Spiritually and Religiously Oriented Health Interventions

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Abstract

Controlled intervention studies
offer considerable promise to
better understand relationships
and possible mechanisms
between spiritual and religious
factors and health. Studies
examining spiritually augmented
cognitive–behavioral therapies,
forgiveness interventions,
different meditation approaches,
12-step fellowships, and prayer
have provided some evidence,
albeit modest, of efficacy in
improving health under specific
conditions. Researchers need to
describe spiritual and religious
factors more clearly and
precisely, as well as demonstrate
that such factors independently
influence treatment efficacy.
Inclusion of potential
moderating and mediating
variables (e.g. extent of religious
commitment, intrinsic
religiousness, specific religious
coping strategy) in intervention
designs could help explain
relationships and outcomes.
Using a variety of research
designs (e.g. randomized clinical
trials, single-subject
experimental designs) and
assessment methods (e.g. daily
self-monitoring, ambulatory
physiological measures, in-depth
structured interviews) would
avoid current limitations of
short-term studies using only
questionnaires.

Keywords

*spirituality, health, intervention,
mediating, moderating,
variables, research designs*

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A GROWING BODY OF EVIDENCE suggests that religious and spiritual involvement is associated with major health outcomes such as all-cause mortality (e.g. Koenig, 1997; Oman & Reed, 1998). Although there has been discussion concerning possible mechanisms through which religious and spiritual involvement may influence health (e.g. Levin, 1996; Miller & Thoresen, in press), and a small number of studies that have controlled for some potentially causal factors (e.g. Oman & Reed, 1998), little empirical evidence on causal factors exists. The vast majority of studies to date have been cross-sectional and correlational in nature. While these single occasion 'snapshots' can be useful in showing that a relationship exists between spiritual or religious involvement and physical or mental health, the underlying nature of this relationship remains largely unexplored and unexplained. We believe that controlled intervention studies using experimental designs offer much promise as a means of understanding the nature of these relationships and possible underlying mechanisms. Unfortunately, few intervention studies have been reported. In a recent review, for example, only 6 percent of the 148 studies examined on religion and counseling variables were interventions (Worthington, Kurusu, McCullough, & Sandage, 1996).

The primary goals of this article are as follows: (1) clarify use of terms such as spirituality, religion and health; (2) identify the range of religious and spiritual interventions currently available or being used; (3) review the scientific literature regarding the therapeutic efficacy of these interventions; (4) identify types of research questions that need to be asked when investigating religious and spiritual interventions in the future; and (5) discuss research procedures for validating the efficacy and effectiveness of interventions with specific clinical populations. Mentioned but not discussed in this article, however, is the specific use of experimentally designed studies to clarify and evaluate theoretical explanations (see Thoresen & Eagleston, 1985, for further discussion and Andrasik & Holroyd, 1983, for an example of such experiments involving headache interventions and biofeedback theories).

Religion, spirituality, and health

Religion, spirituality, and health are each complex and latent multidimensional constructs. The similarities and differences between them may vary depending on how they are conceptualized and operationalized. Given the ambiguity about these terms in many published studies, we comment here briefly on our use of them. Additional discussion is available in Hill et al. (1997), Pargament (1997), Richards and Bergin (1997), and Thoresen (1998). For the present purposes, these terms can be broadly defined in the following way: spirituality refers a person's orientation toward or experiences with the transcendent or existential features of life (e.g. meaning, direction, purpose, connectedness), sometimes referred to as the search for the sacred in life (Larson, Swyers, & McCullough, 1998; Thoresen, 1998). That which is sacred can be thought of as something beyond oneself, such as a Divine Being, Ultimate Power, Communal Spirit, or Nature, although a deistic or theistic spirituality is probably most common in western cultures. Richards and Bergin (1997) view religion as 'denominational, external, cognitive, behavioral, ritualistic, and public' and the spiritual as 'universal, ecumenical, internal, affective, spontaneous, and private' (p. 13). Viewed in this way, religion can be seen primarily as the external manifestations of spiritual experience, although people can engage in religious activities independent of having private and affective spiritual experiences. It is also possible to consider oneself intensely spiritual while not being religious or actually anti-religious. From another perspective, spirituality for some can be seen as an attribute of the individual whereas religion can be seen as an organized social entity in which individuals share some basic beliefs and practices (Miller & Thoresen, in press). These two constructs are probably, but not always, interrelated, and often are used in an interchangeable manner.

Health also deserves mention as it may be viewed in so many ways, again depending on how one defines or thinks about it. Despite considerable criticism, some continue to view it as a default concept: health is the absence of physical disease or illness (Dubos, 1959; Thoresen & Eagleston, 1985). We view health to be a more inclusive concept, including a range of physical, psychosocial, and sociocultural dimensions. We view health as the relative presence of

positive characteristics, particularly the level of available energy that benefits the individual mentally, physically, spiritually, or otherwise in coping with the demands of daily living (Antonovsky, 1979; Miller & Thoresen, in press; Thoresen and Eagleston, 1985). In fact, we suspect that softening of the traditional and sometimes rigid distinctions between mental, physical, spiritual, and social disease and health may facilitate more integrated thinking about the conduct of spiritual interventions.

Secular or religious interventions

Despite the fact that controlled intervention research in this area remains in the very early stages, there appears to be increasing acceptance of the notion that an individual's religious or spiritual beliefs and practices may be clinically important (Richards & Bergin, 1997; Worthington, Kurusu, McCullough, & Sandage, 1996). Furthermore, support is growing for therapeutic interventions that are not only sensitive to religious and spiritual issues but that actively utilize patients' religious and spiritual beliefs and practices as therapeutic tools (Bergin, 1980; Johnson & Ridley, 1992b; Propst, 1982, 1988; Richards & Bergin, 1997; Sacks, 1985; Spilka, 1986; Stern, 1985; Worthington, 1986, 1988). In fact, roughly one-third of medical schools (50 of 125) in the United States now offer at least one course related to the role of spiritual and religious factors in health and medical practice (Puchalski & Larson, 1998).

