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Creating the Need to Serve: How West Virginia Spontaneous Disaster Relief Volunteers'
Motivations and Experiences Influence their Willingness for Continued Volunteerism*

Erin Hudnall

Thesis submitted to the Eberly College at West Virginia University
in partial fulfillment of the requirements for the degree of
Master of Arts in Sociology

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Key words: volunteer, altruism, empathy, disaster, West Virginia
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ABSTRACT

Creating the Need to Serve: How West Virginia Spontaneous Disaster Relief Volunteers' Motivations and Experiences Influence their Willingness for Continued Volunteerism

Erin Hudnall

Spontaneous volunteerism, or emergent volunteer behavior, is characterized by an individual's actions of impulsively offering volunteer services immediately following the occurrence of a natural disaster or community tragedy, such as a flood or terrorist attack. This type of volunteerism differs from traditional volunteer activities that are usually preplanned and not related to a recent tragedy. It is unclear what types of motivations spur individuals to volunteer after a disaster, whether spontaneous volunteers' experiences lead to willingness for continued volunteerism in the future, and whether motivations and experiences differ significantly by context. To study this phenomenon, spontaneous volunteers who offered help during the summer of 2016 southern West Virginia floods were surveyed. Following the Empathy-Altruism model of prosocial behavior, the impact of spontaneous volunteers' types of motivations and experiences during volunteering on their willingness to volunteer in the future was assessed. Results showed that differing motivation types can be influential on spontaneous disaster volunteers' willingness for future volunteerism, especially when their experiences while volunteering are taken into account. Few results align with previous research while others are contradictory, providing a rationale for continued research on the uniqueness of spontaneous volunteerism.

Key words: volunteer, altruism, empathy, disaster, West Virginia

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As instances of terrorism, violence, and potential occurrences of natural disasters due to climate change increase within our society, it is important to understand the experiences of affected communities following such events. In any sort of disaster, there is the potential for highly destructive spatial damage and loss for individuals and the community as a whole. Often the need created by a natural disaster is answered by federal, state, and private organizations such as the Red Cross or the Federal Emergency Management Agency (FEMA) that rely on volunteers from surrounding communities to help in disaster relief efforts. It is also common for volunteers to emerge from informal community networks where they may choose to help a local organization that is responding to the occurrence of a disaster rather than a formal state or federally funded aid agency (Lowe and Fothergill 2003; Sargisson, Hanlen, Smith, and Hamerton 2012).

Regardless of the type of organizations with which it is possible to volunteer after a disaster in a community, those who hold stake in affected communities often offer assistance to victims or to relief organizations seeking to serve communities immediately following the occurrence of a disaster (Drabeck, Adams, Kilijaneck, and Taminga 1981). This type of reflexive volunteering is often referred to as spontaneous volunteerism or emergent volunteer behavior and is characterized by community members immediately responding to disasters by devoting time and other resources to a specific, time-sensitive initiative (Lowe and Fothergill 2003; Tierney and Perry 2001). This differs from traditional volunteerism, which usually involves pre-planned events or tasks that are not related to a specific disaster (Penner 2002).

Previous research has focused on the motivations of spontaneous volunteers as well as the emotional reactions and life-changing experiences resulting from their volunteerism (Lowe and Fothergill 2009; Clukey 2010). Examining the responses of individuals to disaster events

and how their experiences are shaped by entities that provide help to victims in times of need is an important endeavor that often reveals conflicting evidence about the impact on and efficiency of spontaneous volunteers (Neil, Moran, and Correy 1994). To address these issues, this study will utilize the Empathy – Altruism Model (Batson 2011) to determine types of motivations of spontaneous volunteers. This includes two types of motivations – empathic and egoistic– that describe the factors and emotions that can lead to volunteer initiative. Furthermore, researchers have yet to assess whether emergent volunteer behavior leads to the potential for continued volunteerism throughout an individual’s life, or how volunteers’ motivations and experiences may moderate willingness for continued volunteerism.

