
Advances in the Conceptualization and Measurement of Religion and Spirituality

Implications for Physical and Mental Health Research

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Empirical studies have identified significant links between religion and spirituality and health. The reasons for these associations, however, are unclear. Typically, religion and spirituality have been measured by global indices (e.g., frequency of church attendance, self-rated religiousness and spirituality) that do not specify how or why religion and spirituality affect health. The authors highlight recent advances in the delineation of religion and spirituality concepts and measures theoretically and functionally connected to health. They also point to areas for growth in religion and spirituality conceptualization and measurement. Through measures of religion and spirituality more conceptually related to physical and mental health (e.g., closeness to God, religious orientation and motivation, religious support, religious struggle), psychologists are discovering more about the distinctive contributions of religiousness and spirituality to health and well-being.

There is now a substantial literature that connects religion and spirituality to physical health (George, Ellison, & Larson, 2002; Koenig, McCullough, & Larson, 2001; Larson, Swyers, & McCullough, 1998; Seybold & Hill, 2001; Thoresen, 1999; Thoresen, Harris, & Oman, 2001; see also Powell, Shahabi, & Thoresen, 2003, this issue; Seeman, Dubin, & Seeman, 2003, this issue) and mental health (Larson et al., 1998; Plante & Sherman, 2001). What is it about religion and spirituality that accounts for their link to health? Researchers have suggested various possible psychological, social, and physiological mediators that may account for the religion and spirituality–health connection. However, it is possible that the explanation for these effects may also lie in the nature of religion and spirituality themselves. More finely delineated measures of these constructs might relate more directly to physical and mental health. In this article, we highlight some of the advances that have been made in delineating religious and spiritual concepts and measures that are functionally related to physical and mental health. We conclude by pointing to promising areas for growth in the conceptualization and measurement of religion and spirituality in studies of health.

The Meanings of Religion and Spirituality

Through most of the history of modern psychology, the term *religion* has been both an individual and an institutional construct. William James (1902) distinguished a “firsthand” (p. 328) experiential religion that is direct and immediate from a secondhand institutional religion that is an inherited tradition. For James, both elements fell under the purview of religion. More recently, however, the meaning of *religion* has evolved in a different direction. The term *religion* is becoming reified into a fixed system of ideas or ideological commitments that “fail to represent the dynamic personal element in human piety” (Wulff, 1996, p. 46). At the same time, the term *spirituality* is increasingly used to refer to the personal, subjective side of religious experience. Thus, one is witnessing, particularly in the United States, a polarization of religiousness and spirituality, with the former representing an institutional, formal, outward, doctrinal, authoritarian, inhibiting expression and the latter representing an individual, subjective, emotional, inward, unsystematic, freeing expression (Koenig et al., 2001).

Although some researchers may find such contrasts a useful heuristic, there are several dangers to this bifurcation of religion and spirituality (Hill et al., 2000; Pargament, 1999). First, the polarization of religion and spirituality into institutional and individual domains ignores the fact that all forms of spiritual expression unfold in a social context and that virtually all organized faith traditions are interested in the ordering of personal affairs (Wuthnow, 1998). Second, implicit in the evolving definitions is the sense that spirituality is good and religion is bad; this simplistic perspective overlooks the potentially helpful and harmful sides of

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both religion and spirituality (Pargament, 2002). Third, the empirical reality is that most people experience spirituality within an organized religious context and fail to see the distinction between these phenomena (Marler & Hadaway, 2002; Zinnbauer et al., 1997). Finally, the polarization of religion and spirituality may lead to needless duplication in concepts and measures. Current measures of religiousness cover a full range of individual and institutional domains. Purportedly new measures developed under the rubric of spirituality may in fact represent old wine in new wineskins.

Religion and spirituality represent related rather than independent constructs (Hill et al., 2000). Although any definition of a construct as religious and spiritual is limited and therefore debatable, spirituality can be understood as a search for the sacred, a process through which people seek to discover, hold on to, and, when necessary, transform whatever they hold sacred in their lives (Pargament, 1997, 1999). This search takes place in a larger religious context, one that may be traditional or nontraditional (Hill et al., 2000). The sacred is what distinguishes religion and spirituality from other phenomena. It refers to those special objects or events set apart from the ordinary and thus deserving of veneration. The sacred includes concepts of God, the divine, Ultimate Reality, and the transcendent, as well as any aspect of life that takes on extraordinary character by virtue of its association with or representation of such concepts (Pargament, 1999). The sacred is the common denominator of religious and spiritual life. It represents the most vital destination sought by the religious/spiritual person, and it is interwoven into the pathways many people take in life. How to measure the role of the sacred in these pathways and destinations is the special challenge for the religion and spirituality researcher.

