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Religious Coping with Chronic Pain

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This study examined the role of religious and nonreligious cognitive-behavioral coping in a sample of 61 chronic pain patients from a midwestern pain clinic. Participants described their chronic pain and indicated their use of religious and nonreligious cognitive-behavioral coping strategies. Results supported a multidimensional conceptualization of religious coping that includes both positive and negative strategies. Positive religious coping strategies were associated significantly with positive affect and religious outcome after statistically controlling for demographic variables. In contrast, measures of negative religious coping strategies were not associated significantly with outcome variables. Several significant associations also were found between nonreligious cognitive-behavioral coping strategies and outcome variables. The results underscore the need for further research concerning the contributions of religious coping in adjustment to chronic pain. Practitioners of applied psychophysiology should assess their chronic pain patients' religious appraisals and religious coping as another important stress management strategy.

KEY WORDS: religion; chronic pain; coping.

INTRODUCTION

Chronic pain generally has a profound impact on people's lives. Individuals with chronic pain often have physical disabilities which interfere with their capacity to perform daily tasks (Hanson & Gerber, 1990). Chronic pain also may lead to irritability, depression, financial hardships, and loss of employment (Flor & Turk, 1985). Often the functioning of an entire family is affected (Flor & Turk, 1985). Individuals with chronic pain may try to minimize the negative impact of their condition by relying upon cognitive and behavioral efforts to manage the demands. Two constructs that are central to this process are appraisals and specific coping activities (Lazarus & Folkman, 1984).

Appraisals are evaluative processes by which individuals categorize a situation according to its significance to them and their ability to manage it (Lazarus & Folkman, 1984). The

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importance of appraisals in psychological adaptation to life events has been supported empirically in the coping literature (Folkman, Lazarus, Gruen, & DeLongis, 1986). Appraisals also have been associated with adaptation to chronic pain. For example, Smith, O'Keeffe, and Christensen (1994) reported that cognitive distortions such as catastrophizing, overgeneralization, personalization, and selective abstraction were associated with depression in individuals with chronic pain. Similarly, Bush and Pargament (1997) found that fewer negative appraisals about the impact of chronic pain were associated with more positive mood among patients.

Coping activities are efforts to minimize, avoid, tolerate, accept, or master situations which have been appraised as stressful (Lazarus & Folkman, 1984). Chronic pain patients often employ cognitive and behavioral coping strategies, such as engaging in distracting activities, making positive self-statements, and ignoring or reappraising pain sensations (Keefe *et al.*, 1987). Coping activities have been found to be important in explaining individuals' adjustment to chronic pain (Bush & Pargament, 1997; Gil, Abrams, Phillips, & Keefe, 1989; Keefe *et al.*, 1987; Turner & Clancy, 1986).

The Role of Religion in Coping with Chronic Pain

Many individuals rely upon their religious beliefs and practices to help them cope with negative events (Pargament, 1990). Pargament (1997) posits that religious coping may be compelling particularly for individuals who are acutely aware of their own limitations. Individuals with chronic pain often are limited in their ability to control their activity level, their level of pain, and disruptions to their employment and family life. Religious coping can be used in spite of these limitations and is sustainable throughout one's lifetime. Although some nonreligious cognitive-behavioral coping strategies also have these characteristics, religious coping methods offer the additional possibility of drawing upon a limitless, transcendent force or divine being.

Religion can be a part of the appraisal process. For example, events can be appraised as a lesson from God, a punishment or reward from God, a reflection of God's inability to intervene, a lack of God's love, or part of God's mysterious plan (Pargament, 1990). Religious appraisals are common especially when individuals are faced with pain and suffering (Pargament, 1990). In fact, some studies indicate that among people facing serious medical problems, appraisals of the situation as reflecting God's will are more common than any other appraisal (Bulman & Wortman, 1997; Pargament & Sullivan, 1981). Moreover, appraisals of negative situations to God's will, God's love, or God's purpose have been related to more positive outcomes for cancer patients (Jenkins & Pargament, 1988) and church members faced with a significant negative event (Pargament *et al.*, 1990).

