

Article

# Anger toward God(s) Among Undergraduates in India

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**Abstract:** Many people report occasional feelings of anger toward God. However, most evidence pertains to western, predominantly Christian populations. In this study, Indian university students ( $N = 139$ ; 78% Hindu) completed a survey about anger toward God(s). Polytheists (45%) chose one god to focus on. Measurement invariance tests supported comparisons of anger toward God between the predominantly Hindu Indian sample and three mostly Christian U.S. undergraduate samples ( $N_s = 1040, 1811, 918$ ). Indian participants reported more current and situation-specific anger toward God than U.S. participants, but less anger toward God over their lifetimes. In the Indian sample, anger toward God correlated positively with other indicators of religious/spiritual struggle, seeing God as cruel and distant, and seeing anger toward God as morally acceptable. Regarding an event involving suffering, anger toward God related positively to the event's harmfulness, seeing God as responsible, seeing God's actions as negative, and responses involving substance use and protest toward God. Generally, these findings replicated those from prior U.S. samples. Polytheists who preferred some gods over others or chose to follow a different god reported greater anger toward gods. Results uphold the comparability of anger toward God(s) between Indian and U.S. undergraduates while beginning to reveal key differences.

**Keywords:** spiritual struggle; anger at God; religious coping; divine struggle; religious struggle

## 1. Introduction

When people encounter suffering in their own lives, or when they witness the suffering of others, they may feel the need to seek explanations: Who or what is responsible for causing this suffering, and why? Even if people can quickly offer natural explanations, they may also assign part of the responsibility for suffering to a divine agent (Hale-Smith et al. 2012). In referring to such a divine agent, many people use the term *God* (or, in polytheistic contexts, a god; we use "God" throughout to refer to either a single God or multiple gods except where either is specified). When people see God as a direct or indirect cause of suffering, some will become angry at God (Exline et al. 2011).

To date, most research on anger toward God has taken place in the United States among predominantly Christian samples (for reviews, see Exline 2013a, 2013b; Exline and Martin 2005; Exline and Rose 2013). We aimed to advance this work by examining anger toward God in a sample of undergraduates from India. We first evaluated the comparability of two measures of anger toward God between the Indian sample and three U.S. undergraduate samples. We then examined several psychological correlates of anger toward God that had been identified in U.S. samples, with the aim of evaluating whether key findings from the U.S. would replicate in the Indian sample. Finally, we examined several new items relating to belief in multiple gods. To the best of our knowledge, this project represents the first effort to focus specifically on the topic of anger toward God in an Indian sample.

### 1.1. Anger toward God: Conceptual Background

People commonly engage in an attributional search for ways to explain recent, important events in their lives, especially negative events (Wong and Weiner 1981). As an illustrative example, consider a flood that takes the lives of many people. In searching for causes of this event, people may attribute causality to natural events such as heavy rainfall, saturated ground that did not allow water to drain, and erosive forces that weakened and eventually broke a dam. Explanations might also focus on people, perhaps blaming them for building on a flood plain, failing to maintain a dam that broke, or not installing sufficient drainage systems in the town ravaged by the flood.

Yet in addition to natural explanations, a person might also blame supernatural forces, such as God (or, in polytheistic systems, a god), the devil, spirits, fate, destiny, or karma. People can hold natural and supernatural explanations at the same time (Legare et al. 2012). Thus, even if people believe that a specific event can be explained through natural means (e.g., human behavior; physics), they may still see a supernatural force as being involved—and perhaps even as the ultimate initiator of the event. This article will focus specifically on attributions, perceptions, and emotions involving God.

When people experience, witness, or learn about specific instances involving suffering, they may blame God for directly causing the suffering (Exline 2013a). If people see God as fully or partly responsible for events involving suffering, one possible response is to become angry at God (e.g., Exline et al. 2011). In the case of the aforementioned flood example, people might think that God caused the heavy rainfall or cracked the dam. However, even if people do not see God as directly responsible, they may still blame God for allowing suffering that was caused by another agent or force (Lindberg and Exline 2014), potentially seeing God as negligent, weak, or merciless. For example, even if people blamed rainfall for breaking a dam, they might blame God for failing to stop the rain or protect the dam. In other examples, a child might blame God for allowing her parents to divorce, or a person whose family members were killed might blame God for allowing their deaths. Even when people hold themselves responsible for wrongdoing, they may still blame God for creating them with certain vulnerabilities (Grubbs and Exline 2014). For example, consider the case of a woman whose drug addiction spirals out of control, causing her to lose her job, her home, and several cherished relationships. Even if she blames herself for her choices, she may still blame God for giving her certain genetic, biological or psychological qualities that predisposed her to drug addiction. In any such case, seeing God as partly or fully responsible for human suffering could cause anger at God.

### 1.2. Key Findings on Anger toward God from Predominantly Christian Samples Within the United States

Although our aim was to examine anger toward God within an Indian sample, a brief overview of research using U.S. samples will provide context for our project and primary hypotheses. Large surveys have shown that feelings of anger toward God and associated *divine struggles* (conflicts with God; e.g., perceiving God as angry at oneself) are common in the U.S. population (Exline et al. 2011), although usually mild or moderate in intensity (Abu-Raiya et al. 2015). Few demographic factors predict anger toward God. In samples with wide age ranges, anger toward God tends to correlate negatively with age (Exline et al. 2011), suggesting that anger toward God may be especially prevalent among undergraduates and other young adults. (Note, however, that restriction of age ranges in undergraduate samples limits available evidence of age differences in anger toward God.) Prior studies have not shown consistent associations with gender, ethnicity, or religiousness (Exline et al. 2011; Wood et al. 2010). Granted, people who are more religious are more likely to see God as the cause of events in general (e.g., Gorsuch and Smith 1983; Weeks and Lupfer 2000), including negative events (Gray and Wegner 2010; Hale-Smith et al. 2012); however, they typically see God's intent as positive, which attenuates or at least dilutes angry feelings to some degree (Exline et al. 2011; Wilt et al. 2017).

In U.S. samples, anger toward God relates positively to seeing God as cruel or distant (Exline et al. 2015). In specific situations involving suffering, people tend to report more anger toward God when they see the events as more harmful and unfair (Exline et al. 2011), when God is seen as more responsible for causing suffering (as distinct from simply allowing suffering) (Lindberg and

Exline 2014), or when God's actions are seen as negative—for example, when people feel cheated, abandoned, or neglected by God (Exline et al. 2011).

Much as in a relationship with another person, a perceived relationship with God can include both positive feelings (e.g., love, respect) and negative feelings (e.g., anger, fear, hurt, mistrust). Typically, those in the U.S. who believe in God report emotions about God that are much more positive than negative (Exline et al. 2011; Wood et al. 2010), even in contexts involving serious suffering, such as chronic pain (Exline et al. 2016) or the terminal illness of a loved one (Exline et al. 2013). Positive and negative emotions involving God usually show weak to moderate negative associations (e.g., Exline et al. 2011; Wood et al. 2010). This finding fits easily with prior work suggesting that positive and negative emotions are better represented by two separate dimensions (each ranging from neutral to intensely positive or negative) than by opposite endpoints of a single dimension (e.g., Watson et al. 1988). The relative independence of positive and negative feelings toward God may be valuable in practical and clinical terms, especially for detecting and understanding particularly ambivalent cases. It clarifies that positive emotions toward God do not rule out the presence of negative emotions, and vice versa.

Along these lines, people may be nervous about disclosing or expressing anger toward God if they believe that doing so suggests a lack of love or respect for God. As a complementary point, some people who express anger toward God may also implicitly wish to repair their relationship with God, perhaps especially if their feelings are not purely negative. Within U.S. samples, people typically make moral distinctions between different forms of protest toward God (Exline et al. 2012). Specifically, people tend to consider assertive behaviors (asking God questions about why bad things happen; complaining) morally acceptable, whereas exit behaviors (behaviors that involve disengaging from a relationship with God, such as rebellion, questioning God's authority or existence, and rejecting or disbelieving in God) are usually less accepted. People in predominantly Christian samples have tended to see anger toward God as morally neutral or slightly wrong, but not nearly as wrong as exit behaviors. People tend to report higher level of anger toward God if they see such anger as morally acceptable (Exline et al. 2012).