To explore the impact of differing motivations on future volunteerism and how these motivations can be influenced by volunteer experiences, the case of the 2016 summer flooding in southern West Virginia will be used. This is accomplished by the survey of spontaneous disaster volunteers who provided assistance to victims of the flood.

LITERATURE REVIEW

Volunteerism has often been defined as contributions of time or resources without coercion or remuneration (Smith 1994). It is a type of prosocial or helping behavior that is characterized by its nonobligatory nature, deliberate intent to become involved, and its setting within an organizational context (Penner 2002). Previous research suggests that those most likely to volunteer are married, religious, well-educated, women, those with children living in their homes, and individuals of a higher social class as well as those with a personal or family history of volunteerism (Delemater, Myers, and Collett 2014; Barraket et al 2013; Bekkers 2010; Einolf 2010; Beyerlein and Sikkink 2008; Bittman and Fisher 2006; Penner 2004; Bussell and Forbes 2002; Horton Smith 1994). Moreover, the voluntary sector has seen significant growth

over the past few decades as more communities around the world rely on volunteers and the organizations in which they work to provide supplemental labor and social services (Bussell and Forbes 2002).

Despite the knowledge gained thus far from research on traditional volunteerism, much less is known about emergent volunteer behavior or spontaneous volunteerism where individuals offer their time and resources to aid victims after some type of natural or community disaster (Cottrell 2010; Drabek and McEntire 2003). Even though we know it is common for residents of the affected community to be the first to respond to disaster and become spontaneous volunteers through their helping efforts, there are few previous studies outlining the common characteristics of spontaneous volunteers, what motivations prompt them to become involved with victims of a disaster, and how these factors can be contextually dependent. In addition, the few studies that explore these aspects often contradict outcomes of research on traditional volunteerism (Gibbs et al. 2015; Whitaker, McLennan, and Handmer 2015; Rotolo and Berg 2011; Flint 2007).

Problems with Definitions of “Spontaneous Volunteerism”

Previous research on spontaneous volunteerism has equated the term with disaster situations (see Lowe and Fothergill 2003 and Tierney and Perry 2001 for examples). However, it is possible that individuals could decide to volunteer spontaneously in other types of situations, like suddenly becoming involved with a volunteer organization or participating in some sort of supply drive. For the purposes of this research, I employ my own typology of volunteerism, drawing on definitions from other researchers that prove useful for analyzing the voluntary behavior of individuals. First, “volunteerism” as an umbrella term will follow the aforementioned definitions of Penner (2002) and Smith (1994). “Traditional volunteerism” or “formal volunteerism” will follow Wang, Mook, and Handy’s (2017) as well as Lee and

Brudney's (2012) description as taking place within or through organizations or established entities. "Nontraditional" or "informal volunteerism" implies the opposite: that a volunteer's initiative is taking place outside of a formal organization (Wang, Mook, and Handy 2017; Lee and Brudney 2012). Next, "planned volunteerism" occurs when an individual schedules their volunteer involvement ahead of time, such as regularly volunteering at a food pantry a few times a week or participating in annual volunteer opportunities. "Spontaneous volunteerism" occurs when individuals extemporaneously give time and resources to volunteerism efforts. Therefore, spontaneous volunteerism is not planned volunteerism.

"Spontaneous disaster volunteerism" follows the definition of "spontaneous volunteerism," but is specific to disaster situations. The term is applicable for individuals offering their time and resources to aid victims after some type of natural or community disaster, regardless of previous involvement and frequency of volunteerism. "Disaster volunteerism" as a term will refer to any type of volunteerism related to disasters, either planned, spontaneous, formal, or informal.

One must remember that the opportunity to become involved in disaster volunteerism is not always available. Unlike other volunteer initiatives that can be engaged in at any given time, the choice to become involved in spontaneous disaster volunteering is only present during or after the occurrence of a disaster, presenting a novel opportunity for individuals to make a choice about whether or not to become involved in such volunteer initiatives. Therefore, delineation must be made between spontaneous disaster volunteerism and spontaneous volunteerism of other kinds.