The Religion–Spirituality Gap in Health Research

Psychologists and other social scientists have generally kept their distance from religion and spirituality. Few professional training programs in psychology address religious and spiritual issues (Bergin, 1983; Shafranske & Malony, 1990) and, in general, clinicians appear to have little to do with religious leaders and institutions. Although mental health professionals seek out referrals from religious groups, they rarely make referrals to clergy or other religious leaders (Koenig, Bearon, Hover, & Travis, 1991). Furthermore, the gap between psychology and religion and spirituality can also be felt in the empirical arena. Systematic reviews of the empirical literature indicate that religion and spirituality are understudied variables in health-related research in a number of disciplines, including psychology (Weaver et al., 1998), psychiatry (Larson, Pattison, Blazer, Omran, & Kaplan, 1986), family practice (Craigie, Liu, Larson, & Lyons, 1988), and gerontology (Sherrill, Larson, & Greenwold, 1993). For example, a systematic review conducted by Larson et al. (1986) in four major psychiatric journals from 1978 to 1982 found that only 2.5% of the quantitative studies included a religion and spirituality

measure. Journals in mainstream psychology fare no better. Weaver et al. (1998) conducted a systematic review of research on religion and spirituality in articles published in seven American Psychological Association journals between the years 1991 and 1994. The authors found that 2.7% of the quantitative studies included a religion and spirituality variable. Furthermore, if the *Journal of Personality and Social Psychology* (which evaluated a religion and spirituality factor in 5.8% of the articles reviewed) were excluded from their systematic review, only 0.9% of the remaining articles measured the religion and spirituality variable. Of course, such numbers are difficult to interpret given that there are specialty journals designed to investigate religion and spirituality. Nevertheless, in light of the importance of religion and spirituality to the U.S. populace (Gallup, 1994), these numbers suggest that religion and spirituality are understudied in psychology and related disciplines.

A complete discussion of the reasons for this gap, as important as they are, is beyond the purposes of this article. Briefly, several possible reasons for the neglect of the religion and spirituality variable include the following: (a) Religion and spirituality are less central and important to psychologists and other health-related researchers than to the public as a whole (Bergin, 1991; “Politics of the Professorate,” 1991; Shafranske, 1996), (b) religion and spirituality are mistakenly assumed by some to fall outside the scope of scientific study (Thomson, 1996), and (c) religion and spirituality are believed by some, contrary to what the data suggest (Gallup, 1994), to necessarily recede during an age that reflects the rise of science and rational enlightenment (see Barbour, 1990; also see Hill et al., 2000).

When religion and spirituality have been studied, they have often been included only as add-on variables in the context of other research agendas. Many of the religion and spirituality research findings, especially in relation to health, have emerged from either large epidemiological surveys of medical populations or large-scale sociological surveys of national populations. Thus, measures of religion and spirituality are often but one of many variables under investigation and, as a result, researchers have relied heavily on brief (frequently single-item) and imprecise global indices such as frequency of church attendance, denominational affiliation, or self-rated religiousness and spirituality. For example, of the 59 quantitative studies including a religion or spirituality variable in four major psychiatric journals in Larson et al.’s (1986) systematic review, only 3 included religion or spirituality as a central variable under investigation.

In their review of religion and physical health, Koenig et al. (2001) identified a growing literature investigating religion and spirituality (especially religion) in relation to factors such as heart disease, cholesterol, hypertension, cancer, mortality, and health behaviors, among others. Across every health domain reported in their review, the predominant religion and spirituality measure was some sort of global index of religious involvement, most notably, denominational affiliation or frequency of church attendance. For example, Koenig et al. (2001) reviewed 101

studies that examined the association between religion and spirituality and mortality (or length of survival). Almost half of the reviewed studies ($n = 47$) measured religion and spirituality as religious (usually denominational) affiliation only, with another 43 studies relying on broad general measures, such as church attendance or membership, membership in the clergy, or a global assessment of subjective religiousness. The limited reliability of such brief measures attenuates the association of the religion and spirituality variable with the health variables of interest, resulting in smaller effect sizes than would be observed if the religion and spirituality variable were assessed with more reliable measures (Hunter & Schmidt, 1990). Such measures also may not uncover harmful health effects of religion and spirituality.

Still, despite the use of global measures with limited reliability, religion and spirituality have been surprisingly robust variables in predicting health-related outcomes. For example, a meta-analysis of the relationship between religious involvement and mortality, representing nearly 126,000 participants, indicated that people who scored higher on measures of religious involvement (primarily global indices) had 29% higher odds of survival at follow-up than people lower in religious involvement (McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000). Likewise, the literature review by Koenig et al. (2001) strongly suggested that even simplistic religion and spirituality measures, such as denominational affiliation or church attendance, are significant predictors of health outcome variables. Ironically, however, the apparent success of such global indices also may retard the development of more conceptually grounded and psychometrically sophisticated measures that specifically apply to health-related issues.