The spiritually and religiously oriented interventions described in the published literature generally fall into one of two categories. First, there are interventions that originated in existing secular theories but make use of religious or spiritual content in an attempt to alleviate distress and/or strengthen a client's level of commitment (Richards & Bergin, 1997; Worthington et al., 1996). Johnson and Ridley (1992a) noted that while such interventions retain much of their original secular form, they are explicitly modified so as to: (1) actively promote and utilize clients' religious or spiritual beliefs and practices as agents of change; and (2) be more acceptable to religious clients. Second, there are those interventions that originated in religious traditions, such as prayer, meditation, and the reading of sacred texts (Richards & Bergin, 1997).

In the first category, religious and spiritual content are placed into existing psychological interventions, while in the second category, religious and spiritual content and practices are viewed to be therapeutically independent of secular psychosocial theories. This distinction may be more theoretical than practical. For example, forgiveness and prayer/meditation-based interventions can actually be explained and justified theoritically either psychologically or through traditional religious practice.

Propst (1980, 1982, 1988) suggests a compelling reason for the usefulness of religious interventions. A religious or spiritual person may look at the world through a religious or spiritual schema or use religious language or metaphor as a cognitive construction of the world. This view may be different from the therapist's world view (Bergin, 1980), and these differences may present significant barriers to effective treatment. Shafranske and Malony (1996) make a persuasive argument for the inclusion of religious issues in the clinical practice of psychology based on four rationale: 'the professional ideal of cultural inclusion; the substantial evidence of religion as a cultural fact; the developing body of theoretical, clinical, and empirical research literature concerning religion as a variable in mental health; and the appreciation of psychological treatment as a value based form of intervention' (p. 561).

What is the evidence?

Virtually no well-controlled intervention studies have yet focused primarily on changing a spiritual or religious factor, that is, none have used such factors as the major focus or dependent variable of an intervention. Nor have spiritual or religious factors served as the main intervention or treatment (Levin, 1994; Thoresen, 1998), with the exception of intercessory prayer interventions (e.g. Byrd, 1988). Rather, most of the religious or spiritual interventions developed and employed to date have simply been techniques imported from formal religious traditions and used as adjuncts to standard clinical treatments for religious clients or patients (Worthington et al., 1996). Some studies have used what has been traditionally a spiritual or religious practice, such as meditation, in a secularized form within a controlled research

design to change psychological or physical health factors (e.g., Kabat-Zinn et al., 1998). Other health interventions have occasionally included what could be termed a spiritually focused component, such as forgiveness, among several other treatment components (e.g. Friedman et al., 1986; Ornish, 1990; Ornish et al., 1998; Propst, Ostrom, Watkins, & Dean, 1992; Spiegel, Bloom, Kraemer, & Gottlheil, 1989). However, these components have not been explicitly operationalized as being spiritual, nor have their independent contributions to treatment outcomes yet been assessed or evaluated.

Support for the effectiveness of religious and spiritual interventions remains largely theoretical (e.g. Aldridge, 1993) or based on either single case or small sample designs (e.g. Al-Mabuk & Downs, 1996). Thus, the lack of larger studies seriously limits the generalizability of these results to other patient populations or clinical settings.

Despite the general lack of empirical evidence that some religious or spiritually oriented treatments are effective or superior to non-religious treatments in working with religious clients (Johnson & Ridley, 1992b; McCullough, 1999; Worthington, 1986), a plethora of articles and books has begun to emerge describing approaches to religious and/or spiritual therapy (e.g. Miller, in press; Richards & Bergin, 1997; Shafranske, 1996). Table 1 lists the major religious/spiritual interventions that are currently in relatively widespread use either in pastoral counseling, clinical/counseling psychology, or medical settings.

Unfortunately, a tendency exists among clinical advocates of some approaches to make sweeping claims of treatment effectiveness without evidence gathered in well-controlled treatment studies (e.g. Backus & Chapian, 1980; see Ellison & Levin, 1998, for further discussion). In particular, treatment approaches have seldom been specifically evaluated as to whether the persons being treated benefited from the religious or spiritual features of the intervention per se or whether the intervention was more effective than standard clinical treatment. The following sections discuss the available literature on the efficacy of the five religious/spiritual interventions for which some empirical evidence is available: (1) adapted cognitive–behavioral interventions; (2) meditation; (3) 12-step fellowships; (4) forgiveness interventions; and (5) prayer. A comprehensive review of the literature in these areas is not attempted. Rather, we focus on the evidence that spiritual or religious components of these interventions contributed therapeutic value, especially when compared to standard treatments or secularized interventions. Recommendations for future research in each of these areas are also offered.

Table 1. Spiritual and religious interventions currently in use

Interventions that may exist in secular or spiritual/religious form	Interventions that are inherently spiritual or religious
Forgiveness therapy	Religious/spiritual dance
Willingness, releasing, letting go (Fleischman, 1986)	Prayer
Cognitive–behavioral approaches	Religious/spiritual bibliotherapy (Richards & Bergin, 1997)
Ritual	
Meditation/contemplation	Referral to religious or spiritual leaders
Service, volunteering ('selfless service')	
Development of a personal (spiritual or existential) philosophy	Utilization of religious community as a resource
Twelve-step fellowships	Spiritual or religious assessment
	Spiritual confrontation (Richards & Bergin, 1997)

Cognitive–behavioral interventions

Cognitive–behavioral therapy (CBT) has been found to be an effective treatment for clinical depression and other mood-related disorders by helping clients to change thinking processes (e.g. automatic thoughts) and also their ineffective ways of responding to stressful stimuli (Chambless et al., 1996). Cognitive–behavioral interventions typically involve teaching and coaching clients or patients to alter specific thoughts and behaviors in ways that make them feel better, reduce symptoms, and alter the perceived causes of the problems. The client is introduced to the concept that thoughts, beliefs, and interpretations of life events strongly influence the way the client functions physically, emotionally, and socially. Beliefs, for example, are often challenged and described as maladaptive, irrational, or simply based on inadequate evidence (e.g. McMullin, 1986). As clients learn to influence their symptoms and affective states through changing thoughts, beliefs, and behaviors, they are viewed as gaining a greater sense of autonomy and self-efficacy to maintain or improve their mental and physical health (see Beck, 1995).

