Psychology of Religion and Spirituality

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Online First Publication, May 16, 2011. doi: 10.1037/a0023155

CITATION

Carpenter, T. P., Laney, T., & Mezulis, A. (2011, May 16). Religious Coping, Stress, and Depressive Symptoms Among Adolescents: A Prospective Study. *Psychology of Religion and Spirituality*. Advance online publication. doi: 10.1037/a0023155

Psychology of Religion and Spirituality
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1941-1022/11/$12.00 DOI: 10.1037/a0023155

Religious Coping, Stress, and Depressive Symptoms Among Adolescents: A Prospective Study

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This study examined prospective associations between religious coping, stress, and depressive symptoms in a community sample of 111 adolescents (80 female). We hypothesized that religious coping would moderate the relationship between stress and depressive symptoms, with negative religious coping exacerbating the effects of stress on depressive symptoms and positive religious coping buffering the effects of stress on depressive symptoms. We further expected that the moderating effects of religious coping on outcomes would be strongest for youth with high personal religious commitment. Study hypotheses were tested in a prospective 12-week study. Youth self-reported their use of positive and negative religious coping strategies and personal religious commitment at baseline and then reported stressors and depressive symptoms weekly for eight weeks with an additional assessment at 12 weeks. Data were analyzed using hierarchical linear modeling. Results indicated that, as expected, negative religious coping significantly moderated the effects of stress on depressive symptoms across the 12-week study, with depressive symptoms being highest among youth with high stress exposure and high negative religious coping. The exacerbating effects of negative religious coping on the stress-depression relationship were strongest for youth with high personal religious commitment. Positive religious coping only marginally buffered the effects of stress on depressive symptoms. The results confirm and extend previous findings on the association between religious coping strategies and stress in predicting depressive symptoms.

Keywords: religious coping, depression, adolescence, stress

Although depression can occur throughout the life span, it is a problem of particular significance in adolescence. Incidence of depression during adolescence rises dramatically—whereas fewer than 6% of children experience depression, nearly 20% of youth will experience a depressive episode by age 18 (Hankin et al., 1998). Subclinical depressive symptoms also increase in adolescence, with up to 65% of youth reporting moderate to severe symptoms that place them at risk for academic problems, interpersonal difficulties, and future depressive disorders (Fergusson & Woodward, 2002; Hammen & Compas, 1994; Rutter, Kim-Cohen, & Maughan, 2006). The transition to adolescence involves an increase in the frequency of stressors, and contemporary theories of depression suggest that individual differences in the frequency, type, and emotional impact of stressful events may be implicated in the increase in depressive symptoms during this developmental period (Hyde, Mezulis, & Abramson, 2008). According to these theories, many factors that influence the development of depression do so by moderating the stress-depression relationship, minimizing or exacerbating the depressogenic effects of stress (Hyde, Mezulis, & Abramson, 2008).

One potential moderator of the stress-depression relationship is religiosity, which has long been implicated as a protective factor (and occasionally a risk factor) in mental health research. The body of research investigating the impact of religiosity on mental health has grown tremendously in recent years (Ano & Vasconcelles, 2005; Hackney & Sanders, 2003; Harrison, Koenig, Hays, Eme-Akwari, & Pargament,

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2001). Much recent attention has centered around religious coping strategies. Religious coping is defined as a broad variety of spiritually and religiously based cognitive, behavioral, and interpersonal responses to stressors (Pargament, Smith, Koenig, & Perez, 1998). Several studies have concluded that some religious coping responses are protective and positively impact mental health, while others are maladaptive and negatively impact mental health (Ano & Vasconcelles, 2005; Harrison et al., 2001; Pargament, Koenig, & Perez, 2000; Pargament et al., 1998). Pargament et al. (1998) labeled these as positive and negative religious coping, respectively. Since then, consistent relationships have been found between mental health and measures of positive and negative religious coping (Ano & Vasconcelles, 2005; Harrison et al., 2001), including recent studies on depression (e.g., Bjorck & Thurman, 2007; Carleton, Esparza, Thaxter, & Grant, 2008). However, no studies have directly examined positive and negative religious coping as moderators of the stress-depression relationship in a prospective study. In addition, few studies have examined religious coping and depression among adolescents, despite the salience of this developmental period for understanding the etiology of depression. The present study seeks to address these limitations in the extant literature by examining whether positive and negative religious coping moderate the effects of stress on depressive symptoms in 12-week prospective study among adolescents.