The Empathy – Altruism Model

Understanding the reasons for which people choose to become a volunteer can help organizations make effective use of volunteers and their time and hopefully appeal to these motivations in such a way that encourages continued volunteerism. One such framework for understanding volunteer motivations in the literature of prosocial behavior is provided by the Empathy-Altruism model developed by C. Daniel Batson (2011). In this model, individuals can be motivated by either egoistic or altruistic goals (Delemater, Myers, and Collett 2014; Batson 2011). Egoistic motives are concerned with self-gratification and are self-serving and usually involve great consideration by the individual of the costs and benefits of volunteering, such that they engage in volunteering when the benefits outweigh the costs. Examples of volunteerism motivated by egoism include volunteering for the sole purpose of logging community service hours or for the sole purpose of feeling pride in one's actions of helping others. In some volunteer situations, egoistic motives result from the desire to alleviate unpleasant feelings of distress caused by witnessing the suffering of others – otherwise known as distress motivators, which are a subtype of egoistic motive.

The second source of volunteer motivation in the Empathy-Altruism model is related to a definition of altruism as an intentional behavior to help another without expectation of reward (Delemater, Myers, and Collett 2014; Batson 2011). Altruistic motives are based on goodwill or intended benefit for others and usually come at a cost to the volunteer in the form of time or other resources. These motivations are referred to in the model as empathy-motivators, where empathy is manifested as vicarious emotions that may parallel or be identical to the emotion that the individual in need may feel. Whereas those motivated by egoistic drives seek benefits for themselves, those motivated by empathy seek benefit for another. There is evidence to suggest

that acts motivated by empathy result in sustained helping behavior that is more likely to continue for a longer period in comparison to distress or egoistic-motivated behavior (Piferi, Jobe, and Jones 2006; Dovidio, Allen, and Schroeder 1990). These studies provide support for the Empathy-Altruism Hypothesis (EAH), which states that those motivated by empathy will act prosocially more frequently than those motivated by egoism. The EAH informs the first hypothesis of this study: Those motivated by empathy will have greater willingness for continued volunteerism than those motivated by egoism (Hypothesis 1).

Research on the Empathy-Altruism Model has yet to be applied to real-world instances of volunteerism as most studies of the model were focused on monetary giving or were experimental, using fake scenarios, vignettes, and manipulations of empathic perspective-taking (Piferi, Jobe, and Jones 2006; Batson, Chang, Orr, and Rowland 2002; Batson and Ahmed 2001; Batson et al. 1995). However, such studies have established a link between feelings of empathy and altruistic or prosocial helping behaviors (Van Lange 2008; Toi and Batson 1982; Batson et al. 1981; Coke, Batson, and McDavis 1978). These studies found that those motivated by empathy were more willing to help others or had higher rates of actual helping than those motivated by egoism and that those feeling more empathy for another helped more frequently than those feeling less empathy (Van Lange 2008; Dovidio, Allen, and Schroeder 1990; Toi and Batson 1982; Batson et al. 1981; Coke, Batson, and McDavis 1978). Additionally, some studies have explored the personal distress that often results from witnessing another's need and found that this type of emotional experience may lead to egoistic motivations of relieving one's own distress rather than more altruistic intentions of relieving the distress of another (Batson, Fultz, and Schoenrade 1987; Batson, O'Quin, Fultz, and Vanderplas 1983).

More recent studies based on the Empathy-Altruism Model have explored influences of valuing another's welfare, perceiving oneself as similar to another in need, imagining oneself in the place of the other in need, and the influence of public or private prosocial decisions (Batson et al. 2007; Batson, Lishner, Cook, and Sawyer 2005; Batson et al. 2003; Batson et al. 1999).

Although there are many experimental studies on the Empathy-Altruism Model, research has yet to test the model regarding confirmed acts of volunteerism, whether they be traditional, formal volunteerism, or spontaneous.

Previous Studies of Spontaneous Volunteerism

The demographic correlates of traditional volunteerism as mentioned earlier are well known, but those of spontaneous volunteerism remain largely unexplored. Although some studies have found that younger individuals and those living close to a disaster or tragedy are more likely to exhibit emergent volunteer behavior, more descriptive characteristics remain a mystery (Rotolo and Berg 2011; Bekkers 2010; Beyerlein and Sikkink 2008; Bittman and Fisher 2006).

