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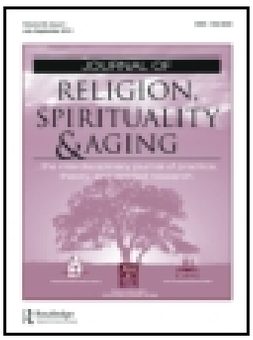

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When reliance on religion falters: Religious coping and post-traumatic stress symptoms in older adults after multiple disasters

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ABSTRACT

In 2005, Hurricane Katrina brought devastating losses to Gulf Coast communities. In this study, Katrina survivors answered open-ended questions about coping with hurricane-related challenges. The sample was partitioned into low and high scorers on a non-organizational religiosity scale. Content analyses revealed that low scorers described secular strategies, relied less on a church community in the aftermath of the storms, and exhibited active religious coping. High scorers referenced a greater need for God and faith, highly valued their church as a coping resource, and described passive religious coping strategies. Implications of the loss of familiar religious routines after disaster are discussed.

KEYWORDS

Disasters; non-organizational religiosity; PTSD; qualitative methods

On August 29, 2005, the U.S. Gulf Coast was forever changed by Hurricane Katrina's destruction and the horrific flooding that followed. Peaking as a Category 5 hurricane, by landfall it was at Category 3 status, causing catastrophic damage in Texas, Louisiana, Mississippi, Alabama, and Florida. On September 24, 2005, (only 29 days later), in the midst of immediate recovery from Katrina, Hurricane Rita, an equally powerful storm, struck the western side of Louisiana and southeast Texas. Damages from Katrina alone were approximated at $108 billion with over 1,500 direct impact deaths (Knabb, Rhome, & Brown, 2011). Losses due to Rita were estimated at $12 billion with seven direct impact deaths (Knabb, Brown, & Rhome, 2011).

Five years later, in 2010, the Gulf Coast was once again hit with environmental catastrophe when the *Deepwater Horizon* oil rig exploded, leaving 11 workers dead and coastal economies (including the fishing, seafood, and tourism industries) disrupted for years to come. Following the explosion, oil continued to flow into the Gulf for 87 days, discharging 4.9 million barrels of oil (more than 205 million gallons) before finally being plugged (Cherry, Lyon, et al., 2015; Graham et al., 2011). Such natural and technological

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disaster, exacerbated by warming sea temperatures and rapid coastal erosion in Louisiana (see Irish, Sleath, Cialone, Knutson, & Jensen, 2014), resulted in massive destruction, a potentially traumatic event for many coastal residents and fisherman. Indeed, many still suffered with symptoms of post-traumatic stress at least five years after the hurricanes (Cherry, Sampson, et al., 2015).

Brief contextual overview of literature

Prior research suggests that religiosity and perceived social support are important determinants of psychological outcomes in a post-disaster environment. Given the destruction of the physical landscape (including churches and other formal places of worship) after Hurricane Katrina in 2005, Cherry, Sampson, et al. (2015) examined the role of religiosity in post-disaster well-being in a predominantly older sample of coastal residents who lost homes and property in 2005, and in comparison samples of (1) non-coastal residents of south Louisiana, (2) former coastal residents who relocated permanently inland, and (3) current coastal fishers. Cherry and colleagues assessed several dimensions of religiosity, including faith community involvement, non-organizational religiosity, religious beliefs, and coping. Non-organizational religiosity was defined as how religious one viewed oneself and based on self-reported engagement in solitary practices including reading religious literature, listening to religious programming, and the use of prayer (see Cherry et al., 2011).

Contrary to expectation and counter to a large body of empirical literature that has generally linked higher religiosity with better mental health and psychological coping (e.g., Koenig, King, & Carson, 2012; Marks & Dollahite, 2017; Pargament, 1997), Cherry, Sampson, et al. (2015) found that non-organizational religiosity was significantly associated with *increased* risk of post-traumatic stress (PTS) symptoms, as measured by the PTSD Checklist-Civilian Version (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996; Weathers, Litz, Herman, Huska, & Keane, 1993). Further analyses comparing the upper third of the sample to the lowest third showed that those who were highest in non-organizational religiosity were more than *nine times* as likely to report PTS symptoms than their low-scoring counterparts. Thus, the purpose of the present research was to compare and contrast narrative interviews from the lowest third (low-scoring) group versus the upper third (high-scoring) group in response to two open-ended questions concerning the involvement of faith communities and religious beliefs and practices as coping resources after disaster, in order to shed new light on this counter-intuitive finding of atypical magnitude.

Pargament and colleagues (Pargament, Koenig, & Perez, 2000; Pargament, Smith, Koenig, & Perez, 1998) have identified both positive and negative religious coping methods that an individual may use to

counter life stress (see Table 1 for examples). Validated across different sample groups, the listed coping styles were found to relate to positive or negative adjustment following a stressful event, as measured by physical health, general health questionnaires, emotional distress, stress-related growth, and religious outcomes (e.g., whether individuals felt closer to God and/or their religion after the stressful event). A meta-analysis of 49 religious coping and psychological adjustment studies revealed that positive religious coping was associated with positive adjustment and inversely associated with negative adjustment; negative religious coping, however, was only associated with negative psychological adjustment (Ano & Vasconcelles, 2005). One empirical study with Croatian war veterans found that those with PTSD were more likely to engage in negative

Table 1. Positive and negative styles of religious coping.[a]

