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If the Lord is willing and the creek don't rise: Religious attendance and disaster recovery in the Deep South

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Introduction

People who regularly attend assemblies of religious organizations have greater community engagement and are less likely to be socially isolated (Hovey *et al.*, 2004). These benefits, suggests the social science research evidence thus far, are not related to religious belief, but instead are associated with regular attendance at religious organizations (Shor and Roelfs, 2013).¹ Furthermore, community engagement often confers other benefits onto individuals including psychological benefits (Cavendish, 2000), health benefits (Moren-Cross and Lin, 2006), and more resilience to trauma and disaster (Nakagawa and Shaw, 2004). Specifically, studies have found a connection between the level of community engagement (including the size of one's social network) and the ability to recover from natural and man-made disasters and that this effect differs between whites and African Americans. The current article examines this relationship to see whether social networks, religious attendance, and race are associated with the ability of individuals to recover from disasters in the heavily religious Deep South states of Mississippi and Alabama.

Religious institutions play an integral part of community recovery by serving as an information source in the pre- and post-disaster stages and by providing material resources for recovery and psychological support throughout the disaster phases (Rivera and Nickels, 2014; Angel *et al.*, 2012; Brunnsma *et al.*, 2010). Additionally, it is well established that there are racial differences in both disaster resilience (Elliot and Pais, 2006; Senkbeil *et al.*, 2014) and social and religious involvement (Chaves and Higgins, 1992; Cavendish, 2000). Our

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¹Herein, we use the terms "religious organizations" and "church" interchangeably. Though some individuals in our sample practice non-Christian religions, the vast majority the Deep South adheres to the Christian faith

research assesses the role of religious attendance in disaster impact and recovery to address the following research question: Does religious attendance facilitate disaster recovery? To assess the effect of religious attendance on disaster recovery, we studied three Gulf States disasters: the April 2011 tornado that hit Tuscaloosa, Alabama; the April 2010 BP Deepwater Horizon (DWH) Oil Spill in the Gulf of Mexico; and the April 2011 flooding of the Mississippi River in the Mississippi Delta region.²

Social Networks and Disasters

Previous research has found that those with stronger social networks are not only less likely to feel the full brunt of a disaster (Klinenberg, 2002), but are also more likely to fully recover over long periods of time (Calvo *et al.*, 2015). Nakagawa and Shaw (2004) studied the role of social networks in the recovery processes after the 1995 Kobe (c.f., Aldrich, 2011) and 2001 Gujarat earthquakes and showed the vital role that social capital prior to the disasters played in the rebuilding of affected communities.

Religious Attendance and Social Networks

Religious institutions provide social networks.—The role of religion in the development of social networks has recently received considerable attention in the empirical research (Lim and Putnam, 2010; Wuthnow, 2002, 2004; Lewis, MacGregor and Putnam, 2013; Bruhn 2011). Religious institutions provide individuals with access to others in the community and provide vital social network connections in preparing for and responding to disasters (Brunsma *et al.*, 2010). These connections are to the institution itself, to others in the congregation, and to the organizations that the religious institutions work closely with. Liu *et al.* (2011) find that many individuals, in particular Hispanics and African Americans, trust their religious institution more than other community organizations to work in coalitions to improve the community. Similarly, Schnable (2015) found that higher religious attendance and developed religious social ties are among the factors that increased favor for religious institutions to provide aid at the international level rather than aid from government organizations.

Religious institutions have been well documented to provide both material resources and spiritual support following disasters (Angel *et al.*, 2012; Leventhal and Mears, 2002). When a Gallup survey asked respondents to name up to three things that helped them get through Hurricane Katrina, the most commonly provided answers were religious faith, social networks, and organizations (Brunsma *et al.*, 2010). The ability to mobilize resources when a disaster strikes a community is often dependent on knowledge of a community, and of religious networks in particular (Thomson, 2014). Religious institutions are also more likely to exist in low-income neighborhoods than secular institutions and provide services in these neighborhoods for addressing social problems (Rivera and Nickels, 2014).