Other literature on emergent volunteer behavior has attempted to explain the incentives and motivations of individuals who exhibit willingness to help others after a disaster. For example, in a study by Lowe and Fothergill (2003) on the experiences of volunteers after the attacks on the Twin Towers on September 11, 2001, researchers found that the motivations of volunteers were often in the interest of stress-coping or having a constructive activity to aid in overcoming their feelings of loss and powerlessness. In this instance, these volunteers felt a “compelling need to help in some way” so they could “find something meaningful in the midst of a disaster” (p. 298), which shows egoistic rather than altruistic motivation. Furthermore, because of their volunteerism, these individuals gained a sense of empowerment and healing that aided

them in coping with the distress of witnessing such a terrifying attack on their community (Lowe and Fothergill 2003). The sense of control and stress relief provided by volunteer work has been cited in other studies as a motivation of spontaneous volunteers (Barrakey et al. 2013; Clukey 2010; Cottrell 2010; Neil, Moran, and Correy 1994).

The emotional motivation of emergent volunteer behavior often results in the powerful transformation of individuals and communities alike, but such emotional motivations are not always the root of volunteerism. Rather, restoring a valuable community resource for personal use can often motivate spontaneous volunteers, such as in the case of the Rena Oil Spill in New Zealand (Sargisson, Hunt, Hanlen, Smith, and Hamerton 2012). Despite the differing motivation of this group of spontaneous volunteers, these individuals also experienced a positive outcome of their volunteer work: a greater appreciation for life.

Although these studies represent egoistic motivations for helping victims of a disaster, other studies have demonstrated more selfless or altruistic reasons for spontaneous volunteerism. In their study of spontaneous volunteers in Brisbane, Australia, Barraket and colleagues (2013) found that the most frequently cited reason for becoming involved in disaster relief efforts was to support victims and help the community, but volunteers reported several simultaneous motivations for becoming involved, and these results are mirrored in other studies (Kulik, Arnon, and Dolev 2016; Francis and Jones 2012; Cottrell 2010). However, Barraket et al. (2013) also discovered that those with higher rates of volunteerism reported being more upset about the disaster than those with lower rates of volunteerism. These researchers and others have concluded that volunteerism can often act as a therapeutic activity for those being affected by or witnessing a traumatic event, and they called for further research on the possible health and wellbeing effects of volunteering during a disaster (Saaroni 2015). In addition, as job markets

around the world become more competitive and new generations become increasingly interested in personal, career, and skill development, there is the potential for motivations of volunteers, whether they are traditional or spontaneous, to be self-serving as well as altruistic, underscoring the dynamic nature of prosocial behavior (Stukas et al. 2016; Francis and Jones 2012; Parkin 2008).

Negative Consequences of Emergent Volunteerism

Previous research has shown that the personal outcomes of traditional volunteerism are generally positive with volunteers reporting higher levels of self-esteem and lower levels of depressive symptoms and stress (Wilson 2012). However, there is evidence to suggest that the experiences of spontaneous volunteers are not always as positive as those of traditional volunteers. Individuals involved in relief efforts may experience post-traumatic stress-like symptoms as a result of witnessing tragic circumstances, such as in the suffering loss of hurricane victims in Clukey's (2010) study. Volunteers and others closely involved with a traumatic event may experience the same amount of stress as professional emergency service providers such as police and firefighters (McMahon 2001; Neil, Moran, and Correy 1994). Volunteers also experience emotional exhaustion and burnout, not only due to the need to provide emotional support to victims, but also due to the frustration they may feel over bureaucratic organizational rules that sometimes hinder the effective administration of needed relief for victims (Clukey 2010; Hustinx, Cnaan, and Handy 2010). These experiences of frustration with formal authority structures were common with volunteers in other disasters (Clukey 2010; see Drabeck et al's 1981 study for a notable exception).

