

# The Use of Prayer to Manage Anger: Do Characteristics of the Emotional Experience Matter?

Shane Sharp<sup>1</sup> · Deborah Carr<sup>2</sup>

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**Abstract** Research has established that individuals use prayer to manage negative emotions, yet little is known about how the characteristics of individuals' emotional experiences—such as how long the emotions last and the source of emotions— influence the use of this emotion management strategy. Using data from the 1996 General Social Survey emotion module (N = 1114), we evaluate the extent to which the use of prayer to manage anger is associated with: the intensity, source, and duration of negative emotions experienced; reflection on the negative emotion-inducing incident; and perceived appropriateness of emotional reaction. Estimated logistic regression models show that characteristics of emotional experiences (except perceived appropriateness) are significantly associated with the use of prayer to manage anger. The analyses reveal that the appropriateness of using prayer to manage negative emotions varies based on specific aspects of the emotional experience, carrying implications for interventions such as pastoral counseling or anger management programs.

**Keywords** Prayer · Emotions · Emotion management

## Introduction

Prayer—or interactions with divine others (Cerulo and Barra 2008; Sharp 2012; Stark and Finke 2000)—is a quintessential religious activity. William James (2004 [1902]: 400) called prayer “the very soul and essence of religion.” The Pew Forum

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✉ Shane Sharp  
shanesharp@niu.edu

<sup>1</sup> Department of Sociology, Northern Illinois University, DeKalb, IL 60115, USA

<sup>2</sup> Boston University, Boston, MA, USA

on Religion and Public Life (2015) estimates that 71% of Americans pray at least once a week, with 55% praying on a daily basis. Compared to other religious practices—such as attending religious services or scripture reading—prayer is by far the most common religious practice performed in the United States.

While there are many motivations for praying (Poloma and Gallup 1991; Sharp 2012; Stark and Finke 2000), research shows that one motivation for praying is to manage negative emotions (e.g., Bade and Cook 2008; Koenig et al. 1988; Sharp 2010; Simon and Nath 2004; Thoits 1990). Emotion management refers to the manipulation of “attitudes, thoughts, or behaviors in the service of changing one’s own feelings” (Scheff 1979: 9; see also Hochschild 1983: 7). Emotion management practices are used most often to manage negative emotions such as anger and sadness, since both experiencing and expressing these emotions have particularly negative consequences for individuals, such as relationship dissolutions, experiences of depression, and the loss of social support one might have found beneficial.

While research has established that individuals use prayer to manage negative emotions, there is little understanding of how specific characteristics of emotional experiences influence the use of this practice. Emotional experiences can vary along several dimensions. Individuals may experience negative emotions only slightly, very intensely, or somewhere in between, and these spells may last for a few seconds, days, or even weeks (Doan 2012). The reasons why individuals experience negative emotions also vary: a negative emotion may be caused by an interaction with a co-worker or boss; by a family member or friend; or even by an inanimate object, such as a computer that crashes or a wireless internet router that stops working. Individuals also vary in how much they think about the experience that triggered their negative emotion: some may give the experience very little thought, whereas others ruminate over the experience for an extended period of time. The perceived appropriateness of an experienced emotion can also vary: sometimes people feel justified in experiencing a negative emotion, while other times the reaction is deemed inappropriate or overblown. Prior studies that have used monolithic measures capturing the mere presence or absence of individuals’ emotional states may offer a misleading characterization of the association between the use of prayer and emotional experience, as these coarse measures of emotion fail to capture the vast heterogeneity in the experience of emotions.

To fill this research gap, we explore how characteristics of emotional experiences influence individuals’ use of prayer to manage the negative emotion of anger. To do this, we analyze data from the General Social Survey (GSS), a nationally representative sample of nearly 1500 adults that in 1996 administered a topical module on how respondents experienced and managed their last experience of anger. Although scholars have long noted the benefits of using religious practices in the coping process (Ellison and Levin 1998; Pargament 1997), our analysis highlights the importance of contextual factors—such as the characteristics of negative emotional experiences—in determining when individuals use religious practices in the coping process.

## Emotional Experiences and the Use of Prayer to Manage Anger: Five Hypotheses

Emotion management refers to the process of adjusting one's "attitudes, thoughts, or behaviors in the service of changing one's own feelings" (Scheff 1979: 9; see also Hochschild 1983). When individuals experience negative emotions such as anger and sadness, they often use emotion management techniques to change these feelings or lessen their intensity. When individuals engage in emotion management, they often seek out supportive others for help. During these interactions with supportive others, individuals receive both instrumental and expressive support—such as a shoulder to cry on, kind words, and practical advice—they can use to help them manage negative emotions (Thoits 1984, 1990).