Research has consistently shown racial differences in disaster recovery (Elliot and Pais, 2006) and well as social involvement (Chaves and Higgins, 1992), including faith-based community activism (Cavendish, 2000). Faith and spirituality are sources of resilience and

²See Supplement 1 for a background on each of the three disasters that provide the scope of our study

survival for many, and found to be more so for African Americans (Wailoo *et al.*, 2010). A religious belief system regarding disaster recovery can promote positive mental health and thus serve as a psychological function of resilience. Wailoo *et al.* (2010) assert that African Americans are more likely to rely on their social networks for assistance than whites, and are more likely to attribute their survival to God.

Hypotheses

Based on our review of the literature and preliminary analysis, we explore the following hypotheses:

- H1: Individuals with larger social networks have higher levels of recovery from disasters.
- H2: Individuals who attend religious services frequently will have higher levels of recovery than individuals who only occasionally attend religious services.
- H3: Individuals who do not attend religious services will have higher levels of recovery than individuals who only occasionally attend religious services.
- H4: The effect of religious attendance on disaster recovery will be greater for blacks than for other races.

Data and Methods

Data Collection

The data used to address the research questions were collected through a random digit dialing (RDD) phone survey accessing both landlines and cellphones of individuals impacted by one of three disasters—the DWH oil spill, the Tuscaloosa tornado, and the Mississippi River flood. The 57-question survey took place in August 2014 and participants were screened to be at least 18 years of age, in the community at the time of the disaster, and having been negatively affected by the disaster. Calls were made to Greene, Tuscaloosa, and Jefferson counties in Alabama for the Tuscaloosa tornado; Mobile and Baldwin counties in Alabama and Hancock, Harrison, and Jackson counties in Mississippi for the DWH oil spill; and Desoto, Tunica, Coahoma, and Bolivar counties in Mississippi for the Mississippi River flood.

Variables

Dependent Variable

Degree of Recovery. To measure personal recovery, responders were asked, “Thinking of a percentage where 0 percent is not recovered at all and 100 percent is completely recovered, to what extent have you recovered from the (disaster)?”

Independent Variables

Social Network. Our social network variable comes from two questions. First, individuals were asked “How many people would you be comfortable discussing important matters related to (the disaster) with?” The second question was “Thinking about these people, which of the following statements best describes how well they know each other ...?” The

responses to the second question were coded as 1= “most do not know”; 2= “most know each other casually”; 3= “most know each other very well.” We then took the number of people in the network and multiplied it by answer to the second question and then divided by the maximum of this value to get a scale from 0 to 1 to measure the strength of one’s social network. The scaling did not affect the results reported below.

Religious attendance variables.: Respondents were asked, “In the weeks leading up to (disaster), how often did you attend religious services?” to which responses were coded as never, less than once a month, at least once a month, two to three times per month, weekly/ four times per month or more, or more than once a week. For the purpose of this study, we have coded those that attended weekly or more than weekly as “frequent attenders;” those that responded as “once a month” but less than once a week as “moderate attenders;” and those that responded “less than once a month” or “never” as “non-attenders.” The rationale for combining “less than once a month” with the “non attenders” is that first, this makes the cells of “never” “irregular” and “regular” of approximately the same sized groups, and that many report attending services more often than they actually do (Murray, 2012, p. 203). We used ordinary least square (OLS) regression to assess the relationship between religious attendance and disaster recovery.³ Regression analysis was used to assess religious attendance as an independent variable, controlling for education, gender, race, age, income, and social network variables and the interaction terms for the social network and the religion variables. We first pooled all of the disasters together and then ran the models separately for each disaster.

Data Analysis

Findings

Descriptive Statistics: Respondent Characteristics.—Table 1 provides the mean levels of religious attendance by disaster, gender, and race. To calculate the mean, attendance statistics were coded as: never attend as one, attend less than once a month as two, and so on, until more than once a week was coded as six.