Whether and to what extent volunteers experience negative consequences partly depends on their relationship to the community they serve. Negative consequences of volunteerism can

have varying effects on individuals who are connected to the victim community by different relations. For example, in a study by Form and Loomis (1956), analysis of volunteers providing help after a tornado found that the most effective volunteers were those who were technically competent but not personally connected to the community. It was much easier for these volunteers to maintain clear boundaries between their work and the emotional needs of the community. Conversely, the least effective volunteers were those who were directly connected to the community and not technically competent, as these volunteers found it much more difficult to control their emotional responses to others' suffering and thus became less capable of performing assigned tasks efficiently. Although analysis in this study did not include the empathy-altruism framework, these examples expose the various outcomes that may result from specific types of volunteers' motivations as it seems possible that those who are more connected to the communities they are serving may be more empathic or altruistically motivated, especially in cases where spontaneous volunteers emerge through networks of kinship, neighborhood membership, and workplace or school affiliations (Maner and Gailliot 2007; Form and Loomis 1956). There is also evidence to suggest that different types of volunteer motivation can lead to varying outcomes for personal well-being (Stukas et al. 2016).

Research on volunteer experiences provides the basis for two hypotheses in this study accounting for the impact of experience on volunteers' future volunteerism: positive experiences while volunteering will positively influence willingness for continued volunteerism (Hypothesis 2) and negative experiences while volunteering will negatively influence willingness to volunteer in the future (Hypothesis 3).

The interaction of volunteer experiences with volunteer motivation has rarely been taken into account in relevant literature. Therefore, this study will explore these complex relationships

with the following hypotheses: As the number of positive experiences increases, the positive relationship between empathic motivation and willingness to volunteer will increase (Hypothesis 4); as the number of positive experiences increases, the positive relationship between egoistic motivation and willingness to volunteer will increase (Hypothesis 5); as the number of negative experiences increases, the positive relationship between empathic motivation and willingness to volunteer will also decrease (Hypothesis 6); as the number of negative experiences increases, the positive relationship between egoistic motivation and willingness to volunteer will also decrease (Hypothesis 7). Although it is hypothesized that empathy-motivated individuals will be more willing to volunteer in the future than ego-motivated individuals, these hypotheses about possible moderation effects of volunteer experiences simply state that negative experiences are detrimental to future volunteerism whereas positive experiences potentially encourage future volunteerism.

Continued Volunteerism

The experiences of spontaneous volunteers can have a long-lasting impact on their future volunteerism, and this can be crucial to sustaining volunteers in nonprofit organizations and the communities they serve (Barraket et al. 2013). Some volunteers in previous studies agreed that after their spontaneous volunteerism, volunteerism in general was now important in their lives, and they indicated that they would return to such altruistic efforts in the future (Lowe and Fothergill 2003; Clukey 2010; Sargisson et al. 2012). While some studies show continued involvement (Lowe and Fothergill 2009), others show that only a small percent of spontaneous volunteers continue to engage in altruistic activities once disaster relief efforts subside (Moran and Correy 1994). Other research has addressed how one's motivation for engaging in spontaneous volunteerism—egoistic versus altruistic—may affect his/her willingness to engage

in continued volunteerism. Barraket and colleagues (2013) found that intrinsic rewards, such as making a difference and experiencing comradery, were important factors for continued volunteering beyond the initial disaster relief efforts. These results of continued volunteerism motivated by altruism were mirrored in Stukas et al.'s (2016) study. Chinman and Wandersman (1999) found that continued volunteerism occurred when a volunteer's initial reason for becoming involved was fulfilled while Horton Smith (1994) attributed continued volunteerism to interesting or satisfying tasks.

These previous studies attempted to capture the likelihood that spontaneous volunteers' motivations and experiences would contribute to continued volunteerism, but these outcomes differ and appear to be context dependent. Furthermore, many of these studies relied on interviews with a few participants rather than a survey of a large portion of the volunteers involved in relief efforts and, for the most part, were aimed at the actual occurrence of continued volunteerism rather than changed attitudes and openness to further voluntary action.