Most research on emotion management focuses on the ways that people turn to concrete others to help manage negative emotions. However, emerging research suggests individuals also interact with supernatural others such as God, gods, and guardian angels for resources to help them manage negative emotions. Individuals interact with these supernatural others through the act of prayer. According to Sharp (2010), prayer helps individuals manage negative emotions because it is an "imaginary social support interaction" that provides individuals with coping resources individuals can use to manage these negative emotions. In particular, interactions with God through prayer provides individuals with five resources they can use to manage negative emotions: (1) an other to whom one can express and vent negative emotions, (2) positive reflected appraisals, (3) a cognitive frame that helps individuals see situations differently, (4) an other with whom one can interact to "zone out" negative emotion inducing stimuli, and (5) an emotion management model to imitate.

Conceptualizing prayer as an imaginary social support interaction that provides individuals with emotion management resources can help explain why the characteristics of emotional experiences are plausibly associated with the use of prayer to manage negative emotions. Specifically, we hypothesize that the intensity of emotions experienced, the source of negative emotional experiences, the duration of negative emotional experiences, the frequency with which individuals ruminate over negative emotion inducing incidents, and the perceived appropriateness of negative emotions experienced are significantly associated with the use of prayer to manage negative emotions.

First, individuals may turn to prayer to manage negative emotions when these emotions are particularly intense. Expressing intense negative emotions towards concrete others may cause these others to respond with negative reprisals, such as verbal insults, physical aggression, or the dissolution of the relationship. Individuals who fear or seek to avoid such reactions may instead turn to prayer to express particularly intense negative emotions. Prayer provides an other to whom individuals can express intense negative emotions without fear of reprisal or escalation. For instance, victims of intimate partner violence often turned to prayer as a means to express the intense anger they felt toward their abusers because they

feared they would experience further abuse from their partners if they expressed this anger towards them (Sharp 2010).

Conversely, when negative emotions are mildly or less intensely felt, individuals may feel comfortable expressing these more subdued emotions towards their sources. Individuals may be more likely to express negative emotions that are mildly felt towards the sources of these emotions because individuals can express these emotions more calmly and clearly, and are thus more likely to be met with a calm and measured response from these sources. However, when individuals intensely feel negative emotions, they may be more likely to “lash out” at the source of the negative emotions, increasing the likelihood that the source will respond with negative reprisal. Thus, because of the high level of risk or uncertainty in expressing intense negative emotions to concrete others, we expect more intense negative emotions will be associated with a greater likelihood of using prayer to manage negative emotions.

**Hypothesis 1** The more intense the negative emotion experienced, the more likely individuals will use prayer to manage this negative emotion.

Second, the source of negative emotions may also influence whether a person turns to prayer to manage negative emotions. Specifically, we hypothesize that individuals are more likely to use prayer to manage negative emotions when a family member (e.g., spouse, parent, sibling, child) has caused this negative emotion than when an individual from one’s work has caused the negative emotion. Because of their frequency, ubiquity, and psychological salience, chronic strains related to one’s family are particularly distressing (e.g., Pearlin 1980). In cases where family members have triggered the negative emotions, the very persons who might otherwise be sources of support are instead the sources of distress. Individuals often rely heavily on family-based social networks for help during times of struggle and crisis (Stack 1973) and therefore may be hesitant to express negative emotions toward family members for fear of losing this essential source of social support. However, prayer provides individuals with a number of resources they can use to manage negative emotions caused by family members. For instance, if a person is angered by her spouse and fears what may happen if she were to express this emotion to her, she could turn to prayer because it can provide her with an other to whom she can express this anger without fear of negative reprisal.

We expect that individuals will be less motivated to use prayer to manage negative emotions when the source of the negative emotion is a work relation, such as a colleague, boss, or client. Most workplaces have formal grievance policies that employees can use to express their displeasure toward their fellow co-workers or their bosses (Edelman 1990; Sutton et al. 1994). Moreover, the relationships formed in the workplace are often not as emotionally salient as familial relationships, and thus individuals may be less fearful of potentially negative repercussions of relationship strain or dissolution when expressing negative emotions towards those in the workplace. Also, in situations where customers, clients, or bosses cause negative emotions, individuals can express these negative emotions to their co-workers, commiserating with one another over belligerent and demanding customers, clients, or bosses.

**Hypothesis 2** Individuals are more likely to use prayer to manage negative emotions when the source of these negative emotions is family related than when the source is work related.