Research on behaviors associated with anger toward God has emerged recently. Anger toward God (usually in the more general context of divine struggles; Exline et al. 2014; Pargament 2007) has related modestly and positively to behaviors such as alcohol use (e.g., Johnson et al. 2008; Stauner et al.), disordered eating (Exline et al. 2016), and addictions in general (Faigin et al. 2014). In terms of behaviors toward God, anger tends to predict more complaint and lamentation toward God, attempts to suppress anger, and exit behaviors such as rebellion and withdrawal from God (Exline and Grubbs 2012; Exline et al. 2016).

As with other forms of religious/spiritual (r/s) struggle, anger toward God usually correlates positively with indicators of negative emotion, such as depression and anxiety (Abu-Raiya et al. 2015; Exline et al. 2011; Wilt et al. 2016; Wood et al. 2010; Exline 2013a, 2013b; Pargament 2007; Stauner et al. 2016a). Anger toward God correlates positively with doubts about God's existence (Exline et al. 2014; Pargament et al. 1998) and with other types of divine struggles, such as feeling punished by God (Exline et al. 2014; Pargament et al. 2000; Pargament et al. 1998) and concerns about being the object of God's disapproval or anger (Hall and Edwards 2002).

Negative religious coping and other r/s struggles also tend to accompany anger toward God (e.g., Exline et al. 2014; Pargament et al. 1998, 2000). Specifically, anger toward God and other divine struggles correlate positively with doubts about one's faith in general (e.g., Exline et al. 2014), questions about whether one's life has ultimate meaning (Exline et al. 2014), moral struggles and associated fear and guilt around religion (Grubbs and Exline 2014), feeling attacked by the devil or evil spirits (e.g., Pargament et al. 2000), and interpersonal struggles around religion, such as disagreements with people about religious issues or feelings of anger at organized religion (e.g., Abu-Raiya et al. 2015). A bifactor model of r/s struggles indicated that anger at God shares 53% of its variance with all other kinds of r/s struggles, whereas only 18% related uniquely to other divine

struggles (Stauner et al. 2016b). This suggests that anger at God rarely occurs in isolation from other r/s struggles.

### 1.3. The Indian Context

We are not aware of any empirical projects focusing specifically on the topic of anger toward God within an Indian (predominantly Hindu) sample, although some projects have tapped into the idea of divine struggle as a secondary objective or part of a larger primary objective. In recent years, psychology researchers have developed measures of Hindu pathways (Tarakeshwar et al. 2003a) and Hindu religious coping (Tarakeshwar et al. 2003b; for an application to Bhutanese Hindu refugees, see Benson et al. 2011). However, these measures were developed based on Hindu samples in the United States, not in India. The Hindu religious coping measure, reflecting its roots in the earlier, Judeo-Christian-focused RCOPE (Pargament et al. 1998, 2000) does include several items relevant to divine struggle (voiced anger that God did not hear my prayers; felt punished by God for my lack of devotion).

Authors of conceptual or clinical articles have alluded to God's perceived role in suffering, including divine struggle, among Hindus (Abu-Raiya and Pargament 2015; Gupta 2011; Whitman 2007). Ethnographic work among the Mikirs of India has documented attributions of suffering to gods (Jain and Borthakur 1980). An exploratory study of cancer patients in India documented some reports of anger toward gods (Mehrotra and Sukumar 2007). In addition, negative religious coping (which includes anger toward God) predicted less posttraumatic growth among family caregivers of cancer patients in India (Thombre et al. 2010).

Given the context of monotheistic majorities in existing empirical literature on God-related thoughts and emotions, research on divine struggle has neglected polytheistic perspectives. Our predominantly Hindu sample presented the opportunity to study anger toward multiple gods. Polytheists might favor certain deities above others or could shift loyalties from one god to another based on feelings such as anger, mistrust, or disappointment. To the best of our knowledge, these ideas have not yet been tapped empirically.

Our study allowed us to examine anger toward God from multiple angles, including current feelings of anger toward God, lifetime frequency of such feelings (via retrospective report), and emotional responses to a specific situation involving suffering. We also assessed many of the variables mentioned earlier that related to anger toward God in U.S. samples, including other demographics, religiousness, attributes of God, other indicators of r/s struggle, moral acceptability of anger toward God, and situation-specific contextual variables around a specific incident involving suffering.

First, we tested the invariance of two measures of anger toward God (a list of situation-specific emotion-focused adjectives based on Exline et al. 2011, Study 3, and the Attitudes Toward God Scale-9, Wood et al. 2010) across our four samples of undergraduates (one from India and three from USA). Second, we compared levels of anger at God across these four samples. Third, we examined correlations between anger toward God and several related variables to attempt to replicate prior results from U.S. samples with an Indian sample. These variables included religiousness, belief in God(s), perceptions of God's attributes and actions, various emotions toward God (current, lifetime frequency, and in the context of a specific situation), behaviors toward God, and substance use. Our analyses also included several new questions on dynamics unique to belief systems involving multiple gods.

## 2. Method

### 2.1. Participants and Procedure

#### 2.1.1. Indian Sample

Participants were 139 undergraduates recruited from psychology courses at a university in Southwestern India. All volunteered and were not compensated for participation. The sample

comprised predominantly Hindu (78%), single (82%) men (62%) with a median age of 23 years. Participants completed a survey entitled “God’s Role in Suffering” online or in a paper format (with the format being based on instructor preferences). In addition to answering general questions about themselves and their r/s beliefs and experiences (see Measures section below), all participants were asked to describe and answer questions about a serious negative event that involved suffering.

### 2.1.2. U.S. Samples

Participants were from three U.S. universities: 1040 from a private Christian university on the West Coast (96% Christian, 63% women, 99% single, 62% White/Caucasian, median age = 18), 1811 from a public university in the Great Lakes region (71% Christian, 67% female, 99% single, 84% White/Caucasian, median age = 19), and 918 from a private university in the Great Lakes region (50% Christian, 55% female, 99% single, 56% Caucasian, median age = 19). All received partial course credit for completing an Internet-based survey entitled “Religious and Spiritual Issues in College Life.” (For more detail on the U.S. samples, please see [Stauner et al. 2016b](#).) Within the U.S. samples, as in the Indian sample, all participants answered basic questions about themselves and their r/s beliefs; however, in the U.S. samples, only those who were able to recall a specific, recent r/s struggle answered the situation-specific items on anger toward God and other responses to the struggle, as detailed below.

## 2.2. Measures

Except for the purposes of testing measurement invariance, all measures below were scored by averaging across items, as explained in the Results section. In both studies, participants who believed in multiple gods were encouraged to focus on one god while completing the survey items. After giving this suggestion, we used the term “God” in most survey items to allow straightforward comparisons of measures between our Indian and U.S. samples.

**Religiousness.** Participants rated their extent of agreement from 0 (*strongly disagree*) to 10 (*strongly agree*) with four items on religious belief salience based on [Blaine and Crocker \(1995\)](#); one item presupposing belief in God was omitted. A sample item is “I allow my religious/spiritual beliefs to affect other areas of my life.” Participants also rated their frequencies of six behaviors (e.g., “prayed or meditated”, “thought about religious/spiritual issues”) in the previous week on a six-point Likert-type scale with the following options: *not at all, once, a few times, on most days, daily or almost daily, and more than once a day*.

**Belief in multiple gods.** Participants were asked, “Do you tend to think about one god or multiple gods (or Gods)?” There were three response options: *one God, multiple gods, and not sure*. Those who endorsed belief in multiple gods were encouraged to choose one god to focus on. To foster comparisons with prior research and across the samples used here, most subsequent items used the term “God” rather than god or gods.

