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Moderating Effects of Religious/Spiritual Coping in the Relation Between Perceived Stress and Psychological Well-Being

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Abstract Although the relationship between stress and depressive symptoms is well documented, less is known about the role of coping strategies, in particular strategies for coping via religious or spiritual means. To investigate the relationships among these factors, data was collected with questionnaires completed by 127 MSW students at a northeastern university in 2003. Significant Stress×Religious/Spiritual Coping buffer interactions were found in the relationship between stress and depression. EQS 6.1 and hierarchical moderated regression analysis showed that religious/spiritual coping reduced the impact of stress on depression. Implications for practice are discussed.

Keywords Stress · Depressive symptoms · Religious/Spiritual coping

Empirical studies have demonstrated direct associations between life stress and negative physical and mental health consequences (Aldwin 1994; Edwards and Besseling 2001; Kendler et al. 1999; Unger et al. 2001). For instance, Stewart and Salt (1981) found a significant association between working women's multiple-role stress and physical illness and between stress and depressive symptoms. Previous research also suggests that spiritual beliefs are protective factors for many individuals in times of stress because they are associated with enhanced coping skills and better psychological well-being. This article presents results of a study that investigated these issues in a sample of graduate students working toward a master's degree in a northeastern school of social work. The general expectation at the outset was that religious/spiritual coping would serve as buffer of the relationship between stress and depressive symptoms; that is, that religious/spiritual beliefs would moderate the negative effect of stress on depressive symptoms, possibly by helping individuals to make sense of the stressful event and thereby facilitating adaptive coping efforts (see, for example, Park and Cohen 1993). This reasoning is consistent with theories of stress, coping, and attributions.

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Stress, coping, and religion

According to Brennan (2001), the ability to cope effectively with stress is a significant factor in determining good health and well-being. Brennan defined coping as behavioral efforts to master, reduce, or tolerate the demands that are created by stressful transactions.

Lazarus (1966) has argued that cognitive appraisal of an event and subsequent coping responses affect the relationship between stressors and health. According to Lazarus (1966), when a stressor is experienced, individuals evaluate whether the event is threatening, and if so, whether they have the appropriate resources to handle the event. After the appraisal is made, individuals may employ coping strategies to reduce harm from the perceived stress.

Religion appears to add a unique dimension to the coping process (Brennan 2001). Although some researchers debate whether its effect on psychological well-being has beneficial or detrimental effects on individuals' psychological well-being (Handal and Wiener 1989; Sharkey and Malony 1986), published studies consistently show an inverse relationship between religious commitment and stress (Brashears and Roberts 1996; Pargament et al. 1990). For instance, in their study of the mental and physical health of inmates, Johnson and Larson (1998) found that the religiously committed experienced a lower amount of stress than the less committed. They found also that when the religiously committed and the less religiously committed had similar levels of stress, the religiously committed coped more effectively than did their less religious counterparts. In their study of religion and psychological distress in a community sample, Willams et al. (1991) found that religious coping buffered the negative impact of stress on psychological well-being. They concluded that religion may be a potent coping strategy that facilitates adjustment to life stresses.

Attribution theory and religious/spiritual coping

Theoretically, it is plausible that religious/spiritual coping might influence the stress–health relationship. Attributions to a higher being or entity may help some to make sense of stressful events. This might, in turn, facilitate more adaptive coping in stressful circumstances. For example, Park and Cohen (1993) found that individuals who attributed the death of a friend to a purposeful higher entity coped more successfully with the loss than those who attributed the loss to chance. This is considered with Spilka et al. (1985) theoretical framework. Their argument is that people seek to make sense of their life experiences and to understand the cause of life events; that people who view religion as a vital part of their lives will use religion in their coping process; and that the environmental setting and the context of the stressful event greatly influence people's perceptions and attributions. They argue further that situations perceived as unexplainable or uncontrollable are more likely to evoke a religious coping strategy.