To date, only five psychotherapy outcome studies have evaluated the relative efficacy of cognitive–behavioral interventions modified to be more spiritually or religiously focused compared with unmodified versions. All of these studies have been conducted with clients who identified themselves as religious (Johnson, DeVries, Ridley, Pettorini, & Peterson, 1994; Johnson & Ridley, 1992b; Peucher & Edwards, 1984; Propst, 1980; Propst et al., 1992). Each of these studies modified an established cognitive–behavioral intervention to be congruent with the religious beliefs of Christian clients. However, no studies have evaluated such modifications with persons of other religious or spiritual orientations nor have any studies demonstrated that more religiously or spiritually focused CBT interventions provide better results than standard therapies for clients in general, that is, with religious and non-religious clients.

Only Propst (1980) and Propst et al. (1992) have found a religiously adapted CBT approach to be more effective with religious clients than a secular version. Specifically, Propst (1980) found that religious imagery treatment within a CBT approach produced statistically significant lower levels of depression on both self-report and behavioral measures than non-religious imagery.

In the most comprehensive and well-controlled outcome evaluation to date, Propst et al. (1992) found that religious clients in a pastoral counseling CBT treatment group with religious content, reported significantly less post-treatment depression and maladjustment than did religious clients in regular CBT treatment or wait-list control group. The authors did report another noteworthy (and unexpected) finding: religious clients receiving CBT with religious imagery from non-religious therapists actually had lower levels of depression and maladjustment scores than patients receiving the same treatment from religious therapists. This unexpected finding, although possibly explained by sampling error, suggests that several factors may interact significantly in interventions and need to be studied using appropriate research designs.

On the other hand, Peucher and Edwards (1984), using a Christian version of Beck's cognitive therapy for depression, reported no significant differences between secular and Christian versions of the treatment in reducing depression for religious clients. More recently, Johnson and Ridley (1992b) and Johnson et al. (1994) evaluated the comparative efficacy of Christian versions of Ellis' rational–emotive therapy with a secular version. Results demonstrated that both treatments significantly reduced depression, automatic negative thoughts, irrational thinking, and general psychopathology. No consistent differential treatment effects were found. Thus, present empirical support for adapting CBT to fit religious clients remains modest and mixed. In a recent review and meta-analysis, McCullough (1999) concluded that the choice to use religiously orientated therapies with religious clients was more a matter of client preference rather than an issue of differential efficacy.

Some areas that need to be addressed in future research include the following: (1) Evidence is needed regarding religiously or spiritually modified forms of CBT with different problem areas and different populations; (2) Detailed information should be gathered about the diversity of meanings people hold about pertinent categorical variables, such as Christian (or Jewish,

Hindu, etc.) and Religious. Each of these groups undoubtedly represents considerable diversity with respect to religious/spiritual thoughts, beliefs, and behaviors. Much more careful assessment of the multiple dimensions of general religious and spiritual orientations (Miller & Thoresen, in press) would help clarify who responds most to a specific kind of religiously adapted treatment and may also shed light on underlying mechanisms of treatment responses (see Pargament et al., 1999, and Woods, Antoni, Ironson, & Kling, 1999, this issue, for examples of the importance of discerning between different styles of religious coping among Christians). (3) We need to know how well these therapies work for people with different religious or spiritual frameworks, as well as for people who do not consider themselves religious or spiritual. Based on Kiesler's (1966) critique of problems in psychotherapy research, Thoresen (1998) has warned of the dangers of uniformity myths in spiritual and health research, such as assuming that all 'religious' clients are essentially the same (patient uniformity myth), and that all religious clients with a particular diagnostic problem need the same intervention (treatment uniformity myth).

Meditation-based interventions

Although a highly cognitive and sometimes emotional activity, meditation immerses the whole person in a psychophysiological experience, which has been characterized as 'active passivity' (e.g. sitting quietly while being inwardly alert and focused) and 'creative quiescence' (e.g. inwardly calm while being open to expanded awareness) (Shafii, 1985, pp. 90–91). This calm yet alert attentiveness is practiced in two basic forms (Carrington, 1993; Goleman, 1988; Odajnyk, 1993). One is concentration, or fixed meditation, in which the person focuses awareness on an internal or external object (e.g. sound, word, breath) while minimizing distraction and bringing the wandering attention back to focusing on the chosen object. The second meditative practice is known as mindfulness, in which the person focuses alertly but non-judgmentally on all processes passing through the mind, not on a fixed object, thought, or action (Goleman, 1988; Kabat-Zinn, 1993).

Meditation has been more frequently associated with eastern religions (e.g. various forms of Hinduism and Buddhism) and often more narrowly with transcendental meditation (TM). However, meditation with a religious/spiritual orientation is deeply rooted and extensively practiced in western religions as well (Benson, 1993; Goleman, 1988; Schopen & Freeman, 1992). When divested of its spiritual and religious elements, meditation also serves as a therapeutic method with similarities to biofeedback techniques, progressive muscle relaxation, visualization, and guided imagery techniques (Carrington, 1993; see Kristeller & Hallett, 1999, this issue). Indeed, during the past 20 years, meditation has been extensively studied as a way of reducing physiological and psychological stress (e.g. Benson, 1996). While there are several forms of meditation, all appear to produce similar physical and psychological changes (Benson, 1975; Chopra, 1991; Easwaran, 1989; Goleman, 1977; Yogi, 1963)

Since the early 1960s there has been a growing interest in the use of Hindu- and Buddhist-based meditation as interventions for various types of psychological and physical health problems. More recently, research has focused on the use of meditation as an adjunct to conventional therapy models for alcohol and substance abuse treatment as well as the alleviation of pain, depression, and the symptoms of heart disease (see Ornish et al., 1998; Shapiro & Walsh, 1984; Smith, 1975 for reviews of the literature on this topic).

For example, Gelderloos, Walton, Orme-Johnson, and Alexander (1991) reviewed 24 studies on the benefits of TM in treating and preventing misuse of chemical substances. These studies examine the effect of TM with non-institutionalized users, participants in treatment programs, and prisoners with histories of heavy substance use. Most studies generally found positive effects for the TM program. Some of the survey-based studies were unable to exclude the significant possibility of self-selection or response biases in explaining results. Gelderloos et al. (1991) concluded that TM programs simultaneously addressed several factors underlying chemical dependence, providing not only immediate relief from distress but also enduring improvement in well-being, self-esteem, personal empowerment, and other areas of 'psychophysiological health'.