Volunteerism in West Virginia

In 2016, an organization called Volunteer West Virginia published a state-commissioned annual report on the rates of volunteerism through their sites, programs, and use of AmeriCorps Vista volunteers. According to their data, 360,640 people volunteered in some formal capacity in West Virginia in 2016, which places the state second in the nation for median hours of volunteerism among Generation X individuals. This report included statistics from the organization's efforts to aid victims of the 2016 summer floods in West Virginia. During 2016, only 1% of the state funding received by Volunteer West Virginia was allocated to disaster relief, but the organization managed to place almost 4,000 volunteers in flood relief efforts around

West Virginia during the weeks and months following the disaster. This resulted in just over 56,000 hours of service in flood relief initiatives.

Statistics provided by Volunteer West Virginia are part of the most comprehensive report of volunteerism for the state to date, but it does not reflect the efforts put forth in informal volunteerism, which is a type of voluntary action that takes place outside of formal charitable or philanthropic organizations, or by those that did not have contact with the organization between 2015 and 2016. Informal volunteerism often goes unmeasured for several reasons including difficulty in accurately recording such efforts and current definitions of volunteerism excluding informal actions that often occur outside of voluntary sector organizations or within networks of community and kinship (Whitaker, McLennan, and Handmer; Hustinx, Cnaan, and Handy 2010; Bitmman and Fisher 2006). Spontaneous volunteerism is often more informal in nature since the chaotic convergence of people and resources upon a specific time and place can create problems for tracking volunteers and the hours they serve in the absence of a formal organization with abilities to record such data.

The informal nature of spontaneous volunteerism poses a substantial problem for understanding its complexities, and much of the data about any type of informal volunteering merely relies on estimates. For example, the Corporation for National and Community Service estimates that in 2015 approximately 74% of West Virginia residents participated in informal volunteering that would not have been accounted for by a formal volunteer organization. Outside of this estimate, the three most common formal volunteer activities reported by residents were collecting, distributing, or serving food, raising money, and participating in general labor, all of which were much needed volunteer services during the relief efforts of spontaneous volunteers in the West Virginia (WV) floods of 2016. It is likely that many more individuals participated in

these activities than formally recorded due to spontaneous volunteerism's often informal nature. The Corporation for National and Community Service also provides data for formal volunteerism rates in WV. This shows that volunteerism had begun a dramatic decline in 2010 only to see an increase beginning in 2014, which aligned the state with the national average of formal volunteerism during that time. The lack of data on informal volunteerism makes it difficult to accurately determine true rates of volunteerism in West Virginia.

This lack of data contributes to another unknown: the true value of the supplemental labor provided by volunteers in the state. The value of volunteer time for WV in 2016 was estimated to be \$20.98 per hour by Independent Sector. In a state that often ranks low in measures of health, economy, and human development, this added labor is invaluable to the wellbeing of the state and its residents. Since West Virginia is predominantly made up of rural, close-knit communities where families and neighbors often rely on one another, there is reason to believe that many formal and informal social services are being upheld by the added value of volunteer labor. Since evidence suggests that we are more likely to help those we know or are related to, these volunteerism efforts become even more salient and necessary in disaster situations occurring in the rural communities of West Virginia, thus creating the need for increased understanding of the spontaneous volunteerism that often ushers broken communities through traumatic times (Barraket et al. 2013; Beyerlein and Sikkink 2008; Maner and Gailliot 2007).

The 1,000- Year Flood

The flooding that occurred in southern West Virginia in mid-June of 2016 was deemed by the National Weather Service as an exceptional weather event only expected once every 1,000 years (WV Public Broadcasting 2016). An average of eight to ten inches of rain fell in several

areas of the state over twelve to eighteen hours, decimating dozens of communities, many of which were almost completely submerged under flood waters. Roads, bridges, and private drives were destroyed, leaving many stranded in their communities as the flooding continued. Houses were swept off of their foundations to be seen floating by in the flood waters, some of them on fire. Various branches of emergency services and law enforcement were deployed to aid and remove stranded citizens from their decimated homes, transporting them to refuge locations with other family members or in flood shelters located in two nearby counties.

