religious/spiritual issues as these relate to health (e.g., via the 5 A’s framework)
- *which* professional boundaries should not be crossed with regard to religion/spirituality and health (e.g., learners should be familiar with the aforementioned secular framework).

*Continuing education.* Although the recommendations presented thus far pertain to graduate programs, the objectives in Figure 3 are equally relevant to continuing education. After all, a plurality (41%) of the respondents identified continuing education as a viable source of information/training on counseling clients regarding the health effects of religious/spiritual involvement. Incidentally, Larimore and others (2002) have offered a relevant continuing education course to more than 6,000 health care professionals. The course emphasizes applications of religion/spirituality to clinical practice and covers approaches to resolving various ethical dilemmas. The vast majority (90%) of attendees have reported success at incorporating this training in their clinical practices (Larimore et al.).

*Institutional Level: University Counseling Centers*

Considering that the respondents indicated a high level of self-efficacy regarding the application of the 5 A’s framework to guidance on the health effects of religious/spiritual involvement, university counseling centers may wish to adopt such a framework as part of their treatment protocol. Patient satisfaction surveys that have been designed based on the 5 A’s framework could be adapted to assess clients’ preferences regarding
Finally, in addition to the other sources of information and training that were identified by respondents such as peer consultation \((n = 10)\) and clinical supervision \((n = 5)\), university counseling centers might consider establishing a lunchtime colloquium series/discussion group that hosts speakers on various topics related to religion/spirituality, health, and clinical practice.

**Community Level: Future Research**

A number of recommendations for future research can be offered based on the findings of this study:

- In order to establish a starting point for curriculum development or enhancement, surveys should be conducted of graduate programs and practicum/internship sites that prepare students to provide mental health services in university counseling centers. Specifically, the degree of correspondence between existing content and that proposed in published guidelines (Puchalski et al., 2001) should be assessed. Research questions might include: (1) Are issues of religion/spirituality and health addressed in currently available courses?, (2) Which courses are providing the broadest coverage of such issues?, and (3) What are the implications for course modifications or the development of new courses? With that, researchers might wish to explore internal and external factors that potentially influence the development and implementation of curricula involving religion/spirituality and health. For example, might faculty members or clinical supervisors question the appropriateness of such content or caution trainees against the incorporation of religion/spirituality in clinical practice? If so, does this vary by the type of
academic institution in which a given training program is housed?

- The effects of incorporating material on religion/spirituality and health in the curricula of graduate programs or internships should be evaluated based on established principles of curriculum development and program evaluation (Fitzpatrick, Sanders, & Worthen, 2004; Stark & Lattuca, 1997). Outcomes involving students’ knowledge, skills, and confidence in discussing the health effects of religious/spiritual involvement should be assessed.

- A plurality (41%) of the responding university counseling professionals were “unsure” about whether clients think counselors/psychotherapists should ask about religious/spiritual issues in relation to health. This implies an opportunity for future studies to examine the perspectives of clients’ in this area. For example, it may be informative to conduct surveys of college students regarding their perceptions and practices of communicating with university counseling professionals or other health care providers on campus about religious/spiritual issues.

- Approximately one-fourth (22%) of the respondents identified “religious/spiritual groups and organizations” as a source of information or training that they had received on counseling clients regarding the health effects of religious/spiritual involvement. Researchers may wish to explore the potential for collaboration between religiously/spiritually oriented community organizations and university counseling centers in terms of coordinating primary prevention activities and early intervention services for college students with mental health needs. In addition, researchers might explore the potential for collaboration among
organizations within the campus community. For example, one of the respondents mentioned that s/he practices as part of a wellness team, which is comprised of colleagues from “Student Health Services” and “The Office of Spiritual Life.”

- It was interesting to note that self-rated health status had no bearing on the stages of change, general perceptions, or outcome expectations in this study. Considering that the distribution of health status scores was negatively skewed (i.e., the median score on the five-point health status subscale was 4.40, with higher scores reflecting better health), there may have been a ceiling effect. Findings might differ based on data obtained from a less healthy sample. Future studies may wish to consider this possibility.