Meditation as part of complex treatments

Ornish and his colleagues (e.g. Ornish et al., 1998) conducted an intervention called the Lifestyle Heart Trial in which patients with confirmed heart disease were placed on a dietary and lifestyle modification program. In addition to significantly reducing the dietary intake of fat, Ornish et al. (1998) also incorporated moderate aerobic exercise, meditation, yoga, and group counseling into a treatment protocol to reverse coronary artery disease without using pharmacological or surgical interventions. Dramatic reductions in physical symptoms and improved overall health were found in addition to a reduction in coronary artery occlusion for most patients in the experimental group. By contrast, patients in the usual care group showed significantly more progression of coronary artery disease, having 20 percent more plaques than the treatment group. Although Ornish contends that the meditation component of this regimen was integral to overall success, the individual components of this multifaceted program have not been distinctively evaluated. Therefore, it is uncertain yet as to how much, if at all, the meditation component contributed to the observed improvements in artery disease, physical symptoms, and psychosocial factors.

Relaxation response

Some have suggested that most of what can be accomplished therapeutically with meditation can be accomplished with relaxation training, which is generally easier to embrace for those who are reluctant or concerned about the religious basis of some meditation practices (Worthington et al., 1996). In the 1970s, cardiologist Herbert Benson identified what he called the relaxation response as one of the effects of various types of meditation (Benson, 1975). Benson's research over the years has examined a wide constellation of psychological and physiological effects of the relaxation response (see Benson, 1996; Benson, Malhotra, Goldman, & Jacobs, 1990). In order to elicit the relaxation response, one focuses on a repetitive prayer, word, sound, image, or muscular action (e.g. breathing), which allows the person to reduce external distractions. Interestingly, when given a choice, many individuals prefer to use a ritual prayer from their family of origin when practicing relaxation (Benson, 1996).

If the relaxation response is a component of various meditative practices and prayer, this raises important theoretical questions regarding the mechanisms by which these interventions may work. Are the spiritual or religious components of various meditative practices in essence 'delivery systems' for the actual mechanism of change, that is, the relaxation response? Or do the spiritual or religious components, when present, contribute to observed effects of meditative practice in a more integral or facilitative way, allowing the relaxation response to work in a way that otherwise could not or would not happen? Or do the spiritual and religious components act as an additional and separate 'active ingredient'? Furthermore, are these relationships different for different people? Whether the relaxation response is the primary mediator of the effects of meditation or prayer is still unclear. It should be noted that some question the overall evidence to date that claims to support the efficacy of the relaxation response in health care (see Roush, 1997).

Comparing types of meditation

Alexander, Langer, Newman, and Chandler (1989) conducted one of the few studies to date that compared TM, mindfulness meditation (MF), and relaxation training. In addition, an assessment control condition was used. All were assessed in terms of short-term mortality rates and reversing age-related declines in physical health. To accomplish this, 73 residents of eight nursing homes (mean age 81 years) were randomly assigned to one of the four conditions mentioned above.

After 36 months, the TM group was found most improved on measures of cognitive and behavioral flexibility, mental health, and systolic blood pressure, followed by the MF group, the relaxation group, and the assessment control group, respectively. By contrast, the MF group improved the most on perceived control and word fluency, followed by the TM group, the relaxation group, and the assessment control group, respectively. After 3 years, the survival rate for the TM group was 100 percent compared to 87.5 percent for the MF group, 65 percent for the relaxation group, and 62.5 percent for the assessment control group.

This study suggests that the effects of meditation on physical and mental health may go beyond merely enhancing one's ability to relax and reduce physiological stress. Recently, a number of studies, some controlled clinical trials, have used meditation as the primary treatment variable (e.g. Astin, 1997; Maclean et al., 1997; Miller, Fletcher, & Kabat-Zinn, 1995; Panjwani, 1995; Vedanthan et al., 1998; Wenneberg et al., 1997). The results suggest that although meditation is not a panacea, it may be for certain clinical populations an effective, non-invasive, and cost-effective adjunct or alternative to other therapies. Future research in this area should focus in on comparing explicitly religious or spiritually oriented meditation interventions with more secularized versions, assessing dimensions of participants' religious and spiritual orientation, and paying much more attention to selected individual treatment interactions that may moderate or mediate clinical outcomes (e.g. gender and type of religious affiliation).

Twelve-step fellowships

Twelve-step fellowships address themselves to helping people whose lives are damaged by the excessive consumption of alcohol or drugs (Scott, 1993; Trice & Staudenmeier, 1989) and more recently by a broad range of human problems with excessive dependence or addictive features (e.g. gambling, overeating, sexual addiction). Twelve-step fellowships have burgeoned in the past few decades and today are considered by many to be a very successful method for supporting sobriety (e.g. Emrick, Tonigan, Montgomery, & Little, 1993). Estimates put membership in Alcoholics Anonymous (AA) alone at about 500,000 members worldwide. A thorough review of the research evaluating 12-step fellowships is not possible here. Instead, we focus on the evidence that spiritual and religious features of 12-step fellowships are instrumental to their successful outcomes.

Alcoholics Anonymous, the original 12-step movement, is explicitly based on transcendent spiritual principles (e.g. 'God as you know him'). AA writings assert the existence and importance of spiritual processes and the relevance of the spiritual process with clinical outcomes (Brown, 1985; Brown, Peterson, & Cunningham, 1988; Johnson & Chappel, 1994). It is through an emphasis on surrender to a higher power, self-honesty, patience, tolerance, kindness, and humility that spiritual growth is presumably encouraged in AA. Studies have concluded that active AA membership enables from 60 to 68 percent of alcoholics to drink less (or not at all) for up to a year, and 40 to 50 percent to achieve sobriety for many years (Emrick, 1987). Although there is some evidence that more active or dedicated members remain sober longer, other researchers have failed to find a dose–response relationship (Watson, Hancock, Gearhart, & Mendez, 1997).

Several theories attempt to explain the success of the AA approach. One model interprets the achievement of sobriety as a 'conversion experience' (Galanter, 1990; Greil & Rudy, 1983). However, an alternative model suggests that AA members recover by learning and practicing a better way to handle their addictive disorder or 'disease' and also to live more healthy lives (Hufford, 1988; Kurtz, 1982; Scott, 1993). In contrast to the 'conversion experience' theory, this model describes learning the 'new way' through an intellectual and educational process requiring considerable therapeutic work and perseverance (Kurtz, 1982). AA's own theory suggests that its success comes from the commitment to a group and surrender to a higher power. Clearly, AA offers a complex intervention with several components.