Third, the duration of negative emotional experiences may be associated with the use of prayer to manage emotions. Emotional states can last for a few seconds to several days (Doan 2012). When negative emotional experiences last for extended periods of time, they become “feeling traps” (Scheff 1990), where the original emotion influences subsequent interactions such that it prolongs the experience of the original emotion. When individuals fall into feeling traps, they may seek out the emotion management resources provided by prayer to escape these traps. For instance, prayer can provide individuals with a divine other to whom they can express negative emotions they cannot seem to shake; once individuals express these emotions, the feelings dissipate and have less of an impact on subsequent interactions. Prayer also may provide a set of “reinterpretive cognitions” that help individuals view their experiences and situations in such a way as to alleviate long-felt negative emotions, thus lessening the impact the original emotion has on subsequent interactions. Prayer also may provide an emotion management model that individuals can emulate to help escape feeling traps. For instance, through prayer individuals often develop forgiving attitudes towards those that have wronged them because prayer reminds them that God is forgiving and that they should emulate His actions (Sharp 2010). These cognitive frames can assuage negative feelings and their immediate consequences, thus helping individuals escape feeling traps. Conversely, individuals who experience negative emotions that are shorter in duration may not feel the need to use prayer to manage these emotions. Negative emotion spells that dissipate relatively quickly are less likely to influence subsequent interactions and trigger feeling traps.

**Hypothesis 3** The duration of emotional experiences will be positively associated with the use of prayer to manage negative emotions.

Fourth, the frequency with which individuals think about negative emotion-inducing incidents may also be linked to the use of prayer to manage negative emotions. Thinking frequently about the events that induced negative emotions may lead to a process of rumination in which individuals continue to rehash and dwell on the negative experience. This process of rumination over the event creates a context in which individuals relive the negative emotional experiences (Doan 2012; Ekman 2003; Nolen-Hoeksema et al. 2008). When individuals feel that they cannot stop thinking about negative emotion-inducing events, they may turn to prayer. One of the emotion management resources that prayer provides is a way to “zone out” negative emotion-inducing stimuli (Sharp 2010). By interacting with divine others through prayer, individuals can distract themselves from the people, things, and experiences—including recurring thoughts—that are causing them to experience negative emotions. Thus, when individuals find themselves unable to stop thinking about a negative emotion-inducing incident, they may turn to prayer to distract themselves from these thoughts. Conversely, individuals who do not think about or dwell on the negative emotion inducing event may be less motivated to use prayer;

they may not require an emotion management resource that helps them to “zone out” the experience from their consciousness.

**Hypothesis 4** The frequency of cognitive reflection about negative emotion-inducing incidents will be positively associated with the use of prayer to manage negative emotions.

Finally, the perceived appropriateness of one’s emotional reactions may influence the use of prayer to manage negative emotions. When individuals believe that their emotional reactions are inappropriate, they experience what Thoits (1985) calls “emotional deviance.” Experiences of emotional deviance may lead individuals to label themselves as mentally ill. To manage experiences of emotional deviance, individuals often seek out supportive others who will help them reinterpret their feelings as appropriate. Individuals may see God or a supernatural other as a supportive and non-judgmental other that they can seek out when they perceive their emotions to be inappropriate. As Sharp (2010) argues, prayer helps individuals manage emotions by providing reinterpetive cognitions that help individuals view things in a different light. Thus, individuals may turn to God through prayer as a way to cognitively reframe their emotional reactions as appropriate and thus alleviate their feelings of emotional deviance. Conversely, when individuals feel that their emotional reactions are justified, they may not feel it necessary to think about their situations differently. These individuals do not feel the need for reinterpetive cognitions, and thus would feel less need to turn to prayer for these cognitions.

**Hypothesis 5** The less individuals believe their emotional reactions are appropriate, the more likely they are to use prayer to manage negative emotions.

## Data and Methods

### Data

We use data from the 1996 wave of the General Social Survey (GSS), a random sample of 2904 noninstitutionalized American adults 18 years of age and older. The response rate for this wave of the survey was 76%. The 1996 wave was the most recent wave of the GSS that included a topical module assessing respondents’ emotional experiences in a variety of social contexts. This module was administered to a randomly selected 50% subsample ( $n = 1460$ ) in order to reduce the overall length of interview.

Our analysis focuses on the 77% of respondents ( $n = 1125$ ) who could recall and describe an event during the past month in which they felt “angry, irritated, or annoyed.” Those who could recall and describe such an event were asked several follow-up questions about this particular experience of anger, such as how intensely they experienced the anger, the source of the anger, how long they experienced the anger, how often they have thought about the incident that elicited the anger, the perceived appropriateness of their emotional reaction, and the strategies they used to

manage the anger. We dropped the 11 cases that did not provide valid responses to the question assessing whether they used prayer to manage the anger that they experienced, resulting in a final analytic sample of 1114 persons. We used Stata's *ice* (imputation by chained equation) command to impute missing values for model variables.