OLS Regression Results.—Table 2 presents results from the pooled (all three disasters) regression model where the dependent variable is the percent that an individual has recovered from the disaster. In the first model that only includes the set of demographic control variables and the two religious attendance dummies (frequent attendance and non-attendance), we find that four of the independent variables are statistically significant. First, those individuals with at least a bachelor’s degree recover to a greater extent than those with less schooling (impact is such that they recover about six percent more). Blacks recover less than non-blacks. When we then add social network size, we find that the larger the social network, the greater degree of recovery. When we then interact the social network size variable with the religious attendance variables, we find that none of these variables is statistically significant (columns 3 and 4). Tables 3 through 5 show the results for the same models presented in Table 2, but with each of the disasters separated.

³Non-linear models were also estimated check the sensitivity of our results to the OLS model. The results were not qualitatively different than those results reported here. These results are available upon request.

Tuscaloosa tornado.—Table 3 presents the results from the Tuscaloosa tornado and shows results that are very similar to those for the pooled model in Table 2. Specifically, college education is correlated with a greater level of recovery, while blacks have a lower level of recovery. Additionally, both frequent religious attenders and non-attenders have a higher level of recovery when compared to occasional attenders. Social network size is not related to the level of recovery and the interaction terms between social network and religious attendance are not significant.

DWH Oil Spill.—Table 4 presents the model for those impacted by the DWH oil spill. In this model, the only variable that is statistically significant is the race dummy for blacks, which shows that blacks report recovering 22–23 percentage points less than other races.

Mississippi River flooding.—Table 5 presents the results for the victims of the Mississippi river flood. For this model, the race dummy for blacks is negative and significant for three of the four models. Additionally, both the frequent attendance dummy and the dummy variable for non-attendance measures are positive and statistically significant for most of the models.

To account for the emphasis on race in the fourth hypothesis, Tables 6 and 7 report the results for the pooled model separately for white respondents and black respondents, respectively. Table 6 reports that, for whites, the non-attendance dummy is statistically significant, while the frequent attendance dummy is no longer significant. Likewise the dummy variable for college education is no longer significant. In Table 7 (the results for blacks), income is now statistically significant⁴. Additionally, frequent religious attendance is positive and statistically significant, but the non-attendance dummy is not significant. Thus, we found that the effects of frequent attendance and non-attendance does not hold equally for whites and blacks. For blacks there was a positive effect from frequent attendance, but there was not an effect (positive or negative) from non-attendance. For whites, it was the opposite: there was a positive effect from non-attendance but not from frequent attendance. While the results are somewhat puzzling, we believe that the answer lies in the social networks formed in towns marked by religious polarization, especially those located in economies that are centered around knowledge workers such as Tuscaloosa, Alabama, which is the location that appears to be driving these results.

Discussion and Conclusion

This research has assessed the role of religious attendance in disaster recovery. Specifically, we have examined the relationship between social networks and religious attendance and if they affect the ability of individuals to recover from disasters in the heavily religious Deep South states of Mississippi and Alabama. The posited connection between disaster recovery and religious attendance is that those who have strong community bonds in their religious organization will be more likely to have access to resources that can help them recover from the disaster

⁴Household income (as measured by thousands of dollars) is included in all of the models in Tables 2–7 but the results are only presented in Table 7 for the sake of table brevity.

Regarding our third hypothesis, which addresses secularization, we find that frequent religious attendance and non-attendance (our measure of secularization) leads to greater recovery than moderate religious attendance. This implies that both those who frequently attend religious services and those who are secular, as defined by never attending or attending less than once a month, have a higher degree of recovery than those who only occasionally attend. Our initial analysis suggested a non-linear relationship between religious attendance and social network impact on disaster recovery. One of the more dramatic social trends in America in the past 50 years has been a rise in secularization (Putnam and Campbell, 2010; c.f., Murray, 2012). The trend towards secularism is often tied to the rise in individualism in American cultural attitudes (Grossmann and Varnum, 2015; Wuthnow 2002). While this trend is most clearly seen in the rise in the number of individuals who state “none” for religious preference (Pew, 2012), we will follow Putnam and Campbell (2010) and take religious attendance as the primary way of defining secularization. In this definition, we will include the “de facto seculars” (Murray, 2012) who only attend less than once a month in our definition of “seculars.” Similarly, in response to hypothesis 4, we found the effect of religious attendance differs by race; and the effect of secularization differs by race.