Some authors argue that despite decades of experience, appropriate controlled outcome studies of 12-step fellowships have not been done (Peele, 1990). In addition, issues have been raised about more appropriate research designs, such as comparing the effects of 12-step fellowships to other recognized interventions, and about assessment issues, such as assessing psychosocial functioning more frequently before and after 12-step participation (Glaser & Ogborne, 1982). Of particular theoretical interest would be the comparison of the spiritually based 12-step programs with a program, such as Rational Recovery (Schmidt, 1996), that is a non-spiritual or secularized version of AA programs. Also of interest is the relative importance of the spiritual element in AA programs, independent of other factors in the AA model known to facilitate change (e.g. perceived social and emotional support). Other questions have been

raised but not adequately addressed, including the possible benefits of tailoring the type of spiritual or religious focus (e.g. type of religious coping method) to various person factors (e.g. position on an intrinsic–extrinsic religiosity continuum) (Gorsuch & Miller, in press; Pargament, 1990). Given their popularity and their apparent success rates, additional research on 12-step fellowships seems long overdue. For an extended discussion of this topic, the reader is referred to Miller and Bennett (1998).

Forgiveness interventions

Helping clients forgive is often a major focus of therapeutic work (Denton & Martin, 1998; Jones, Watson, & Wolfram, 1992). Some argue that forgiveness is the most frequently used spiritual intervention used by psychotherapists (Richards & Bergin, 1997). Unlike prayer, forgiveness has commonly been used in secular counseling by non-religious counselors and clients alike, particularly in individual, martial, and family therapies (see Al-Mabuk & Downs, 1996; DiBlasio, 1992, 1993, 1998; DiBlasio & Benda, 1991; DiBlasio & Proctor, 1993). Forgiveness appears to be a therapeutic concept that, like meditation, can be used with or without reference to spiritual or religious beliefs (McCullough, Sandage, & Worthington, 1997; Richards & Bergin, 1997).

Some case studies of the effectiveness and the processes of forgiveness have been reported (e.g. DiBlasio, 1998; Flanigan, 1992) along with countless anecdotal reports (e.g. Albom, 1997). A number of theoretical articles about possible therapeutic processes involved in forgiveness are also available (e.g. McCullough, Pargament, & Thoresen, in press; Worthington, 1998). However, fewer than 20 forgiveness intervention studies have been reported (e.g. Al-Mabuk, Enright, & Cardis, 1995; Coyle & Enright, 1997; Freedman & Enright, 1996; Hebl & Enright, 1993; McCullough & Worthington, 1995; McCullough, Worthington, & Rachal, 1997; Rye & Pargament, 1997).

These studies have provided encouraging evidence that people can reduce their levels of self-reported hurt, anger, and perceived offense, and have improved their self-reported mood and emotional states. Only one study by Rye and Pargament (1997) to date has studied a religiously integrated forgiveness intervention and compared it with a secularized version and a no-treatment control group. In this study both intervention groups demonstrated positive changes in hopefulness, existential well-being, and forgiveness, as well as other dimensions, compared to the control group. However, the religious and secular treatments did not differ in efficacy. No forgiveness intervention study has yet assessed physiological variables or reported improved physical health or disease-related changes (Thoresen, Harris, & Luskin, in press).

Intervention-related issues

Recently much has been written concerning issues that need to be addressed in future forgiveness research (see McCullough, Pargament, & Thoresen, in press). Worthington, Sandage, and Berry (in press), Thoresen et al. (in press), and Thoresen, Luskin, and Harris (1998) have offered extended discussions of research issues concerning forgiveness-based interventions. As mentioned, forgiveness shows genuine promise as a therapeutic goal. What remains unknown is the therapeutic impact of integrating religious or spiritual elements into forgiveness interventions. What should be integrated and for which persons? We do not know how religious or spiritual elements may interact with the religious or spiritual characteristics of participants. For example, would a more universally focused spiritual framework result in better outcomes for some Christians (or those of another religious orientation) than one focused specifically on a Christian perspective?

Another theoretical issue pertaining to both religious and secular forgiveness interventions is the question of prematureness. Richards and Bergin (1997) note that it is important not to encourage premature forgiveness, suggesting several possible consequences of doing so, such as failing to fully recognize the nature of the offense and the need to focus first on protecting against future offenses.

Another major question deserving more study is the view that successfully forgiving an offender requires (or is mediated by) an increase in empathic understanding of the offender by the person hurt (e.g. McCullough et al., 1997). Can people experience health benefits by forgiving others but not alter in any substantial manner, if at all, their empathy for them? Or is increased empathy for the offender the key active ingre-

dient in forgiving and thus in mediating health effects for the forgiver? Research that explores these and other conceptual notions of forgiveness could greatly contribute to our understanding of this topic (see McCullough et al., 1997).

Seeking forgiveness

Although the ability to forgive another may be important in fostering improved interpersonal relationships and mental health, seeking forgiveness when one has wronged another could also prove important in improving relationships. Only a few empirical studies of seeking forgiveness have been reported in the social psychological literature (Bassett, Hill, Pogel, & Lee, 1990; Cody & McLaughlin, 1988; Weiner, Graham, Peter, & Zmuidinas, 1991), but no clinical investigations have been undertaken using this type of intervention. Does, for example, combining forgiving another with self-forgiveness in an intervention yield better outcomes, particularly over time? It would also be useful to begin to compare the various forms of forgiveness therapy in specific clinical populations (e.g. mildly, moderately, and severely depressed individuals) to determine which forgiveness approaches result in greater benefits. Controlled intervention studies with persons from various age, ethnic, clinical, and socio-economic groups, as well as different religious/spiritual orientations would also begin to clarify what works better with whom in particular problem areas.

Exline, Yali, and Lobel (1999, this issue) present, for example, a study that raises another fascinating and potentially useful perspective on forgiveness interventions: the notion of forgiving God. What are the benefits and contraindications of promoting forgiveness of a Divine Being or an Ultimate Source in therapeutic work? What are the client and therapist factors that might make this type of intervention beneficial or detrimental? These questions are worthy of further study.