## Dependent Variable

The study outcome is whether participants used prayer to manage anger for the particular anger-inducing episode they recalled. The GSS interviewers read a list of sixteen emotion-management strategies commonly used to manage anger and asked respondents if they employed any after experiencing anger during the event recalled. Respondents were asked to indicate all that applied. One strategy was “praying to God for help.” This variable is dichotomous, where 1 = yes. Twenty-eight percent of the sample reported using this strategy to help manage their anger.

## Main Independent Variables

### *Intensity of Anger*

Concerning the anger-inducing episode recalled, the GSS asked respondents how intensely they experienced the anger. Scores range from zero (not at all intense) to 10 (very intense). We treat this as a continuous measure in the analysis.

### *Source of Anger*

The GSS asked respondents who or what caused them to feel angry during the last time they experienced anger. We constructed three mutually exclusive categories for the source of anger: family (e.g., spouse, sibling, child, parent), work (e.g., co-worker, boss, client/customer), or another source.<sup>1</sup> Family is the reference category.

### *Duration of Anger*

The GSS asked respondents, “Emotions eventually fade away. How long did your anger or irritation last?” in regards to the last time they recalled being angry. We coded duration of anger into three categories: (1) less than 1 h (reference category), (2) from 1 to 24 h, and (3) more than 1 day or felt continuously up until now.

### *Reflection on Anger-Inducing Incident*

The GSS asked respondents, “Even after they go away, feelings sometimes come back when we think about things. How often have you thought about this situation

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<sup>1</sup> These other sources include friend, stranger, object, self, company, government employee, service employee, public figure, healthcare worker, teacher, landlord, criminal, and other.

since it happened?” Categories include “very often” (reference category), “every once in a while,” “just once or twice,” and “never.”

### *Perceived Appropriateness of Emotional Reaction*

Respondents were asked, “Did you feel like your reaction to the situation was appropriate, or did it seem wrong to you somehow?” Respondents were asked to choose a number between zero and 10, with zero representing “completely right” and 10 representing “completely wrong.” We treat this as a continuous variable in our analysis.

### **Control Variables**

We control for several factors that have been found in prior studies to be associated with prayer and the use of prayer to manage anger. We control for *gender* (1 = female) because women are more likely than men to pray and to use prayer to manage anger (Baker 2008; Pew Forum 2015; Simon and Nath 2004; Sharp et al. 2016). We also control for *race* (white [reference category], black, other), since blacks are more likely than whites to pray and to use prayer to manage anger (Baker 2008; Pew Forum 2015; Sharp et al. 2016). We also control for *age* (in years), since age is positively associated with frequency of prayer (Pew Forum 2015). Finally, we also control for *education* (in years) and *family income* (\$0–19,999 [reference category], \$20,000–39,999, \$40,000–74,999, and \$75,000 or higher) because socioeconomic status is negatively associated with frequency of prayer (Baker 2008).

We also control for several measures of religiosity because religiosity is positively associated with the use of prayer to manage negative emotions (Sharp et al. 2016). We control for *religious affiliation* (evangelical Protestant [reference category], mainline Protestant, Catholic, other faith, no affiliation) because evangelical Protestants are more likely to use prayer to manage emotions.

We also control for *frequency of prayer in general* (1 = once a day or more) because those who pray frequently are more likely to use prayer to manage anger. Although the original response categories were “several times a day,” “once a day,” “several times a week,” “once a week,” “less than once a week,” and “never,” we use a dichotomous indicator because 43% of respondents reported praying once a day or more. Consistent with the notion that prayer is used for a range of purposes beyond emotion management, we found only a modest zero-order correlation between frequency of prayer and using prayer to manage anger ( $r = 0.39$ ).

Finally, we control for *religious attendance* (never [reference category], several times a year or less, once a month to nearly every week, and every week or more than once a week) because those who attend frequently are more likely to use prayer to manage emotions.



## Analytic Strategy

We first present descriptive statistics and the results of bivariate analyses, contrasting those who pray to manage anger versus those who do not, with respect to all study variables. Second, we estimate multivariate logistic regression models to evaluate whether significant bivariate associations hold when controlling for potential confounders. Third, we estimate a full model with all the variables included in the analysis.

## Results

### Bivariate Analysis

We present the results of our bivariate analysis in Table 1. We found statistically significant differences between those who used prayer to manage anger and those who did not for four of the five measures of emotional experience. Those who used prayer to manage anger experienced more intense anger than those who did not use prayer (6.75 [.33] vs. 6.03 [.20],  $p < .001$ ). Those who used prayer to manage anger were significantly more likely than those who did not to be angered by a family member (38 vs. 26%,  $p < .001$ ) than by work-related factors (23 vs. 31%, *ns*). They also experienced significantly longer durations of anger relative to those who did not use prayer; 43% of respondents who used prayer to manage anger reported experiencing the anger for more than 1 day, while only 26% of respondents who did not use prayer to manage anger reported this ( $p < .001$ ). Those that used prayer to manage anger reflected on the anger-inducing experience more frequently than those who did not use prayer; while 25% of respondents who used prayer to manage anger reported reflecting on the anger-inducing incident “very often,” only 15% of respondents who did not use prayer to manage anger reported reflecting “very often” ( $p < .001$ ). However, we found no significant differences between those who did and did not use prayer in regards to perceived appropriateness of emotional reaction (3.52 [.39] vs. 3.73 [.23], *ns*).