Although this literature speaks to the importance of religion and spirituality, it leaves unanswered critical questions about why and how religion and spirituality influence health. What is it about religion and spirituality that accounts for their linkage to mental and physical health? A number of nonspiritual explanations have been proposed (Ellison & Levin, 1998). Certainly, there are possible physiological, psychological, and social mediators of the religion and spirituality–health linkage, including, but not limited to, such factors as lifestyle issues (see King, 1990), social networks (Taylor & Chatters, 1988), a worldview that promotes well-being (Dull & Skokan, 1995; McIntosh, 1995), and an optimistic explanatory style (Sethi & Seligman, 1993). However, by relying so heavily on global religion and spirituality indices, researchers have underestimated the complexity of religion and spirituality variables and overlooked the possibility that something inherent within the religious and spiritual experience itself contributes to or detracts from physical and mental health. To fully investigate this possibility, more finely delineated and reliable measures of religion and spirituality are necessary. These measures may offer greater insight into the workings of religion and spirituality in the context of mental and physical health.

Advances in Health-Related Concepts and Measures of Religion and Spirituality

Researchers in the psychology of religion have made progress in the measurement of religiousness. They have found that religion and spirituality are far from uniform processes. Instead, they are complex variables involving cognitive, emotional, behavioral, interpersonal, and physiological dimensions. Hill and Hood (1999) reviewed 125 measures of religion and spirituality from 17 different categories (e.g., beliefs, attitudes, religious orientation, faith development, fundamentalism, attitudes toward death, congregational involvement, and satisfaction). Others have identified similar multiple dimensions of religion and spirituality (Fetzer Institute/National Institute on Aging Working Group, 1999).

Unfortunately, much of the conceptual and empirical work from the psychology of religion has not been well integrated into research on the connection between religion and spirituality and health. Health researchers are not well acquainted with the psychological study of religion, a literature “far more voluminous than many psychologists would suppose” (Wulff, 1996, p. 44; see, e.g., Batson, Schoenrade, & Ventis, 1993; Gorsuch, 1988; Hood, Spilka, Hunsberger, & Gorsuch, 1996; Paloutzian, 1996; Pargament, 1997; and Wulff, 1997, for reviews). The empirical findings in this field have not, until recently, been widely disseminated, in part because much of the research has been published in specialized journals, such as the *International Journal for the Psychology of Religion*, the *Journal for the Scientific Study of Religion*, or the *Review of Religious Research*, that are unfamiliar to many psychologists. Thus, for example, religion (other than religious pathology) is not well represented in psychology textbooks (Lehr & Spilka, 1989) or in educational curricula (Shafranske & Malony, 1990).

It is also important to note that much of the early work in the conceptualization and measurement of religiousness grew out of an interest in understanding the disturbing links between religion and prejudice, in particular, anti-Semitism (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950). For example, asserting that it is more important how rather than whether a person is religious, Allport (1950) formulated his classic distinction between religiously mature and religiously immature people. Later (Allport & Ross, 1967), using less value-laden language, he contrasted individuals who “live their religion” (p. 434; i.e., who are intrinsically oriented) with those who “use their religion” (p. 434; i.e., who are extrinsically oriented) and tested the notion that intrinsically oriented religious individuals would manifest lower prejudice than those who were extrinsically oriented. Until recently, psychologists have not developed similarly differentiated religion and spirituality concepts and measures that are directly and explicitly connected to health.

This picture, however, has begun to change. Recently, advances have been made in delineating religion and spirituality concepts and measures that are functionally related

to physical and mental health. Below, we consider several of these promising areas.

Perceived Closeness to God

To know God is, according to many traditions, the central function of religion. Systems of religious belief, practice, and relationships are designed to help bring people closer to the transcendent, however that transcendence may be defined. It is important to recognize that, to the religious or spiritual mind, the connection with God is of ultimate value (Kass, Friedman, Lesserman, Zuttermeister, & Benson, 1991), regardless of whether it leads to better mental and physical health. However, there are good theoretical reasons to believe that a felt connection with God may be tied to better health status.

Attachment theorists have likened God to an attachment figure (Kaufman, 1981; Kirkpatrick, 1995). As children look to their parents for protection, people can look to God as a safe haven, a being who offers caring and protection in times of stress. Attachment theory suggests that people who experience a secure connection with God should also experience greater comfort in stressful situations and greater strength and confidence in everyday life. Lower levels of physiological stress and lower levels of

loneliness are other logical consequences of a secure tie to God.