Religion also can shape the nature of coping activities. There is a variety of religious coping methods (Pargament, 1997). They include looking for spiritual support from clergy, participating in religious rituals, looking for comfort from God, working with God as a partner, deferring to God's will, pleading for intercession, religious distraction, and religious conversion. Religious coping activities have been associated with both positive and negative outcomes. In a study of college students dealing with the Persian Gulf War, Pargament and co-workers (1994) found that some religious coping activities, such as seeking religious support, were associated with positive affect, while others, such as pleading with God and religious discontent, were associated with negative affect. Thus, it appears that positive and

negative outcome may be predicted by the particular type of religious coping used by an individual.

There is a dearth of studies examining the contribution of religious appraisals and coping to the adjustment of persons with chronic pain. When religion and chronic pain have been studied, religion generally is conceptualized as a unidimensional variable and is measured by a few religious questions added to existing scales. This strategy makes it difficult to determine whether religion contributes a unique dimension to coping as well as to identify the specific aspects of religion that may be helpful or harmful. For example, several authors have found that prayer, as measured by the Diverting Attention or Praying Factor of the Coping Strategies Questionnaire, is associated with maladaptive adjustment to chronic pain (Ashby & Lenhart, 1994; Keefe & Dolan, 1986; Rosenstiel & Keefe, 1983). In these studies, however, prayer is treated as a unidimensional construct. Different forms of prayer, however, may be associated with different outcomes, both positive and negative (Poloma & Gallup, 1991). Furthermore, in this factor, items measuring prayer were combined with items measuring distraction. As a result, it is unclear whether the associations with negative outcome were due to prayer, distraction, or a combination of prayer and distraction. A growing body of literature suggests that religion is a multidimensional construct which requires more comprehensive analyses in studies of coping.

Professionals working in applied psychophysiology frequently deal with persons with chronic pain conditions exacerbated by stress. Typical stress management interventions include relaxation training, biofeedback, guided imagery, and general cognitive-behavioral techniques. Clinical interventions most likely are effective when they match the individual's goals, beliefs, and values (Lazarus & Folkman, 1984), and the general population of the United States tends to be highly religious (Hoge, 1996). A number of studies have shown positive outcomes from the use of religious coping during stressful situations (Larson, 1998; Tix & Frazier, 1998; Pargament, 1977). Examining religious issues as they affect persons with chronic pain may have important stress management benefits.

The Present Study

This study examined the relationship between religious and nonreligious cognitive-behavioral coping strategies and outcome variables for individuals with chronic pain. The study attempted to measure the contribution of religious coping in a more comprehensive manner than in previous studies. Specifically, this study addressed the following questions: (1) Is religious coping best conceptualized as a unidimensional or multidimensional construct? (2) Do both religious and nonreligious cognitive-behavioral coping strategies relate to outcomes after controlling for demographic variables? These outcomes include general mood, the impact of the chronic pain on the patient, and changes in religious life. (3) Are different forms of religious coping associated with different outcomes?

METHOD

Participants

Chronic pain patients ($N = 61$) from a midwestern community-based pain management center comprised the sample for this study. The participants ranged in age from 22 to 72 with a mean age of 47 years. The majority of the participants were female (80%)

and Caucasian (78%). Other ethnic groups represented in the sample included African-American (18%), Hispanic (2%), and American Indian (2%). Most of the participants were married (74%); the remainder were divorced (15%), single (8%), or widowed (3%).