Stress and Depression

It has been well established that stressful life events are associated with both the onset of depressive episodes (e.g., Kendler, Karkowski, & Prescott, 1999) and increases in depressive symptoms in adolescence (Grant et al., 2003; Grant, Compas, Thurm, McMahon, & Gipson, 2004; Tram & Cole, 2000). First episodes of depression, which are particularly relevant to the emergence of depression in adolescence, are especially likely to be triggered by negative life events (Monroe & Harkness, 2005). Recent comprehensive vulnerability-stress models of depression have explained individual differences in depressive symptoms by highlighting the importance of affective, cognitive, and biological factors that leave individuals more or less able to cope with life stressors and moderate the stress-depression relationship (Hankin & Abramson, 2001; Hyde, Mezulis, & Abramson, 2008). According to the vulnerability-stress model, some individuals use more positive and effective coping skills that reduce risk for depression after exposure to stressful events, while others engage in cognitive or behavioral strategies that exacerbate the harmful effects of stress and increase depressive symptoms.

Positive and Negative Religious Coping

The positive/negative religious coping framework, formally introduced by Pargament and colleagues (1998), identifies a variety of specific spiritually based cognitive, behavioral, and interpersonal responses to stressors and categorizes them as either positive or negative for mental health. Positive religious coping strategies include benevolent religious reappraisals of stressors, seeking spiritual connection, and seeking spiritual support from others; these are believed to be effective coping responses that protect individuals from the depressogenic effects of stress. Negative religious coping strategies include punishing-God reappraisals, expressing spiritual discontent, demonic reappraisals, and reappraisals of God's power; these are believed to be maladaptive responses that exacerbate the depressogenic effects of stressors. Although these strategies resemble nonreligious responses in many ways (e.g., cognitive reframing, social support, etc.), studies have found religious coping to contribute unique variance to the prediction of mental health (Pargament, 1997; Tix & Frazier, 1998) such that it "cannot be 'reduced' to nonreligious forms of coping" (Pargament, Koenig, & Perez, 2000, p. 710).

Positive and negative religious coping strategies have been widely used over the past decade to predict a variety of mental health outcomes (see Ano & Vasconcelles, 2005 for a review and meta-analysis). In a meta-analysis of 49 studies, Ano and Vasconcelles (2005) concluded that both positive and negative religious coping were significantly related to psychological adjustment. Positive religious coping was significantly associated with both increased positive adjustment and decreased negative adjustment. Negative reli-

gious coping was significantly associated with increased negative adjustment only. A number of studies have focused on the relationship between religious coping and depressive symptoms (Bjorck & Thurman, 2007; Fitchett, Rybarczyk, DeMarco, & Nicholas, 1999; Hebert, Zdaniuk, Schulz, & Scheier, 2009; Maltby & Day, 2003; Nooney & Woodrum, 2002; Pargament et al., 1998; Sherman, Plante, Simonton, Latif, & Anaissie, 2009; Tarakeshwar & Pargament, 2001). In one recent cross-sectional study of Protestant Church members, for example, Bjorck and Thurman (2007) found that negative religious coping significantly predicted increased depressive symptoms, while positive religious coping interacted with stress to predict decreased depressive symptoms.

Despite these consistent findings, contemporary studies of positive and negative religious coping may be limited by reliance on cross-sectional designs. Many researchers have noted the wide prevalence of cross-sectional study designs and the need for more prospective studies to clarify causational and interpretational ambiguities (Ano & Vasconcelles, 2005; Harrison et al., 2001; Hebert et al., 2009; Pargament et al., 1998; Sherman et al., 2009).