Researchers have developed a number of reliable and valid measures that tap into perceptions of closeness to God. Although the instruments are by no means identical, they share a focus on the individual's felt close relationship with the divine. Some specific scales with illustrative items are listed in Table 1. Of course, these measures must necessarily rely on perceived closeness to God and cannot assess the reality of that God or gods: that is, these are measures of perceived closeness to an unverifiable object. However, these measures of perceived closeness to God have been significant predictors of mental and physical health.

Consistent with the predictions that grow out of attachment theory, people who report a closer connection to God experience a number of health-related benefits: less depression and higher self-esteem (Maton, 1989b), less loneliness (Kirkpatrick, Kellas, & Shillito, 1993), greater relational maturity (Hall & Edwards, 1996, 2002), and greater psychosocial competence (Pargament et al., 1988). Furthermore, as predicted by attachment theory, the perceived sense of closeness to God appears to be particularly valuable to people in stressful situations. Measures of re-

Table 1
Measures and Illustrative Items of Religion and Spirituality Constructs Functionally Related to Health

Construct and measure	Illustrative item
<i>Closeness to God</i>	
Spiritual Support Scale (Maton, 1989b)	I experience a close personal relationship with God.
Religious Problem Solving Scale (Pargament et al., 1988)	When faced with a question, I work together with God to figure it out.
Spiritual Assessment Inventory (Hall & Edwards, 1996)	I am aware of God attending to me in times of need.
Index of Core Spiritual Experiences (Kass et al., 1991)	How close do you feel to God?
<i>Orienting, motivating forces</i>	
Age Universal I-E Scale (Gorsuch & Venable, 1983)	My whole approach to life is based on my religion. (intrinsic)
Religious Internalization Scale (Ryan et al., 1993)	A reason I pray by myself is because I enjoy praying.
<i>Religious support</i>	
Religious support (Krause, 1999)	How often do people in your congregation make you feel loved and cared for?
Perceived religious support (Fiala et al., 2002)	I have worth in the eyes of others in my congregation.
Religious Coping Scale (Pargament et al., 2000)	Asked others to pray for me.
<i>Religious and spiritual struggle</i>	
Religious strain (Exline et al., 2000)	Disagreement with a family member or friend about religious issues.
Intrapersonal religious conflict (Trenholm et al., 1998)	When my faith in my religion wavers, I feel guilty.
Negative Religious Coping Scale (Pargament, Zinnbauer, et al., 1998)	Felt God was not being fair to me.
Spiritual History Scale (Hays et al., 2001)	At times, my religious life has caused me stress.
Quest Scale (Batson et al., 1993)	Questions are far more central to my religious experience than are answers.

Note. Illustrative items reprinted with permission of authors and copyright holders.

religious coping that reflect a secure relationship with God have been tied to better self-rated health (Krause, 1998) and better psychological adjustment among people facing a variety of major life stressors, including transplant surgery (Tix & Frazier, 1998), medical illness (Koenig, Pargament, & Nielsen, 1998), and natural disasters (Smith, Pargament, Brant, & Oliver, 2000). It is important to add that the magnitude of these effects is greater than that associated with global religion and spirituality measures, such as denominational affiliation, church attendance, frequency of prayer, or self-rated religiousness and spirituality (see Pargament, 1997). As yet, these findings have not been explained by nonreligious factors (e.g., general coping, cognitive restructuring, demographic variables), leading one group to conclude that “religious coping adds a unique component to the prediction of adjustment to stressful life events” (Tix & Frazier, 1998, p. 420).

Religion and Spirituality as Orienting, Motivating Forces

To the devout, religion and spirituality are not a set of beliefs and practices divorced from everyday life, to be applied only at special times and on special occasions. Instead, religion and spirituality are ways of life to be sought, experienced, fostered, and sustained consistently. As Mircea Eliade (1959) put it in his classic work, *The Sacred and the Profane: The Nature of Religion*, “Religious man can live only in a sacred world, because it is only in such a world that he participates in being, that he has a real existence” (p. 64). Through education, services, rituals, mentoring, and programming, religious and spiritual traditions from across the world encourage their adherents to see themselves, others, and life more generally through a spiritual lens.

Psychologists have also noted that religion and spirituality can be understood, for some people, as overarching frameworks that orient them to the world and provide motivation and direction for living (see, e.g., Allport, 1950; McIntosh, 1995; Pargament, 1997). Furthermore, there are a number of theoretical grounds offering reason to suspect that those with a more elaborated and encompassing religious orientation are likely to experience some health benefits and perhaps liabilities.