Religious Methods of Coping to Find Meaning
Benevolent Religious Reappraisal – redefining the stressor through religion as benevolent and potentially beneficial
*Punishing God Reappraisal** – redefining the stressor as a punishment from God for the individual's sins
Demonic Reappraisal *– redefining the stressor as an act of the Devil
*Reappraisal of God's Powers** – redefining God's power to influence the stressful situation
Religious Methods of Coping to Gain Control
Collaborative Religious Coping – seeking control through a partnership with God in problem solving
Active Religious Surrender – an active giving up of control to God in coping
*Passive Religious Deferral** – passive waiting for God to control the situation
*Pleading for Direct Intercession** – seeking control indirectly by pleading to God for a miracle or divine intercession
Self-Directing Religious Coping – seeking control directly through individual initiative rather than help from God
Religious Methods of Coping to Gain Comfort and Closeness to God
Seeking Spiritual Support – searching for comfort and reassurance through God's love and care
Religious Focus – engaging in religious activities to shift focus from the stressor
Religious Purification – searching for spiritual cleansing through religious actions
Spiritual Connection – experiencing a sense of connectedness with forces that transcend the individual
*Spiritual Discontent** – expressing confusion and dissatisfaction with God's relationship to the individual in the stressful situation
Marking Religious Boundaries – clearly demarcating acceptable from unacceptable religious behavior and remaining within religious boundaries
Religious Methods of Coping to Gain Intimacy with Others and Closeness to God
Seeking Support from Clergy or Members- searching for comfort and reassurance through the love and care of congregation members and clergy
Religious Helping – attempting to provide spiritual support and comfort to others
*Interpersonal Religious Discontent**- expressing confusion and dissatisfaction with the relationship of clergy or members to the individual in the stressful situation
Religious Methods of Coping to Achieve a Life Transformation
Seeking Religious Direction – looking to religion for assistance in finding a new direction for living when the old one may no longer be viable
Religious Conversion – looking to religion for a radical change in life
Religious Forgiving – looking to religion for help in shifting from anger, hurt, and fear associated with an offense to peace

* - indicates coping method is associated with negative adjustment as measured by RCOPE

[a]from Pargament et al. (2000). Reprinted with permission.

religious coping compared to healthy controls (Mihaljević, Aukst-Margetić, Vuksan-Ćusa, Koić, & Milošević, 2012).

Thus, in the current qualitative exploratory study, our aim was to delve into qualitative interview data to examine underlying reasons and potential explanations for the ninefold increase in PTS symptoms for those with higher non-organizational religiosity. A magnitude of such difference is not commonly seen in the social and behavioral sciences. Although qualitative research does not typically include formal hypotheses (Daly, 2008), we thought it possible that those in the high-scoring non-organizational religiosity group would be significantly more likely to engage in negative religious coping than the low-scoring group, possibly contributing to the ninefold increase in PTS observed in Cherry, Sampson, et al. (2015). Such a pattern of results would be noteworthy and would also confirm Mihaljević and colleagues' (2012) earlier findings.

Method

Participants

Participants were recruited from multiple sources in the greater Baton Rouge area and in two coastal communities located in St. Bernard and Plaquemines Parishes (counties). A recruitment flyer seeking research volunteers and pre-stamped, mail-in postcards were created and distributed widely after informal talks to church groups and civic organizations. Follow-up telephone calls were made to those who returned postcards; others volunteered after hearing of friends' participation. The original study sample totaled 219, which is described in greater detail elsewhere (see Cherry, Sampson et al., 2015). For this particular study, we removed the 30 non-coastal controls, bringing the sample to 189, and then divided that sample into tertiles based on their scores for the non-organizational religiosity module, for which 66 had low scores (scores of 3–7), 70 had medium scores (8–10), and 53 reported high scores (11–15). In this study, we compared narrative responses of the low (n = 66) and high (n = 53) non-organizational religiosity score tertiles only, bringing our final sample to 119. All participants were assigned a three-digit number to protect anonymity: former coastal residents in the 100s (101–162), current coastal residents in the 200s (201–263), and coastal fishermen in the 300s (300–363).

Materials and procedure

A 12-item religiosity questionnaire modeled after Krause (1998) was administered to assess participants' faith community involvement, non-

organizational religiosity, and religious beliefs and coping (see Cherry et al., 2011). Means by group appear in Table 3. The *faith community involvement* module included participants' religious affiliation, membership in a church, frequency of church attendance, and frequency of participation in church activities such as Bible study or Sunday school classes, with the latter two questions using a 5-point rating scale ranging from 1 = *never* to 5 = *nearly every day*. The *non-organizational religiosity* module assessed solitary religious participation. Two questions assessed the frequency of reading the Bible or other religious literature and listening or watching religious programs on the radio or television (1 = *never* to 5 = *nearly every day*). Participants also rated how religious they are (1 = *not at all*, 2 = *not very*, 3 = *somewhat,* 4 = *moderately,* 5 = *very*). The *religious beliefs and coping* modules measured participants' use of religion to cope in time of stress and need. Questions in the *religious beliefs* module included frequency of seeking comfort in your religious beliefs (e.g., *God plans everything for a reason)* and religious practices (e.g., praying, meditating, fasting, etc.) also using a 5-point rating scale ranging from 1 = *never* to 5 = *nearly every day*. Questions in the *religious coping* module appraised how much one utilized strength and support from God in difficult times, the use of prayer for coping with distresses and disturbances, and the importance of seeking God's guidance when making important life decisions. These questions were rated on a 4-point scale where 1 = *strongly disagree* to 4 = *strongly agree*. Responses were summed within each module to yield a composite index of faith community involvement, non-organizational religiosity index, and religious beliefs and coping (see Cherry et al., 2011, for description). The psychometric qualities of the religiosity questionnaire include content validity (Cherry et al., 2011) and internal consistency reliability (Cronbach's alpha = 0.907; see Cherry, Sampson, et al., 2015).