The small body of existing prospective studies has yielded relatively consistent support for the hypothesis that negative religious coping is associated with depression, but mixed finding regarding the relationships between positive religious coping and depression. One prospective study by Tix and Frazier (1998) using general religious coping measures did find a positive association between religious coping and positive psychological adjustment, but subsequent prospective studies have failed to replicate these findings. In one recent prospective study of female cancer patients, Hebert et al. (2009) found no association between positive religious coping and measures of psychological well-being. They did find that negative religious coping was positively associated with depressive symptoms, worse mental health, and lower life satisfaction. Another recent prospective study of medical transplant patients (Sherman et al., 2009) yielded similar results. This study found that negative religious coping was associated with increased depressive symptoms, posttransplant anxiety, lower measures of well-being, and transplant concerns, while positive religious coping was unrelated to these variables. These findings are further consistent with those found by Fitchett et al. (1999), who prospectively studied positive and negative religious coping in medical rehabilitation patients and found support only for the harmful effects of negative religious coping.

The discrepancy between the findings of these prospective studies and the findings of many cross-sectional studies underscores the need for more prospective examinations of religious coping. The bulk of these studies have also been done among medical patients undergoing acute or chronic health stress. Given that such individuals may adjust their coping styles toward more negative strategies (Bjorck & Thurman, 2007), with hospital patients showing different patterns of religious coping than nonhospital samples (Koenig, Pargament, & Nielsen, 1998), there is a need for studies of religious coping, stress, and depression among nonmedical samples.

Moderation by Religious Commitment

The extent to which religious coping may moderate the stress-depression relationship may itself be moderated by other factors, including the religious commitment of the individual. Individuals who are high in personal religious commitment, as evidenced by engagement in religious activities such as participation in religious services, personal use of prayer, and/or who indicate that their religious faith is of importance to them, may be particularly likely to be influenced by their religious coping style. A number of studies have found that global indices of religiosity (e.g., prayer, church attendance, seeing oneself as religious, strength of religious identification, personal meaningfulness of religion) are related to depressive symptoms among religious adolescents and adults (Eliassen, Taylor, & Lloyd, 2005; Schnittker, 2001; Wright, Frost, & Wisecarver, 1993). Eliassen, Taylor, & Lloyd (2005) found that a composite measure of prayer, religious coping, and turning to God in response to stressors predicted decreased depression in highly religious individuals and increased depression in less religious individuals. We hypothesized that the efficacy of religious coping may be moderated by religious commitment.

The Current Study

In the present study, we examined the impact of positive and negative religious coping on the stress-depression relationship in an adolescent sample. It is hypothesized that positive strategies serve to buffer the effects of stressors, while negative strategies exacerbate its harmful effects (Bjorck & Thurman, 2007; Pargament et al., 1998). In the context of a vulnerability-stress model of depression, we would therefore expect positive and negative religious coping to impact depression by moderating the stress-depression relationship. We expected that negative religious coping would moderate the stress-depression relationship by exacerbating the depressogenic effects of stress. We also expected positive religious coping to moderate the stress-depression relationship by buffering against the depressogenic effects of stress. We further examined whether either of these potential relationships may themselves be moderated by religious commitment.

Method

Participants

Participants were 111 (80 female) adolescents recruited from 9th through 12th grade classrooms in the Pacific Northwest. Participants were attending one of three private religiously affiliated high schools: two Catholic schools and one Protestant school. Participants ranged in age from 14.1 to 19.3 years, with a mean age of 16.4 years (SD = 1.33). Approximately 75% identified as Caucasian, 16% as Asian, 6% as African American, and 3% did not identify a race. Our sample's religious affiliation was 50.9% Catholic, 33% Protestant, 0.9% Jewish, and 0.9% Hindu. 14.3% reported no religious affiliation.

Procedure

Participants were recruited at school via in-class presentations. An information packet and parent consent form was sent home with interested participants. Parents and participants provided written consent. Participants completed a baseline set of questionnaires that included measures of positive and negative religious coping, participation in religious activities, overall religiosity, and depressive symptoms. Each week for eight consecutive weeks, participants then completed a weekly questionnaire in which they reported on stressors and depressive symptoms. Four weeks after the last weekly questionnaire, participants completed a final questionnaire assessing stressors and depressive symptoms. All participants completed the initial questionnaire and at least one weekly questionnaire; the mean number of weekly questionnaires completed was 7.4 of a possible 9. Questionnaires were completed at school during sessions held after class and during lunch. Participants received $5 for completing the initial questionnaire and a small gift (valued at $3 or less) for each weekly questionnaire.