Participants reported experiencing chronic pain related to the following conditions: fibromyalgia (46%), arthritis (31%), postsurgery (26%), and carpal tunnel syndrome (16%). One-quarter of the sample indicated that they were experiencing pain from conditions other than those mentioned above, such as postaccident pain and tendonitis; 10% of the sample failed to respond to this question. The percentages sum to more than 100% because several participants reported experiencing pain from more than one condition. A requirement of the study was a duration of chronic pain for at least 1 year; thus, no participants had acute pain problems, including the postsurgery patients. The length of time participants had experienced chronic pain ranged from 1 to 50 years, with a mean duration of 9 years. When asked to rate their current level of pain on a Likert-type scale ranging from 0 (no pain) to 10 (pain as bad as it can be), the majority of participants (72%) gave a rating of 5 or higher.

The highest educational level reported by participants was college or advanced degree (26%), some college (46%), high school degree (18%), or less than high school degree (10%). Family income ranged from $0 to $75,000 with a mean income of $40,490. Participants who were employed full-time represented 33% of the sample, while other participants were employed part-time (3%), on medical leave (25%), disabled (22%), retired (15%), or other (2%).

The majority of participants indicated that they were either moderately religious (51%) or very religious (30%). Participants identified themselves as being affiliated with the following religious groups: protestant (70%), Catholic (14%), Jewish (2%), and other (14%).

Procedure

A staff psychologist recruited patients for the study following their initial assessment interview at the pain management center. Patients were considered eligible to participate if they were 18 years of age or older, had experienced chronic pain for at least 1 year, and had no other major medical problems. Patients who agreed to participate and who met study criteria were provided with a written consent form and a questionnaire. Patients completed questionnaires at the clinic following their initial appointment. A total of 72 questionnaires was completed and returned. Eleven questionnaires were eliminated due to incomplete data or unintelligible responses resulting in a final sample of 61 participants. No data were available regarding the number or characteristics of patients who declined to participate.

Instruments

Participants were asked to complete a questionnaire assessing demographic information, coping and appraisal strategies, and outcome variables. The scales used are described briefly below.

Demographic Information. Basic demographic information was obtained. Participants also were asked to indicate their current level of pain, highest level of pain within the last week, and lowest level of pain within the last week. Similar to the approach of other pain studies (Turner & Clancy, 1986), pain intensity ratings were obtained using a Likert-type

scale with response possibilities ranging from 0 (no pain) to 10 (pain as bad as it can be). The ratings from the pain intensity questions were summed to form a total pain index.

Pain Specific Appraisals. The 10-item Pain Specific Appraisal Scale (Bush & Pargament, 1997) was used to identify the extent to which patients believed that their lives would be affected by their pain on various dimensions. Examples include "your feelings about yourself," "your finances," and "your relationships with friends." The scale was adapted from the original version for use in this study. Instead of the 7-point Likert-type scale used on the original scale, a 4-point Likert-type scale was used, with response possibilities ranging from 1 (not at all) to 4 (very much so). In addition, several items were revised to assess more adequately pain appraisals among patients in this sample. Higher scores on this scale reflect more negative appraisals. In this study, Cronbach's α for this scale was .85. The scale had predictive validity in a previous study on family coping with chronic pain (Bush & Pargament, 1997).

Pain Coping Strategies. To examine the use of nonreligious cognitive-behavioral coping strategies, participants completed a portion of the Coping Strategies Questionnaire (Keefe, 1992; Rosenstiel & Keefe, 1983). Twenty-four items were selected from the original scale for use in this study. The selected items constituted a factor called Active Coping Attempts (Bush & Pargament, 1997). In general, the factor measures cognitive and behavioral coping strategies such as involvement in pleasurable activities and distraction from pain. Patients were asked to consider the frequency with which they utilized these coping strategies. Examples of items include "I try to think of something pleasant" and "I try to be around other people." The items were constructed using a Likert-type format with response possibilities ranging from 0 (never do that) to 6 (always do that). Cronbach's α for this scale in this study was .91.

Religious Appraisal and Coping. The Religious Appraisal and Coping Survey was tailored specifically to the sample in this study to measure religious strategies to cope with chronic pain. The scale consists of 40 items compiled from existing measures of religious coping (Pargament, 1990). Examples of items include "I tried to find a lesson from God in my situation" and "I asked God to take away my pain." Items were constructed on a Likert-type scale with response possibilities ranging from 1 (not at all) to 4 (quite a bit). Results from the factor analysis on this scale are presented in the results section.