Thousands of homes and businesses were lost, causing an estimated one billion dollars of property damage, and 26 people lost their lives due to flood-related causes (National Centers for Environmental Information 2017; FEMA 2016a). Eighteen of the state's counties qualified for 72 million dollars of federal assistance on either the individual- or county-level through FEMA's Hazard Mitigation Grant Program (FEMA 2016b; see Appendix A); over 8,000 home and business owners had applied for such assistance immediately following the announcement of aid provisions (FEMA 2016a).

Despite the immediate response of federal and other aid initiatives, flood relief still continues. Individuals from all over the state served directly within flooded communities to clear damaged houses and business and clean up flood waters. Some houses and businesses are still being rebuilt or repaired to this day. Volunteers also aided victims within various shelter and donation centers, and these volunteers are still working with victims in rebuilding their lives. Organizations across the state are still seeking to understand the causes and consequences of the flooding as well as to prepare for future disaster events. Volunteers are still seeking ways to become involved through these organizations and community groups that remain ever vigilant to the needs created by the 1,000-year flood. This research stands to benefit these organizations as

well as others seeking to understand how volunteers can be recruited, trained, and retained to produce the best possible outcomes in disaster situations.

METHOD

An online survey was produced using the platform Qualtrics. A link to the online survey was posted in five closed community Facebook groups utilized by flood directors and other volunteers for continued communication since the flood event. For a complete list of respondent recruitment sources, see Appendix B. Permission to post the survey link along with information about the study and researchers' contact information was obtained from group administrators. A page for informed consent prefaced the survey (see Appendix D). The survey was accompanied by a brief description of goals and eligibility requirements (see Appendix C) and was available for online participation from November 3, 2017 to January 22, 2018.

Additionally, the survey was sent to students who had participated in flood relief service trips to various parts of West Virginia's southern region through West Virginia University's Center for Service and Learning. No incentive was provided for students to participate in the survey. This process was facilitated by the Center for Service and Learning through their iServe software.

The survey was also emailed to volunteers who had worked with Volunteer West Virginia during flood relief efforts. Volunteer WV is a state agency seeking to improve and boost volunteer participation in the state. During the flooding, they were responsible for managing volunteer reception centers that connected individuals with flood relief opportunities across the impacted areas. There was a total of nine operational Volunteer WV reception centers (see Appendix E).

Measures

The primary independent variables in this study are volunteers' types of motivations (egoistic or altruistic) based on the Empathy-Altruism model developed and tested by Daniel Batson (2011). To measure motivation type, the survey allowed participants to rate the importance of different motivations on a Likert scale from "not important" to "very important" on a survey item that stated, "Please indicate how important the following reasons were in your decision to become involved in the 2016 West Virginia floods." These ratings indicated either egoistic-motives or altruistic-motives based on the respective definitions of these concepts included in the Empathy – Altruism Model. Statements representing altruistic-related or egoistic-related motivations were created based on Batson and Shaw's (1991) overview of experiments that led to the development of the model as well as statements from Independent Sector's 2001 Giving and Volunteering survey that represented egoistic or altruistic motivations. For example, statements such as "I wanted to give back to my community," "I felt sorry for the flood victims," "I personally knew someone affected by the disaster," and "Those with more should help those with less" are the four altruistic or empathy- related motives used in this study. Statements such as "I felt getting involved would help me cope with stress caused by the flooding," "I felt I could gain something from the experience of volunteering," "Others with whom I am close place a high value on volunteering," and "I wanted to meet new people and make friends" are the egoistic motivators used in this study of spontaneous flood volunteers.

Other survey items measured the nature of volunteers' experiences. For example, the item "Please indicate whether your volunteer experiences in disaster relief for the 2016 summer floods in southern WV were negative or positive" allowed participants to rate their experiences on a Likert Scale from "all negative" to "all positive." It is important to note the small sample

size of negative experiences for this variable, as only seven participants rated their experience as “somewhat negative” and no participants in the sample rated their experiences as “all negative” or “mostly negative.” To correct this issue, another variable was created to act as a proxy for respondents’ possible negative experiences while volunteering. Participants were asked to mark any challenges they faced during volunteering from a list with 18 answer options including “disorganization at the volunteer site,” “witnessing the effects of the flooding,” and “learning new skills/adapting to the environment.” Respondents also had the option to mark “other” and write in a challenge that was unlisted. Each respondent’s answers to this item were aggregated to create a numeric count variable of the total challenges faced by each respondent as a proxy measure for volunteers’ possible negative experiences. An additional item asked respondent to indicate whether they incurred any out-of-pocket costs as a result of volunteering to account for possible fiscal complications of disaster volunteerism.