Measures

Religious coping. Positive and negative religious coping were measured at baseline using the Brief RCOPE (Pargament et al., 1998), which consists of 14 items describing positive and negative religious coping responses. Participants were asked to indicate how typically they use the coping response when faced with stressful events using a 1–5 Likert scale (1 = *not at all*, 5 = *a great deal*). The positive subscale consists of seven items reflecting seven coping strategies, such as benevolent religious reappraisals, collaborative religious coping, and seeking spiritual support. A sample positive item is "Tried to see how God might be trying to strengthen me in this situation." The other seven items assess five negative religious coping strategies, such as spiritual discontent, punishing God reappraisal, and demonic reappraisal. A sample negative item is "Wondered whether my church has abandoned me." Responses were averaged to create composite scores for positive and negative religious coping. Internal consistencies were high for positive religious coping (α = .93) and moderate for negative religious coping (α = .77).

Depressive symptoms. Depressive symptoms were measured at baseline, weekly, and at the 12-week follow-up with the short form of the Children's Depression Inventory (CDI; Kovacs, 1985). The full CDI is a 27-item self-report inventory, which inquires about the presence of depressive symptoms within the past two weeks. Each item contains three statements; participants were asked to select the statement that best described them in the previ-

ous two weeks. The CDI was designed for use with youth between the ages of 8 and 17. Total scores on the CDI can range from 0 to 54, with higher scores indicating more severe depressive symptoms. The CDI has repeatedly demonstrated excellent internal consistency (alpha reliability ranges from .80 to .87), test–retest reliability, and predictive and construct validity, especially in community samples (Blumberg & Izard, 1986; Kovacs, 1981, 1985). The CDI-S was developed as a shorter, 10-item assessment of depression and has been found to be comparable with the full CDI (Kovacs, 1992). Resulting scores fall between 0 and 20 and in nonclinical populations have had an internal consistency of .74 to .77 (Smucker, Craighead, Craighead, & Green, 1986). Internal consistencies of the CDI-S ranged from .72 to .86 in our study.

Stressful life events. Stressful life events were measured weekly using a shortened version of the Adolescent Perceived Events Scale (APES; Compas, Davis, Forsythe, & Wagner, 1987). Participants completed 59 items representing both major and daily life events, such as: "Doing poorly on an exam or paper"; "Fight with a friend"; and "Problems with family member." Participants indicated for each event whether it had occurred in the past week. The number of stressors reported each week was then totaled for each participant.

Religious commitment. Religious commitment was indexed by three constructs. First, participants completed one item assessing how frequently they participated in voluntary religious activities outside of school (*1 = More than once per week, 6 = Never*). We specified out-of-school religious activities given that most study participants were required to attend school religious activities; thus, out-of-school activities were expected to be a more reliable indicator of personal religious commitment. Second, they indicated how often they took part in private religious activities such as prayer or meditation (*1 = More than once per day, 6 = Never*). These items were reverse-scored so that higher scores indicate more religious commitment. Third, participants completed two items indicating the overall degree of the importance of their religious faith. They indicated how religious they considered themselves to be using a nine-point Likert scale (*1 = Not at all religious, 9 = Very religious*) and how important religion was to them (*1 = Not at all important, 9 = Very important*). These two items were averaged to produce a composite score of overall religious importance, with higher scores indicating more self-identified religious importance.

Results

Data Analytic Plan

To analyze the multiwave repeated-measures data and potential moderators, we used hierarchical linear modeling (HLM). Advantages of this technique include the ability to test multiple-moderator models and deal with missing data (for a full review of this technique, please see Bryk & Raudenbush, 1992). The analysis of multiple levels of data in multilevel modeling is accomplished by constructing Level 1 and Level 2 equations. At Level 1, a regression equation is constructed for each participant that models variation in the repeated measure (here, depressive symptoms) as a function of time (from baseline through week 12). Each equation includes parameters to capture features of the individual's trajectory over time: an *intercept* that describes the expected initial level on the variable (e.g., when time = 0) and a *slope* that describes change in that level over time. Additional time-varying predictors can also be included in the Level 1 equations. At Level 2, equations are specified that model individual differences in the Level 1 variables as a function of Level 2 variables (here, positive and negative religious coping). Thus, the Level 1 equations capture individuals' trajectories for the dependent variable (depressive symptoms) over time as a function of time and other repeatedly measured predictors (stress); the Level 2 model organizes and explains the between-subjects differences among these trajectories as a function of moderators (religious coping, e.g., as cross-level interactions). A significant advantage of multilevel modeling is that it can flexibly handle cases with missing data. Such random-effects models do not require that every participant provide complete, nonmissing data. In the current analyses, time was entered uncentered so that the resulting intercept reflects the expected value of depressive symptoms at baseline.