**Belief in God.** Participants read, “To what extent do you believe that God exists?” from 0 (*not at all*) to 10 (*totally*). We did not present any of the God-focused questions below to those who reported no belief in God at all.

**Attributes of God.** Participants completed the God-10 ([Exline et al. 2015](#)). Participants rated the extent to which they imagine God as loving (loving, caring, forgiving), cruel (cruel, unkind, rejecting), and distant (distant, remote, unavailable, uninvolved) from 0 (*not at all*) to 10 (*extremely*).

**Current anger toward God, positive emotions toward God, and religious fear and guilt.** We included the nine-item Attitudes toward God Scale-9 ([Wood et al. 2010](#)). Participants read the prompt, “To what extent do you currently . . . ” followed by a list of items rated from 0 (*not at all*) to 10 (*extremely*). Sample items from the four-item Anger/Disappointment subscale include “feel angry at God” and “feel that God has let you down.” Sample items from the five-item Positive Attitudes subscale include “feel supported by God” and “trust God to protect and care for you.” Mixed with these items were six items on religious fear and guilt adapted from Exline, Yali, and Sanderson ([Exline et al. 2000](#)): “believe that God sees you as a bad person,” “believe that sin has caused your problems,” “fear that God will

condemn you for your mistakes,” “feel excessive guilt about your sins and mistakes,” “believe that God disapproves of you,” and “believe that you have committed a sin too big to be forgiven.”

Lifetime frequency of emotions involving God and religion. Building on an earlier measure used by Exline and colleagues (Exline et al. 2011, Study 3), participants read this prompt: “Looking back over your entire life, how often have you . . . ” followed by a list of items rated from 0 (*never*) to 10 (*very often*). Items included “felt angry at God” along with “had positive feelings toward God” and several items focused on divine struggle: “believed that God was angry at you,” “had questions or doubts about whether God exists,” and “experienced a drop or decrease in your belief in God’s existence,” and one item focused on religion more broadly: “felt angry at religion.”

Harmfulness of event. Following Exline and colleagues (Exline et al. 2011, Study 3), participants in the Indian sample rated the extent to which they saw the incident involving suffering as harmful or damaging using a scale from 0 (*not at all*) to 10 (*extremely*).

Situation-specific emotions toward God. As mentioned earlier, participants in the Indian sample completed these items in reference to a specific event involving suffering, whereas those in the U.S. samples focused on a specific r/s struggle. Participants in the Indian sample read this prompt: “At this moment, when I think about the incident involving suffering that I just described, it makes me feel \_\_\_\_\_ toward God.” Those in the U.S. samples read this prompt: “At this moment, when I think about the religious/spiritual struggle that I just described, it makes me feel \_\_\_\_ toward God.” Both participants then responded to a list of emotion-focused adjectives based on Exline and colleagues (Exline et al. 2011, Study 3), including five focused on anger (anger, resentment, frustration, mistrust, disappointment) and five focused on positive emotions (love, trust, respect, closeness, positive feelings). All were rated from 0 (*not at all*) to 10 (*extremely*).

Attributions of God’s responsibility. Following Exline and colleagues (Exline et al. 2011, Study 3), participants rated the extent to which they saw God as responsible for the incident involving suffering (India) or the r/s struggle (U.S.) from 0 (*not at all*) to 10 (*extremely*).

Perceptions of God’s actions. Participants in India read this prompt in reference to the event involving suffering that they had described: “I believe that in this particular incident, God \_\_\_\_\_ the one(s) who suffered.” U.S. participants read this prompt in reference to the specific r/s struggle they had described: “I believe that in this particular situation involving struggle, God \_\_\_\_\_ me.” We then included a list of items based on Exline and colleagues (Exline et al. 2011, Study 3), all rated from 0 (*not at all*) to 10 (*extremely*). Five items focused on negative actions (betrayed, abandoned, neglected, abused, turned away from), and five focused on positive actions (loved, comforted, strengthened, encouraged, supported).

Behaviors toward God. In reference to the specific situation that they described (struggle for U.S. participants; suffering for India participants), participants were asked, “To what extent have you responded in each of these ways?” They then completed items reflecting four types of behaviors toward God (Exline and Grubbs 2012), all rated from 0 (*not at all*) to 10 (*extremely*): Approach (“drew close to God”, “prayed to God”, “tried to trust God”, “praised God”), Exit (“turned away from God”, “rejected God”, “ignored God”, “rebelled against God”, “questioned whether God exists”, “decided that God did not exist”), Complaint (“asked God, ‘Why?’”, “complained to God”, “protested to God”, “argued with God”), and Suppression (“told myself that it was wrong to be angry with God”, “tried to ‘push down’ or suppress angry feelings toward God”, “pretended that everything was OK in my relationship with God”, “tried to hide feelings of anger or disappointment toward God”).

Alcohol and substance use. In reference to the specific situation they described, participants rated their agreement with the two-item subscale on substance use from the Brief Cope (Carver 1997): “I’ve been using alcohol or drugs to make myself feel better,” and “I’ve been using alcohol or other drugs to help me get through it.” These items were rated on a four-point scale from *not at all* to *a great deal*.

Moral acceptability of negative emotions toward God (Indian sample only). As in an earlier article (Exline et al. 2012), participants in the Indian sample read this prompt: “Do you think that it is

morally right or wrong to . . . ” followed by a list of items rated from  $-5$  (*totally wrong*) to  $+5$  (*totally right*), with 0 being neutral. Three items focused on negative emotions toward God: “feel anger toward God,” “feel disappointment toward God,” and “feel frustration toward God.” Two items focused on assertiveness: “complain to God,” “ask God questions about why bad things happen.” Five items focused on exit responses: “question God’s authority,” “hold on to angry feelings toward God,” “rebel against God,” “cut off your relationship with God,” and “reject God.”

Religious/spiritual/divine struggle (Indian sample only). The Hindu Religious Coping Scale (Tarakeshwar et al. 2003b) was administered in the Indian sample. Only a few items related to divine struggle are of interest here: “voiced anger that God didn’t answer my prayers” and “felt punished by God for my lack of devotion.” Items were rated from 1 (*not at all*) to 4 (*a great deal*).

Items on multiple gods (Indian sample only). Participants who reported some belief in multiple gods read the prompt, “Have you ever . . . ” and completed these three items, all rated from 0 (*never*) to 10 (*very often*): “found that you liked some gods better than others,” “felt like you could trust some gods more than others,” and “switched gods, where you chose to follow a certain god because you felt disappointed or angry with a different god.”

### 3. Results

See Table 1 for descriptive statistics ( $M$ ,  $SD$ , Cronbach’s alpha) for all key study variables. Before proceeding, one finding worth noting is that within the Indian sample, 31% of participants reported belief in a single God, whereas 45% believed in multiple gods and 24% were not sure. In the U.S. samples, in contrast, the vast majority of participants (81–99%) reported belief in a single God.

#### 3.1. Measures of Anger toward God: Tests of Reliability, Normality, and Measurement Invariance

##### 3.1.1. Tests of Reliability and Normality

Before proceeding with our hypothesis tests, we first performed tests to determine whether our measures of anger toward God would perform acceptably in the Indian sample. We first evaluated the two multi-item measures of anger toward God (ATGS-9 Anger/Disappointment subscale and situation-specific anger) within the Indian sample. Both subscales showed good internal consistency ( $\alpha = 0.82$  for Anger/Disappointment,  $0.86$  for situation-specific anger) and no major issues with skew (Anger/Disappointment: 1.0; situation-specific anger: 0.4) or kurtosis (Anger/Disappointment: 0.3; situation-specific anger:  $-0.7$ ).