**Summary of Recommendations**

The recommendations offered in the preceding section can be summarized as follows:

- University counseling professionals who are in the precontemplation stage with respect to discussing the health effects of religious/spiritual involvement could be equipped with processes of consciousness raising and environmental reevaluation. Those in the action or maintenance stage might benefit from processes of stimulus control and contingency management.

- Perceived benefits could be increased by clarifying associations between religious/spiritual factors and better physical health.

- Perceived barriers could be reduced by (a) correcting misinformation about faith-integrated treatment approaches, and (b) addressing possible environmental, social, and affective concerns.
• Self-efficacy could be enhanced with respect to advising clients about connections between religious/spiritual involvement and health through direct experience, observational learning, guided practice, frequent evaluation, and positive reinforcement.

• Graduate programs that prepare students for the provision of mental health services in university counseling centers should address issues of religion/spirituality and health as part of their curricula.

• Training guidelines that have been developed for psychiatrists could be tailored to the needs of mental health professionals in practice at university counseling centers.

• Persons responsible for the delivery of graduate programs in counseling psychology and related fields might consider the learning objectives suggested in Figure 3.

• University counseling centers may wish to adopt the “5 A’s for providing guidance on the health effects of religious/spiritual involvement” as part of their treatment protocol. This would essentially involve (1) conducting a routine assessment of clients’ religious/spiritual involvement, (2) conveying information that could help clients make connections between religious/spiritual involvement and health, (3) reinforcing existing coping behaviors, health behaviors, and sources of social support, (4) making referrals to community resources as appropriate, and (5) ensuring continuity of care.

• Future research might (a) evaluate the effects of incorporating material on religion/spirituality and health in the curricula of graduate programs, (b) examine
college students’ perceptions and practices of communicating with campus health care providers about religious/spiritual issues, and (c) explore the potential for collaboration between university counseling centers and religiously/spiritually oriented community organizations.

**Conclusion**

This dissertation has addressed issues regarding the provision of clinical guidance on the health effects of religious/spiritual involvement. The present study expands upon previous research involving physicians and clinical psychologists and, in doing so, contributes to the literature by providing data on a novel population. Specifically, little attention had been given to the perceptions and practices of mental health professionals at university counseling centers in relation to religion/spirituality and clinical practice. Thus, the degree to which university counseling professionals were advising clients about the health effects of religious/spiritual involvement was unknown.

In terms of the fundamental research questions, this study found that 62% of the responding university counseling professionals had been discussing the health effects of religiosity/spirituality with their clients for a period of six months or more, whereas 31% had never seriously thought about doing so. Consistent with the propositions introduced in Chapter One and the mechanisms reviewed in Chapter Two, the respondents acknowledged the salutary influence of religiosity/spirituality and implied a role for religious/spiritual involvement in the process of recovery from mental health problems. It was proposed that discussions of mental health concerns and religious/spiritual issues could extend to discussions concerning the positive influence of religious/spiritual involvement on attitudes and behaviors that reduce physical health risks and promote
healthier lifestyles. As it turns out, relatively few (21%) respondents discussed the physical health effects of religiosity/spirituality with the majority of their clients. Overall, through their survey responses and handwritten observations, the respondents seemed to emphasize the importance of “following the client’s lead” where guidance on the health effects of religious/spiritual involvement is concerned. Correspondingly, attention has been given to a number of ethical issues throughout this dissertation.

One of the primary objectives of this study was to collect information that could stimulate and inform efforts to enhance clinical training. A plurality (35%) of the respondents had received no formal training preparing them to counsel clients on the health effects of religiosity/spirituality. Thus, it will be important to support the development of curricula that could assist university counseling professionals in making informed, self-directed, and professionally satisfying choices in this regard.