General Mood. General mood was assessed using the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988). Respondents were asked to rate the extent to which they had experienced various emotions within the past few days on a Likert-type scale with response possibilities ranging from 1 (very slightly or not at all) to 5 (extremely). The scale consists of 10 items measuring positive affect, such as strong, enthusiastic, and active, and 10 items measuring negative affect, such as distressed, hostile, and nervous. Initial psychometric data obtained with university students revealed an adequate internal consistency, with the Chronbach α's ranging from .86 to .90 for Positive Affect and .84 to .87 for Negative Affect (Watson *et al.*, 1988). In the present study, Cronbach's α's for both the Positive and the Negative Affect Scales were .92.

Pain Outcome. The Pain Specific Outcome Scale (Bush & Pargament, 1997) was used in the study to measure the impact of chronic pain. Patients were asked to consider the degree to which chronic pain has adversely affected various aspects of their lives during the past few weeks. Examples of items include "I am involved in activities with friends or others in the community, even though I have pain," "I enjoy life, even though I have pain," and "Even though I experience pain, I work well at my job, school, or household activities." For use

in this study, items were constructed using a Likert-type format with response possibilities ranging from 1 (not at all) to 7 (very much so). Higher scores on this scale reflect better outcome. In this study, Cronbach's α for this scale was .75. The scale had predictive validity in a study on family coping with chronic pain (Bush & Pargament, 1997).

Religious Outcome. Three questions were adapted from Pargament and others (1990) for use in this study as a measure of the effect of chronic pain on patients' religious and spiritual lives. Instructions and item formats for questions on this scale were identical to the Pain Specific Outcome Scale. Scale items were "I have grown spiritually," "I have grown closer to God," and "I am satisfied with my religious life." Responses to each of these items were added to form the scale. Cronbach's α for this scale in this study was .65.

RESULTS

Preliminary Analyses

Factor Structure of the Religious Coping Measure. A principal-components factor analysis with oblique rotation was performed on the Religious Appraisal and Coping Survey. The goal of the factor analysis was to organize and reduce the data into clusters of variables according to commonalities among the survey items. The religious items were assumed to have some commonality or lack of independence, so an oblique rotation was chosen. An oblique rotation frequently results in an interpretable structure when items are not independent. A three-factor solution was selected because it accounted for the largest amount of variance without compromising interpretability. Individual items which loaded less than .4 on their respective factors were dropped from the scale. The resulting scale consisted of 32 items. The factor solution is presented in Table I.

The first factor, Positive Religious Coping, measures reliance on God or religion to provide strength, comfort, or personal growth. The second factor, Punishing God, measures feelings of punishment by God and pleading or bargaining with God for help. The third factor, Absent God, measures expressions of feelings and beliefs of abandonment by God. The Cronbach α's obtained for each factor, as described in Table I, reveal an adequate internal consistency for each of the three scales. Table I also lists the mean, standard deviation, and factor loading for each item. Higher means were obtained for Positive Religious Coping items and lower means were obtained for Negative Religious Coping items. The three factors combined accounted for 45.6% of the variance.

Correlations Among Study Variables. First, correlations were computed between the continuous demographic variables (age, level of pain, and income) and the outcome variables (Positive Affect Scale, Negative Affect Scale, Pain Specific Outcome, and Religious Outcome). Age was correlated significantly with the Religious Outcome Scale ($r = .33$, $p < .05$). There were no significant relationships between the outcome variables and level of pain or income.