##### 3.1.2. Preparation of U.S. Datasets: Removing Cases Suggesting Insufficiently Effortful Responding

Next, we prepared the U.S. datasets for comparisons against the Indian dataset. Our aim was to identify and remove cases in which participants showed patterns of insufficiently effortful responding on the ATGS-9 and the measures of situation-specific and lifetime frequencies of emotions toward God. We determined thresholds for excessively invariant responding empirically by first counting the number of identical responses each participant gave to each of these three measures. These counts did not include 0 (*never*) responses, which some participants might reasonably have been expected to choose for all items. Using the distributions of identical response counts separately for each measure, we set the threshold for excessively invariant responding at the number of identical responses that was one greater than the lowest number that occurred least often in the sample. This was 13 identical responses on the 15-item measure of current attitudes toward God, and 14 on the 17-item measures of situation-specific and lifetime frequencies of emotions toward God. Using these thresholds, we excluded 198 participants across our three U.S. samples who chose the same nonzero response more often across all items of these three measures.

### 3.1.3. Measurement Invariance Tests of the ATGS-9 and Situation-Specific Anger Measures

Next, we tested the ATGS-9 Anger/Disappointment subscale and the situation-specific anger questionnaire for measurement invariance across our four samples (three large samples from USA and one small sample from India). For these tests, we used the lavaan package (Rosseel 2012) in R (R Core Team 2014), polychoric correlations among the ordinally-measured items instead of a traditional covariance matrix, and the unweighted least squares estimator with robust standard errors and scale-shifted fit statistics adjusted for means and variances. We used Cheung and Rensvold's (2002)  $\Delta\text{CFI} = -0.01$  threshold as our criterion for identifying significant measurement variance when comparing the scaled CFI of a constrained measurement model to the scaled CFI of a less constrained model.

Unidimensional measurement models fit well for both the ATGS-9 Anger/Disappointment subscale (CFI = 0.99, RMSEA = 0.04, SRMR = 0.04) and the situation-specific anger questionnaire (CFI = 0.99, RMSEA = 0.04, SRMR = 0.05). Neither measure produced evidence of significant variance in loadings, thresholds, residuals, or latent variances ( $\Delta\text{CFI} = -0.009$  and  $-0.005$  relative to completely unconstrained models). These results supported direct comparisons of these measures' latent factors and their correlations with external variables.

To summarize, both the ATGS-9 Anger/Disappointment subscale and the situation-specific anger measure performed acceptably on tests of measurement invariance, suggesting that it would be statistically appropriate to compare scores on these measures across the four samples. Ideally, external variables' measurement models would also be included in a multi-group SEM and tested for invariance, but we considered that level of scrutiny outside the scope of this study, the focus of which is anger toward God. Therefore, we adopted the provisional assumption that measures of other constructs used in this study did not introduce excessive bias through measurement variance or other latent structural complications. Correlational results are presented with this understanding that their validity is contingent on this assumption of general measurement invariance and limited to whatever degree this assumption was violated.

### 3.1.4. Comparisons of Levels of Anger toward God between the Indian Sample and the Two U.S. Samples

Based on the results of the measurement invariance testing, our next step was to compare scores on the three measures of anger toward God between the Indian sample and the three U.S. samples. These analyses were exploratory. In order to proceed efficiently with other analyses, we applied classical test theory (CTT) to calculate latent factor scores as averages of ordinal item responses, which we treated as numeric henceforth. Due to the interference of measurement error (i.e., unique item variance), correlations between CTT-scored factors tend to appear weaker than latent correlations estimated with structural equation models. Thus, we considered the use of CTT scores a relatively conservative approach to estimating correlations (i.e., erring on the side of Type I "miss" errors rather than Type II "false alarm" errors). CTT-scored means and medians can also be easier to interpret in terms of their measures' rating options, so we present these statistics based on CTT scores as well.

The ATGS-9 Anger/Disappointment subscale's latent mean did not vary significantly across our four samples ( $\Delta\text{CFI} = -0.003$  relative to the aforementioned model using all other equality constraints). However, a Kruskal–Wallis test (a nonparametric alternative to a one-way ANOVA) found significant differences in CTT-scores between the four samples ( $\chi^2_{(3)} = 106.2, p < 0.001$ ). The Indian sample's median (2.3) exceeded the medians at the two Midwestern universities (both 1.5) and at the Pacific Coastal Christian University (1.3).

The situation-specific anger questionnaire's latent mean differed significantly ( $\Delta\text{CFI} = -0.016$ ) across samples. The Indian sample's latent mean (0.68) exceeded the means in the Pacific Coastal Christian university sample (0.23) and in the religiously unaffiliated universities near Lake Erie (public university mean = 0.18; we used the private university as the reference group, hence its mean = 0.00 by design; all standardized latent variances = 1.00). A Kruskal–Wallis test of situation-specific anger

CTT scores corroborated the SEM result ( $\chi^2_{(3)} = 292.8, p < 0.001$ ). The Indian sample's median (4.4) exceeded the medians at the two Midwestern universities (private = 1.8; public = 2.4) and at the Pacific Coastal Christian university (2.6).

It is important to note that this measure of anger at God(s) referred to different specific situations in our different studies: an experience of suffering in the Indian sample's survey, and an R/S struggle in the American survey. To facilitate a more direct comparison with surveys of American samples that used the same prompt regarding an experience of suffering as in the Indian sample's survey, we used an ANOVA to compare the Indian sample's mean (4.7), standard deviation (2.7), and sample size (100) to those from two American samples presented in Study 2 ( $M = 3.4, SD = 2.8, n = 186$ ) and Study 3 ( $M = 3.2, SD = 2.9, n = 446$ ) of Exline and colleagues (Exline et al. 2011). The mean score in the present study's Indian sample exceeded both American means significantly ( $F_{(2,729)} = 11.4; p < 0.001$  for the ANOVA and both Tukey's HSDs).

Finally, a Kruskal–Wallis test revealed significant differences between samples in lifetime frequencies of anger at God(s) ( $\chi^2_{(3)} = 116.5, p < 0.001$ ). In contrast with other measures of anger at God(s), the Indian sample's median lifetime frequency of anger at God(s) was lower (2) than the medians in the two Midwestern universities (both 3) and the Pacific Coastal Christian university (4). However, the Indian sample's mean (3.3) only differed significantly from the Pacific Coastal Christian university's mean (4.4, Tukey's HSD  $p < 0.001$ ), which also exceeded the other American means (public = 3.7, private = 3.6) significantly (both Tukey's HSD  $ps < 0.001$ ). We speculated that the Pacific Coastal Christian University's embeddedness in religious culture may have prompted its students to attribute more events to God, which might make instances of anger toward God more frequent throughout life, but we did not attempt further interpretations of differences in our American samples.

To summarize, the Indian sample showed higher means than the U.S. samples on two of the anger-at-God measures: situation-specific and current anger/disappointment. However, the Indian sample reported lower lifetime frequency of anger than the U.S. samples. (See Table 1 for a summary of means.)

**Table 1.** Descriptive statistics for key measures.

Sample	India	U.S. Sample 1	U.S. Sample 2	U.S. Sample 3
	<i>M</i> ( <i>SD</i> ) ( $\alpha$ )			
Religious belief salience	5.4 (2.6) (0.85)	9.9 (1.6) (0.93)	5.8 (3.5) (0.97)	4.8 (3.8) (0.97)
Religious participation	2.6 (1.0) (0.80)	4.0 (0.9) (0.80)	2.2 (1.0) (0.88)	2.0 (1.0) (0.88)
Belief in God's existence	6.9 (2.9) (—)	9.7 (1.0) (—)	7.4 (3.3) (—)	5.9 (3.7) (—)
Attributes of God (God-10)				
Loving	7.5 (2.3) (0.82)	9.6 (0.9) (0.83)	8.8 (2.0) (0.92)	8.0 (2.5) (0.95)
Cruel	1.2 (1.8) (0.78)	0.6 (1.2) (0.68)	1.3 (2.0) (0.87)	1.6 (2.0) (0.87)
Distant	2.7 (2.0) (0.66)	1.1 (1.7) (0.79)	2.2 (2.5) (0.87)	3.2 (2.8) (0.90)
Current attitudes toward God				
Anger/disappointment	2.2 (2.4) (0.82)	1.1 (1.8) (0.89)	1.5 (2.1) (0.91)	1.4 (1.9) (0.91)
Positive attitudes	7.0 (2.5) (0.85)	8.8 (1.6) (0.88)	7.1 (3.0) (0.96)	6.0 (3.3) (0.96)
Religious fear and guilt	3.5 (2.3) (0.72)	2.8 (2.1) (0.83)	2.6 (2.2) (0.87)	2.3 (2.1) (0.89)
Lifetime frequency measures				
Anger toward God	2.3 (2.8) (—)	3.4 (2.5) (—)	2.7 (2.7) (—)	2.6 (2.5) (—)
Positivity toward God	5.9 (3.6) (—)	5.0 (3.1) (—)	3.9 (3.2) (—)	3.2 (3.0) (—)
See God as angry at you	2.4 (3.3) (—)	2.8 (2.7) (—)	1.9 (2.6) (—)	1.4 (2.2) (—)
Anger at religion	2.4 (3.2) (—)	2.8 (2.9) (—)	2.5 (3.0) (—)	2.9 (2.9) (—)
Doubt about God's existence	2.8 (3.1) (—)	2.7 (2.7) (—)	3.3 (3.3) (—)	3.9 (3.2) (—)
Drop in belief in God	3.9 (3.3) (—)	2.9 (2.9) (—)	3.1 (3.3) (—)	3.6 (3.2) (—)