To the extent that university counseling professionals are able to access accurate information and adequate training in this area, guidance on the health effects of religious/spiritual involvement could serve to enhance the health and well-being of clients at university counseling centers. This is considering the sheer volume and consistency of research that demonstrates connections between religious/spiritual involvement and better mental and physical health (Koenig et al., 2001). If studies continue to demonstrate that relevant clinical guidance improves client satisfaction and lowers rates of service consumption, then perhaps religious/spiritual involvement could augment the limited resources cited by university administrators in their endeavors to meet the growing demand for mental health services on college campuses. As previously emphasized, this does not mean that religiously/spiritually oriented interventions should be implemented
with non-religious/non-spiritual clients. Rather, it suggests that (a) the beliefs and practices of religious/spiritual clients could be well utilized in their treatment and recovery, and (b) knowledge concerning the mechanisms by which religion/spirituality influences health could be applied to benefit non-religious/non-spiritual clients within a secular framework (Koenig, 2007c). In either case, it will be important to respect clients’ autonomy and personal preferences in the area of religion/spirituality, and to ensure that counseling services are grounded in informed consent and targeted toward relevant treatment goals (Sherman & Plante, 2001).
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Appendix A

Human Subjects Approval Letter
To: Joseph Dake, Ph.D., MPH and Adam Mrdjenovich, M.A., LLP
Department of Health and Rehabilitative Services

From: Barbara K. Chesney, Ph.D., Chair
Wesley A. Bullock, Ph.D., Vice Chair

Signed:                    Date: 03/19/09

Subject: IRB #106392

Protocol Title: University Counseling Center Practices Regarding Guidance on the Health Effects of Religious/Spiritual Involvement

On 03/19/09, the protocol listed above was reviewed and approved by the Chair and Chair Designee of the University of Toledo (UT) Social, Behavioral, & Educational Institutional Review Board (IRB) via the expedited process. You have been granted a waiver from the requirements of a written consent form. This action will be reported to the committee at its next scheduled meeting.

Items Reviewed:
- IRB application requesting expedited review
- Questionnaire (version date 03/19/09)
- Information sheet (version date 03/19/09)

This protocol approval is in effect until the expiration date listed below, unless the IRB notifies you otherwise.

Only the most recent IRB approved form(s) may be used when enrolling participants into this research.

Approval Date: 03/19/2009       Expiration Date: 03/18/10

Number of Subjects Approved: 623
Appendix B

Survey Instrument
Counseling Clients on the Health Effects of Religious/Spiritual Involvement

Directions: For each of the following statements, please mark or circle the response that most accurately describes your opinion or behavior.

“Health effects” refer to lower rates of disease and disability, enhanced recovery from illness; less stress, anxiety, depression, substance abuse, and suicide; greater well-being and life satisfaction, etc.

“Religious/spiritual involvement” refers to a belief in God(s) or a Higher Power, and behaviors such as prayer/meditation, religious service attendance, religious coping, and the provision/receipt of social support in a religious/spiritual context. Please answer the items that pertain to religiosity/spirituality in terms of your own personal belief system, whether it be religious, spiritual, or other.

1. Which of the following best describes your practice in relation to discussing the health effects of religiosity and/or spirituality (R/S) with clients at your counseling center? (please mark only one)
   _____ I have never seriously thought about discussing the health effects of R/S with my clients.
   _____ I have been seriously thinking about discussing the health effects of R/S with my clients, but I have not yet done so.
   _____ Within the next couple months, I plan to start discussing the health effects of R/S with my clients.
   _____ I have been discussing the health effects of R/S with my clients for less than six months.
   _____ I have been discussing the health effects of R/S with my clients for longer than six months.
   _____ I used to, but no longer, discuss the health effects of R/S with my clients.