Regarding social networks, we found little evidence to support a relationship between social networks and disaster recovery for our sample. However, we find very consistently across a number of models that both those who attend religious services at least once a week and those who attend less than once a month recover more than those individuals who attend services occasionally. This result breaks down when we run separate regressions by race. Whites in our sample who attend services frequently do not recover more, but those who do not attend religious services do recover more. The exact opposite is true of blacks in our sample. We find that secular blacks recover at a similar pace as those who are occasional attenders, but that frequent attenders recover more than both other groups. This aligns with the literature arguing that faith and spirituality are sources of resilience and survival for many, and found to be more so for African Americans (Wailoo *et al.*, 2010; Elliot and Pais, 2006; Chaves and Higgins, 1992; Cavendish, 2000).

The relationship between secularization and social capital is not straightforward. For example, Putnam and Campbell (2010, p. 445) claim that “religious people are more likely to volunteer for secular organizations, as well as for religious ones” (p. 445). However, data from Faith Matters Survey that the authors cite shows that individuals in the lowest two quintiles of religious attendance volunteer for secular organizations at a higher rate than those in the middle quintile, and these seculars also give to non-religious organizations at a higher rate than the middle quintile (Putnam and Campbell, 2010, pp. 446–449). Thus, we posit that secular individuals may be investing in social capital outside of religious institutions, while those who are infrequent religious attendees, but still religious, are the ones who have the weakest social networks. Secular individuals build their social capital elsewhere while individuals in the middle have neither the strong religious social networks that the frequent attendees have, nor have they invested in secular social networks.

One plausible explanation for our findings regarding seculars is that one of the communities is the university town of Tuscaloosa, Alabama. In a college town, there may be a higher level

of true seculars (they not only do not attend, but are truly non-believers) than there are in other places in the Deep South. If this is the case, the findings about seculars/non-attenders in our data cannot be generalized, but only apply to the case of more highly educated polarized seculars. These individuals are more akin to the secular Americans associated with the religious polarization as described by Putnam and Campbell (2010) that also have a different set of political beliefs and may have developed such highly integrated secular social networks, that they will recover more quickly. Individuals who are non-attenders, but are religious believers (merely “lapsed” in some way or another) may not have the full breadth of resources that these college town seculars do.

Throughout our analysis, we find that it is those individuals who report attending either once a month or two to three times a month are the ones that recover the least. We think of these individuals as having some religious beliefs and being very much aligned culturally with those who attend religious organizations more frequently, but these individuals do not take full advantage of the social networks formed in these organizations. These occasional attenders may be culturally similar to the frequent attenders, but not fully benefit from the religious social networks. *As such, it is this middle group that may become more vulnerable than those on either end of the spectrum.* Of course, our results are preliminary and specific to our sample, but the consistency in this finding for both of the natural disasters (the Tuscaloosa tornado and the Mississippi river floods) implies that there is something about this middle group that deserves the attention of further research.

If further research on the relationship between religious attendance and disaster recovery supports the findings we have presented herein—lack of relationship between social networks and disaster recovery, higher degrees of recovery for frequent attenders and non-attenders than for occasional attenders, and racial differences in the role of religious attendance in recovery—these factors should be accounted for in disaster planning and resilience. Recovery capital provides disaster victims with social and emotional support, as well as access to much needed resources (c.f., Boeri *et al.*, 2016). We find that frequent attenders and seculars/non-attenders have greater access to this recovery capital, but that occasional attenders, as the least recovered group, may have limited access to such resources. The question then arises of how to improve access to resources for the middle group—the occasional attenders—to improve resilience to and recovery from disasters. Seculars and frequent attenders, as distinct societal segments, have access to resources through unique social structures (c.f., Williams and Durrance, 2008; Boeri *et al.*, 2016). We put forth that all community organizations, including faith-based organizations, can do more to network with each other and to identify ways to reach marginalized communities.