Informed consent was obtained for all participants at the beginning of the session. The procedures used were reviewed and approved by the Institutional Review Board of Louisiana State University in Baton Rouge, Louisiana. Interviews were conducted in participants' homes or other locations in their community in two sessions.

Narrative responses

At the end of the first interview session, participants were given seven open-ended questions on a prepared sheet. These were read aloud and reviewed. In the following session (at least one week later), participants answered these questions and their responses were recorded. Digital voice files were transcribed verbatim and double-checked for accuracy. In this study, we focus on participants' responses to these questions:

(1) In times of trouble, people often turn to their religious and spiritual beliefs to help them cope with life stresses. Have your religious beliefs and practices helped you cope with Hurricane Katrina and Rita, and if so, in what way? [and]
(2) In times of trouble, people may turn to a faith community to help them cope with life stresses. Has a church or faith community helped you cope with Hurricanes Katrina and Rita, and if so, in what way?

Analyses and coding

We performed Numeric Content Analyses (NCA) of the narrative data consistent with a systematic four-phase, team-based qualitative methodology (for detailed explanation, see Marks, 2015). In brief, a team of six undergraduate student coders and one graduate student team leader met weekly during the 2015 spring semester to carry out the open coding process, which was based on our earlier qualitative work with the Louisiana Healthy Aging Study (LHAS) hurricane assessment study (Marks, 2015; Marks, Cherry, & Silva, 2009; Tausch et al., 2011). The students were divided into two teams of three coders each. One team was assigned the low non-organizational religiosity sample and the other the high non-organizational religiosity sample. Each week, coding partners met separately to discuss the prevalent ideas and themes covered in the interviews, in order to provide and ensure inter-rater reliability. Coding the data as a team with a focus on inter-rater reliability "allow[ed] for multiple voices" but tempered "the idiosyncrasies [and biases] of any single member" (Marks, 2015, p. 501).

In addition, a weekly team meeting was held with all coders present to compare and contrast codes separately by low and high non-organizational religiosity. Each week, the two teams met both separately and together to compare and contrast that weeks' findings. Across the semester, themes began to gradually unfold, and the two teams were progressively able to filter "pretenders" (concepts that may seem important at first but fade throughout multiple interviews) from "contenders" (concepts that remain salient across many interviews). To ensure that the themes were supported by primary data, the graduate student leader then created a document in which "gems" (verbatim quotes that support the theme) were copied and pasted from interviews underneath their respective themes. Each of the major themes reported herein had several pages of supporting data drawn from multiple interviews. Only themes that achieved consensus were "designated with the carefully reserved appellation of core theme" (Marks, 2015, p. 503). Thus, the coding approach we implemented was designed to augment the consistency and reliability of the coding scheme (Anfara, Brown, & Mangione, 2002; Marks, 2015). Throughout the research process, we strived to align ourselves with Patton's (2002)

recommendation of creating a systematic data "audit trail" (p. 93). When the qualitative analyses were completed and all themes identified with primary data had been finalized, the graduate student leader examined the literature on religion and health to account for emergent group differences in an effort to explain our prior finding of a ninefold higher likelihood of PTS symptoms among the high scorers (Cherry, Sampson, et al., 2015).

For the major themes identified in this article, there were some areas of overlap and similarity between the two groups. There were, however, differences in the respective order of importance and salience of themes across groups. There were also nuances that were captured during the process of team-based qualitative analysis that are discussed in the Findings section.

Findings

Our comparisons featured two distinct groups: (1) high non-organizational religiosity scorers [those with ninefold higher reported symptoms of post-traumatic stress than the low-scoring group, according Cherry, Sampson, et al.'s (2015) previous analysis], and (2) low non-organizational religiosity (for comparison purposes). Both groups were predominantly Catholic (Low-scoring group = 77.3%, High-scoring group = 66.0%) with the high-scoring group being significantly older (M age = 60.36, SD = 14.44), than the low-scoring group (M age = 53.95, SD = 18.38, p = 0.04). Additional quantitative sociodemographic information (via chi-square analyses and independent samples t-tests where appropriate) of the two groups is reported in Tables 2 and 3.

Across the two open-ended questions, common themes among the high- and low-scoring groups emerged, with noticeable differences within the groups. Four recurring or "core" themes are discussed—along with supporting and illustrative verbatim excerpts from participants' interviews in the effort to convey participants' own voices. The four themes are, respectively: (1) Use of Prayer and Belief in God as Coping; (2) The Importance of Going to Church; (3) Reliance on a Faith Community; and (4) Disappointment with the Catholic Church. As we reveal participants' narratives, we are not attempting to disparage or cast blame on the Catholic Church—indeed, we have published work that features strengths of that religious organization (Batson & Marks, 2008). Instead, our purpose is to accurately display the varieties of frustrations and disappointments the (predominantly Catholic) sample experienced (see also Marks, Hatch, Lu, & Cherry, 2015).

Theme 1: Use of prayer and belief in God as coping

In response to using religious beliefs and practices as a means for coping, dividing the sample based on high versus low non-organizational religiosity scores revealed different uses for prayer. The low-scoring group was rarely

Table 2. Demographic characteristics of the sample.