Prayer

Researchers attempting to study the effectiveness of prayer in naturalistic settings have documented its importance in religious people as a method of coping with stress or stressful situations (e.g. Pargament, 1990). It has also been observed that prayer is not a unitary phenomenon, and as such can vary by purpose, formality, the object and subject of the prayer, and its attendant behaviors and circumstances (Richards & Bergin, 1997). Prayers can be general or specific, for oneself or others, to a specific God or offered more generally. Richards and Bergin (1997) cite preliminary evidence suggesting that different forms of prayer may have differential associations with certain outcome variables, such as overall well-being and life satisfaction. However, the usefulness of prayer as adjuncts to counseling or medical care remains almost completely uninvestigated (Marwick, 1995; Worthington et al., 1996).

Intercessory prayer: an example

In the first well-designed empirical study of the effectiveness of intercessory prayer (i.e. asking God or a divine power to intercede on another's behalf) on physical health, Byrd (1988) assigned a group of three to seven Christians to pray for patients ($n = 393$), primarily recovering from acute myocardial infarction, over a 10-month period. Patients were assigned randomly to one of two groups: a prayer or a non-prayer group. In the prayer group, patients were prayed for but did not know they were being prayed for. Those who prayed knew the patient's first name, specific diagnosis, and general condition; they received periodic updates on the patient's condition. Each patient was prayed for by between five and seven people at least once a day. Those praying were not given explicit instruction about how to pray. The praying was done outside the hospital. In the no-prayer control group, patients were not assigned to people for daily prayer (although they may have been prayed for by family members or friends). Because this study employed a double-blind design, neither the patients nor the researchers who collected and analyzed the outcome data knew who in the study was in the prayed-for group.

Results showed that patients in the prayer condition did substantially better than control patients on a number of health-related outcome categories at the experiment-wide $p < .05$ level, such as 7 percent fewer antibiotics required at discharge ($p < .005$) and 6 percent less need for intubation ($p < .002$). In addition, they had 6 percent less pulmonary edema ($p < .03$), 6

percent less congestive heart failure ($p < .03$), and 5 percent less cardiopulmonary arrest ($p < .02$), although these differences failed to reach statistical significance at the experiment-wide $p < .05$ level.

This double-blind clinical trial appears to have been generally well designed with sufficient statistical power to detect important differences. The generalizability of its findings depends, however, on replication by others. Furthermore, the study had some methodological weaknesses. For example, participants were not matched on several potentially relevant variables, such as their own religiousness. Furthermore, no effort was made to assess the amount of prayer offered for patients in the no-prayer group (e.g. by family members, friends, and even the patients themselves).

The findings of this study need to be viewed within the context of other empirical investigations of prayer of different kinds, not all of which have demonstrated significant effects (see Benor, 1990 for a review of spiritual healing research, including intercessory prayer). The issues of how to explain these findings (e.g. by what mechanism might intercessory prayer work?) also looms large, making it difficult for some to take any clinical results seriously (Thoresen, 1998). Nevertheless, this double-blind study did yield statistically and clinically significant results. At the very least, these findings merit efforts to replicate and clarify possible factors that might explain such results.

Another intercessory prayer study merits brief comment, given the Byrd (1988) findings. Sicher, Targ, Moore, and Smith (1998) recently reported findings from a randomized double-blind study of 40 AIDS patients. Each of 20 randomized patients was prayed for over 10 weeks by 10 different prayers, all recognized as professional healers from several religious and spiritual traditions throughout the United States. All prayers had extensive experience in using intercessory prayer, sometimes termed distant healing. None of the participants in the study knew if they were in the prayer or no-prayer condition.

Those in the prayed-for condition differed significantly over 6 months from the control condition on various physical health-related outcomes. For example, total number of hospitalizations was 3 compared to 12 ($p < .05$), number of outpatient physician visits was 185 compared

to 260 (mean visits 9.2 compared to 13.0, $p < .01$), number of days in the hospital was 10 compared to 68 ($p < .05$), and the number of newly acquired AIDS-related diseases was 2 compared to 12 ($p < .05$). No differences were found, however, for CD4 cell counts or in mortality (all were on protease inhibitors and other medications which have sharply reduced AIDS mortality). Also, because more than 30 of the comparisons in this study were made using paired t-tests or Wilcoxon signed-rank test, the experiment-wide error rate appears to be quite high. Interestingly, improvements in self-reported emotional mood were also significantly higher in the prayer condition.

Richards and Bergin (1997) mention several ways to incorporate prayer into a treatment regime. These include encouraging a person to pray, praying with the person, praying for the person, asking others to pray with or for the person, and possibly other forms. These authors discuss potential ethical and role boundary issues that need to be addressed, however, when considering use of prayer in treatment. These include the danger of imposing certain beliefs or values on clients, usurping or conflicting with religious authority, and the possibility of 'potentially unhealthy transference issues' (p. 204).

Overall, further research is needed to clarify the efficacy of prayer in altering clinical outcomes. Furthermore, the costs, benefits, and appropriate therapeutic uses of various forms of prayer need to be considered. Use of qualitative interview studies of clients whose treatment has involved some form of prayer could be used to complement the kind of knowledge gained from controlled intervention studies in this area. Note that prayer may indeed prove to be very beneficial for some persons with various health problems, even though we may be able to explain some but not all of the mechanisms of how prayer functions to influence health. We believe that a critical yet open-minded perspective is called for, recognizing that at present many useful health and medical procedures cannot be fully explained as to what specific mechanisms actually account for the observed changes (Suppe, 1977).

Guidelines for future research

Johnson (1993) presented some guidelines that

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seem useful for future research on religious and spiritual interventions. These guidelines are presented as a series of six questions that researchers and practitioners of religious and spiritual therapies could use to guide the development, validation, and comparison of different treatment approaches. These six questions as well as two others are presented here for consideration.

Question 1: what is it?

Most theorists in the field have neither adequately explained their assumptions nor operationalized their therapeutic constructs and methods, including relevant independent variables that need to be included and measured in the research (Johnson & Ridley, 1992b; Thoresen, 1998). Therefore, prior to conducting empirical research on any religious or spiritual intervention, the treatment needs to be carefully operationalized. Specifically, researchers should develop treatment manuals to fully describe the treatment package, even if these manuals are rough 'first editions'. Such manuals can help to ensure treatment consistency within and across research studies, as well as encouraging others to conduct needed research.