Analyses of variance were computed to determine whether the categorical demographic variables (gender, education, religious affiliation, self-rated religiousness, and marital status) were related significantly to the outcome variables. Gender was related significantly to the Negative Affect Scale ($F = 7.31$, $p < .01$) and the Pain Specific Outcome Scale ($F = 10.60$, $p < .01$), with males scoring higher on each scale. Education was related significantly to

Table I. Alphas, Item Means, Standard Deviations, and Factor Loadings for the Religious Appraisal and Coping Survey

Item	α	Mean	SD	Factor loading
Positive Religious Coping	.94			
I looked for God for strength and support.		3.29	0.97	.86
I sought comfort from God.		3.20	1.01	.84
I looked for God to be with me.		3.36	0.98	.84
I asked God to strengthen me.		3.29	1.00	.84
I sought God's love and care.		3.27	0.96	.83
I looked for an opportunity to grow spiritually.		2.78	1.17	.82
I thought about God instead of my situation.		2.41	1.07	.77
I tried to place more importance on religion in my life.		2.71	1.10	.73
I thanked the Lord for other blessings.		3.56	0.82	.71
I tried to see how God might be trying to strengthen me.		3.02	1.12	.70
I focused on religion rather than on my own problems.		2.02	1.06	.70
I tried to find a lesson from God in my situation.		2.63	1.20	.68
I looked for God's greater purpose in my suffering.		2.42	1.22	.67
I tried to find a new life through religion.		1.78	1.06	.63
I prayed to get my mind off the pain situation.		2.92	1.06	.58
I repeated prayers to keep me busy.		2.10	1.08	.55
I prayed for a reawakening of religious feeling.		2.07	1.13	.50
I used religion to keep myself occupied.		1.74	1.00	.49
I prayed to God for a miracle.		1.98	1.21	.43
Negative Religious Coping (Punishing God)	.81			
I thought that God is punishing me for the past.		1.35	0.79	.84
I wondered what I did to make God punish me.		1.22	0.65	.80
I felt punished by God for my failings.		1.22	0.65	.70
I felt that my sins have caught up with us.		1.45	0.90	.70
I felt punished by God for my lack of devotion.		1.48	0.84	.67
I pleaded with God to make things turn out okay.		2.31	1.20	.53
I bargained with God to make things better.		1.24	0.57	.52
I asked God for a miracle.		2.07	1.20	.41
Negative Religious Coping (Absent God)	.83			
I wondered whether God truly cares for me.		1.12	0.42	.89
I wondered whether God has abandoned me.		1.12	0.38	.79
I felt angry with God for deserting me.		1.14	0.44	.79
I felt that God may not care about my problems.		1.19	0.58	.69
I questioned God's love for me.		1.09	0.34	.67

the Pain Specific Outcome Scale ($F = 4.55$, $p < .05$), with participants who had attended graduate school scoring the highest. Education also was related significantly to the Religious Outcome Scale ($F = 3.20$, $p < .05$). With the exception of participants who had attended graduate school, participants with higher education reported less positive religious outcome. In addition, self-rated religiousness was related significantly and positively to the Religious Outcome Scale ($F = 20.2$, $p < .01$). There were no other significant relationships between categorical demographic variables and outcome variables. Continuous and categorical demographic variables that were related significantly to the respective outcome variables were controlled for in the hierarchical multiple regression analyses.

Correlations between major study variables were computed to determine the independence of these variables. There were no significant correlations among any of the religious predictor variables (Positive Religious Coping, Punishing God, and Absent God) or among

the nonreligious predictor variables (Pain Specific Appraisal and Active Coping Attempts). This suggests that the scales measure independent constructs.

Correlations computed among outcome variables (Positive Affect Scale, Negative Affect Scale, Pain Specific Outcome, and Religious Outcome) revealed several significant associations. Specifically, the Positive Affect Scale was correlated negatively with the Negative Affect Scale ($r = -.48$, $p < .01$), correlated positively with the Pain Specific Outcome Scale ($r = .38$, $p < .01$), and correlated positively with the Religious Outcome Scale ($r = .31$, $p < .05$). In addition, the Negative Affect Scale was correlated negatively with the Pain Specific Outcome Scale ($r = -.57$, $p < .01$) and the Religious Outcome Scale ($r = -.27$, $p < .05$). There were no significant correlations among the other outcome variables.