Demographic Variable	Low Scorers (n = 66)	High Scorers (n = 53)	χ^2	P
Gender				
Male	35 (53.0%)	15 (28.3%)	7.38	0.007
Female	31 (47.0%)	38 (71.7%)		
Ethnicity				
Caucasian	56 (84.8%)	40 (75.5%)	1.66	0.198
Isleño, African American, Hispanic, or Other	10 (15.2%)	13 (24.5%)		
Marital Status				
Single	12 (18.2%)	7 (13.2%)	2.50	0.287
Married	45 (68.2%)	33 (62.3%)		
Divorced/Widowed	9 (13.6%)	13 (24.5%)		
Educational Attainment				
High school or less	21 (31.8%)	19 (35.8%)	.463	0.793
Some college or Bachelor's	35 (53.0%)	28 (52.8%)		
Master's/Professional/Doctorate	10 (15.2%)	6 (11.3%)		
Denominational Affiliation				
Catholic	51 (77.3%)	35 (66.0%)	1.85	0.174
Other	15 (22.7%)	18 (34.0%)		
Official member of a church				
No	39 (59.1%)	6 (11.3%)	28.53	< 0.001
Yes	27 (40.9%)	47 (88.7%)		

Table 3. Self-reported age and religiosity characteristics of the sample.

Demographic Variable	Low Scorers (n = 66)	High Scorers (n = 53)	*t-statistic*	P
Age	53.95 (18.38)	60.36 (14.44)	2.07	0.0403
Faith-community involvement	3.80 (1.37)	6.79 (1.66)	10.77	<0.0001
Religious beliefs	6.00 (2.26)	9.47 (0.89)	10.54	<0.0001
Religious coping	8.47 (2.71)	11.72 (1.29)	8.04	<0.0001

atheist; many described a personal, loving relationship with God. Some of these participants described themselves as spiritual, but not religious, while still finding a need for prayer:

> **L154, 57-year-old male, former coastal resident**: "God grant me the serenity to accept the things I cannot change … courage to change the things I can, and wisdom to know the difference." I truly say that prayer at least once a week. I don't know who I'm praying to, but I'm praying. . . . I don't go to church, and I don't know if I see the value in that anymore, but I pray. So, does that help me cope with the stresses? When I'm in the highest stress, yes.
>
> **L314, 22-year-old male, coastal fisherman**: I know God helped me through that time, and I just feel that without that sense of my belief in God and my spirituality … I don't know if people would have gotten through that without finding God.

Within this theme addressing prayer and belief, we noted subthemes regarding the versatility, mobilization, and independence of prayer. Rather than feeling the need to go to church to pray, many people in the low non-organizational religiosity group mentioned that their prayer habits occurred in many contexts:

H229, 56-year-old male, current coastal resident: But as far as coming here to pray over me or me going to a spiritual group to seek time with the Lord … I get that every day myself. I take care of that. I don't need them. I don't need somebody to be there to help me through that.

H350, 30-year-old female, coastal fisherman: We don't go to church that often, but we believe in God and everything, so of course we pray when things are tough.

Using Pargament and colleagues' (2000) styles of religious coping as reference (Table 1), use of prayer as a coping mechanism for the low-scoring group can be classified as *Active Religious Surrender*. In a college sample, religious surrender was correlated with stress-related growth ($r = .22$, $p < .01$) and positive religious changes such as growing closer to God after the stressful incident ($r = .51$, $p < .01$) (Pargament et al., 2000). Although the importance of prayer was not underemphasized in this group, the idiom "God helps those who helps themselves" was salient. Self-sufficiency, in conjunction with prayer, was highly valued by this group:

L360, 55-year-old male, coastal fisherman: God is not going to do it for you. You got to do it yourself. You know, God can give you strength just to keep going and make it through every day [but] you have to decide to do it, and God is not going to do it for you. Some people just have to … depend on somebody else to do it, to fix it and praying to God is not going to help … fix your things that were broken. God did not bring it on you. He did not bring it. He is not going to get you out of it.… You have to work and get others—whatever help you can—to get back, and working together as a community. [That] is how you get back.

L137, 71-year-old female, former coastal resident: The buck stops here. You make your own luck. All of it. [You have to work to make] all those things right.

Conversely, although the high-scoring group also used prayer as a coping mechanism, analysis of these narratives revealed a different style of coping:

H245, 79-year-old female, current coastal resident: And I prayed, and prayed. That's all you could do was pray. Oh yes, oh yes. I believe in God, and I prayed to God. All you did was sit in a gym, honey. You sat there those three days. You never slept. Because you was on a bench. You sat on a bench. That's how you was, three days, sitting there. A bottle of water and a bag of potato chips to eat. That's what you had to eat.

H208, 66-year-old female, current coastal resident: I find myself constantly praying to God, "Oh please don't let that happen. Please help me here, or do something." I can't go sit in my church like I use to do, but I feel like I can pray here at home as much as anything else. I mean, I do pray constantly, and my beliefs have gotten me a long way, and they still do. And it has helped me to cope because … a lot of times you sit down and you think about everything that you lost and all the friends that you lost and everything else, and all your …. [M]y big deal is, "For God's sake, please take that out my mind for now. I got something else I got to do. I mean please, take it out of my mind." But it does help you to cope with everything that you have problems with. I'm a great believer that God has brought me through a lot.

> **H209, 56-year-old female, current coastal resident**: Because you, you know … that it's going to get better. Sometimes you … I'm sorry. Sometimes you try to fix things, but you can't. You just got to turn it over to God and let him fix it.