Researchers also need to clarify potential clinical factors that are possibly influenced by the treatment. For example, how do the spiritual elements of an intervention interact with spiritual beliefs and practices of participants to reduce specific symptoms? In conjunction with this documentation, researchers can also offer detailed clinical case histories that describe presumably critical features of the treatment as it is practiced and experienced with specific clients of different religious and spiritual traditions with certain problems. The question of 'what is it?' may best be answered by using different research strategies and assessments, a point that applies to other questions cited below. See Thoresen (1998) and Thoresen, Luskin, and Harris (1998) for further discussion of how the experience of researchers in counseling and psychotherapy can be especially useful for spiritual and religious interventions. See, also, Ellison and Levin (1998) on other perspectives about what needs to be studied in this area.

Question 2: does it work?

The efficacy of an intervention in terms of its overall main effect should be established prior to employing complex, multitreatment comparative designs. At this initial 'does it work' stage, the following designs could be employed, although the specifics of these designs as well as their strengths and limitations are not elaborated here (see Cook & Campbell, 1979; Hillard, 1993; Kazdin, 1982): One Group Pre-test–Post-test Design, Randomized Control Group Pre-test–Post-test Design, and Single Subject Experimental Designs. Furthermore, methods of qualitative inquiry (see Denzin & Lincoln, 1998), such as interview data, and daily monitoring methods (see, for example, Keefe et al., 1997) can also effectively complement more traditional means of assessment (e.g. standardized questionnaires). Qualitative methods also offer considerable potential to strengthen and deepen the nature of empirical evidence, by acting as validity checks to standardized self-report measures, and in revealing phenomena related to effects and correlates of interventions not available otherwise (see, for example, Richards & Folkman, 1997, and Fow, 1996 as well as Shedler, Mayman, & Manis, 1993, on the dangers of only using questionnaires when assessing sensitive social and emotional topics and issues).

Question 3: how does it compare?

After a religious or spiritual intervention has been established as being generally efficacious, it is then useful to compare it to other treatment modalities. Alternatively, once secular versions of a therapy have been shown to be effective (e.g. CBT or meditation), then religiously or spiritually integrated or adapted versions can be compared to 'standard treatment'. At least two state-of-the-art research designs can be utilized to accomplish this: Non-randomized Two Group Pre-test–Post-test Design and Randomized Two Group Pre-test–Post-test Design (Cook & Campbell, 1979). The latter design is more desirable for initial comparative outcome evaluation because it offers better control of other possible explanations as to why an intervention might be successful (see Alexander et al., 1989 and Propst et al., 1992, for examples).

Question 4: what are the critical ingredients?

When an intervention has been shown to produce consistent therapeutic benefits, Kazdin

(1986) recommends use of two further evaluation strategies aimed at analyzing the basis for such change. The first is called a 'dismantling strategy', in which the individual components of the treatment are eliminated step by step until the necessary and sufficient components of the therapeutic change have been determined. The second design is termed a 'constructive strategy', in which an additive approach is used to determine how many components of the intervention need to be added to achieve meaningful outcomes.

Dismantling and constructive approaches are considered appropriate only after a treatment has first been shown to be generally effective. These approaches are aimed at trying to clarify a treatment's 'active ingredients' and avoiding use of more components than are needed. Thoresen, Luskin, and Harris (1998), for example, called for a stepped-care intervention approach in forgiveness interventions. Some people suffering from unresolved hurt or offense by others may only need written information about how to forgive; others may need such information plus opportunities to meet occasionally with others who are also trying to let go of the burden of past hurts. Still others may need the above plus meeting with a trained health care professional. Spiritual and religious factors may be components that are included for some people at certain steps. Determining who, particularly among the spiritually or religiously committed, needs what steps of an overall treatment can be examined using a constructive or stepped-care approach (Black & Coster, 1996). This model has great potential in avoiding the costs associated with providing complex treatments; typically not everyone needs the complete range of intervention components (e.g. Robin, Gilroy, & Dennis, 1998).

Question 5: how does it interact with other variables?

Researchers also need to examine possible interactions among patient, therapist, and treatment variables across treatment packages (Beutler, 1979; Butler & Strupp, 1986; Critis-Cristoph & Mintz, 1991; Stiles, Shapiro, & Elliot, 1986). One solution for doing this is to undertake research using 'matrix' designs (Stiles, Shapiro, & Elliot, 1986), which seeks to understand how therapist qualities interact with patient charac-

teristics to produce (or fail to produce) the interpersonal conditions necessary for therapeutic change (Butler & Strupp, 1986). In this design, single interventions might be evaluated with one or more patient, therapist, or environmental variables completely nested. For example, a religious modified CBT might be administered, varying therapist religiosity across treatment groups. Or an intervention with a non-specific spiritual orientation might be administered to participants who vary in religious or spiritual orientation, including persons who are not religious or spiritual. Again, it is often important to assess for multiple dimensions of religious or spiritual involvement and not solely rely on one single dimension or factor, such as frequency of church attendance.

For example, Oman, Thoresen, and McMahon (1999, this issue) found that men and women differed in how much they benefited in reduced mortality rates from volunteering to help others. Gender produced differences that interacted with the effects of being of service to others. Why did men only show benefit if they volunteered to help in at least two organizations when women gained from one or more? Reasons for this difference remain unclear. Most likely, other factors covaried among the men in this study to reduce the effects of volunteering.

Question 6: when and where should it be evaluated?

Researchers need to conduct clinically meaningful outcome evaluations in order to provide external or clinical validity for interventions, making the case that treatment generalizes to people under varying conditions (e.g. different ethnic groups, different religious backgrounds, different types of problems). Studies conducted to date in this area have generally been analog studies as opposed to clinical trial research, with the latter being more generalizable. Single-case experimental designs and experimental process research can also help in exploring generalization issues (Shapiro & Shapiro, 1983), as can larger randomized clinical trials conducted at several sites in different locales. The use of generalizability theory offers a comprehensive vehicle to assess the relative contributions of several factors (Shavelson & Webb, 1991; see McCullough, Rachal, & Hoyt, in press, for an example of applying generalizability theory)

Question 7: independent, dependent, or moderating variable?