2. Overall, religious and/or spiritual involvement has a positive influence on the health and well-being of college students. SD D U A SA

3. My clients think I should ask them during counseling sessions about their religious/spiritual involvement (e.g., activities, beliefs, experiences, values) as it relates to health. SD D U A SA

4. University counseling professionals should advise clients about connections between religious/spiritual involvement and better health. SD D U A SA

5. If it were empirically demonstrated that a specific religious and/or spiritual intervention was effective at promoting health, then university counseling professionals should offer that intervention. SD D U A SA

6. Do you routinely identify and document the religious and/or spiritual involvement of your clients?
   _____ Yes   _____ No
7. How often do you do each of the following? (please circle one answer for each part)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Always (100%)</th>
<th>Most of the time (99-51%)</th>
<th>Sometimes (50-26%)</th>
<th>Seldom (25-1%)</th>
<th>Never (0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I share my own religious and/or spiritual experiences and ideas with my clients.</td>
<td>A</td>
<td>M</td>
<td>ST</td>
<td>S</td>
<td>N</td>
</tr>
<tr>
<td>b. I support clients in their own religious/spiritual beliefs and practices.</td>
<td>A</td>
<td>M</td>
<td>ST</td>
<td>S</td>
<td>N</td>
</tr>
<tr>
<td>c. When religious/spiritual issues come up in discussions with my clients, I try to change the subject in a tactful way.</td>
<td>A</td>
<td>M</td>
<td>ST</td>
<td>S</td>
<td>N</td>
</tr>
<tr>
<td>d. I pray with my clients if they request.</td>
<td>A</td>
<td>M</td>
<td>ST</td>
<td>S</td>
<td>N</td>
</tr>
</tbody>
</table>

8. During counseling sessions, which of the following topics do you discuss with the majority (>50%) of your clients as being a potential health benefit of religious and/or spiritual involvement? (check all that apply)

- Reduces risk behaviors (e.g., substance abuse, high-risk sexual behaviors, violence)
- Promotes healthier lifestyle behaviors (e.g., proper diet, exercise, and sleep)
- Improves recovery from physical illness
- Contributes to a sense of well-being
- Provides a means of coping with stress
- Offers social support
- Promotes hope/optimism (i.e., a tendency or disposition to expect positive outcomes)
- Fosters forgiveness
- Leads to greater life satisfaction
- Prevents anxiety and/or depression
- Enhances recovery (e.g., enables clients to overcome the negative impact of mental illness; achieve their full potential; live a meaningful life in the community of their choosing, etc.)
- Other (please specify)

9. For those clients with whom you do not discuss the health effects of religious/spiritual involvement, what are the typical reasons for not doing so? (check all that apply)

- There are no barriers to my discussing this topic with clients.
- Lack of time to spend on this topic
- Such discussion occurs primarily with clients who indicate that religion/spirituality is important to them.
- My clients do not wish to communicate with me about religious/spiritual issues.
- My clients do not believe participation in religious/spiritual activities has an impact on health.
- Referrals are made to providers at the student medical center.
- Referrals are made to clergy, who do not have conflicting roles in religious/spiritual matters.
- Asking clients about religious/spiritual issues is inappropriate.
- Clients might use religion/spirituality to avoid taking personal responsibility for their mental health.
- Religion/spirituality may lead clients to resist or delay other indicated interventions.
- Religion/spirituality may cause negative emotions that lead to increased client suffering.
- Such discussion is discouraged by my colleagues and/or supervisors.
- Potential liability (e.g., lawsuits)
- My lack of personal expertise on religion/spirituality in relation to health
- My personal religious/spiritual beliefs
- Other (please specify): ____________________________
10. How confident are you in your ability to do the following actions with your clients? (please circle one answer for each part)

<table>
<thead>
<tr>
<th>Action Description</th>
<th>Not at All</th>
<th>Moderately</th>
<th>Highly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asking my clients about their religious and/or spiritual involvement.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Advising my clients about connections between religious/spiritual involvement and health.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Assessing my clients’ receptiveness to religious and/or spiritual involvement as a health promotive practice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Assisting my clients with referrals to religious and/or spiritual resources (e.g., religious/spiritual leaders, programs, organizations; chaplains; pastoral counselors).</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Arranging follow up contact to see if my clients’ religious and/or spiritual needs were adequately addressed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

11. How likely do you think that regularly using all of the strategies listed above (asking, advising, assessing, assisting, and arranging) would result in the following outcomes? (please circle one answer for each part)