First, viewed in a religious and spiritual light, many aspects of life can be perceived as sacred in significance and character, including health, both physical (e.g., the body as a temple) and psychological (e.g., sense of self, meaning; Pargament & Mahoney, 2002). People may be especially likely to treat those dimensions of life they find sacred with respect and care. Moreover, the sense of sacredness may represent an important source of strength, meaning, and coping. However, it is important to add, loss or violation of aspects of life perceived to be sacred may be especially painful and damaging (Magyar, 2001).

Second, religion and spirituality frameworks can provide people with a sense of their ultimate destinations in life. More than goals, these destinations become spiritual strivings often by virtue of their associations with a larger

religious framework. Emmons (1999) has suggested a number of mechanisms that link spiritual strivings to better health and well-being: Spiritual strivings are empowering—people are likely to persevere in the pursuit of transcendent goals; spiritual strivings can provide stability, support, and direction in critical times—people can hold on to a sense of ultimate purpose and meaning even in the midst of disturbing life events (Baumeister, 1991); and spiritual strivings offer a unifying philosophy of life, one that lends greater coherence to personality in the face of social and cultural forces that push for fragmentation.

Finally, religion and spirituality orientations can offer not only a sense of ultimate destinations in living but also viable pathways for reaching these destinations. For example, in the effort to sustain themselves and their spirituality in stressful situations, those with stronger religious frameworks may have greater access to a wide array of religious coping methods (e.g., spiritual support, meditation, religious appraisals, rites of passage). These methods have been linked to better mental and physical health (Pargament, 1997). Similarly, in the pursuit of spiritual growth or a relationship with the transcendent, the individual may be more likely to avoid the vices (e.g., gluttony, lust, envy, pride) and practice the virtues (e.g., compassion, forgiveness, gratitude, hope) that have themselves been associated with mental and physical health status. As indicated in Table 1, a number of psychometrically sound measures (Gorsuch & Venable, 1983; Ryan, Rigby, & King, 1993) are available to assess the extent to which religion represents a central, motivating force in the life of the individual.

Several lines of empirical studies have provided some support for the theoretical connections between an organizing, motivating religion and spirituality framework and better health. First, people reportedly experience less conflict with; derive greater satisfaction and meaning from; and invest more time, care, and energy into those aspects of their lives they view as sacred (Mahoney et al., 1999; Tarakeshwar, Swank, Pargament, & Mahoney, 2001). Second, spiritual motivation appears to have positive psychological implications. For example, Emmons, Cheung, and Tehrani (1998) asked people in diverse samples to describe what they were striving for in their lives. Those who reported a higher number of spiritual strivings also indicated greater purpose in life, better life satisfaction, and higher levels of well-being. Furthermore, spiritual strivings were related to less conflict among goals and to a greater degree of goal integration. Third, in a number of investigations, higher levels of an intrinsic religious orientation have been associated with better mental health, including self-esteem, meaning in life, family relations, a sense of well-being, and lower levels of alcohol abuse, drug abuse, and sexual promiscuity (see, e.g., Donahue, 1985; Payne, Bergin, Bielema, & Jenkins, 1991). Measures of intrinsic religiousness have also been tied to positive methods of religious coping, such as spiritual support, benevolent religious interpretations of life crises, and various forms of prayer (Pargament et al., 1992; Park & Cohen, 1993).

Religious Support

According to many religious traditions, relationships are conduits through which people express their spirituality and come to know the transcendent. At their best, philosopher Martin Buber (1970) wrote, people are more than objects, they are subjects who meet and complete each other. Buber located God in relationships and thus afforded them a special significance: "The relation to a human being is the proper metaphor for the relation to God," he said, "as genuine address here is accorded a genuine answer" (Buber, 1970, p. 151). The primacy of human relationships is articulated by most of the world's religions through some variant of the Golden Rule (e.g., caring, love, compassion), and the vehicle for enacting these relationships within most religions is the religious congregation. Be they churches, synagogues, temples, or mosques, congregations are designed in part to foster connectedness and caring among their members.

Social scientists have suggested that the support individuals derive from the members, leaders, and clergy in their congregations has a number of health benefits. As with other forms of social support, religious support can be a valuable source of self-esteem, information, companionship, and instrumental aid that buffers the effects of life stressors or exerts its own main effects (Cohen & Wills, 1985). However, religious support may have some added benefits. Although members of an individual's social network come and go across the life span, a religious system represents more of a "support convoy" (Kahn & Antonucci, 1980, p. 253) that can accompany the individual from birth to death. Although the people who make up the convoy change, the individual can count on the assistance of a group of like-minded individuals who share a set of values and a worldview, even in the most difficult of circumstances such as serious illness, aging, or death (Ellison & Levin, 1998). The effects of religious support may be further strengthened by the religious content of the support, such as awareness of prayers being offered on behalf of the individual or the belief that God is working through others.