The preceding quotes can be best described as *Pleading for Direct Intercession* (Table 1). Unlike the low-scoring group, those in the high-scoring group appeared to struggle with self-sufficiency, as their familiar and possibly routine method of coping with stressors, namely religion, seemed out of reach given the catastrophic destruction of homes and churches in Katrina's aftermath. Many of the high-scoring individuals reportedly felt helpless in the time after the storm, and it was their belief that things would only get better if God directly intervened. In contrast, for those in the low-scoring group, secular support through friends, family, and other organizations appeared to remain stable after the storms. While in Pargament et al. (2000) college sample *Pleading for Direct Intercession* correlated positively with stress-related-growth (r = .31, p < .01) and religious outcomes (r = .38, p < .01), use of *Pleading for Direct Intercession* was also negatively associated with physical health (r = .-18, p < .01), greater distress at the time of the event (r = .14, p < .01), and level of distress now (up to three years after event) (r = .20, p < .01). The latter outcome is especially important for consideration in our sample who were interviewed approximately five years after Hurricanes Katrina and Rita struck and one year after the Deepwater Horizon Oil Spill. Although the physical devastation was long over, the psychological trauma people endured often remained salient. The next theme, The Importance of Going to Church, provides further insight into why the highly religious group seemed to be at substantially increased risk for post-traumatic stress.

Theme 2: The importance of going to church

Striking differences between the two groups were also evident in self-reported participation in organized religion. While 40.9% of the low-scoring group reported having current membership at a church, 88.7% of the high-scoring group were current church members. In both groups, Catholicism was the predominant denomination—consistent with the population of south Louisiana (see Table 2). The low-scoring group expressed at least two related ideas that differed from the high-scoring group; namely, the low-scoring group repeatedly reported that: (a) their church was not a social network for them, and (b) they did not need a church to have a relationship with God:

> **L154, 57-year-old male, former coastal resident**: I didn't go to my church. I didn't go. It wasn't a community. [My community] was [my] family and my friends.

> **L257, 55-year-old male, current coastal resident**: [C]hurch was not going to do it for me, but I had to look into the beliefs that I have internally, you know the spiritual [stuff], 'cause God doesn't live, to me, at the church. God lives inside of us.

By way of comparison, the high-scoring group reportedly valued the structure, routine, and sanctity that going to church and mass provided:

> **H151, 62-year-old female, former coastal resident**: And I can remember one day just saying, "Please, please take it from me and whatever you want, I'll do. Just show me how to get up out of this bed every single day." And I don't know what I was doing that day, but I thought to myself, "You need to go to mass." And I did. And I started going to daily mass. And it's been, I mean, there's a lot of times I sure don't feel like going, but I do it because I just think to myself, "Why not?"

> **H161, 33year-old female, former coastal resident**: "Okay, I'm not in control right now. I am the child. I'm learning. You're in control … just for an hour at least." And it's almost hard sometimes to go back to real life, because at church it's like you let go, you worship, you submit, you have friends, everything is happy. When you come back home it's like, ugh, work, cleaning house, parent, responsibilities, things I need to do. It's almost overwhelming sometimes to come back home and put that role back on.

> **H234, 59-year-old male, current coastal resident**: And it helps because we get together with … our church families, and we're able to confide in each other. When we're going through these things, we almost think it's only happening to us, and then we see what others went through, what they're going through, and how they struggled and things like that.

This difference in the importance of a church community does not appear to imply positive or negative religious coping like our first theme did. Rather, the high-scoring group reportedly used church as a means of coping or social support whereas the low-scoring group did not. *Seeking Support from Clergy or Members*, another method of coping to gain intimacy with God, was found to positively relate to overall health, stress-related growth, and religious outcome in Pargament et al. (2000). However, if these high-scoring participants were engaging in this protective or positive coping behavior, then why do we see this large discrepancy in likelihood of PTS symptoms? Examination of the final two themes may help provide partial answers to this crucial question.

Theme 3: Reliance on a faith community

Regarding the second open-ended question focusing on reliance on a faith community for support after the storms, a common theme of gratefulness for the influx of non-Catholic (and often Protestant-based) volunteer groups emerged from both the high-scoring and low-scoring groups:

> **L261, 20-year-old female, current coastal resident**: We did have a lot of faith-based people [that] came down and helped us after Katrina … from every faith, from like Baptist, Lutheran, I mean, every faith besides Catholic.

> **L235, 43-year-old female, current coastal resident**: Baptists rock. It made me question the Catholic [involvement], I'll tell you that.
>
> **H327, 48-year-old female, coastal fisherman**: [T]he people who helped us were very religious and even though they were Baptist and I was Catholic … it didn't matter. We all believed in one God.

The voluntary physical and material help and assistance provided by an array of churches and received by participants were at the core of this gratefulness—a phenomenon discussed in depth elsewhere (Marks et al., 2015; see also Henderson, Roberto, & Kamo, 2010; Stanko et al., 2015; for additional post-Katrina findings on gratefulness and thankfulness). In short, however, the desire of these religious (but usually non-Catholic) volunteers to provide physical labor and tangible goods in addition to spiritual support was reported and appreciated by several participants.

> **H330, 43-year-old female, coastal fisherman**: The church in Tupelo helped us, and they helped us as much as they could emotionally, but they helped us a lot … spiritually and physically … coming down here to physically work on the house. And when they would come down here to work on the house, they would talk to other people about their faith.
>
> **H253, 21-year-old male, current coastal resident**: We were most surprised that they [the helpers] … They told *us* thank you. They were like, "No, thank *you* for letting us come down here and letting us help you, giving us the opportunity to share what we know and to share how we feel so that we can help you get through this troubling time."

The low-scoring group reported less reliance on the faith community-based volunteers for spiritual support compared to the high-scoring group, but were similarly thankful for the services volunteers provided:

> **L137, 71-year-old female, former coastal resident**: I guess involuntarily tears just started flowing and they said, "Do you need a prayer?" I said, "No, I need a lunch." [laughs] And then I felt bad. And they said, "Fine, we can do that."
>
> **L255, 20-year-old male, current coastal resident**: It was nice for a church group to have a physical way of helping as well as [giving] their spiritual guidance.