For our main analyses examining positive and negative religious coping as moderators of the stress-depression relationship, our dependent variable was depressive symptoms assessed at each of the assessment points. Stress

was included in the Level 1 equations as a time-varying covariate to represent the main effect of stress on depressive symptoms over time; religious coping styles were entered in Level 2 as potential moderators. This model allowed us to examine whether religious coping moderates the relationship between stress and depressive symptoms over time. These equations are shown here:

$$\textit{Level } 1\text{: } \textit{Depression}_{ij} = \beta_{0j} + \beta_{1j}(\text{Time}) + \beta_{2j}(\text{Stress}) + e_{ij}$$

$$\textit{Level } 2\text{: } \beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Religious Coping}) + r_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}(\text{Religious Coping}) + r_{1j}$$

$$\beta_{2j} = \gamma_{20} + \gamma_{21}(\text{Religious Coping}) + r_{2j}$$

Finally, we examined our religious commitment variables as potential moderators of the coping style × stress model. Again using multilevel modeling, we examined time and stress as Level 1 predictor variables, with coping style, the additional moderator (e.g., voluntary religious activities), and the coping × moderator interaction as Level 2 moderators of Level 1 predictors. Separate models were computed for each hypothesized coping style (positive and negative religious coping) and each moderator (voluntary religious activities; private religious activities; religious importance). For example, the final model for voluntary religious activities as a moderator of the negative religious coping × stress model was as follows:

$$\textit{Level } 1\text{: } \textit{Depression}_{ij} = \beta_{0j} + \beta_{1j}(\text{Time}) + \beta_{2j}(\text{Stress}) + e_{ij}$$

$$\begin{aligned}\textit{Level } 2\text{: } \beta_{0j} = {} & \gamma_{00} \\ & + \gamma_{01}(\text{Negative Religious Coping}) \\ & + \gamma_{02}(\text{Religious Activities}) \\ & + \gamma_{03}(\text{Religious Activities} \\ & \times \text{Negative Religious Coping}) + r_{0j}\end{aligned}$$

$$\begin{aligned}\beta_{1j} = {} & \gamma_{10} + \gamma_{11}(\text{Negative Religious Coping}) \\ & + \gamma_{12}(\text{Religious Activities}) \\ & + \gamma_{13}(\text{Religious Activities} \\ & \times \text{Negative Religious Coping}) + r_{1j}\end{aligned}$$

$$\begin{aligned}\beta_{2j} = {} & \gamma_{20} \\ & + \gamma_{21}(\textit{Negative Religious Coping}) \\ & + \gamma_{22}(\textit{Religious Activities}) \\ & + \gamma_{23}(\textit{Religious Activities} \\ & \times \textit{Negative Religious Coping}) + r_{2j}\end{aligned}$$

This data analytic strategy allowed us to examine whether religious coping moderates the relationship between stress and depressive symptoms over time, and whether any of the predictive relationships between stress, religious coping, and the cross-level religious coping × stress interaction are further moderated by religious commitment.

Main Effect of Stress on Depressive Symptoms

Means, standard deviations, and correlations among study variables are reported in Table 1.

As expected, a main effect of stress on depressive symptoms was observed. Stress and depressive symptoms covaried significantly over time, such that participants reporting higher amounts of stress across the study also reported more depressive symptoms (coefficient = .32, $t = 12.66$, $p < .001$). See Table 2.

Does Negative Religious Coping Moderate the Stress-Depression Relationship?