Table 1. Cont.

Sample	India	U.S. Sample 1	U.S. Sample 2	U.S. Sample 3
	M (SD) ( $\alpha$ )			
Situation-specific responses				
Anger toward God	3.7 (2.7) (0.86)	2.4 (2.4) (0.90)	2.3 (2.5) (0.90)	1.9 (2.4) (0.92)
Positivity toward God	4.0 (3.3) (0.89)	5.0 (3.1) (0.92)	3.9 (3.2) (0.93)	3.2 (3.0) (0.93)
Harmfulness of event	7.2 (3.0) (—)	—	—	—
God responsible for event	3.3 (3.3) (—)	3.0 (3.6) (—)	2.7 (3.3) (—)	2.7 (3.3) (—)
See God's actions as pos.	2.9 (2.9) (0.92)	7.3 (2.7) (0.93)	5.5 (3.5) (0.95)	4.8 (3.4) (0.94)
See God's actions as neg.	3.5 (2.2) (0.83)	0.8 (1.6) (0.91)	1.3 (2.2) (0.93)	0.9 (1.7) (0.94)
Use alcohol/drugs to cope	1.4 (0.8) (0.84)	1.2 (0.6) (0.89)	1.4 (0.8) (0.90)	1.3 (0.6) (0.90)
Approach God	4.6 (3.0) (0.82)	7.1 (2.3) (0.85)	5.0 (3.3) (0.92)	4.2 (3.1) (0.91)
Exit/disengage from God	2.2 (2.4) (0.88)	1.6 (2.0) (0.87)	2.4 (2.4) (0.85)	2.2 (2.3) (0.82)
Complain to God	4.2 (2.8) (0.81)	4.4 (2.6) (0.81)	3.1 (2.6) (0.81)	2.8 (2.6) (0.83)
Suppress anger toward God	3.4 (2.6) (0.73)	3.9 (2.4) (0.76)	3.3 (2.5) (0.80)	2.6 (2.3) (0.80)
Voiced anger toward God	1.7 (1.0) (—)	—	—	—
Felt punished by God	1.9 (1.0) (—)	—	—	—

### 3.2. Testing of Primary Hypotheses about Anger toward God

Since the primary focus of this report is on the Indian sample, the hypothesis tests reported here will focus on the Indian sample only (see Table 2). However, we did provide correlation tables for the three U.S. samples for comparison, as the current project provided a natural opportunity to evaluate the replicability of findings from earlier, smaller U.S. samples (Exline et al. 2011, 2012, 2015). We offer correlations from the U.S. samples in Tables 3–5, although we will not interpret these results in the text because they are of secondary interest.

**Table 2.** Indian sample: Correlations between key study variables and three measures of anger toward God.

	Current Anger/Disappointment toward God (ATGS-9)	Situation-Specific Anger toward God	Lifetime Frequency of Anger toward God
Age	0.03	−0.16	0.03
Gender (1 = male, 2 = female)	−0.02	−0.02	0.02
Religiousness (belief salience and participation, combined)	0.01	−0.06	−0.01
Attributes of God			
Loving	0.02	−0.04	−0.14
Cruel	<b>0.63</b>	<b>0.32</b>	<b>0.29</b>
Distant	<b>0.44</b>	<b>0.32</b>	<b>0.23</b>
Current attitudes toward God			
Anger/disappointment (ATGS-9)	—	<b>0.30</b>	<b>0.39</b>
Positive attitudes (ATGS-9)	0.10	−0.01	−0.03
Religious fear and guilt	<b>0.52</b>	<b>0.29</b>	0.08
Lifetime frequency measures			
Anger toward God	<b>0.39</b>	<b>0.42</b>	—
Positive feelings toward God	− <b>0.29</b>	−0.07	0.02
See God as angry at you	<b>0.24</b>	<b>0.46</b>	<b>0.51</b>
Anger at religion	<b>0.24</b>	<b>0.37</b>	<b>0.29</b>
Doubt about God's existence	<b>0.29</b>	<b>0.54</b>	<b>0.34</b>
Drop in belief in God's existence	<b>0.44</b>	<b>0.30</b>	0.19

Table 2. Cont.

	Current Anger/Disappointment toward God (ATGS-9)	Situation-Specific Anger toward God	Lifetime Frequency of Anger toward God
Situation-specific responses			
Anger toward God	<b>0.30</b>	—	<b>0.42</b>
Positive emotion toward God	0.10	−0.19	0.03
Harmfulness of event	−0.13	<b>0.30</b>	0.05
God responsible for event	<b>0.26</b>	<b>0.64</b>	<b>0.35</b>
See God’s actions as positive	<b>0.27</b>	0.22	0.22
See God’s actions as negative	<b>0.27</b>	<b>0.56</b>	<b>0.46</b>
Use alcohol/drugs to cope	0.07	<b>0.31</b>	0.17
Approach God	0.10	0.09	0.16
Exit/disengage from God	<b>0.48</b>	<b>0.64</b>	<b>0.50</b>
Complain to God	<b>0.40</b>	<b>0.62</b>	<b>0.63</b>
Suppress anger toward God	<b>0.23</b>	<b>0.43</b>	<b>0.35</b>
Voiced anger toward God	<b>0.36</b>	<b>0.42</b>	<b>0.27</b>
Felt punished by God	<b>0.22</b>	<b>0.37</b>	0.11
Anger toward God is morally acceptable	0.13	<b>0.25</b>	<b>0.58</b>
Items on multiple gods			
Like some gods better than others	<b>0.29</b>	0.26	−0.01
Trust some gods more than others	<b>0.39</b>	<b>0.37</b>	0.05
Have switched gods	<b>0.50</b>	<b>0.34</b>	0.23

Note. Bolded correlations differ significantly from zero with  $p < 0.05$ ; Pairwise  $n = 40-105$ .

Table 3. Pacific Coastal Christian university sample: Correlations between key study variables and three measures of anger toward God.