Researchers have developed a few promising instruments to assess religious support (see Table 1) from congregational members and clergy. Empirical studies have shown that many people derive emotional and tangible support from their congregations. For example, according to one national survey of African Americans, two out of three respondents indicated that they received support from fellow church members (Taylor & Chatters, 1988). Moreover, religious support has been associated with lower levels of depression and more positive affect or life satisfaction (Fiala, Bjorck, & Gorsuch, 2002; Krause, Ellison, & Wulff, 1998). This support may be particularly helpful to people dealing with stressful situations. Maton (1989a) found that members who were experiencing high levels of economic distress reported greater life satisfaction in more supportive than in less supportive religious settings; life satisfaction did not differ for the low-stress participants in the two types of settings. Religious support has also been predictive of less emotional distress cross-sectionally and

longitudinally among people coping with the stresses of the Gulf War (Pargament, Koenig, & Perez, 2000). Finally, some empirical studies have suggested that support rooted in religion may be distinctive. Religious support has emerged as a significant predictor of psychological adjustment after controlling for the effects of general social support (VandeCreek, Pargament, Belavich, Cowell, & Friedel, 1999).

Religious and Spiritual Struggle

The religious and spiritual life is not always smooth or easy. According to narrative accounts, even the exemplars of some of the world's great religions—from Buddha to Moses to Jesus Christ to Mohammed—faced their own spiritual trials and struggles. Such struggles represent pivotal moments, according to religious traditions, for they may lead the individual on or off the path toward spiritual growth.

Psychologists have articulated several types of religious and spiritual struggle, including interpersonal struggle, intraindividual struggle, and struggles with God (Exline, Yali, & Sanderson, 2000; Pargament, Murray-Swank, Magyar, & Ano, in press). Interpersonal struggles involve religious conflicts between the individual and a member or members of the social context: spouses, family members, congregation members, clergy or other church leaders, or members of other religious groups. Struggles can also occur internally, as illustrated by the tensions people experience between the virtues they espouse, their feelings, and their actual behavior. The individual may also struggle with the divine, questioning God's presence, benevolence, sovereignty, or purpose for the individual.

Religious and spiritual struggles of these kinds may have important and distinctive implications for health and well-being because they elicit ultimate questions and concerns. Religious disappointments with congregation and clergy can raise basic doubts about the trustworthiness and faithfulness of others (Krause, Chatters, Meltzer, & Morgan, 2000). Internal religious conflicts can pose fundamental questions about self-worth, self-control, and self-efficacy. Questions about God's nature and relationship with the individual can lead to fear, disillusionment, and distrust of the transcendent. In short, religious and spiritual struggles may be especially distressing because they challenge those aspects of life that are most sacred and imply harsh truths about the human condition, truths that may be ultimate, immutable, and eternal. It is important to add, however, that the process of doubting, searching, and questioning in the religious realm can also be a key and perhaps necessary prelude to growth and development (Batson et al., 1993).

As shown in Table 1, a number of promising measures that assess various dimensions of religious struggle have been developed: religious strain, intrapersonal and interpersonal conflict, negative religious coping, spiritual history, and a "quest" religious orientation that assesses "the degree to which an individual's religion involves an open-ended responsive dialogue with existential questions raised

by the contradictions and tragedies of life” (Batson et al., 1993, p. 169).

Using these measures, empirical studies have found that religious and spiritual struggles are linked to both negative and positive health outcomes. On the negative side, religious and spiritual struggles have been associated with a number of indicators of psychological distress, including anxiety, depression, negative mood, poorer quality of life, panic disorder, and suicidality (Exline et al., 2000; Hays, Meador, Branch, & George, 2001; Krause, Ingersoll-Dayton, Ellison, & Wulff, 1999; Pargament et al., 2000; Pargament, Smith, Koenig, & Perez, 1998; Pargament, Zinnbauer, et al., 1998; Trenholm, Trent, & Compton, 1998). With respect to physical health, religious and spiritual struggles have also been predictive of declines in physical recovery in medical rehabilitation patients (Fitchett, Rybarczyk, DeMarco, & Nicholas, 1999), longer hospital stays (Berg, Fonss, Reed, & VandeCreek, 1995), and greater risk of mortality following a medical illness (Pargament, Koenig, Tarakeshwar, & Hahn, 2001). But various indicators of religious and spiritual struggle have been associated with positive outcomes, such as stress-related growth, spiritual growth, open-mindedness, self-actualization, and lower levels of prejudice (Calhoun, Cann, Tedeschi, & McMillan, 2000; Pargament et al., 2000; Ventis, 1995). These findings seem to support the notion that religious and spiritual struggles represent a crucial fork in the road for many people, one that can lead in the direction of growth or to significant health problems. How well the individual is able to resolve these struggles may hold the key to which road is taken.