No significant correlations were found between the religious predictor variables and the nonreligious predictor variables. Correlations between the religious predictor variables and the outcome variables revealed that the Positive Religious Coping factor was correlated positively with the Religious Outcome Scale ($r = .78$, $p < .01$). Correlations between nonreligious predictor variables and outcome variables revealed several significant associations. Specifically, the Pain Specific Appraisal Scale was correlated positively with the Negative Affect Scale ($r = .44$, $p < .01$) and correlated negatively with the Pain Specific Outcome Scale ($r = -.46$, $p < .01$). Thus, more negative pain appraisals were associated with negative affect and worse pain adjustment. The Active Coping Attempts factor was correlated positively with the Positive Affect Scale ($r = .32$, $p < .05$).

Relationships Between Coping Variables and Outcome

Hierarchical multiple regression analyses were computed to identify which of the appraisal and coping variables were associated with the outcome variables. Separate analyses were conducted for each outcome variable. Variables were entered into the hierarchical multiple regression analyses in two steps. First, the demographic variables which were related significantly to respective outcome variables were used as statistical controls. Therefore, gender was controlled for when examining Negative Affect and Pain Specific Outcome, age was controlled for when examining Religious Outcome, and education was controlled for when examining Pain Specific Outcome and Religious Outcome. The level of pain was controlled for in all analyses because it was assumed to be an important source of variance among chronic pain patients. Second, the religious and nonreligious cognitive-behavioral coping variables were entered into the hierarchical multiple regression analyses. Religious and nonreligious predictors were included as a block because studies have found that religious and nonreligious variables often are employed simultaneously (Pargament, 1997). The results of these analyses are presented in Table II.

As shown in Table II, the religious and nonreligious cognitive-behavioral coping variables accounted for small to moderate amounts of variance in all outcome variables after controlling for demographic variables and level of pain (incremental R^2 ranged from .13 to .55). Among the religious coping variables, Positive Religious Coping was correlated positively with Positive Affect ($\beta = .27$, $p < .05$) and Religious Outcome ($\beta = .82$, $p < .001$). Neither of the remaining religious coping variables (Punishing God and Absent God) was associated significantly with any of the outcome variables. Among the nonreligious cognitive-behavioral coping variables, Pain Specific Appraisals were correlated negatively

Table II. Hierarchical Multiple Regression Analyses (with Betas) of Nonreligious Cognitive-Behavioral Coping Variables, Religious Coping Variables, and Outcome Measures

	Outcome measure			
Variable	Positive affect	Negative affect	Pain specific outcome	Religious outcome
Control				
Level of pain	−.13	.11	−.29*	.13
Sex	—	.32*	−.37**	—
Age	—	—	—	.30*
Education	—	—	.06	−.08
Incremental R^{2a}	.02	.13*	.28**	.13
Nonreligious coping				
Pain specific appraisals	.04	.38**	−.47***	−.25**
Active coping attempts	.28*	−.18	.22	.03
Religious coping				
Positive religious coping	.27*	.06	.14	.82***
Punishing God	−.17	−.01	−.04	−.05
Absent God	−.07	.22	.13	−.02
Incremental R^{2b}	.21*	.13*	.25**	.55***

[a]This incremental R^2 represents the unique contribution of the nonreligious cognitive-behavioral coping variables above and beyond those of the control variables.
[b]This incremental R^2 represents the unique contribution of the religious coping variables and the nonreligious cognitive-behavioral coping variables above and beyond the control variables.
*$p < .05$.
**$p < .01$.
***$p < .001$.

with Pain Specific Outcome ($\beta = -.47$, $p < .001$) and Religious Outcome ($\beta = -.25$, $p < .01$) and correlated positively with Negative Affect ($\beta = .38$, $p < .01$). In addition, the Active Coping Attempts factor was correlated positively with Positive Affect ($\beta = .28$, $p < .05$).