<table>
<thead>
<tr>
<th>Outcome Description</th>
<th>Not at All</th>
<th>Unlikely</th>
<th>Not Sure</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>A reduction in health risks for my clients</td>
<td>NL</td>
<td>UL</td>
<td>NS</td>
<td>L</td>
<td>VL</td>
</tr>
<tr>
<td>Enhanced recovery for my clients</td>
<td>NL</td>
<td>UL</td>
<td>NS</td>
<td>L</td>
<td>VL</td>
</tr>
<tr>
<td>Clients would attribute a greater sense of trust and caring to me.</td>
<td>NL</td>
<td>UL</td>
<td>NS</td>
<td>L</td>
<td>VL</td>
</tr>
<tr>
<td>Clients would be harmed by this intervention.</td>
<td>NL</td>
<td>UL</td>
<td>NS</td>
<td>L</td>
<td>VL</td>
</tr>
<tr>
<td>I would feel more complete and satisfied in my professional life.</td>
<td>NL</td>
<td>UL</td>
<td>NS</td>
<td>L</td>
<td>VL</td>
</tr>
</tbody>
</table>

12. Where have you received most of your information/training on counseling clients regarding the health effects of religious and/or spiritual involvement? (check all that apply)

- [ ] I have not received any formal training on this topic.
- [ ] Training in graduate school
- [ ] Continuing education classes or workshops
- [ ] Professional journal articles
- [ ] Professional meetings/Conferences
- [ ] Religious/spiritual group or organization
- [ ] The popular media
- [ ] Other (please specify) ________________________________
The following items allow the researcher to assess the representativeness of the respondents.

13. Sex:  _____ Male  _____ Female

14. Age:  _____ years

15. Race/Ethnicity:  _____ White/Caucasian  _____ Black/African American  
   _____ Hispanic/Latino  _____ Asian  
   _____ Other (please specify) _________________________

16. Type of degree:  _____ MA/MS  _____ MSW  _____ Ph.D.  _____ Psy.D.

17. Type of license:  _____ Licensed psychologist (clinical or counseling)  
   _____ Professional counselor  
   _____ Social worker  
   _____ Other (please specify) _________________________

18. Years in practice:  _____ years

19. How true or false is each of the following statements for you? (please circle one answer on each line)

   | Definitely True | Mostly True | Not Sure | Mostly False | Definitely False |
---|----------------|-------------|----------|--------------|-----------------|
   a. I seem to get sick a little easier than other people do. | DT | MT | NS | MF | DF |
   b. I am as healthy as anybody I know. | DT | MT | NS | MF | DF |
   c. I expect my health to get worse within the next month. | DT | MT | NS | MF | DF |
   d. My health is excellent. | DT | MT | NS | MF | DF |
   e. During the past four weeks, my physical or emotional problems have interfered with my regular daily activities. | DT | MT | NS | MF | DF |

20. What is your current religious/spiritual preference?
   _____ Buddhist  _____ Catholic  _____ Hindu  _____ Jewish  _____ Muslim  _____ Orthodox  
   _____ Protestant  _____ Agnostic  _____ Atheist  _____ Other (please specify) _________________________

21. Which of the following best describes you? (check all that apply)

   | I believe in God.  
   | I believe in a Higher Power.  
   | I consider religion to be an important part of my life.  
   | I consider spirituality to be an important part of my life.  
   | I try hard to carry my religious beliefs over into all of my other dealings in life.  
   | I try hard to carry my spiritual beliefs over into all of my other dealings in life.  
   | I attend religious services at least once a month.  
   | I participate in public spiritual activities at least once a month.  
   | I pray and/or meditate at least once a week in places other than a church, synagogue, mosque, etc.  
   | I use my religion to understand or deal with stressful situations.  
   | I use my spirituality to understand or deal with stressful situations.