Several sociodemographic factors were significantly associated with the use of prayer to manage anger. Women were significantly more likely than men, blacks significantly more likely than whites, and those with low incomes significantly more likely than those with high incomes to use prayer to manage anger. However, we found no significant education or age differences. Religious affiliation, frequency of prayer, and frequency of religious attendance all were significantly associated with the use of prayer to manage anger, in ways consistent with prior literature. Those who belong to evangelical Protestant denominations were significantly more likely to use prayer to manage anger than those who belong to other Christian denominations, other religions, and unaffiliated persons. Those who pray once a day or more were significantly more likely than those who pray less than once a day to use prayer to manage anger. Finally, frequency of religious attendance is significantly positively associated with using prayer to manage anger.

**Table 1** Proportions or means (and standard deviations) for all independent variables by use of prayer to manage anger, General Social Survey (1996) (N = 1114)

	Total sample	Used prayer to manage anger	Did not use prayer to manage anger
<i>Total sample</i>		.28	.72
<i>Intensity of anger (0–10)</i>	6.23 (.17)	6.75 (.33)	6.03*** (.20)
<i>Source of anger</i>			
Family	.29	.38	.26***
Work	.29	.23	.31
Other	.42	.39	.43
<i>Duration of anger</i>			
Less than an hour	.30	.21	.34***
1–24 h	.39	.36	.40
More than 1 day	.31	.43	.26
<i>Reflection on anger inducing-incident</i>			
Very often	.15	.25	.15***
Every once in a while	.31	.37	.30
Just once or twice	.31	.22	.32
Never	.23	.16	.23
<i>Perceived appropriateness of anger (0–10)</i>	3.67 (.19)	3.52 (.39)	3.73 (.23)
<i>Gender</i>			
Male	.43	.29	.48***
Female	.57	.71	.52
<i>Race</i>			
White	.82	.72	.86***
Black	.13	.22	.09
Other	.05	.06	.05
<i>Age (in years)</i>	43.1 (1.34)	43.6 (2.2)	42.8 (1.58)
<i>Education (in years)</i>	13.6 (2.9)	13.4 (2.8)	13.7 (2.9)
<i>Income</i>			
\$0–19.9K	.44	.51	.41**
\$20–39.9K	.36	.36	.35
\$40–74.9K	.15	.10	.17
\$75K or more	.06	.03	.07
<i>Religious affiliation</i>			
Evangelical Protestant	.29	.43	.24***
Mainline Protestant	.26	.25	.26
Catholic	.24	.19	.26
Other	.08	.09	.07
None	.13	.05	.16

**Table 1** continued

	Total sample	Used prayer to manage anger	Did not use prayer to manage anger
<i>Frequency of prayer</i>			
Once a day or more	.45	.85	.43***
Less than once a day	.55	.15	.57
<i>Religious attendance</i>			
Never	.16	.07	.19***
Several times a year or less	.39	.24	.45
1–3 times a month	.22	.28	.20
Weekly or more	.23	.41	.16
N	1114	310	804

Significant differences ( $X^2$  or  $t$  test) between subgroups or means of independent variables on dependent variable noted as follows: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$  (two-tailed)

## Multivariate Analysis

We estimated multivariate logistic regression models to evaluate the extent to which the significant associations between emotional experience factors and the use of prayer to manage anger persist after accounting for sociodemographic and religious characteristics. We show these results in Table 2, presenting odds ratios for ease of interpretation. Model 1 includes intensity of anger along with sociodemographic and religious characteristics. As hypothesized, intensity of anger is positively associated with the use of prayer to manage anger. For every one-point increase in reported intensity, the odds of using prayer to manage anger rise 16% (Odds ratio [OR] 1.16,  $p < .001$ ).

Model 2 includes measures of the source of anger plus sociodemographic and religious controls. As hypothesized, those angered by family members are significantly more likely to use prayer to manage anger than those angered at work. The odds of those angered at work using prayer to manage anger is 36% less than the odds of those who were angered by family members (OR 0.64,  $p < .05$ ).