DISCUSSION

There were several limitations to this study. The relatively small number of participants reduced its statistical power. In addition, the factor analysis of the Religious Coping and Appraisal Survey had a relatively low case-to-item ratio. Although the factor loadings may be unstable due to the relatively low number of patient responses entered into the analysis, similar positive and negative religious coping factors have been found by other researchers (Pargament, Smith, & Koenig, 1996). Finally, the cross-sectional nature of this study precludes causal inferences regarding the contribution of religious and nonreligious cognitive-behavioral coping to adjustment over time.

In spite of these limitations, this study makes several important contributions to coping with chronic pain. First, the results provide support for a multidimensional conceptualization of religious coping. In particular, findings suggest that religious coping involves both positive and negative strategies. In contrast, many studies that examine the contribution of religious coping in chronic pain management conceptualize religious coping

unidimensionally. The findings in this study underscore the need for a more comprehensive analysis of religious coping.

The findings also suggest that different forms of religious coping have different associations with outcome. In particular, positive religious coping strategies were correlated with positive affect and religious outcome; negative religious coping strategies were not related significantly to outcome. In comparison, other authors have found that positive religious coping strategies were associated with positive outcomes, whereas negative religious coping strategies were associated with negative coping outcomes (Grevengoed, 1985; Pargament *et al.*, 1990, 1994). It is unclear why negative religious coping strategies were not associated significantly with outcome variables in this study. Perhaps a larger sample size is needed to detect significant effects. Nevertheless, these findings do not support the notion that negative religious coping strategies are harmful to people with chronic pain.

Interestingly, positive religious coping was not correlated inversely with negative affect. Perhaps positive religious coping works, not by decreasing the pain or negative affect associated with pain, but by enabling the person with chronic pain to experience a broader range or greater intensity of positive emotions. Indeed, other coping researchers have suggested that coping strategies may function to maintain or restore positive mood (Aldwin, 1994; Folkman, Moskowitz, Ozer, & Park; Tix & Frazier, 1998).

This study also provides additional support for the substantial body of literature demonstrating significant relationships between nonreligious cognitive-behavioral coping strategies and outcomes (Jensen, Turner, Romano, & Karoly, 1991). Appraisals of greater negative impact of chronic pain were correlated positively with negative affect and correlated negatively with pain specific outcome and religious outcome. This supports the findings of other authors who have found that adjustment to chronic pain can be predicted from the manner in which individuals with chronic pain appraise their difficulties (Bush & Pargament, 1997). In addition, the use of active coping strategies was associated with positive affect. Similarly, other authors have found that active coping strategies are related to better adjustment to chronic pain (Gil *et al.*, 1989).

The results of this study highlight the importance of examining the contribution of religious coping to chronic pain management. Professionals working in applied psychophysiology frequently deal with persons with chronic pain conditions and incorporate interventions such as relaxation, biofeedback, guided imagery, and general cognitive-behavioral techniqies. Professionals' awareness and incorporation of religious issues into assessment and stress management may lead to more effective treatment of religious clients (Larson & Larson, 1994; Tix & Frazier, 1998). For example, prayer could be a meaningful relaxation intervention for a particular client or the choice of a religious being as a guide or supportive figure might be an important part of a client's imagery.

Religious coping may have particular significance for individuals with chronic pain. Persons with chronic pain often are limited in their ability to control their activity level, their level of discomfort, or disruptions to their employment and family life. Coping strategies such as religion, which tend to emphasize changes in perspective or collaboration with a higher power, may be compelling particularly in these situations. Pargament (1997) has argued that religious coping might be most useful when persons are faced with limitations that tax the finite resources of any individual human being. Obtaining a better understanding of the contribution of religious coping strategies will further clinicians' ability to treat chronic pain patients effectively and sensitively. Ultimately, this information

may stimulate the development of psychospiritual interventions to assist people coping with chronic pain.

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