	Current Anger/Disappointment toward God (ATGS-9)	Situation-Specific Anger toward God	Lifetime Frequency of Anger toward God
Age			
Age	−0.02	0.00	−0.02
Gender (1 = male, 2 = female)			
Gender (1 = male, 2 = female)	−0.07	0.02	0.01
Religiousness (belief salience and participation, combined)			
Religiousness (belief salience and participation, combined)	−0.29	−0.18	−0.08
Attributes of God			
Loving	−0.43	−0.30	−0.15
Cruel	<b>0.46</b>	<b>0.35</b>	<b>0.19</b>
Distant	<b>0.53</b>	<b>0.38</b>	<b>0.23</b>
Current attitudes toward God			
Anger/disappointment (ATGS-9)	—	<b>0.58</b>	<b>0.42</b>
Positive attitudes (ATGS-9)	−0.60	−0.33	−0.20
Religious fear and guilt	<b>0.61</b>	<b>0.37</b>	<b>0.27</b>
Lifetime frequency measures			
Anger toward God	<b>0.42</b>	<b>0.38</b>	—
Positive feelings toward God	−0.32	−0.20	−0.33
See God as angry at you	<b>0.44</b>	<b>0.35</b>	<b>0.53</b>
Anger at religion	<b>0.33</b>	<b>0.31</b>	<b>0.47</b>
Doubt about God’s existence	<b>0.37</b>	<b>0.31</b>	<b>0.48</b>
Drop in belief in God’s existence	<b>0.35</b>	<b>0.29</b>	<b>0.39</b>
Situation-specific responses			
Anger toward God	<b>0.58</b>	—	<b>0.38</b>
Positive emotion toward God	−0.22	−0.29	−0.11
God responsible for event	<b>0.26</b>	<b>0.32</b>	<b>0.18</b>
See God’s actions as positive	−0.39	−0.25	−0.15
See God’s actions as negative	<b>0.68</b>	<b>0.55</b>	<b>0.30</b>

Note. Bolded correlations differ significantly from zero with  $p < 0.05$ ; Pairwise  $n = 510-1034$ .

**Table 4.** Midwestern public university sample: Correlations between key study variables and three measures of anger toward God.

	Current Anger/Disappointment toward God (ATGS-9)	Situation-Specific Anger toward God	Lifetime Frequency of Anger toward God
Age	0.04	−0.04	−0.01
Gender (1 = male, 2 = female)	0.02	<b>0.11</b>	<b>0.05</b>
Religiousness (belief salience and participation, combined)	−0.16	−0.18	−0.03
Attributes of God			
Loving	−0.25	−0.16	−0.20
Cruel	<b>0.39</b>	<b>0.24</b>	<b>0.31</b>
Distant	<b>0.34</b>	<b>0.24</b>	<b>0.25</b>
Current attitudes toward God			
Anger/disappointment (ATGS-9)	—	<b>0.62</b>	<b>0.44</b>
Positive attitudes (ATGS-9)	−0.32	−0.26	−0.17
Religious fear and guilt	<b>0.65</b>	<b>0.37</b>	<b>0.31</b>
Lifetime frequency measures			
Anger toward God	<b>0.44</b>	<b>0.34</b>	—
Positive feelings toward God	−0.29	−0.18	−0.10
See God as angry at you	<b>0.44</b>	<b>0.31</b>	<b>0.57</b>
Anger at religion	<b>0.36</b>	<b>0.31</b>	<b>0.47</b>
Doubt about God’s existence	<b>0.35</b>	<b>0.27</b>	<b>0.44</b>
Drop in belief in God’s existence	<b>0.37</b>	<b>0.24</b>	<b>0.46</b>
Situation-specific responses			
Anger toward God	<b>0.62</b>	—	<b>0.34</b>
Positive emotion toward God	−0.16	−0.11	−0.12
God responsible for event	<b>0.42</b>	<b>0.36</b>	<b>0.19</b>
See God’s actions as positive	−0.36	−0.21	−0.17
See God’s actions as negative	<b>0.72</b>	<b>0.68</b>	<b>0.32</b>

Note. Bolded correlations differ significantly from zero with  $p < 0.05$ ; Pairwise  $n = 324$ – $1786$ .

**Table 5.** Midwestern private university sample: Correlations between key study variables and three measures of anger toward God.

	Current Anger/Disappointment toward God (ATGS-9)	Situation-Specific Anger toward God	Lifetime Frequency of Anger toward God
Age	−0.01	0.00	−0.01
Gender (1 = male, 2 = female)	−0.11	0.04	0.00
Religiousness (belief salience and participation, combined)	−0.08	−0.14	<b>0.10</b>
Attributes of God			
Loving	−0.13	−0.19	−0.01
Cruel	<b>0.42</b>	<b>0.41</b>	<b>0.24</b>
Distant	<b>0.30</b>	<b>0.34</b>	<b>0.12</b>
Current attitudes toward God			
Anger/disappointment (ATGS-9)	—	<b>0.57</b>	<b>0.46</b>
Positive attitudes (ATGS-9)	−0.09	−0.18	0.02
Religious fear and guilt	<b>0.63</b>	<b>0.37</b>	<b>0.29</b>
Lifetime frequency measures			
Anger toward God	<b>0.46</b>	<b>0.37</b>	—
Positive feelings toward God	−0.16	−0.19	<b>0.17</b>
See God as angry at you	<b>0.49</b>	<b>0.43</b>	<b>0.48</b>
Anger at religion	<b>0.27</b>	<b>0.29</b>	<b>0.45</b>
Doubt about God’s existence	<b>0.27</b>	<b>0.29</b>	<b>0.34</b>
Drop in belief in God’s existence	<b>0.32</b>	<b>0.30</b>	<b>0.42</b>

Table 5. Cont.

	Current Anger/Disappointment toward God (ATGS-9)	Situation-Specific Anger toward God	Lifetime Frequency of Anger toward God
Situation-specific responses			
Anger toward God	<b>0.57</b>	—	<b>0.37</b>
Positive emotion toward God	<b>−0.23</b>	<b>−0.16</b>	−0.12
God responsible for event	<b>0.33</b>	<b>0.40</b>	<b>0.22</b>
See God’s actions as positive	<b>−0.31</b>	<b>−0.17</b>	−0.06
See God’s actions as negative	<b>0.68</b>	<b>0.72</b>	<b>0.36</b>

Note. Bolded correlations differ significantly from zero with  $p < 0.05$ ; Pairwise  $n = 231$ –904.

### 3.2.1. Positive Emotions and Anger

Based on many U.S. studies showing that people generally report more positive than negative emotions toward God (e.g., Exline et al. 2011; Wood et al. 2010), we predicted that Indian participants would also report more positive than negative emotions toward God. (See Table 1 for means.) This prediction was supported for current positive attitudes vs. anger/disappointment toward God based on the ATGS-9,  $t_{(104)} = 14.71$ ,  $p < 0.001$ , Cohen’s  $d = 1.96$ , effect-size  $r = 0.70$ , and lifetime frequency of positive emotions vs. anger toward God,  $t_{(92)} = 11.19$ ,  $p < 0.001$ , Cohen’s  $d = 1.12$ , effect-size  $r = 0.49$ . However, situation-specific anger toward God did not differ significantly from positive emotions toward God,  $t_{(99)} = 0.68$ ,  $p = 0.50$ , Cohen’s  $d = 0.10$ , effect-size  $r = 0.05$ , although the pattern of means suggested more positive emotions than anger. Thus, when assessing emotions toward God in general—that is, outside a context directly involving suffering—participants reported more positive than negative emotion toward God, as expected. However, when focusing directly on events involving suffering, participants reported approximately as much anger as positive emotion toward God.

We did not expect to see a strong negative correlation between positive and negative emotions toward God—not enough to view them as mutually exclusive or redundant concepts. This hypothesis was supported (see Table 2 for correlations). All three measures of anger toward God showed small, usually insignificant correlations with the associated measures of positive emotion toward God. Even the strongest negative correlation between current anger at God and lifetime frequency of positive emotion was only moderate ( $r = -0.29$ ), and its 95% confidence interval ( $-0.49, -0.06$ ) would not support very strong relationships, let alone threaten the discriminant validity of positive and negative emotions toward God (shared variance  $< 25\%$ ). All other confidence intervals had lower bounds weaker than  $r = -0.38$ . To summarize, as shown in studies with U.S. samples (e.g., Exline et al. 2011), anger and positive emotions toward God can coexist and mostly vary independently of each other.