Model 3 includes the measure of the duration of anger along with sociodemographic and religious controls. As hypothesized, longer spells of anger are positively associated with the use of prayer to manage anger. Those who reported that their anger lasted somewhere between one and 24 h are almost twice as likely (OR 1.82,  $p < .01$ ) and those who reported that their anger lasted more than 1 day are four times as likely (OR 3.97,  $p < .001$ ) to report using prayer to manage anger relative to those who reported that their anger lasted less than an hour.

Model 4 includes measures of reflection about the anger-inducing incident plus sociodemographic and religious controls. As hypothesized, reflection was positively associated with the use of prayer to manage anger. The relationship is monotonic; as the frequency of reflection about the anger-inducing event decreases, so do the odds of using prayer to manage emotions. Respondents who thought about the event “every once in a while” were about half as likely as those who thought about the

**Table 2** Multivariate logistic regression models predicting the use of prayer to manage anger (N = 1114)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Intensity of anger</i> (0–10)	1.16*** (1.09–1.24)					1.05 (0.98–1.13)
<i>Source of anger</i> <sup>a</sup>						
Work		0.64* (0.42–0.98)				0.61* (0.39–0.95)
Other		0.76 (0.53–1.08)				0.69 (0.47–1.01)
<i>Duration of anger</i> <sup>b</sup>						
1–24 h			1.82** (1.18–2.81)			1.61 (1.05–2.49)
More than 1 day			3.97*** (2.69–5.87)			2.74*** (1.74–4.30)
<i>Reflection on anger inducing incident</i> <sup>c</sup>						
Every once in a while				0.49** (0.29–0.83)		0.55* (0.32–0.96)
Just once or twice				0.26*** (0.15–0.43)		0.33*** (0.19–0.58)
Never				0.20*** (0.11–0.36)		0.32*** (0.17–0.61)
<i>Perceived appropriateness of anger</i> (0–10)					0.99 (0.95–1.04)	0.99 (0.94–1.04)
<i>Sex</i> (1 = female)	1.44* (1.01–2.07)	1.44* (1.02–2.03)	1.39 (0.98–1.98)	1.44* (1.02–2.02)	1.51* (1.08–2.10)	1.26 (0.88–1.81)
<i>Race</i> <sup>d</sup>						
Black	1.84** (1.17–2.87)	1.93** (1.18–3.18)	1.84* (1.08–3.13)	2.04** (1.21–3.44)	2.01** (1.23–3.30)	1.78* (1.02–3.11)
Other race	1.56 (0.79–3.09)	1.50 (0.64–3.47)	1.55 (0.68–3.55)	1.68 (0.73–3.88)	1.55 (0.67–3.58)	1.61 (0.69–3.73)
<i>Age</i>	0.99 (0.98–1.01)	0.99 (0.98–1.00)	0.99 (0.98–1.00)	0.97 (0.92–1.03)	0.99 (0.98–1.00)	0.99 (0.98–1.00)
<i>Education (in years)</i>	1.00 (0.94–1.07)	1.00 (0.95–1.07)	0.99 (0.93–1.05)	0.97 (0.92–1.03)	1.00 (0.94–1.06)	0.98 (0.92–1.05)
<i>Income</i> <sup>e</sup>						
\$20–39.9K	1.17 (0.74–1.86)	1.13 (0.73–1.76)	1.20 (0.77–1.86)	1.27 (0.83–1.96)	1.09 (0.71–1.67)	1.38 (0.88–2.16)
\$40–47.9K	0.66 (0.34–1.29)	0.69 (0.40–1.24)	0.62 (0.34–1.15)	0.76 (0.41–1.39)	0.66 (0.36–1.19)	0.72 (0.39–1.32)
\$75K or more	1.05 (0.32–3.44)	0.84 (0.28–2.56)	0.87 (0.29–2.62)	1.07 (0.34–3.35)	0.81 (0.27–2.47)	1.07 (0.35–3.31)
<i>Religious affiliation</i> <sup>f</sup>						
Mainline Protestant	0.81 (0.54–1.22)	0.85 (0.55–1.32)	0.81 (0.51–1.28)	0.86 (0.54–1.38)	0.85 (0.55–1.31)	0.82 (0.51–1.32)