McIntosh (1995) conceptualized that religiousness may influence not only the interpretation of life events, but also the selection of strategies for understanding or managing those events. Individuals may employ extremely varied coping strategies. One set of coping responses involve how individuals use their religion in stressful circumstances and to determine the effects of religious coping on health outcomes. Paragament (1997) proposed that religious coping must be considered to understand the relationship between religious variables and health outcome variables. This study focuses on the roles of religious/spiritual coping in understanding the relationship of perceived stress to psychological well-being.

Moderator model and proposed hypotheses

According to Pearlin et al. (1981), life stress paradigms examine interrelationships among three conceptual domains: (1) sources of stress, (2) mediators of stress and/or moderators of stress, and (3) outcomes of stress. The focus of this study is on religion as a moderator of stress.

The moderator model is based on the premise that an interaction between stress and the resource(s) will result in a significant attenuation of negative outcomes a result of the higher levels of the resource (Wheaton 1985). Coping resources can moderate the negative effects of stress and help an individual reduce the impact of stressors. Pearlin and Schooler (1978) posited that coping resources function to: (1) alter the meaning of the situation or events, making them less stressful in nature, (2) modify or eliminate the conditions leading to problems, or (3) manage the level of emotional response to stressors.

Religious/spiritual phenomena have received attention as a stress-buffering resource (Levin et al. 1995; McAdoo 1995). There is a logical and theoretical reason why religious/spiritual coping should impact the stress–health outcome relation. Because attributions to a purposeful God may help individuals to make sense of stressful events and may facilitate their adaptation to stressful circumstances, it is logical to conclude that those who attributed stressful circumstances to a purposeful God felt less distress. For instance, Park and Cohen (1993) found that religious attributions are associated with looking at stressful events in more adaptive ways, and this ultimately fosters personal growth.

To shed light on which of these possible relationships holds, this study measured the amount of stress, depression, and religious/spiritual coping for over 100 graduate students. The present study used these data to examine the following two hypotheses:

H1: Higher levels of perceived stress lead to higher levels of depression.
H2: Depression is a function of the *interaction* between perceived stress and religious/spiritual coping such that the effect of perceived stress on depression is *reduced* when religious/spiritual coping is high.

Method

Participants

One hundred twenty-seven Masters of Social Work students at a northeastern university in 2003 who were enrolled in foundation and second level social work courses such as social work research, organizational research, evaluation research for social services, and qualitative research were measured.

Procedure

The researcher gave out a four-page questionnaire to all MSW students during December of 2003, which they completed in class. Respondents were provided with a package containing an introductory letter and the survey. Participation was voluntary and participants were told that the purpose of the research was to understand more about the student population, particularly their difficulties adjusting to school and whether or not they used religious/spiritual coping strategies to overcome those difficulties. In addition, they were told they could refuse to participate in the study. All completed the questionnaire.

Measures

Graduate Stress Inventory-Revised (GSI-R) The stress was measured with the Graduate Stress Inventory-Revised (GSI-R) (Rocha-Singh 1994). The GSI-R is a 21-item self-report instrument that measures the degree to which graduate students perceive their academic responsibilities, the university environment, and familial and financial responsibilities as stressful (Rocha-Singh 1994). The 21 items of the GSI-R utilize a seven-point Likert scale ranging from "Not at all stressful" (1) to Extremely stressful" (7). Reliability and validity of the GSI-R were estimated from factor analysis and correlations on three samples (Rocha-Singh 1994). The first study consisted of 450 master's and doctoral students. According to Rocha-Singh (1994), internal consistency for each subscale was: environmental stress (eight items) with a coefficient alpha of .85; familial/monetary stress (five items) with an alpha of .77; and academic stress (eight items) with an alpha of .78. The second study reported reliabilities as follows: environmental stress, .30; academic stress, .74; and family/monetary stress, .68. Also, Rocha-Singh used the sample for the third study to establish test–retest reliability of the GSI-R, and its result were as follows: .80 for environmental stress; .85 for academic stress; and .85 for family/monetary stress. In the present sample, the mean stress score was 71.5 (SD=16.6). The scale yielded a coefficient alpha of .83.