As hypothesized, negative religious coping was a significant moderator of the relationship between stress and depression (coefficient = .13, $t = 2.71$, $p < .01$). Youth reporting high use of negative religious coping strategies reported more depressive symptoms when faced with stress than youth with less utilization of negative religious coping strategies.

Table 1
Descriptive Statistics and Correlations for Baseline Study Measures

Variable	Mean	*SD*	1	2	3	4	5
1. Negative Religious Coping	.54	.53					
2. Positive Religious Coping	1.09	.85	.14				
3. Religious Importance	5.15	2.25	.09	.71*			
4. Private Religious Activities	2.60	1.72	.05	.68*	.69*		
5. Voluntary Religious Activities	3.86	1.19	.07	.52*	.55*	.48*	
6. Depressive Symptoms	3.14	3.25	.24*	−.08	−.10	−.06	−.04

* $p < .05$.

Does Positive Religious Coping Moderate the Stress-Depression Relationship?

Positive religious coping was only marginally significant as a moderator of the stress-depression relationship (coefficient = −.06, t = 1.73, p = .08). This marginal negative relationship indicates the relationship between stress and depression was marginally reduced for youth reporting greater utilization of positive religious coping strategies, suggesting a trend for positive religious coping to buffer the negative effects of stress on depression.

Are Either of These Effects Moderated by Religious Commitment?

As hypothesized, engagement in voluntary religious activities marginally moderated (coefficient = −.07, t = 1.74, p = .08) and engagement in personal religious practices significantly moderated (coefficient = −.09, t = 3.18, p = .002) the effect of negative religious coping on the stress-depression relationship. In both cases, the moderation was in the expected direction, such that the maladaptive effect of negative religious coping on the stress-depression relationship was strongest for youth with high religious commitment. Contrary to study hypotheses, overall religious importance did not additionally moderate the effects of negative religious coping on the stress-depression relationship. Similarly, none of the religious commitment variables moderated the effect of positive religious coping on the stress-depression relationship. See Tables 3 and 4.

Table 2
Multi-Level Model Predicting Depressive Symptoms as a Function of Stress and Religious Coping

	Coefficient	t	p
Level 1			
Stress	.32	12.66**	.000
Level 2			
NRC	.06	1.07	.286
PRC	−.06	−.28	.782
Cross-level interaction			
NRC × Stress	.13	2.71*	.007
PRC × Stress	−.06	−1.73	.084

Note. NRC = Negative Religious Coping; PRC = Positive Religious Coping.
* $p < .01$. ** $p < .001$.

Discussion

The purpose of this study was to examine whether individual differences in the use of religious coping strategies would moderate the well-established negative effects of stress on depressive symptoms in a community sample of adolescents. We expected negative religious coping to exacerbate the depressogenic effects of stress over time and positive religious coping to buffer the depressogenic effects of stress over time. Finally, we additionally examined whether the effects of religious coping on the stress-depression relationship may be moderated by one's expressed level of religious commitment.

The results of the present study support our first hypothesis that negative religious coping moderates the stress-depression relationship, exacerbating the effects of stress. As expected, we observed a main effect of stress on depression over time. Participants' levels of depressive symptoms during the field period were directly related to the amount of life stressors they reported. As negative religious coping was used, the strength of this stress-depression rela-

Table 3
Multi-Level Models Predicting Depressive Symptoms as a Function of Stress, Negative Religious Coping, and Religious Commitment

	Coefficient	*t*	*p*
Model 1: Negative Religious Coping & Religious Importance			
Level 1			
Stress	.35	3.73***	.000
Level 2			
Negative Religious Coping (NRC)	−.10	−.60	.547
Religious Importance	−.02	−1.35	.181
NRC × Religious Importance	.03	1.04	.301
Cross-level interaction			
NRC × Stress	.01	.03	.974
NRC × Stress × Religious Importance	.02	.86	.388
Model 2: Negative Religious Coping & Voluntary Religious Practice			
Level 1			
Stress	−.04	−.33	.739
Level 2			
Negative Religious Coping (NRC)	−.02	−.15	.885
Voluntary Religious Practice	−.03	−.74	.463
NRC × Voluntary Religious Practice	.02	.58	.561
Cross-level interaction			
NRC × Stress	.35	2.77**	.006
NRC × Stress × Voluntary Religious Practice	−.07	−1.74	.081
Model 3: Negative Religious Coping & Private Religious Practice			
Level 1			
Stress	−.07	−.58	.562
Level 2			
Negative Religious Coping (NRC)	.04	.26	.792
Private Religious Practice	.01	.436	.663
NRC × Private Religious Practice	.00	.06	.952
Cross-level interaction			
NRC × Stress	.54	3.97***	.000
NRC × Stress × Private Religious Practice	−.91	−3.18**	.002