Areas for Growth in Religion and Spirituality Conceptualization and Measurement

It has been almost two decades since Gorsuch (1984) contended that measurement in the psychology of religion had produced “reasonably effective” instruments that were “available in sufficient variety for most any task in the psychology of religion” (p. 234). Hill and Hood’s (1999) compendium of religion and spirituality measures makes clear that, indeed, there is a vast array of religion and spirituality measures from which health researchers can choose. However, in contrast to Gorsuch’s claim, it is necessary that religion and spirituality conceptualization and measurement continue to grow in size and in sophistication in the years to come. As we have stressed, there is a particular need for religion and spirituality measures that are theoretically and functionally linked to mental and physical health, as well as to specific populations facing specific stressors. In addition, there are several other areas for growth and development in religion and spirituality conceptualization and measurement.

More Contextually Sensitive Measures

Measures of religion and spirituality have been geared largely to Protestants and, more generally, to members of Judeo-Christian traditions (Gorsuch, 1988). Although Prot-

estantism represents the largest religious grouping in the United States, the population is becoming increasingly pluralistic religiously (Shafranske, 1996). Differences in language, teachings, and practices across diverse religious groups are likely to be especially relevant to matters of mental and physical health. For instance, the Hindu concept of karma has no direct equivalent in Western religions, yet it may hold significant implications for well-being (see, e.g., Dalal & Pande, 1988). Thus, one important area of growth is the development of tradition-specific religion and spirituality measures.

Measures of religion and spirituality should also reflect greater sensitivity to cultural characteristics and issues. Differences in religious and spiritual beliefs, practices, and affiliations are interwoven into other cultural features. Those studies that have overrepresented Protestants in the United States have also overrepresented Whites, the middle class, and, to some extent, men. Even within Protestantism, some scales may be insensitive to one of the most religious (and Protestant) groups of all: African Americans. Issues of great importance to the African American church, such as a strong ethos of community service (Ellison & Taylor, 1996) or the notion of reciprocal blessings with God (Black, 1999), go undetected by measurement instruments.

The need for cultural sensitivity is magnified even further when attempting to create or modify a measure for use beyond a Judeo-Christian population, especially to non-Western religious and spiritual traditions. When modifying or applying a measure originally developed for a Western population for cross-cultural research, investigators must be sensitive to more than the usual concerns about the content and meanings of words. They must also be attuned to even subtle religious biases that may be embedded in the measure (Heelas, 1985).

Alternatives to Self-Report Measures

As is true with so many research topics in psychology, measurement of religion and spirituality relies almost exclusively on paper-and-pencil self-report measures. Religion and spirituality research is not immune to the limitations of these measures: These scales may require reading and comprehension levels beyond the ability of children, poorly educated adults, and some clinical populations; some paper-and-pencil measures may not engage the interest of the respondent, which, in turn, may foster response sets; some aspects of religious and spiritual experience may be difficult to capture through such measures; and religion and spirituality measures may be especially vulnerable to a social desirability bias (Batson et al., 1993). Alternative religion and spirituality measures are needed. For example, Hill (1994) has noted that response time, a measure of attitude accessibility in the social psychology literature, could be used as a measure of the centrality or importance of the religion and spirituality factor. Pendleton, Cavilli, Pargament, and Nasr (2002) assessed religious and spiritual coping in children with cystic fibrosis in part through pictures the children drew of God and themselves. Unobtrusive observational techniques for assessing various reli-

gious and spiritual as well as health practices and rituals are also currently underused. Physiological indicators (e.g., computerized tomography and positron-emission tomography scans, immunological functioning) of religion and spirituality could also be applied to health research (Newberg, d'Aquili, & Rause, 2001). Furthermore, there is considerable value in gaining observers' reports on both religious and spiritual practices and health, especially in clinical populations.

Measures of Religious and Spiritual Outcome

The literature on the religion and spirituality–health connection has focused almost exclusively on religion and spirituality as predictors of health. Few religion and spirituality scales have been used as outcome measures. Yet, to the religiously minded, the central function of religion and spirituality is not mental health or physical health, it is spiritual health and well-being. Certainly, in many instances, mental, physical, and spiritual health go hand in hand. In other instances, however, there may be important trade-offs across these domains. Consider, for example, the individual who defers responsibility for the resolution of a treatable illness to God (Baider & Sarell, 1983). Here, the individual's sense of closeness with God and spiritual well-being more generally may be purchased at the price of physical health. It is also important to consider not only the impact of religion and spirituality on illness but also the impacts various illnesses have on religiousness and spirituality. In this vein, Hathaway, Scott, and Garver (1999), noting that psychopathology can deeply affect religiousness and spirituality, proposed that the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994) should expand its domain of "clinically significant impairment" to include religious and spiritual functioning in addition to social and occupational functioning.