In intervention studies, measures of spiritual and religious factors can serve as independent and/or dependent variables (i.e. as the target of a treatment, or part of the treatment itself), and/or a moderating or mediating categorical variable. For example, an intervention may try to increase a particular spiritual or religious factor, such as frequency of prayer or meditation (McCullough & Worthington, 1994). By contrast, a spiritual or religious factor can serve as an intervention or part of an intervention designed to change some health factor, such as depression, hypertension, medical care utilization, or all-cause mortality (e.g. Benson, 1996). Another approach might be to classify or categorize patients according to various spiritual or religious factors (e.g. God viewed as loving and forgiving or judging and punishing) to see if the effects of a health intervention are moderated or mediated by this spiritual or religious factor.

More intervention studies that use spiritual and religious factors as independent, dependent, or moderating variables are needed to overcome some of the serious limitations of cross-sectional studies. Especially valuable are interventions that offer glimpses of causal or etiologic factors. For example, Friedman et al. (1986) demonstrated in a randomized clinical trial that reductions in hostile and time-urgent behavior were directly associated with reduced coronary fatal and non-fatal events. Such changes suggest that hostile and time-urgent behavior and cognitions may be implicated in the cause of coronary heart disease via autonomic nervous system and hypothalamic-pituitary-adrenal (HPA) axis pathways that alter cardiovascular and metabolic systems (McEwen, 1998).

Similar studies that focus on spiritual and religious factors are needed. For example, Tix and Frazier (1998), investigating associations of religious and non-religious coping with stress and life satisfaction after kidney transplant surgery, provide an interesting example of a research design that examined possible moderating effects (e.g. type of religious affiliation) and possible mediating effects (e.g. cognitive restructuring) of coping on life satisfaction. They found that religious coping was not mediated by other factors, such as non-religious coping but being Protestant, compared to being Catholic, moderated the effects of religious coping on patient life satisfaction 18 months after surgery.

Note, however, that the above study did not use a randomized experimental design. While a prospective design using multiple measures on 3 occasions over almost 2 years offers decided benefits over simple cross-sectional designs, the results still remain correlational. As such, inferences about possible causal mechanisms that explain why Protestants using religious coping fared better than Catholics in terms of higher life satisfaction remain unclear.

Question 8: how is change measured?

Since spiritual or religious factors have seldom been used in well-controlled intervention studies (especially as major outcome measures), the issue of effective assessment remains essentially unexamined (Thoresen, 1998). If, for example, the goal of an intervention is to increase selected spiritual or religious factors and explore how the pattern of change in these factors may alter over time (e.g. before, during, and after the intervention), then measures are essential that can be reliably and validly used on a repeated basis, and that are sensitive enough to detect change. Currently, however, there is a lack of such measures. Also needed are ways to begin to assess spiritual and religious factors that do not exclusively rely on survey or questionnaire methodology. Richards and Folkman (1997), for example, used quantified interview methods to discover and then study the role of spiritual and religious factors, along with positive and negative emotions and coping styles, in caregivers who had recently experienced the death of their partners. Notably, results of questionnaire data in this study would have been seriously misleading without the information provided by the interviews (see also Idler, 1995). By analyzing questionnaire data on mood and coping by level of spiritual experience (assessed from interview data), changes over time in mental health status were greatly clarified (see Woods & Ironson, 1999, this issue, for an example of an interview-based approach).

Studies that collect assessment data periodically during the interventions process, not simply before and after, are also needed to examine and capture patterns in how individuals experi-

ence spiritual or religious factors during treatment interventions and in documenting their effects over time. Daily monitoring methods used in pain research as to mood, self-efficacy, pain level, and coping methods (e.g. Keefe et al., 1997) clarified theoretical issues greatly compared to only using single pre–post assessment strategies. Of the handful of intervention studies reviewed by Worthington et al. (1996), most only used one measure of religiousness or spirituality (often 1- or 2-item measures) on a single occasion. A great deal of work remains to be done to develop ways to assess the clinical relevance of spiritual and religious factors with greater specificity and sensitivity. Without advances in assessment that capture with much greater fidelity the breadth and depth of what people experience over time, developing effective interventions that can both provide service and clarify theory will remain badly hampered.

Conclusions

Most religious and spiritual interventions currently available or being used have not been carefully evaluated to demonstrate their efficacy or their effectiveness or clinical validity. Nevertheless, there are some interventions for which some evidence of efficacy has been demonstrated. Specifically, religiously oriented cognitive therapy, meditation, 12-step fellowships, forgiveness therapy, and intercessory prayer all have some evidence, albeit very modest, suggesting their efficacy under specific conditions. Although these studies need further replication with better design controls, the findings suggest that continued development and evaluating of spiritual/religious interventions would be a very worthwhile endeavor. A number of strategies have been mentioned that are needed to improve studies, thus better ensuring data that will be more consistent, replicable, and generalizable.

Richards and Potts (1995) and Richards and Bergin (1997) have suggested a number of ethical concerns and dangers regarding the use of religious/spiritual interventions, including the danger of: (1) engaging in dual relationships; (2) usurping religious authority or engaging in questionable 'priestcraft' (i.e. getting paid for religious services); (3) trivializing the numinous or the sacred; (4) imposing therapists' religious or spiritual values on clients; and (5) using religious/spiritual interventions inappropriately in certain work settings (e.g. public education, state or federal government facilities, etc.).

The above examples provide ample rationale for using care and caution when utilizing interventions. However, these concerns should not be used to dampen or avoid the much-needed investigation and appropriate clinical use of such interventions. Ethical guidelines, standards of practice, and informed consent are available and can be further developed and utilized. We need to be mindful of both the potential benefits and possible dangers posed to patients and others by the use of spiritually and religiously related interventions.

Given the marked skepticism and strong objection of some health professionals and other researchers to anything spiritual or religious, we believe that the quality of research and the caliber of practice in this area must be state-of-the-art (Ellison & Levin, 1998; Larson et al., 1998). We need evidence to determine when, how, and for whom spiritual and religious interventions could be included in treatment regimes with beneficial effects. The marked increase of interest and concern among research scholars and clinical practitioners in the role of spirituality and religion in health will further encourage we believe the kind of intervention research needed. In the long run, if we conduct high-quality intervention studies, those we serve may indeed benefit greatly in terms of better overall health and quality of life.

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