Center for Epidemiological Studies Depression Scale (CES-D) The psychological well-being was measured with the 20-item Center for Epidemiological Studies Scale (CES-D; Radloff 1977). The CES-D is considered a valid and reliable measure for use with the general population (Radloff 1977). Respondents indicate how frequently statements like "I had crying spells" and "I had trouble keeping my mind on what I was doing" describe them on a scale ranging from 0 (rarely or none of the time) to 3 (most or all of the time). Four positively worded items (4, 8, 12, and 16) are reverse scored and responses are summed to create scale scores. An individual's CES-D score is the sum of all 20 items. The possible range of CES-D score is 0 to 60. Higher scores indicate more depressive symptoms. The internal consistency reliability (Cronbach's alpha) of the CES-D in previous research ranged from .84 to .90 (Chang 2001). In the present sample, the mean depression score was 18.0 (SD=10.6). The scale yielded a coefficient alpha of .91.

Religious/Spiritual Coping Scale form (RCOPE) The Religious/Spiritual coping was measured with a modification of the Religious/Spiritual Coping Scale form (RCOPE) (Pargament et al. 1998). To generate items for religious/spiritual coping scale, I modified the RCOPE to measure the religious/spiritual coping strategy of MSW students based on a search for significance in times of stress in ways related to the sacred (Pargament 1997). The 20 items of the religious/spiritual coping scale utilize a four-point Likert scale ranging from "Not at all" (1) to "A great deal" (4). In measurement development, I attempted to include all relevant components of religious/spiritual coping described in the literature to assess how respondents attempt to understand and deal with problems through religious and spirituality. The 20 items of religious/spiritual coping include benevolent religious appraisals, religious forgiving, spiritual discontent, religious helping, and the search for spiritual connection. The mean score in our sample was 38.4 (SD=9.2) out of a possible 80.0. The scale yielded a coefficient alpha of .84.

The present study also measured a number of common demographic variables; that is, gender, age, ethnicity, marital status, and employment. Participants ranged in age from 18 to 58 years (M=29, SD=8) and 82.7% of the participants were female (N=127). Ethnically, the sample was comprised primarily of Caucasians (73.2%). The religious make-up of the

sample was as follows: Protestant, (40.9%); Catholic, (34.6%); and other, (20.5%). Most of the participants (60.6%) were single.

Results

Descriptive Findings

The mean, standard deviation, and correlation of the critical variables, stress, religious/spiritual coping, and depression, are shown in Table 1. Each of these variables had an approximately normal distribution. Of the participants, 82.7% were female and 17.3% were male (N=127); 26.8% of participants were married and 73.2% were single; 65.4% were employed and 34.6% were unemployed. The most frequently reported answers on religious attendance were "only occasionally (29.1%)" and "weekly (28.3%)." The mean stress score of 3.40 indicated that respondents reported themselves as moderately stressful. The depression mean of .90 indicates that respondents feel depressive symptoms "some or little of the time (1–2 days during the past week)." The religious/spiritual coping mean of 1.92 indicates that respondents cope more or less religiously/spiritually with their negative events.

Correlation analysis

The bivariate relationships for the primary study variables are shown in Table 1. Stress was correlated with depression (r=.50, p<.01) and coping (r=.19, p<.05). Depression was also related to coping (r=.20, p<.05).

Structural equation model analysis

Religious/spiritual coping as a moderator, was analyzed using the EQS 6.1 multigroup technique, where the levels of the moderator are treated as different groups (i.e., low vs high) and the equivalence of the structural relations between stress and depression is compared across the two groups. The goodness of fit test (χ^2 (1)= 4.33, p=.04) indicated a good fit of the model to the data except for the RMSEA .16.

Analysis for the moderating effect of religious/spiritual coping Moderating effects of religious/spiritual coping on depression was evaluated with multigroup SEM. The baseline model was a fully unconstrained model (i.e., there were no constraints placed in the model to test for differences between the low and high religious/spiritual coping groups). To assess

Table 1 Correlations, mean, and SD for study variables

Variable	1	2	3	M	SD
1. Stress	1.0			71.50	16.60
2. Depression	.50*	1.0		18.00	10.60
3. Coping	.19**	.20**	1.0	38.40	9.10

*Correlation is significant at the .01 level.