As the middle group is attending religious services one to three times a month, we recognize that they are part of the religious network, albeit not as connected as the frequent attenders, and that they are culturally aligned with these networks. This presents religious organizations with the opportunity to do more to incorporate these individuals into the network and improve their access to recovery capital. These relationships can be used in the event of a disaster if the institution has material resources or even spiritual support to provide to disaster victims (Angel *et al.*, 2012; Leventhal and Mears, 2002). While the frequent attenders may be more comfortable reaching out to their religious institution for

social, spiritual, and material needs (Brunsma *et al.*, 2010), we propose that perhaps the occasional attenders might not be as comfortable asking for or as aware of these resources.

For many, it is lack of knowledge of the resources that limits access to the resources (Thomson, 2014), which aligns with our findings. Although Polson (2008) finds that 90 percent of congregants receive social services from their religious institutions, more research is needed, as demonstrated by the findings presented herein, on who within the congregation is accessing those resources and how this relates to the frequency of attendance.

Furthermore, as race is a known differential in disaster recovery (Elliot and Pais, 2006) and has been demonstrated herein to be factor in recovery even when controlling for religious attendance and social networks, we conclude with the recommendation that these future studies also consider the differences in the services and networks supported by religious institutions predominately supporting white congregations and those predominately supporting African American congregations (c.f., Wailoo *et al.*, 2010).

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1:**Mean Levels of Religious Attendance**

Variables		N	Religious Attendance (mean)
Disaster	Oil Spill	296	3.95
	Flood	215	4.39
	Tornado	239	4.17
Gender	Male	238	3.83
	Female	511	4.30
Race	White	497	4.00
	Black	208	4.57

Religious attendance is defined as the response to the question “In the weeks leading up (the disaster), how often did you attend religious services?” The answers are coded as follows “Never” =1, “Less than once a month”=2, “At least once a month”=3, “Two to three times a month”=4, “Weekly/four times a month”=5, “More than once a week”=6.

Table 2.

Effect of Religious Attendance and Social Networks on Disaster Recovery-All Disasters

	(1)	(2)	(3)	(4)
VARIABLES	Recovery (percent)	Recovery (percent)	Recovery (percent)	Recovery (percent)
College Degree	6.739 ** (3.229)	6.680 ** (3.218)	6.578 ** (3.236)	6.348 * (3.236)
Black	-17.12 *** (3.870)	-16.31 *** (3.887)	-16.31 *** (3.894)	-16.18 *** (3.890)
Frequent attendance	9.215 ** (4.490)	9.003 ** (4.476)	7.097 (6.946)	8.889 ** (4.478)
Non-attendance	11.54 ** (5.554)	11.73 ** (5.536)	11.74 ** (5.546)	18.23 ** (8.677)
Social network size		0.746 * (0.448)	0.511 (0.794)	0.931 * (0.487)
Frequent X Network			0.337 (0.939)	
Non-att X Network				-1.169 (1.200)
Oil Spill	-13.32 *** (3.515)	-12.32 *** (3.554)	-12.30 *** (3.561)	-12.18 *** (3.558)
Flood	1.318 (3.959)	1.840 (3.958)	1.832 (3.965)	1.976 (3.961)
Constant	81.91 *** (8.470)	78.54 *** (8.679)	79.86 *** (9.443)	77.66 *** (8.727)
Observations	264	264	264	264
R-squared	0.203	0.211	0.212	0.214

These are the results of ordinary least squares regression models on the effect of the above variables on the level of disaster recovery. In addition to the variables listed above, all models also included income measured in thousands of dollars, gender using a dummy variable that took on a value of 1 for female and 0 for male, and age in years. Standard errors in parentheses.

p<0.01,

**
p<0.05,

*
p<0.1

Table 3.