**Table 2** continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Catholic	0.56** (0.36–0.86)	0.58* (0.36–0.93)	0.51** (0.31–0.83)	0.59* (0.37–0.95)	0.59* (0.36–0.94)	0.51** (0.32–0.83)
Other faith	1.04 (0.56–1.94)	1.01 (0.52–1.96)	0.85 (0.41–1.74)	1.15 (0.56–2.38)	1.01 (0.53–1.94)	0.96 (0.44–2.10)
None	0.79 (0.38–1.64)	0.78 (0.38–1.62)	0.73 (0.35–1.52)	0.82 (0.41–1.65)	0.77 (0.37–1.60)	0.80 (0.39–1.63)
Frequency of prayer (1 = once a day or more)	5.27*** (3.22–8.63)	5.28*** (3.22–8.64)	5.60*** (3.34–9.38)	5.90*** (3.51–9.91)	5.26*** (3.21–8.62)	6.13*** (3.59–10.48)
<i>Religious attendance<sup>e</sup></i>						
Several times a year or less	1.25 (0.67–2.13)	1.22 (0.64–2.33)	1.20 (0.62–2.31)	1.22 (0.64–2.31)	1.20 (0.63–2.28)	1.28 (0.66–2.48)
1–3 times a month	2.13* (1.10–4.12)	2.01 (1.00–4.04)	2.16* (1.08–4.30)	2.39* (1.17–4.85)	1.95 (0.97–3.92)	2.64** (1.29–5.40)
Once a week or more	3.60*** (1.91–6.81)	3.20*** (1.66–6.14)	3.72*** (1.94–7.16)	4.03*** (2.07–7.83)	3.20*** (1.66–6.15)	4.44*** (2.26–8.73)
X <sup>2</sup> ; df	279.91; 17	263.26; 18	304.86; 18	308.21; 19	258.55; 17	340.51; 25
Pseudo-R <sup>2</sup>	0.21	0.20	0.23	0.23	0.20	0.26

Relative odds (exponentiated betas) are presented, with confidence intervals in parentheses. Omitted category of dependent variable is persons who did not use prayer to manage anger. Significance levels noted are: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$  (two-tailed)

- <sup>a</sup> Reference category is family
- <sup>b</sup> Reference category is less than 1 h
- <sup>c</sup> Reference category is all the time
- <sup>d</sup> Reference category is white
- <sup>e</sup> Reference category is \$0–19,999
- <sup>f</sup> Reference category is evangelical Protestant
- <sup>g</sup> Reference category is never attends religious services

event “all the time” to use prayer to manage anger (OR 0.49,  $p < .01$ ). Those who said that they thought about the event “just once or twice” or “never” had just 74% (OR 0.26.,  $p < .001$ ) and 80% (OR 0.20,  $p < .001$ ), respectively, of the odds of those who said that they thought about the event “all the time” of using prayer to manage anger.

Model 5 includes the measure of perceived appropriateness of anger plus sociodemographic and religious controls. This variable was not statistically significant in the multivariate analyses (OR .99, *ns*). Thus we found no support for Hypothesis 5.

Model 6 includes all measures of emotional experiences, plus all religious and sociodemographic controls. All the statistically significant relationships identified in Models 1 through 5 remain, except one. With all the measures of emotional experience included, intensity of anger no longer significantly predicts the use of prayer to manage anger (OR 1.05, *ns*). Supplementary analysis (not shown) reveals that duration of anger and the reflection on the anger-inducing incident account for

intensity of anger differences. The zero-order correlations between the intensity of anger and duration of anger and reflection on anger-inducing incident are  $r = -.28$  and  $r = .42$ , respectively. These results suggest that intensity of anger significantly predicts the use of prayer to manage anger because those who experience intense anger also experience longer durations of anger and reflect on the anger-inducing incident more than those who experience less intense anger.

## Discussion

Previous research has documented that individuals use prayer to manage negative emotions, yet we know of no studies that have considered how the characteristics of emotional experiences influence the use of this strategy. Using data from the GSS's 1996 emotions module, our study is the first to demonstrate that the source of negative emotions, the duration of negative emotions, and the frequency of cognitive reflection about negative emotion-inducing incidents are all significantly associated with the use of prayer to manage negative emotions, even after taking into account other characteristics of emotional experiences and other predictive sociodemographic and religious factors. We found partial evidence that the intensity of negative emotions experienced influences the use of prayer to manage emotions in our initial analyses, but upon further exploration we found that this association was mostly because those who experience intense negative emotions also experience them for longer periods of time and more frequently think about the incident that induced the negative emotions.

We did not find a significant association between the perceived appropriateness of one's emotional reaction and use of prayer to manage emotions. This pattern held in both bivariate and multivariate analyses. This indicates that individuals are just as likely to turn to prayer to manage emotions when they feel their emotional reactions are appropriate as they are when they feel their reactions are inappropriate. Perhaps because many individuals view God as loving and caring (Kunkel et al. 1999; Noffke and McFadden 2004), they feel comfortable interacting with this deity whether or not they feel their emotional reactions are warranted.