* $p < .05$. ** $p < .01$. *** $p < .001$.

tionship increased significantly. This adds further evidence to the growing body of research demonstrating the harmful effects of negative religious coping (Ano & Vasconcelles, 2005). These findings also stand in agreement with several recent studies linking negative religious coping with depressive symptoms (e.g., Bjorck & Thurman, 2007), including recent prospective studies of medical rehabilitation patients (Hebert et al., 2009; Sherman et al., 2009). However, the present study extends those findings by examining the pathways by which negative religious coping affects mental health. The present findings provide evidence that negative religious coping functions as a vulnerability to depression by moderating the effects of life stressors much as other cognitive vulnerabilities do (Hyde, Mezulis, & Abramson, 2008). We found no main effect of negative religious coping on depressive symptoms; instead, negative religious coping appeared to function entirely as a moderator.

Our second hypothesis, that positive religious coping would moderate this stress-depression relationship by buffering against the effects of stress, received only marginal support. As positive religious coping was used over time, the link between stress and depression was not significantly lessened. However, the results did trend in this direction, closely approaching but not reaching significance. These findings are marginally supportive of the stress-buffering hypothesis, yet they fall short of the consistent findings reported in many cross-sectional stud-

Table 4
Multi-Level Models Predicting Depressive Symptoms as a Function of Stress, Positive Religious Coping, and Religious Commitment

	Coefficient	*t*	*p*
Model 1: Positive Religious Coping & Religious Importance			
Level 1			
Stress	.30	3.351***	.001
Level 2			
Positive Religious Coping (PRC)	.06	.46	.645
Religious Importance	−.01	−.62	.536
PRC × Religious Importance	−.00	−.29	.771
Cross-level interaction			
PRC × Stress	−.02	−.13	.895
PRC × Stress × Religious Importance	−.01	−.62	.537
Model 2: Positive Religious Coping & Voluntary Religious Practice			
Level 1			
Stress	.34	2.54*	.012
Level 2			
Positive Religious Coping (PRC)	−.17	−2.33*	.020
Voluntary Religious Practice	−.06	−2.15*	.032
PRC × Voluntary Religious Practice	.05	2.12*	.034
Cross-level interaction			
PRC × Stress	.04	.37	.709
PRC × Stress × Voluntary Religious Practice	−.04	−1.07	.284
Model 3: Positive Religious Coping & Private Religious Practice			
Level 1			
Stress	.50	2.74**	.007
Level 2			
Positive Religious Coping (PRC)	−.01	−.04	.970
Private Religious Practice	.01	.17	.865
PRC × Private Religious Practice	.00	.10	.921
Cross-level interaction			
PRC × Stress	−.05	−.52	.603
PRC × Stress × Private Religious Practice	−.01	−.59	.558

* $p < .05$. ** $p < .01$. *** $p < .001$.

ies. In a recent similar study, Bjorck and Thurman (2007) examined positive religious coping as a stress buffer in the prediction of depressive symptoms in 336 adult protestant church members. Using the same religious coping measure as the present study, they cross-sectionally examined relationships between positive religious coping, negative life events, and depressive symptoms. Unlike the present study, they found a strong main effect of positive religious coping on depression scores. In addition, they found a significant interaction between negative life events and positive religious coping such that the impact of negative life events on depression appeared to be reduced for those who reported high levels of positive religious coping. Other studies have reported similar findings. In their review and meta-analysis, Ano and Vasconcelles (2005) examined 29 cross-sectional studies that reported relationships between positive religious coping and negative psychological adjustment. Across these studies, many of which measured depressive symptoms, they found a moderate and significant cumulative effect of positive religious coping on negative psychological adjustment.