22. To what extent do you consider yourself to be a religious person? (please circle one answer)
   Not at All Religious  Slightly Religious  Moderately Religious  Very Religious

23. To what extent do you consider yourself to be a spiritual person? (please circle one answer)
   Not at All Spiritual  Slightly Spiritual  Moderately Spiritual  Very Spiritual
Appendix C

Expert Review Panel
Expert Review Panel

*Conceptual and Operational Definitions of Religion/Spirituality*

Linda K. George, Ph.D., Professor of Sociology  
Department of Sociology  
Duke University  
253 Soc-Psych  
Durham, NC 27710  
(919) 660-5605  
lkg@geri.duke.edu

*Survey Research*

Sherry Everett-Jones, Ph.D., MPH, JD  
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4770 Buford Highway Northeast, Mail Stop K-33  
Atlanta, GA 30341  
sce2@cdc.gov

*Religion and Mental Health; Spirituality in Patient Care*

Harold G. Koenig, M.D., Professor of Psychiatry  
Center for Spirituality, Theology, and Health  
Duke University Medical Center  
DUMC 3400  
Durham, NC 27710  
(919) 681-6633  
koenig@geri.duke.edu

*Religious Coping*

Kenneth I. Pargament, Ph.D., Professor of Psychology  
Department of Psychology  
Bowling Green State University  
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Bowling Green, OH 43403  
(419) 372-8037  
kpargam@bgnet.bgsu.edu
Spirituality and Medicine; Curriculum Development

Christina M. Puchalski, M.D., Founder and Director
Institute for Spirituality and Health
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Washington, DC 20052
(202) 994-6220
cpuchalski@gwish.org

Religious/Spiritual Issues in Psychotherapy

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Pepperdine University
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(949) 223-2521
edward.shafranske@pepperdine.edu
Appendix D

Cover Letter to Panel of Experts
Dear Dr. Last Name:

Recently, I contacted you about a doctoral dissertation that I am preparing to conduct at The University of Toledo concerning mental health professionals’ perceptions and practices of counseling clients on the health effects of religious/spiritual involvement. Thank you for agreeing to serve as a member of an expert review panel. Your expert opinion is vital to the success of my study. Please provide feedback regarding the enclosed instrument by indicating any needed changes, and any additional items that you perceive as being important. Please feel free to write your comments directly on the survey.

The instrument will be used to determine if mental health professionals at university counseling centers:

- routinely discuss the health effects of religiosity/spirituality with their clients
- perceive there to be barriers to having such discussions.

The survey will also be used to determine:

- the topics that respondents discuss with their clients in relation to the health benefits of religious/spiritual involvement
- the respondents’ level of confidence in counseling clients on the health effects of religious/spiritual involvement
- whether respondents believe such counseling would help reduce health risks and promote recovery among their clients
- the sources of relevant information and/or training the respondents may have received.

Thank you again for your time and professional courtesy. Please use the enclosed self-addressed stamped envelope to return the survey with your feedback. Your response within the next two weeks would be greatly appreciated.

If you have any questions or concerns about this process, please feel free to contact me by telephone at (616) 889-7020, or e-mail: adam.mrdjenovich@utoledo.edu.

Sincerely,

Adam J. Mrdjenovich, M.A., Limited-licensed psychologist
Doctoral Candidate
Appendix E

Cover Letter: Test-retest One (faculty)
Date

Dear Faculty Member:

Thank you for agreeing to participate in the psychometric evaluation of the attached survey regarding mental health professionals’ perceptions and practices of counseling clients on the health effects of religious/spiritual involvement. This evaluation is critical to the success of my dissertation study.

As we discussed by e-mail, you will be asked to complete the survey on two separate occasions approximately two weeks apart. Each administration should take no longer than ten minutes. It is essential that both surveys be completed so that the necessary analyses can be conducted.

Please place your first completed survey in the self-addressed manila envelope (attached) and return it to me via inter-office mail. I will then forward the second questionnaire for you to complete.

If you have any questions or concerns about this process, please feel free to contact me by telephone at (616) 889-7020, or e-mail: adam.mrdjenovich@utoledo.edu.

Thank you again for your time and professional courtesy.