Effect of Religious Attendance and Social Networks on Disaster Recovery-Tuscaloosa Tornado

	(1)	(2)	(3)	(4)
VARIABLES	Recovery (percent)	Recovery (percent)	Recovery(percent)	Recovery(percent)
College Degree	8.449 ** (3.631)	8.576 ** (3.672)	9.002 ** (3.679)	8.645 ** (3.682)
Black	-10.45 ** (4.618)	-10.27 ** (4.675)	-10.57 ** (4.669)	-9.790 ** (4.729)
Frequent attendance	19.72 *** (5.191)	19.77 *** (5.219)	30.26 *** (10.05)	19.75 *** (5.231)
Non-attendance	22.03 *** (6.378)	22.29 *** (6.466)	23.92 *** (6.585)	29.72 ** (11.74)
Social network size		0.161 (0.526)	1.325 (1.088)	0.296 (0.556)
Frequent X Network			-1.501 (1.230)	
Non-att X Network				-1.267 (1.670)
Constant	80.02 *** (8.855)	79.10 *** (9.394)	70.50 *** (11.72)	78.08 *** (9.510)
Observations	102	102	102	102
R-squared	0.258	0.259	0.270	0.263

These are the results of ordinary least squares regression models on the effect of the above variables on the level of disaster recovery. In addition to the variables listed above, all models also included income measured in thousands of dollars, gender using a dummy variable that took on a value of 1 for female and 0 for male, and age in years. Standard errors in parentheses.

p<0.01,

**
p<0.05,

*
p<0.1

Table 4.

Effect of Religious Attendance and Social Network on Disaster Recovery (DWH Oil Spill)

	(1)	(2)	(3)	(4)
VARIABLES	Recovery (percent)	Recovery (percent)	Recovery (percent)	Recovery (percent)
College Degree	3.190 (6.988)	2.127 (7.029)	1.364 (7.244)	0.448 (7.236)
Black	-22.18 ** (9.031)	-19.45 ** (9.302)	-18.91 ** (9.415)	-18.82 ** (9.327)
Frequent attendance	-8.836 (9.469)	-8.747 (9.447)	-13.43 (13.69)	-8.664 (9.450)
Non-attendance	-5.303 (11.30)	-5.249 (11.27)	-4.954 (11.35)	7.153 (16.93)
Social network size		1.117 (0.948)	0.545 (1.536)	1.615 (1.075)
Frequent X Network			0.928 (1.955)	
Non-att X Network				-2.276 (2.318)
Constant	73.42 *** (17.54)	68.78 *** (17.94)	71.12 *** (18.69)	66.46 *** (18.10)
Observations	90	90	90	90
R-squared	0.121	0.136	0.138	0.146

These are the results of ordinary least squares regression models on the effect of the above variables on the level of disaster recovery. In addition to the variables listed above, all models also included income measured in thousands of dollars, gender using a dummy variable that took on a value of 1 for female and 0 for male, and age in years. Standard errors in parentheses.

p<0.01,

**
p<0.05,

*
p<0.1

Table 5.

Effect of Religious Attendance and Social Networks on Disaster Recovery- Mississippi River Floods

	(1)	(2)	(3)	(4)
VARIABLES	Recovery (percent)	Recovery (percent)	Recovery (percent)	Recovery (percent)
College Degree	4.372 (7.155)	2.561 (8.013)	3.618 (8.010)	2.511 (8.331)
Black	-14.19 [*] (7.874)	-12.69 (8.503)	-15.43 [*] (8.720)	-12.72 (8.650)
Frequent attendance	19.51 ^{**} (8.601)	18.83 ^{**} (9.401)	8.738 (12.21)	18.83 [*] (9.488)
Non-attendance	23.48 ^{**} (11.73)	23.97 [*] (12.92)	23.02 [*] (12.87)	24.28 (18.17)
Social network size		0.633 (0.867)	-0.280 (1.117)	0.642 (0.939)
Frequent X Network			1.896 (1.475)	
Non-att X Network				-0.0612 (2.458)
Constant	65.44 ^{***} (20.06)	58.82 ^{**} (22.36)	68.25 ^{***} (23.41)	58.79 ^{**} (22.58)
Observations	72	66	66	66
R-squared	0.304	0.309	0.329	0.309