**Correlation is significant at the .05 level.

the moderating influence of religious/spiritual coping, I divided the sample into two groups (n=63 for high coping, and n=64 for low coping), based on observations on both sides of the median. Each group was constrained to equality across groups in baseline model. The constrained model hypothesized that all paths were equal in the low and high religious/spiritual coping groups (e.g., that there were no differences in paths between the high and low religious/spiritual coping subgroups, which is not what was hypothesized). A significant difference in the χ^2 statistics would be attributable to the constrained parameters. This is the method I used to determine whether religious/spiritual coping affected the stress-coping model.

The χ^2 were 4.33, with 1 degree of freedom, for the model where all parameters were equivalent across groups and 0, with 0 degrees of freedom, for the baseline model. These data indicate the existence of a significant moderating influence that was attributable to religious/spiritual coping. In other words, structural pathways for low and high groups were constrained to equality in one model and allowed to vary in another, and the difference in chi-square results between models was compared. When this path is allowed to differ between groups of coping, there are 4.33 improvements in chi-square. Thus the results indicate that religious/spiritual coping moderates the association between stress and depression. The subgroup comparison results supported our hypothesis that stress has less damaging implications for depression when religious/spiritual coping is high.

Table 2 shows the slope of depression on stress is over twice as steep (b=.45 for the low coping group, b=.23 for the high coping group) when religious/spiritual coping is low.

Moderated regression analysis

Moderated multiple regression was additionally employed to assess moderation of the relationship between stress and depression. The stress by religious/spiritual coping interaction was marginally significant (β=−1.02, p=.06; R-squared increment=.02), consistent with the buffering hypothesis. Table 3 shows the slope coefficient for the interaction of −.01 indicates that the slope of depression on stress becomes 0.01 less positive for a one unit increase in religious/spiritual coping. In other words, the minus sign tells us that as religious/spiritual coping increases, the slope of the effect of stress on depression becomes less positive. This shows that the deleterious effect of perceived stress on depression is reduced when religious/spiritual coping is high.

Figure 1 presents the regression lines of depression on stress for the low and high religious/spiritual coping subgroups, clearly showing, consistent with the buffering hypothesis.

Table 2 Coefficients and R^2 changes for baseline model and new model

	Baseline model		New model	
	Low coping	High coping	Low coping	High coping
b	.45*	.23*	.32*	.32*
ΔR^2	.33	.17	.27	.19

*p<.05

Table 3 Coefficients for moderated multiple regression analysis of religious/spiritual coping

	b	SE	β	*p*	ΔR^2
Step1					.1
Gender	1.21	2.61	.04	.64	
Marriage	−2.20	2.20	−.09	.32	
Employment	.28	2.02	.01	.89	
Religious attendance	.34	.79	.04	.66	
Step 2					.28
Stress	.31	.05	.49	.00	
Coping	.26	.11	.22	.03	
Step 3					.02
Stress × coping	−.01	.00	−1.02	.06	

Discussion

The primary aim of this study was to examine the contribution of stress experienced to respondent's psychological well-being. In support of the first hypothesis, stress was independently related to depressive symptoms. The relationship between stress and psychological well-being were in the predicted direction, with higher levels of stress associated with poor well-being (i.e., greater symptoms of depression). The mean CES-D score of this study (18.0) was higher than the community average of 9. The mean of 18 for the CES-D indicates that many respondents were depressed because a score of 16 or more is considered to reflect clinical depression. Therefore, based on their response to CES-D data, 64 respondents out of 127 (50.3%) were categorized as currently depressed (i.e., symptomatic). In this study, 15 men designated as currently depressed (or 23.4% of those