Sincerely,

Adam J. Mrdjenovich, M.A., Limited-licensed psychologist
Doctoral Candidate
Appendix F

Cover Letter: Test-retest One (practicum student)
Dear Practicum Student:

You are invited to participate in the psychometric evaluation of the attached survey regarding mental health professionals’ perceptions and practices of counseling clients on the health effects of religious/spiritual involvement. This evaluation is vital to the success of my dissertation study.

You will be asked to complete the survey on two separate occasions approximately two weeks apart. Each administration should take no longer than ten minutes. It is essential that both surveys be completed so that the necessary analyses can be conducted.

Please place your first completed survey in the self-addressed manila envelope (attached) and return it to me via inter-office mail. I will then forward the second questionnaire for you to complete.

If you have any questions or concerns about this process, please feel free to contact me by telephone at (616) 889-7020, or e-mail: adam.mrdjenovich@utoledo.edu.

Thank you very much for your help.

Sincerely,

Adam J. Mrdjenovich, M.A., Limited-licensed psychologist
Doctoral Candidate
Appendix G

Cover Letter: Test-retest Two
Date

Dear:

Thank you for completing the first survey regarding mental health professionals’ perceptions and practices of counseling clients on the health effects of religious/spiritual involvement.

As previously described, this is the second half of the reliability testing for the survey instrument. Please complete the attached questionnaire and return it to me via inter-office mail using the self-addressed manila envelope provided.

If you have any questions or concerns about this process, please feel free to contact me by telephone at (616) 889-7020, or e-mail: adam.mrdjenovich@utoledo.edu.

Again, thank you very much for your professional courtesy.

Sincerely,

Adam J. Mrdjenovich, M.A., Limited-licensed psychologist
Doctoral Candidate
Appendix H

Cover Letter: Wave One
Dear Dr./Mr./Ms. Last Name:

You are invited to participate in the research study entitled, “University Counseling Center Practices Regarding Guidance on the Health Effects of Religious/Spiritual Involvement,” which is being conducted at The University of Toledo by Adam Mrdjenovich under the direction of Dr. Joseph Dake. The purpose of this study is to assess the perceptions and practices of university counseling professionals regarding the provision of guidance on the health effects of religious/spiritual involvement.

You will be asked to complete a questionnaire regarding your perceptions and practices of providing clients with guidance on the mental and physical health effects of religious/spiritual involvement. Your participation will take approximately 10 minutes. The time it takes to respond to the survey is the only potential risk or inconvenience to you. We do not anticipate any immediate or direct benefits to you if you participate in this study. However, other mental health professionals may benefit from learning the results of this study. The researcher will make every effort to protect your confidentiality. Your responses will be analyzed and presented only in combination with the responses of other participants. Your refusal to participate in this study would involve no penalty or loss of benefits to which you are otherwise entitled, and would not affect your relationship with The University of Toledo. In addition, you may discontinue participation at any time without any penalty or loss of benefits.

Before you decide to accept the invitation to participate in this study, you may ask any questions you might have. If you have questions at any time before, during, or after your participation, you should contact the Principal Investigator at (419) 530-2767. If you have questions beyond those answered by the researcher, please feel free to contact Dr. Jeffrey Busch, SBE IRB coordinator, at (419) 530-2844.

For your convenience, we have included a self-addressed stamped envelope in which you may return your completed survey. Your response within the next week would be greatly appreciated. We realize that the $1.00 enclosed does not begin to reimburse you for your time, but we hope you will accept it as a small token of our appreciation.

Sincerely,

Adam J. Mrdjenovich, M.A., Limited-licensed psychologist
Doctoral Candidate

Joseph A. Dake, Ph.D., MPH
Associate Professor
Appendix I

Cover Letter: Wave Two
Dear Dr./Mr./Ms. Last Name:

Recently, we mailed you a survey regarding mental health professionals’ perceptions and practices of providing guidance on the health effects of religious/spiritual involvement.

If you have already returned the survey, thank you very much.

Perhaps you never received the first mailing. The good news is that it’s not too late to participate. Your participation is very important to ensure the success of this national study. The survey takes about 10 minutes to complete, and all responses are confidential.