Although the preceding quotes demonstrate the importance that other (and often geographically distant) faith groups provided, local faith groups, particularly the churches our participants belonged to, were comparatively not as helpful in the aftermath of the storm. In both the low (77.3%) and high scoring (66%) groups, Catholicism was the top religious affiliation. Louisiana is known for being heavily Catholic (especially south Louisiana—including Baton Rouge and New Orleans), with "parishes" not counties, and the Catholic Church has a large following across generations. In the aftermath of the storm, these parishioners reported that they looked to the Church for guidance and support for recovery but were disappointed in the response (or lack thereof) they found.

We now turn to our final theme, which focuses on participants' perceptions of the post-disaster response of the Catholic Church.

Theme 4: Disappointment with the Catholic Church

As mentioned earlier, in the aftermath of the storms, many faith-based groups across the country came to the Gulf Coast to assist in salvage, repair, and general assistance (see Cherry, Allen, & Galea, 2009, for discussion). Even so, many of our participants belonged to the same parish that they were born into and had dedicated their religious lives to—and subsequently expected more assistance from "their" Catholic church.

> **L153, 52-year-old female, former coastal resident**: If anything, it broadened my horizons as to how much the Catholic Church does not do, or maybe does in a different way. [It was] maybe not as hands-on as some churches can be.

> **L235, 43-year-old female, current coastal resident**: Coming back home after the storm, other religions did more than the Catholics. There were religions with tents and stuff, giving water out to people, and there were just a lot of religions here but the Catholic was not. N-O-T here at all. Catholic Charities … nothing.

> **L312, 40-year-old female, coastal fisherman**: We actually went to a Catholic church in Butler and they said … Their exact words to my sister—I turned around and walked away—was, "We don't have anything for you."

> **L230, 49-year-old male, current coastal resident**: Oh yes, the Catholic Church really screwed St. Bernard.

Much of the expressed anger toward the Catholic Church and Archdiocese of New Orleans came from the low-scoring group who reported disappointment in the Church's response and presence after the storm. It is vital to note, however, that although individuals and families suffered extreme devastation from the aftermath of the storms, organizations such as the (Catholic) Archdiocese of New Orleans experienced $287.9 million dollars in damage, with $215.1 million due to flood damage and $71.3 million due to hurricane-force winds (Nolan, 2008). Before the storms, the Archdiocese had 128 parishes or mission centers in the region; three years later in 2008, after restructuring and consolidating, only 108 remained—a quantitative loss of 20 and, for some, an inestimable qualitative loss (Finney, 2015). The hierarchical structure of the Catholic Church frustrated participants who were very involved in their local parish but were not given permission by the Archdiocese to rebuild or replace a score of destroyed churches:

> **L209, 56-year-old female, current coastal resident**: So when we had made our plea and they had … people from the Archdiocese come down and we were giving our reasons why we think we should be reopened and all this kind of stuff. . . . [S]o when that announcement came out, we were so happy. I mean, we had people on three-way [conference calls] and everything else screaming that … we were going

> to get to reopen [our church]. . . . [But] there were only three churches given the okay to reopen . . . at that time. And that was us, St. Thomas in Plaquemine Parish way down, and somebody else . . . forget who somebody else was . . . we didn't care about that somebody else. We just . . . [laughs]
>
> **Interviewer**: You wanted your own parish [back].
>
> **L209**: Yes!

To those that valued the church as a second community and as "church family," being unable to use their church as a coping resource was another major loss to them after losing their homes and neighborhoods. Under circumstances that are typically studied, when an individual relies upon and needs his or her church community in a time of crisis, the church is not simultaneously experiencing catastrophe. Such was not the case in wake of natural disasters such as Hurricanes Katrina and Rita. Many Catholic parishioners were displaced immediately after the storms and did not return to their original parishes afterward. Prior to 2005, the (Catholic) Archdiocese of New Orleans reported 490,898 registered parishioners; by 2008, this number dropped to 384,994, a 21.6% decrease. Faced with a $104.5 million gap in insurance coverage and significantly fewer parishioners and priests, the Archdiocese closed seven parishes and delayed opening of 23 others until February 2006 (Finney, 2006), leaving many of our participants without a community that, to many of them, had encapsulated their entire lives. In these parishes, people were baptized at birth, married in adulthood, and eulogized at death. Growing up, participants were told, "If you are there for the church, the church will be there for you." However, to the dismay of many, this was not the case after the storms. In prior qualitative work with Latter-day Saint (Mormon) families, when a faith community failed an individual or family rather than a secular agency, "it was both disappointing and hurtful in ways that seemed to elicit deeper frustration and pain" (Marks & Dollahite, 2001, p. 636). This "deeper frustration and pain" seemed to also be experienced and echoed by highly religious Catholics in our study:

> **H226, 81-year-old male, current coastal resident**: Yeah . . . I'm hurt. I'm hurt . . . that thing goes way back when I was a youngster in the Italian school in the French Quarter, my parents donated every little dime they had extra to the poor sisters and the poor Church. And, after we got there, the Pope comes along, sells the Church, he sells the school, he sells the property, and they go to another Church that need[ed] donations for this and for that. And, this is what shocks me the most about the Catholic [Church], they take the . . . for years they get everything they want, then when something goes wrong, they back out. Down here we had two buildings for the older people. It only had four feet of water in it. The Catholic Church took the money for the full buildings for the elder[ly] people, never fixed the buildings, tore it down, took the money. Where's the old people? Where's all that money they got from them people? And, that upsets me about the Catholic religion.