The Spiritual Well-Being Scale (Paloutzian & Ellison, 1982) represents one potentially valuable religion and spirituality outcome measure that assesses well-being in both religious and more general existential realms. Hall and Edwards's (1996, 2002) Spiritual Assessment Inventory is another religion and spirituality outcome measure designed to assess a relationally oriented psychospiritual maturity that blends concepts from object relations theory with the contemplative Christian spirituality literature.

Measures of Religious and Spiritual Change and Transformation

The idea that people can change and grow spiritually is central to most religious and spiritual traditions (Ullman, 1989). Also, according to most traditions, religious growth is essential to health, broadly defined. As yet, however, most studies of religion and spirituality are cross-sectional and most measures assess religion and spirituality as stable, enduring constructs. Research designs and measures are needed that better capture the dynamic qualities of religion and spirituality—the possibility of change, growth, deterioration, or stability in religious and spiritual life across time and situations. Hays et al.'s (2001) Spiritual History

Scale and other measures of religious coping (Pargament et al., 2000) represent encouraging steps in this direction.

Studies of religious conversion are also promising. Although conversion has been defined in different ways, most agree that, at its core, conversion involves radical change (Snow & Machalek, 1984), a transformation built on (a) a recognition that the self is limited and (b) an incorporation of the sacred into the self (Pargament, 1997). Paloutzian, Richardson, and Rambo (1999) reviewed a number of studies suggesting that religious conversion has significant ties to personality and well-being. Specifically, they found that although religious conversion has minimal effect on elemental personality functions (such as the Big Five traits), it has rather profound effects on midlevel personality functions such as values, goals, attitudes, and behaviors, as well as on the more self-defining personality functions of life meaning and personal identity. However, most of these studies still relied on global self-report items to assess changes in religious and spiritual affiliation or identification, and, once again, the questions about the nature of religious and spiritual change and its implications for health remained unanswered.

Of course, religious and spiritual traditions are complex and identify different critical ingredients of religious and spiritual change (e.g., suffering in Buddhism, submission in Islam, relational concepts such as compassion, repentance, and forgiveness in both Judaism and Christianity). Here, too, measures of religious and spiritual change and growth need to be tailored to fit the unique characters of different faiths.

Conclusions

Researchers interested in physical and mental health have paid relatively little attention to religion and spirituality. Studies of religion and spirituality as they relate to health status are the exception rather than the rule. Even when they are included in empirical studies, religion and spirituality are typically add-on variables assessed by global indices, such as frequency of church attendance, self-rated religiousness, or denominational affiliation. Surprisingly, even these gross indicators of religion and spirituality oftentimes emerge as significant predictors of physical and mental health. Nevertheless, researchers are still left with the question, What is it about religion and spirituality that accounts for their links to health?

In their attempts to explain these effects, social scientists have turned their attention to psychological and social explanations. Empirical studies, however, have had limited success at best in accounting for religious and spiritual effects through these psychosocial mediators (George et al., 2002). Of course, it is possible that improvements in the measurement of mediators or the discovery of other psychological, social, or physiological mediating factors may eventually explain the religion and spirituality–health connection. There is, however, another possibility: Religiousness and spirituality may have direct effects on health.

Within the psychology of religion, researchers have begun to get closer to religious and spiritual life, articulating dimensions and measures of religion and spirituality

that are linked theoretically and functionally to physical and mental health. Dimensions such as closeness to God, a religious or spiritual orientation and source of motivation, religious and spiritual support, and religious and spiritual struggle are in some sense psychospiritual constructs: They have roots in religious and spiritual worldviews as well as in psychological theory. In addition, they have clear implications for religious and spiritual functioning as well as for health status. Empirical studies have shown that measures of dimensions such as these, more proximal to physical and mental health, are in fact significantly tied to health. With further advances in religion and spirituality conceptualization and measurement, psychologists may find that religion and spirituality are of a different stripe than other psychological and social constructs. Already, there is evidence that religion and spirituality are distinctive dimensions that add unique explanatory power to the prediction of physical and mental health.

In sum, it is now known that religion is linked to physical and mental health. As psychologists get closer to religious and spiritual life, they are beginning to learn why.

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