Just in case you misplaced the original survey, we have enclosed a copy for your convenience, as well as a self-addressed stamped return envelope.

We appreciate your busy schedule and thank you for your professional courtesy.

Sincerely,

Adam J. Mrdjenovich, M.A., Limited-licensed psychologist
Doctoral Candidate

Joseph A. Dake, Ph.D., MPH
Associate Professor

P.S. Please check the box below and return only this letter if you do not currently treat clients in a college/university counseling center.

___ I do not currently treat clients in a college/university counseling center.
Appendix J

Cover Letter: Wave Three
Dear Dr./Mr./Ms. Last Name:

We need your assistance.

A few weeks ago, we sent you a survey regarding mental health professionals’ perceptions and practices of providing clients with guidance on the health effects of religious/spiritual involvement. If you have already returned the survey, thank you very much.

Just in case you never received the original survey, a copy is enclosed.

It’s not too late to help! Your participation is crucial to ensure the success of this national study. If you have not yet had an opportunity to respond, please consider taking about 10 minutes to complete and return the survey. All responses are confidential.

We greatly appreciate your time and professional courtesy. If you have any questions or concerns about this project, please feel free to contact Dr. Joseph Dake by telephone at (419) 530-2767, or email: joseph.dake@utoledo.edu.

Sincerely,

Adam J. Mrdjenovich, M.A., Limited-licensed psychologist
Doctoral Candidate

Joseph A. Dake, Ph.D., MPH
Associate Professor

P.S. Please check the box below and return only this letter if you do not currently treat clients in a college/university counseling center.

___ I do not currently treat clients in a college/university counseling center.
Appendix K

Research Questions and Hypotheses matched with Corresponding Survey Items and Data Analyses
Research Questions and Hypotheses matched with Corresponding Survey Items and Data Analyses

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Hypotheses</th>
<th>Survey Items</th>
<th>Data Analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1.1</td>
<td>1</td>
<td>• Descriptive statistics</td>
</tr>
<tr>
<td>2.</td>
<td>2.1 – 2.9</td>
<td>1, 13, 14, 15, 22, 23, 19, 12, 18</td>
<td>• Pearson chi-square ($\chi^2$) • Independent $t$-tests</td>
</tr>
<tr>
<td>3.</td>
<td>3.1 – 3.5</td>
<td>2, 22, 23, 19, 18</td>
<td>• Descriptive statistics • Pearson chi-square ($\chi^2$) • Independent $t$-tests</td>
</tr>
<tr>
<td>4.</td>
<td>4.1 – 4.5</td>
<td>4, 22, 23, 19, 18</td>
<td>• Descriptive statistics • Pearson chi-square ($\chi^2$) • Independent $t$-tests</td>
</tr>
<tr>
<td>5.</td>
<td>5.1 – 5.9</td>
<td>6, 7, 22, 23, 18, 1</td>
<td>• Descriptive statistics</td>
</tr>
<tr>
<td>6.</td>
<td>6.1</td>
<td>8</td>
<td>• Descriptive statistics</td>
</tr>
<tr>
<td>7.</td>
<td>7.1 – 7.5</td>
<td>9, 22, 23, 18, 12</td>
<td>• Descriptive statistics • Mann-Whitney $U$ • Kruskal-Wallis $H$ • Pearson $r$</td>
</tr>
<tr>
<td>8.</td>
<td>8.1 – 8.9</td>
<td>10, 22, 23, 18, 12</td>
<td>• Descriptive statistics • Mann-Whitney $U$ • Kruskal-Wallis $H$ • Pearson $r$</td>
</tr>
<tr>
<td>9.</td>
<td>9.1 – 9.10</td>
<td>11, 19, 18, 12</td>
<td>• Descriptive statistics • Independent $t$-tests • ANOVA • Tukey tests • Pearson $r$</td>
</tr>
<tr>
<td>10.</td>
<td>10.1</td>
<td>12</td>
<td>• Descriptive statistics</td>
</tr>
</tbody>
</table>