Where was the Catholic Church after Katrina? Catholic Charities, the church's largest humanitarian effort, reportedly donated and distributed $12.9 million in aid to individuals after the storm (Nolan, 2008). Receiving this aid, however, was reportedly difficult for our participants, as noted by the following three participants.

> **H249, 51-year-old female, current coastal resident**: They have [the] Catholic Charities but I never went because I got scared away from [them] because they … asked you how much money you made, how much you did this, how much you did that, how much money … [a]nd you had to answer all kinds of questions that meant they might give you some help. When you went to the other places, it [was] just all whatever you needed, it was handed to you. But they (Catholic Charities) … just handled things a little differently and they weren't as available and a lot of people left Catholicism because of it, but you can't do that. Your faith needs to be stronger [than that].

> **H226, 81-year-old male, current coastal resident**: I'm a born Catholic and I will die a Catholic … and I know they do things charity-wise or … help people in the community, but I hadn't seen nothing like that in my area for me or my family. But I seen other religious people from other religions, other communities, come out of the country, out of the state, coming down here with kids loaded in buses and … [we] appreciate what they're doing for anybody down here.

> **H208, 66-year-old female, current coastal resident**: As far as a church or a faith community, no, I haven't dealt with any of that. I really … I thought when all the storm and all took place [that] Catholic Charities … would come forth, but they never did. And I really put a lot of hope into that. Because I felt like, "That's my religion; they should be there for me." But they weren't.

It is with those final quotes that we see how profoundly affected these individuals were by the tragedies of Hurricanes Katrina and Rita. Quantitatively, the high-scoring group was more likely to report engaging in religious coping in times of need or stress (see Table 3). However, the large amount of damage inflicted across the archdiocese was exacerbated by gaps in insurance payouts (Nolan, 2008), as well as the disheartening realities of substantially fewer parishioners, priests, and parishes, diminished the capabilities of these individuals to engage in positive religious coping methods.

Discussion

In this study, we examined qualitative narratives from participants affected by the 2005 Hurricanes Katrina and Rita and the 2010 Deepwater Horizon Spill. To shed light on Cherry, Sampson et al.'s (2015) counterintuitive finding, where higher non-organizational religiosity scores were associated with ninefold higher odds of reporting post-traumatic stress symptoms, we examined the narratives of those who scored lowest on this measure (the low-scoring group) compared to those who scored highest (the high-scoring group). Qualitative analysis revealed different styles of religious coping, with

the low-scoring group relying less on a church community, and voicing a resentment about the actions of the Catholic Church, particularly the Archdiocese of New Orleans, in the aftermath of the storms. In addition, whereas quantitative results demonstrated that low-scoring participants utilized religious coping less than the high group overall, qualitative analysis revealed greater positive religious coping within the low group than the high-scoring group, who, by comparison, placed more importance on going to and partaking in church and religious services. These key findings, among others reported here, are discussed in greater detail in the sections that follow.

Styles of coping and post-disaster psychological reactions

Using Pargament et al's. (2000) styles of religious coping and their associated symptomology as a framework in which these narrative data can be interpreted, we can speculate as to why the high-scoring group had an increased likelihood of post-traumatic stress symptoms. After qualitative analysis of interviews with participants, it may be more accurate to say that the lower-scoring group relied less on religious coping overall (see Table 3 for quantitative differences); and, while the higher-scoring group attempted to engage in positive religious coping by seeking support from their church community, they were often unable due to the widespread damage of Katrina and Rita affecting institutions as well as people's personal lives.

Theme 1 revealed that many of the low-scoring group reported the importance of having God and faith in their lives. They were not overwhelmingly agnostic or atheist. Rather, many of them described themselves as spiritual but not religious. When participants mentioned how they prayed or the contents of what their prayers were, our data suggest that participants in the low-scoring group utilized more positive coping, such as asking God to work with them as they contributed as much as they personally could. In contrast, the high-scoring group's prayers contained pleas for direct intercession from God, as they felt helpless and needed God to make the change for them. Use of active or positive religious coping has been demonstrated to be more beneficial to mental and physical health than negative religious coping (Pargament et al., 2000), a possible explanation for why the high-scoring group experienced a ninefold greater likelihood of PTS symptoms relative to their low-scoring counterparts.

Theme 2 revolved around the importance of organizational religiosity, particularly attending church services. Here we saw striking differences between the low- and high-scoring groups, due to the low-scoring group placing little to no importance on going to church, whereas the high group very much relied on the routine, ritual, comfort, and social support that church services, particularly Mass, provided. Tying into Theme 3, Reliance on a Faith Community, our low-scoring group reported more secular coping

resources than the other group who previously and currently relied on church services as coping. Here we see that after the 2005 hurricanes, the high-scoring group was unable to lean upon the Church in a time of crisis as a positive coping mechanism. Therefore, when participants in the high group attempted to engage in positive religious coping, they were unable, due to multiple closures of churches in their coastal communities and parishes. Many of these churches fell under the jurisdiction of the Archdiocese of New Orleans, and local parishioners were not authorized to rebuild. Thus, loss of a support network in addition to one's home and community may be another reason why this group had higher prevalence of PTS symptoms (see Cherry, Sampson, et al., 2015).

Both groups of participants indicated profound gratitude for volunteers, particularly Protestant-based groups. Faith-based volunteers who contributed to the disaster relief efforts reportedly provided much to these individuals beyond spiritual support. The low-scoring participants expressed the desire for "basic needs over spiritual needs" met, which was granted by the many organizations that travelled to the coastal parishes to lend a helping hand. For those in the high-scoring group, the combination of physical and spiritual help offered by these groups, regardless of denomination, left a powerful impact, even five years after the hurricanes.