While the present findings do not contradict these studies, they provide only marginal prospective evidence for benefits of positive religious coping. As noted earlier, other prospective studies have had similar results. Hebert et al. (2009); Sherman et al. (2009), and Fitchett et al. (1999) all failed to find significant effects of positive religious coping on mental health out-

comes. Tix and Frazier (1998) found general measures of religious coping associated with increased positive adjustment. These studies all examined potential main effects of religious coping on mental health, not interactions. Our marginal finding may represent some weak moderating benefits of positive religious coping on the stress-depression relationship. It is possible that with a larger sample size we would have found a significant relationship; however, any effect would have to have been small as the large amount of data collected in the present study allowed for relatively high-power analyses. It is also possible that the present marginal finding would disappear with a larger sample size. This is a question that remains open for future investigation.

We also found support for our third hypothesis, that overall religious commitment variables might themselves moderate the effects of religious coping. The effect of negative religious coping on the stress-depression relationship increased significantly as youth spent time in voluntary religious practices such as prayer and meditation; a smaller marginal effect was observed for voluntary religious activities such as church attendance outside of school. That this effect was not observed for overall religious importance suggests that the efficacy of negative religious coping may rely more on the amount of time spent having negative coping experiences than the strength of individual religious commitment. It is also possible that self-report biases may have made the overall measures of religious commitment less valid. No studies to date have examined this question. A number of existing studies have examined how global religiosity variables impact depression (Eliassen, Taylor, & Lloyd, 2005; Schnittker, 2001; Wright, Frost, & Wisecarver, 1993); however, little distinction has been made thus far between religious practice and religious commitment in this literature.

The marginal moderating effect of positive religious coping was not moderated by any global religiosity variables, contrary to hypotheses. As noted previously, the present findings provided only marginal evidence that positive religious coping moderates the stress-depression relationship, which may explain why indices of religious commitment showed no effect in the present sample. If there is indeed a causal link between decreased depressive symptoms and global religiosity variables such as prayer, church attendance, and personal commitment, as has been postulated in previous research (Eliassen, Taylor, & Lloyd, 2005; Maddi, Brow, Khoshaba, & Vaitkus, 2006; Ross, 1990; Schnittker, 2001; Wright, Frost, & Wisecarver, 1993), it does not appear to be attributable to a moderating effect on the stress-depression relationship.

The present study was limited in its use of an exclusively adolescent sample. While this population is at high risk for depression and depressive symptoms, it is unknown whether they express religious coping the same as adults. While we believe it was a benefit to the existing literature to examine the effects of positive and negative religious coping prospectively in a nonmedical sample, this population may have its own challenges. The present study was also limited by a reliance on self-report measures. Future studies may wish to examine these variables using a broader array of measurement tools.

Religious coping has been found repeatedly to explain both positive and negative mental health outcomes, including depression in cross-sectional research. The present study found evidence strongly supportive of the findings of existing research on negative religious coping yet, as with other prospective studies, has failed to find strong evidence for the hypothesized relationships between positive religious coping and depression. Why this is still remains unclear. It is possible that positive religious coping scores may in part reflect a self-deceptive value-congruent bias, as has been suggested of other religiosity variables (e.g., Batson, Schoenrade, & Ventis, 1993; Barnes & Brown, 2010). As most existing religious coping research has been conducted on adults, another relevant question is whether religious coping functions in adolescents mirror those of adults. An interesting comparison would be to conduct the same study with a community adult sample similarly to Bjorck and Thurman (2007), who did find strong cross-sectional evidence in support of positive religious coping using similar measures. The present research, while providing new insights into the function and nature of religious coping, raises further questions for future prospective research.

Religiosity is turned to in times of stress, a fact that holds true for adolescents during the

developmental period most sensitive to stress and the development of depression. The present findings add to the growing body of evidence that the ways adolescents turn to faith in response to stress can dramatically impact mental health, for better or worse. Far from representing a blanket, active force over the mental health of youth, it seems religiosity influences the mental health of youth by adding to—and detracting from—their existing attempts to cope with stress.

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Received September 21, 2010
Revision received December 20, 2010
Accepted January 4, 2011 ■