Taken together, our results suggest that individuals may turn to prayer to manage negative emotions when the intensity, duration, or source of negative emotions experienced makes it difficult to turn to members of one's immediate social network for support, making a supernatural other such as God a more appropriate, comfortable, and accessible source of support. As we hypothesized, individuals experiencing particularly intense feelings of anger may recognize the potentially harmful consequences of expressing these feelings to significant others. Highly intense emotional displays may be met with retaliation and an escalation of negative emotion, perhaps ending with aggression or relationship dissolution. Likewise, individuals who are angry at family, in particular, may be forced to look beyond their immediate circle of support, who may be either the direct source of anger or complicit in the event provoking the anger. As such, those who are angry at family or who feel particularly intense emotions may turn to prayer for resources to help them manage these emotions (Sharp 2010).

Our study has several limitations. First, the GSS assessed the use of prayer to manage the emotion of anger specifically, and thus we could not consider other negative emotions such as sadness or fear, or positive emotions such as happiness. However, individuals also use prayer to manage other negative emotions such as sadness and fear (Sharp 2010), and research links the frequency of prayer with happiness and subjective well-being (e.g., Ellison 1991; Lim and Putnam 2010). Future work should evaluate whether the characteristics of individuals' emotional experiences influence the use of prayer to manage other negative and positive emotions.

Second, our fully adjusted model only accounted for 26% of the variance in the use of prayer to manage emotions. Future work should seek to identify other factors that influence the use of prayer in the emotion management process. We believe these factors might include personality characteristics such as self-efficacy, cultural contexts such as the priming of religious scripts through exposure to religious media, and past experiences of successful or efficacious use of religious practices in the coping process.

A third limitation involves the operationalization of our outcome measure. The GSS asked individuals if they "prayed to God for help" to help them manage their anger. This allows us to identify who did and did not use prayer to manage anger. However, this coarse indicator does not provide more fine-grained detail, such as how often one used prayer to manage anger, how long these prayers lasted, or whether these prayers occurred in private or public (e.g., prayer group) contexts. A fuller set of contextual measures would help to clarify why and how the use of prayer to manage emotions is associated with the characteristics of emotional experience. We encourage future researchers to include such measures in surveys that explore prayer, emotion management, and emotional experience.

Fourth, the GSS administered the emotion management in 1996 only. Although these data are more than 20 years old, we do not believe the age of the data undermines our findings or the strength of our conclusions. It is plausible that the overall proportion of Americans who use prayer to manage anger has declined during this period, reflecting both increases in the proportion who do not claim a religious preference (Hout and Fischer 2014) and increases in the use of internet technology which may provide a range of alternative anger management venues. However, estimating a population estimate of the rate at which American adults use prayer to manage anger is not our focal goal. Rather, we sought to identify aspects of the emotional experience that are associated with the use of prayer, and we have no reason to believe that these associations are historically or contextually dependent.

Finally, because of the cross-sectional nature of the data, we could not make strong causal claims regarding causal ordering. We believe we make a compelling case on conceptual grounds as to why the characteristics of emotional experiences may lead people to use prayer to manage negative emotions. However, it is certainly plausible that the use of prayer to manage negative emotions contributes to some of these emotional experiences. For example, using prayer may also cause individuals to think more about the negative emotion-inducing event, since during the act of prayer individuals may ruminate over the event more. This additional rumination

over the event, in turn, may cause individuals who use prayer to manage anger to experience anger longer in duration than those who do not pray. Determining the correct causal order among these variables will require longitudinal survey or experimental data, which we encourage future researchers to collect.

## Conclusion

Scholars have long noted the importance of religious beliefs and practices in the coping process (e.g., Carver et al. 1989; Ellison and Levin 1998; Ellison and Taylor 1996; Pargament 1997; Pargament et al. 1998, 2004). Most of this work has focused on how the use of religious coping influences adaptation to stress, focusing primarily on the consequences of stress, such as subjective well-being, mental health, and physical health. However, little work has investigated how contextual factors influence the use of religion in the coping process, or the specific ways that religious coping is used. We focus on a new outcome, the use of prayer to manage negative emotions, and show that individuals tend to choose this strategy when they experience negative emotions for a long duration and when they frequently ruminate over negative emotion-inducing events. Further, we find that people are particularly likely to turn to prayer when their anger stems from interactions with family rather than work acquaintances.

Taken together, our work suggests that using prayer to manage negative emotions may be one of several religious coping practices individuals use to manage stress and the emotions caused by this stress, joining things like attending religious services, seeking support from religious leaders, and relying on members of one's congregation during times of need. Our results suggest that this approach may be most desirable only in particularly circumstances, such as when negative emotions cannot be expressed safely to others because the intensity and duration of these negative emotions is particularly overpowering. Our results may be instructive to clinicians and especially pastoral counselors, for it suggests that when individuals are struggling with negative emotion-provoking exchanges with family and kin, and when these spells are prolonged and intense, prayer may be an effective, safe, and easily accessible way for adults to manage these negative emotions.

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