The present results add to the small but growing literature on long-term recovery after exposure to a natural disaster (Cherry, 2009, 2015). After a catastrophe, positive and negative religious coping styles both seem to influence symptoms of post-traumatic stress (e.g., Ano & Vasconcelles, 2005; Mihaljević et al., 2012). Thus, it is imperative for a hierarchical religion like the Catholic Church to consider personal, spiritual, and financial needs of their parishioners during the aftermath of a natural disaster. For practicing clinicians and others in health and wellness fields, the present data indicate that assessing a client's religious needs, beliefs, and coping can be important considerations in developing a recovery or care plan for an individual (Dass-Brailsford, 2010).

The present results and their interpretation should be considered in light of at least three methodological limitations. First, individuals who were faring most poorly post-Katrina may not have self-selected to participate in a study on post-disaster recovery, limiting the present findings and their interpretation to relatively healthier populations. Second, our study sample may reflect regional differences unique to south Louisiana, such as limited variation in religious faith, which necessarily impacts generalizability. Future research with a more religiously and culturally diverse sample would be valuable to address this issue. Third, the psychometric qualities of the religiosity questionnaire used in this study are not fully established, so further research is necessary. Replicating the present findings with alternative indices of religiosity, such as the RCOPE (Pargament et al., 2000) and the DUREL (Koenig &

Büssing, 2010) would be desirable before broader conclusions would be warranted.

Religion and health

According to Karl Marx, "Religion is the sigh of the oppressed creature, the heart of a heartless world, and the soul of soulless conditions. It is the *opium* of the people" (Marx & O'Malley, 1970). In Sigmund Freud's *Future of an Illusion*, Freud categorically defined religion as humankind's universal illusion and obsessional neurosis. Indeed, Freud once called religion an "intoxicant," a "bitter-sweet poison," and "childishness to be overcome"—all within the same paragraph (Freud & Scott, 1928, pp. 85–86). At a glance and in isolation, Cherry, Sampson, and colleagues' (2015) previous findings that highly religious participants scored at a ninefold higher PTS rate could be interpreted as consistent with Freud's argument, implying that perhaps religion is a "crutch" and a very bad one at that. However, the present findings stand in anomalous contrast to hundreds of empirical studies that show generally higher levels of mental and psychological health among the highly religious (Koenig et al., 2012; VanderWeele, 2017), including scores by the authors of this article (for a book-length review, see Marks & Dollahite, 2017).

In another study that quantitatively compared styles of religious coping and psychological outcome after the massive Midwest flood of 1993, positive religious coping mediated the relationship between religiosity before the flood and psychological outcome six weeks after the disaster (Smith, Pargament, Brant, & Oliver, 2000). However, nearly 75% of their sample identified as Protestant with only 25% Catholic. Churches were specifically cited as places of refuge and community gathering in the aftermath of the disastrous flooding. These findings support Koenig's (2009) argument that unlike other methods of coping, "religion is available to anyone at any time, regardless of financial, social, physical, or mental circumstances" (p. 205). Unfortunately, our participants did not have these same physical, spiritual, psychological, and social supports available due to catastrophic and widespread damage across the Diocese.

Although both groups expressed thankfulness for faith-based volunteers from other faiths (Marks et al., 2015), the perceived failure to respond by the Catholic Church in the aftermath of the storms in the coastal parishes of south Louisiana left many Catholics in the low-scoring group feeling disgruntled. By contrast, high-scoring religious and devout individuals reported profound, even piercing pain. Further, the high-scoring group was particularly found to have expected "more" help from their religion than what they received, leading to reports of feeling abandoned by "their" Church during their time of greatest need. The phenomenon observed here seems to resonate with a melancholy minor chord from the work of Marks and Dollahite (2017). Based on a series of qualitative

studies, those authors noted that—particularly for highly religious families who typically draw considerable support from their "church family"—when their beloved faith community lets them down or fails them, "it [is] both disappointing and hurtful in ways that [seem] to elicit deeper frustration and pain than failures by secular agencies and institutions" (p. 129). The present findings seem to confirm the reliability and broader applicability of Marks and Dollahite's earlier work insofar as this phenomenon has now been documented in qualitative data from Protestant, Latter-day Saint (Mormon), Muslim, and Jewish contexts (Marks & Dollahite, 2017)—and with Catholics in the present study.

Perhaps, in our specialized empirical narrative involving the wake of Katrina/Rita and reported failure of the Catholic Church, we see a second catastrophe or "storm after the storm" that resulted when those who had leaned heavily on an historically reliable coping mechanism, organized religion, were literally affected to the point of trauma when they discovered that their trusted crutch had given way at the time of crisis when they needed it most. Other evidence, using community-dwelling older adults enrolled in the Second Duke Longitudinal Study, has shown that coping through religion was older adults' top reported coping behavior (17.4%), followed by keeping busy (15.1%) (Koenig, George, & Siegler, 1988). Older adults may rely more heavily on religion in a time of a crisis versus their younger counterparts, leading to greater vulnerability when churches were inaccessible. Lastly, although our participants who displayed the ninefold higher odds of post-traumatic stress symptoms exhibited negative religious coping, perhaps it was the *inaccessibility* to (what had been for many of the highly religious participants) a lifelong positive coping mechanism—and that this lack of access impacted them the most, contributing to this large magnitude in difference five years after the hurricanes. Future research should incorporate measures of expected dependency or level of support expected from organizational religiosity to determine whether discrepancies in support expected versus received contribute to the types of outcomes featured in the present findings. In addition, the saliency of our final theme warrants further exploration into the Catholic Church's response to disasters since Katrina. Exploration of the relevance and applicability of the present findings in the context of other types of disasters and catastrophic environmental events is also needed.

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