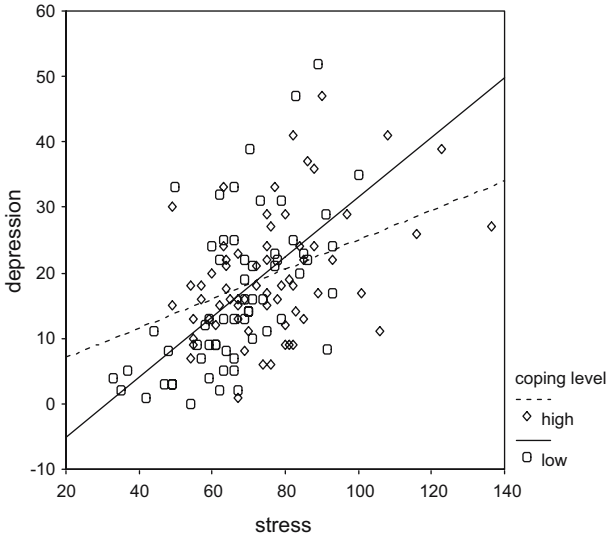

Fig. 1 Stress-depression regression lines for low and high religious/spiritual coping levels

who could be classified) had a CES-D score of 16 or higher. Similarly, 49 women (76.6%) had CES-D scores that met or exceeded the cutoff.

This study also investigated whether religious/spiritual coping moderated the relation between perception of stress and psychological well-being. The results show that high levels of religiosity were associated with low levels of psychological distress symptoms. This pattern is consistent with that found when the moderator model is based on the premise that an interaction between stress and religion will result in a significant attenuation of negative outcomes as a result of the higher levels of stress (Wheaton 1985).

The findings of this study have implications for the treatment of individuals seeking psychological help. From a clinical point of view, they suggest that understanding religious/spiritual coping and its potential influence on health problems have significant implications with respect to enhancing coping resources, thereby improving adjustment to stressful life events. Helping professionals might consider religious/spiritual coping as an important resource in their interventions. Richardson and June (1997) already suggested that exclusion of the spiritual and emotional resources can undermine both the therapeutic process and the therapeutic alliance. Ignorance or disregard for this aspect could result in less effective therapy.

This study is quite counter-intuitive in terms of the main effect of religious/spiritual coping on depression. The coefficient for the associations between these two variables tells us that as religious/spiritual coping increases, depression increases. In addition, by comparing high and low coping coefficients, coping did not moderate the strength of the relationship between stress and depression (for high coping: b=.45, p<.001; for low coping: b=.23, p=.001). This particular result pushed to pursue the different process.

Although there is ample research suggesting that religious/spiritual coping moderates the negative effect of stress on psychological well-being by helping people to make sense of the stressful event (e.g., Brashears and Roberts 1996; Johnson and Larson 1998; Pargament et al. 1990; Park and Cohen 1993), direct associations among stress, religion, and depressive symptoms might be the result of different mechanisms. For example, those who are more religious in comparison to those who are less so might be more prone to guilt. Feeling guilty can induce anxiety, which in turn might lead to increased depressive symptoms. Furthermore, attributing stress to a higher being might cause some to interpret recurring stress as a sign of their own failings. In so doing, they might become more depressed because they might conclude that they are somehow getting what they deserve. These mechanisms would suggest that higher levels of religious commitment might be associated with higher levels of depressive symptoms. It is certainly possible that the direction of the relationship between religious coping and depressive symptoms might be positive, in that more depressed people might be more likely to attribute their difficulties to a higher religious being.

Two additional major limitations to the present study must be acknowledged. First is the nature of the present sample, which limits the ability to generalize the findings to other populations. The obtained results may not be found in samples for other geographic regions and cultures. Future study should seek to survey a much broader sample that includes ages from young adult to the elderly to determine the generalization of these results. The other limitation is related to the measurement of religious/spiritual coping which is limited to an assessment of the individual coping strategies and resources in stress process. A more complete measure that accesses multiple dimensions of religiosity and spirituality including its organizational, nonorganizational, and intrinsic and extrinsic factors would be helpful in identifying the aspects of religious/spiritual coping in promoting greater psychological well-being in individuals' lives.

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