### 3.2.2. Seeing Anger toward God as Morally Acceptable

Participants that saw anger toward God as morally acceptable reported much more anger toward God on the lifetime frequency measure and moderately more on the situation-specific measure, but the weakly positive association with current anger/disappointment did not differ significantly from zero. As in prior studies in U.S. samples (Exline et al. 2012), Indian participants made clear moral distinctions between the three types of protest behaviors toward God: assertiveness, negative emotions, and exit behaviors, Wilks’  $\lambda = 0.60$ ,  $F_{(2,87)} = 28.69$ ,  $p < 0.001$ , partial  $\eta^2 = 0.68$ . Even when using the Holm correction for paired-sample  $t$  tests, participants saw assertive behaviors (on a scale from  $-5$  to  $+5$ ,  $M = -0.3$ ,  $SD = 3.4$ ) as more acceptable than negative emotions ( $M = -2.2$ ,  $SD = 2.7$ ),  $t_{(88)} = 5.98$ ,  $p < 0.001$ , Cohen’s  $d = 0.62$ , effect-size  $r = 0.30$ ), which in turn were rated more acceptable than exit behaviors ( $M = -2.9$ ,  $SD = 2.3$ ),  $t_{(88)} = 3.86$ ,  $p < 0.001$ , Cohen’s  $d = 0.28$ , effect-size  $r = 0.14$ . In comparison to the neutral midpoint of zero, assertive behaviors were essentially seen as morally neutral,  $t_{(81)} = -0.81$ ,  $p = 0.42$ , whereas negative emotions were seen as morally wrong,  $t_{(81)} = 7.59$ ,  $p < 0.001$ . To summarize, Indian participants saw assertive behaviors toward God as being morally neutral, negative emotions toward God as wrong, and exit behaviors toward God as even more wrong.

### 3.2.3. Predictors of Anger toward God

As predicted, none of the measures of anger toward God differed based on age, gender, or religiousness. (See Table 2 for correlations.) A  $2 \times 4$  factorial ANOVA found greater current anger at God(s) among those who tended to think about multiple gods versus a single God ( $F_{(1,3174)} = 19.0$ ;  $p < 0.001$ ,  $\Delta M = 0.8$ ) when controlling differences across samples ( $F_{(3,3174)} = 11.5$ ;  $p < 0.001$ ). However, in the Indian sample, both groups reported equal anger at God(s), so only the American samples provided evidence for greater anger at gods among polytheists. We found insignificant differences in lifetime frequency of anger at God(s) between monotheists and polytheists. We could only compare situation-specific anger toward God(s) in the Indian sample (where we found insignificant differences), because only 11 participants who reported specific r/s struggles also reported belief in multiple gods.

Anger toward God generally correlated positively with other indicators of r/s struggle, as expected. Consistent with hypotheses, all three measures of anger toward God (especially current anger) showed significant positive associations with seeing God as cruel and distant. Anger toward God correlated positively with lifetime frequency indicators of r/s struggle: more anger toward religion, seeing God as more angry at oneself, and lifetime frequency of doubting God's existence and drops in belief in God, as predicted. Current and situation-specific anger toward God were both associated with higher levels of religious fear and guilt; however, this correlation with the lifetime frequency measure of anger was insignificantly greater than zero. Finally, anger toward God associated with higher levels of anger expression and feeling punished as assessed via items from the Hindu Religious Coping Scale (Tarakeshwar et al. 2003b), though lifetime frequency of anger did not correlate significantly with feeling punished. Taken together, these results generally supported hypotheses, and they replicated key results from U.S. samples (from earlier samples and the current three samples) in the Indian sample.

We generally saw the expected associations for responses to a specific situation involving suffering (Table 2): Anger toward God was associated with seeing God as more responsible for causing the suffering and seeing God's actions as more negative, as well as more behavioral indicators of anger, including exit behaviors, complaint, and attempts to suppress anger. Situation-specific anger toward God was also associated with seeing the situation as more harmful/damaging and with more substance use in response to the situation. These results were consistent with predictions.

Participants rated the three questions about multiple gods differently ( $F_{(2,50)} = 4.88$ ,  $p = 0.01$ , Wilks'  $\lambda = 0.60$ , partial  $\eta^2 = 0.16$ ). Based on Holm-corrected paired-sample  $t$  tests, participants were more likely to say that they liked ( $M = 3.2$ ,  $SD = 3.5$ ) or trusted ( $M = 3.5$ ,  $SD = 3.7$ ) certain gods more than others than they were to say that they had switched gods ( $M = 2.2$ ,  $SD = 3.4$ ), with respective  $p$ s = 0.028 and 0.009, Cohen's  $d$ s = 0.29 and 0.36, effect-size  $r$ s = 0.14 and 0.18. The means on the items indicating liking and trusting certain gods more than others did not differ significantly ( $p = 0.350$ , Cohen's  $d = 0.08$ , effect-size  $r = 0.04$ ). In addition, as Table 2 shows, switching gods and trusting certain gods more than others were also associated with greater situation-specific and current anger toward God, but not significantly greater lifetime frequency of anger.

## 4. Discussion

This study represented an initial examination of anger toward God within an Indian (predominantly Hindu) undergraduate population. We evaluated whether our measures of anger toward God had similar structures in India and U.S. samples, and we compared anger levels across these samples and countries. We then tested several hypotheses about anger toward God, mainly focusing on variables that had correlated with it in prior studies from the U.S. Finally, we introduced new exploratory data focusing on multiple gods.

#### 4.1. Summary and Interpretation of Key Findings

Our tests of measurement invariance supported direct comparisons of means and correlations for anger at God(s) across the Indian and U.S. undergraduate samples. These analyses, combined with evidence of good internal consistency and predictive validity described below, support the use of our measures of anger toward God among predominantly Hindu Indian undergraduates, even though these measures were originally designed using Western, predominantly Christian samples.

When we compared levels of anger toward God between the Indian sample and the U.S. samples, we found that both current and situation-specific anger toward God were higher in the Indian sample, whereas the lifetime frequency of anger toward God was lower in the Indian sample than in one of the U.S. samples (the Christian university). Perhaps the clearest finding that can be taken from these exploratory comparisons is that feelings of anger toward God were certainly relevant within the Indian sample, just as they were for the U.S. samples. Participants in both countries reported anger toward God at nontrivial levels. These results further highlight a major point made in prior studies (e.g., [Exline et al. 2011](#)): Anger toward God is a common phenomenon, one relevant in the lives of many people. This idea found clear support in the Indian sample just as it has in many U.S. samples, including the ones described in this report.

The measures of anger toward God showed moderate to strong positive correlations with each other and with other indicators of r/s struggle, consistent with predictions. Participants were more likely to express anger at God if they also perceived that God felt angry or disapproving toward them, for example, or if their life history included more doubts about God's existence and/or drops in belief. Divine struggles tapped by the Hindu Religious Coping Scale ([Tarakeshwar et al. 2003b](#)) items centering on anger expression and a sense of divine punishment were associated with more anger toward God. Anger toward God was also related to anger at organized religion and with religious fear and guilt (e.g., belief in having committed an unforgivable sin; excessive guilt about one's sins). These findings provide evidence of convergent validity for these measures of anger at God within an Indian sample. They are also consistent with findings with the Religious and Spiritual Struggles (RSS) Scale ([Exline et al. 2014](#)) and the Brief RCOPE ([Pargament et al. 1998](#)), in which anger toward God shows moderate to high correlations with other indicators of r/s struggles.

At a more conceptual level, the close associations between anger at God and other forms of r/s struggle demonstrate that feelings of anger toward God often do not occur in isolation; instead, they are likely to be part of a larger picture that includes other types of divine struggle and r/s struggles more generally. For instance, anger at God may be part of a general sense of struggle against external spiritual forces (gods, demons, religious people or institutions, or the universe). Anger toward God might be a secondary defensive response to a more primary, vulnerable sense of being abandoned or rejected, either by God or by religious people or institutions. Anger toward God also often accompanies internal struggles about moral issues, especially when people hold God responsible for giving them certain weaknesses ([Grubbs and Exline 2014](#)) or setting up unreasonable rules for them to follow.