These are the results of ordinary least squares regression models on the effect of the above variables on the level of disaster recovery. In addition to the variables listed above, all models also included income measured in thousands of dollars, gender using a dummy variable that took on a value of 1 for female and 0 for male, and age in years. Standard errors in parentheses.

p<0.01,

**
p<0.05,

*
p<0.1

Table 6.

Effect of Religious Attendance and Social Networks on Disaster Recovery-White Respondents

	(1)	(2)	(3)	(4)
VARIABLES	Recovery (percent)	Recovery (percent)	Recovery (percent)	Recovery (percent)
College Degree	2.780 (3.228)	2.966 (3.221)	2.644 (3.268)	2.573 (3.246)
Frequent attendance	4.429 (4.916)	4.387 (4.903)	0.507 (7.935)	4.346 (4.903)
Non-attendance	10.03 [*] (5.623)	10.27 [*] (5.611)	9.988 [*] (5.638)	16.85 [*] (8.683)
Social network size		0.644 (0.454)	0.225 (0.812)	0.866 [*] (0.506)
Frequent X Network			0.608 (0.977)	
Non-att X Network				-1.125 (1.133)
Constant	-11.87 ^{***} (3.306)	-11.16 ^{***} (3.335)	-11.15 ^{***} (3.340)	-10.95 ^{***} (3.341)
Oil Spill	3.842 (4.252)	4.602 (4.274)	4.809 (4.294)	5.009 (4.294)
Flood	83.60 ^{***} (8.440)	80.11 ^{***} (8.768)	83.01 ^{***} (9.941)	78.68 ^{***} (8.887)
Observations	195	195	195	195
R-squared	0.129	0.138	0.140	0.143

These are the results of ordinary least squares regression models on the effect of the above variables on the level of disaster recovery. In addition to the variables listed above, all models also included income measured in thousands of dollars, gender using a dummy variable that took on a value of 1 for female and 0 for male, and age in years. Standard errors in parentheses.

p<0.01,

**
p<0.05,

*
p<0.1

Table 7.

Effect of Religious Attendance and Social Networks on Disaster Recovery- Black Respondents

VARIABLES	(1) Recovery (percent)	(2) Recovery (percent)	(3) Recovery (percent)	(4) Recovery (percent)
College	12.51 (9.085)	11.23 (9.417)	12.39 (9.571)	9.803 (9.346)
Income/1000	0.300 ** (0.148)	0.298 ** (0.149)	0.286 * (0.150)	0.313 ** (0.147)
Frequent Attendance	19.37 ** (9.407)	18.66 * (9.544)	9.942 (14.90)	18.30 * (9.431)
Non-Attendance	3.398 (18.22)	3.058 (18.33)	1.876 (18.46)	31.06 (25.41)
Social Network		0.677 (1.204)	-0.878 (2.367)	1.074 (1.215)
Frequent X Network			2.026 (2.653)	
Non-att X Network				-7.725 (4.919)
Oil Spill	-17.69 (11.42)	-16.41 (11.71)	-15.54 (11.81)	-17.28 (11.58)
Flood	2.282 (9.792)	2.010 (9.860)	1.037 (9.977)	-0.310 (9.851)
Constant	61.05 *** (20.27)	60.39 *** (20.42)	64.25 *** (21.11)	61.17 *** (20.18)
Observations	69	69	69	69
R-squared	0.265	0.269	0.276	0.298

These are the results of ordinary least squares regression models on the effect of the above variables on the level of disaster recovery. In addition to the variables listed above, all models also included gender using a dummy variable that took on a value of 1 for female and 0 for male, and age in years. Standard errors in parentheses.

p<0.01,

**
p<0.05,

*
p<0.1