One consistent finding from work in U.S. samples is that participants typically report much more positive emotion toward God than anger toward God. As expected, Indian participants did report more positive feelings toward God than anger (or other negative emotions), but only on the measures of current emotion and lifetime frequency. When reflecting on a specific situation involving suffering, however, Indian participants reported levels of anger toward God that were similar to their levels of positive emotion. In U.S. samples the more typical pattern is for people to report more positive emotion than anger toward God even when suffering is involved ([Exline et al. 2011](#)).

Consistent with our predictions, anger toward God did not show strong negative correlations with positive emotions toward God. Taken together, these findings largely replicate a key finding from U.S. samples: Even though reports of positive emotion toward God typically outweigh reports of anger, positive emotion by no means rules out the possibility of anger, or vice versa. This result extends domain-specific evidence that positive and negative emotions often coexist and show only weak negative associations ([Watson et al. 1988](#)). This is an important and culturally sensitive domain

of relational emotions, because some people may worry that feelings of anger may imply that they do not love or respect God, or that loving and respecting God means feeling angry at God is unacceptable or abnormal. In actuality, positive and negative emotions toward God are mostly independent. Again, consider the parallel with human relationships: People can become angry at others regardless of whether they are close to them or not. We can become angry at those who we dislike or don't know well, but we can also feel anger—including intense anger—toward those who we love. As such, it makes sense that positive and negative feelings toward God are also largely independent and coexist in some situations or across the lifespan.

Yet people may still be reluctant to admit feelings of anger toward God, especially if they find such feelings to be morally unacceptable. People in the U.S. often report that they see anger toward God as being morally unacceptable (Exline et al. 2012)—a pattern that was shown here by Indian participants as well. In response to a specific situation involving suffering, as well as on the lifetime frequency measure, Indian participants were more likely to report anger toward God if they saw anger toward God as morally acceptable. As was the case with U.S. participants in earlier analyses (Exline et al. 2012), Indian participants did show some moral reticence around the idea of becoming angry at God or expressing such anger; however, they did make meaningful distinctions between angry feelings (somewhat wrong), assertive behaviors (morally neutral), and exit behaviors suggesting rejection of God or God's authority (very wrong).

In clinical terms, these distinctions may help people to process feelings of anger or disappointment toward God. Feelings of anger will not necessarily impel a person to rebel against God, disrespect God, doubt or disbelieve in God, or otherwise exit the relationship. Instead, anger could be channeled into attempts to assert oneself with God. Within U.S. samples, there is evidence that people who see assertiveness toward God as morally acceptable report perceptions of closer, more resilient relationships with God (Exline et al. 2012). In addition, behaviors involving protest toward God predicted reductions in emotional distress and increases in perceived meaning in a study of headache patients, once anger toward God was controlled (Exline et al. 2016). Broadly speaking, assertiveness could be seen as part of a collaborative, engaged form of religious coping (Pargament et al. 2000).

As anticipated, and in replication of past studies (e.g., Exline et al. 2011, 2015), anger toward God related positively to seeing God as cruel and distant. Also as predicted, participants reported more anger toward God in response to a specific event involving suffering if they saw the event as harmful or damaging and saw God as responsible for causing the event. Perceptions of God's actions were also important. As an example, an illness could be seen as a test sent by God to make a person stronger, or it could be seen as a harsh punishment or a lack of protection. These different perceptions could lead to very different emotional responses focused on God.

We also examined several behavioral correlates of anger toward God. Consistent with predictions, reports of anger toward God in the Indian sample correlated positively with several behavioral indicators of anger, including complaint (e.g., arguing with God; protesting to God), exit (e.g., withdrawal from God; rebellion; deciding that God did not exist), and anger suppression (e.g., attempts to minimize anger or pretend that things were OK in one's relationship with God). However, anger did not relate significantly to approach behaviors. This result echoes other findings (discussed earlier) suggesting that positive and negative feelings and behaviors toward God are largely independent (see also Pargament et al. 1998). Being angry at God does not reduce the likelihood of approaching God in a trusting way or seeking God's love and care.

Anger toward God also correlated with higher levels of alcohol use among Indian undergraduates, as found in the U.S. samples presented here (for more details, see Stauner et al.). These findings reestablish the relationship between alcohol use and anger toward God, which can be used to predict alcohol problems and r/s struggles from each other, and should motivate further research and development of explanatory theories. However, as with other correlations described here, it is important to note that our cross-sectional data cannot determine whether anger toward God (or other

associated r/s struggles) led to drinking, whether drinking led to anger toward God, or whether some third variable (e.g., negative emotionality; life stress) might have led to both.

Although most of our analyses used existing scales that referred to a monotheistic God, we also included several new items focusing on multiple gods (in the Indian sample only), which yielded interesting results. Participants were more likely to report favoring some gods over others (i.e., liking or trusting certain gods more) than they were to report having actually “switched gods,” in which they transferred loyalties to one god because of negative feelings focused on another god. These patterns were endorsed at low (although nontrivial) levels; however, they were associated with higher levels of anger toward gods. Although preliminary, these findings focusing on polytheism suggest some intriguing new horizons for future research. For example, it might seem less dangerous or less wrong to become angry at any particular god if others are believed to be available. Also, the possibility of choosing or switching allegiances provides an option that is unavailable within a monotheistic belief system: A person could exit a relationship with one god but still retain some hope of divine protection or assistance by switching to another god. Given the many gods and goddesses in the Hindu pantheon, a Hindu could conceivably have many choices in terms of shifting allegiances from one god to another.

#### *4.2. Limitations and Future Directions*

Our study of anger at God in India was limited to a single undergraduate sample in India. Sampling a wider range of universities or a broader swath of the Indian population would help to evaluate the generalizability of these findings. In addition, our minimal comparisons of levels of anger toward God(s) between our four samples were atheoretical in that no specific differences were expected or explained. Many confounded factors could have played roles in creating the differences we observed. These factors are not limited to age, gender balance, ethnicity, religion, and the time, context, and mode in which the survey was taken, all of which differed between our American and Indian samples. These confounds should be disentangled in replicative future research before inferring meaningful population differences in anger at God(s) between the USA and India.

The study was cross-sectional and does not allow direct inferences about causality, though these results indirectly support some causal possibilities and provide evidence against others where variables did not correlate. We used self-report measures, some of which were retrospective; both factors can introduce bias (e.g., self-enhancement, socially desirable self-presentation or self-censorship, memory errors, insufficiently effortful responding). In addition, and importantly, most of the measures used here were designed for U.S. samples and were worded and conceptualized based on a western, predominantly Christian framework. In future studies it would be useful to assess more detailed beliefs about the attributes of deities of specific religious traditions. Within the Hindu pantheon, for example, the god Shiva and the goddess Kali both engage in acts of anger and destruction, which might make them more likely targets for anger than other gods. It would also be helpful, in cases of polytheistic belief, to give more guidance to participants in terms of which god to focus on and to ask questions about why they chose a specific god.

Although the measures of anger toward God from the U.S. appeared to perform equivalently well in the Indian sample, there are several limitations. First, because the measures were given in English, we could only survey English-speaking participants. Subtle differences in interpretation of English terms may have led to some confusion or misinterpretations of items that we might have failed to detect. In future work, it would be valuable to translate the measures used here into languages and dialects commonly used in India. Second, we could not evaluate single-item measures for measurement invariance. Comparisons of our correlational results across samples would assume the untested invariance of secondary measures, and were omitted partly for this reason. Another limitation involved having to ask participants who believe in multiple gods to focus on only one God, as forcing a focus on one God prevented us from tapping nuances in emotions toward different gods. A complementary technique would be to use a more empirically guided approach to measure development, such as asking Indians to describe situations involving anger toward a God or gods,

and designing new measures specifically for this population based on common themes and concepts in their freely written responses.

**Author Contributions:** Julie Exline designed the study, did parts of the data analysis, and served as first author for the Introduction, Discussion, and parts of the Method and Results sections. Shanmukh Kamble gave input on the study design, collected data, and reviewed the manuscript. Nick Stauner did parts of the data analysis, wrote parts of the Method and Results sections (including tables), and gave input on the manuscript draft.

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