The primary dependent variable for this study is spontaneous volunteers’ willingness to volunteer in any manner (disaster relief or otherwise) in the future. This is measured by an additive index of “willingness score” created from the Likert responses of “strongly disagree” to “strongly agree” on the following survey items: “I would like to become involved in other volunteer efforts unrelated to disaster relief”; “I would be willing to help with other service opportunities not associated with disaster relief”; “I feel that it is likely I will volunteer with disaster relief in the future”; and “I feel that it is likely I will volunteer for community needs in the future other than disaster relief.” The Cronbach’s alpha level for this scale is 0.74.

Demographic control variables are used in the regression models, including measures of annual household income, history of volunteering, employment status at the time of the flood, race, marital status, previous philanthropic donation behaviors, gender, and educational

attainment. For purposes of preserving adequate sample sizes in the analysis on the impact of education on spontaneous disaster volunteering, respondents were categorized as having low, medium, or high educational attainment: those with a high school degree or GED were categorized as “low,” those with some college or an Associate’s degree were categorized as “medium,” and those with a Master’s, Doctorate, or Professional Degree were categorized as “high.” It is important to note that the sample for low educational attainment is just 20 respondents, but this issue could not be corrected by alternative combinations since other educational categories would also drop below an acceptable sample size if further manipulated. A copy of the survey has been included in Appendix F.

Analytic Strategy

Pearson’s correlation coefficient is used to estimate the association between empathy and egoistic motives, with the assumption that the two will be weakly correlated, indicating that these concepts are not associated and measure differing characteristics. Pearson’s correlation coefficient is also used to examine the association between spontaneous volunteers’ motivations and their willingness for continued volunteerism.

Using STATA, descriptive statistics are estimated to determine characteristics of the average spontaneous volunteer serving in the 2016 West Virginia summer floods. This includes variables such as age, gender, marital status, and household income. Next, a series of Ordinary Least Squares (OLS) regression models are estimated based on a model-building approach. These models met internal validity and normality assumptions and did not return divergent results from other potential models or regression techniques. The first model includes the demographic characteristics of spontaneous volunteers as the independent variables and their willingness for continued volunteerism as the dependent variable

The second regression model will include type of spontaneous volunteer motivation (i.e. egoistic or altruistic- motives) as the independent variable with willingness for continued volunteerism as the dependent variable, controlling for demographic characteristics such as age, socioeconomic status, and race. In this model, I expect that those motivated by empathy will have greater willingness for continued volunteerism than those motivated by egoism [Hypothesis 1] (Batson 2011; Strigas 2003; Batson and Shaw 1991). The third model will include experiences as the independent variable and willingness for continued volunteerism as the dependent variable with the same control variables as the first model. I hypothesize that positive experiences during volunteering will positively influence willingness for continued volunteerism (Hypothesis 2). The fourth model accounts for volunteers' negative experiences using respondents' challenge scores, and I hypothesize that those with higher challenge scores (more negative experiences) will be less willing to volunteer in the future (Hypothesis 3).

The fifth regression model accounts for the interaction of volunteer motivations and their type of experience, and it is expected that as the number of positive experiences increases, the positive relationship between empathic motivation and willingness to volunteer will increase (Hypothesis 4) and that the positive relationship between egoistic motivation and willingness to volunteer will increase (Hypothesis 5). The sixth model uses another set of interactions between motivators and challenge scores. I hypothesize that as the number of negative experiences increases, the positive relationship between empathic motivation and willingness to volunteer will also decrease (Hypothesis 6) and as the number of negative experiences increases, the positive relationship between egoistic motivation and willingness to volunteer will also decrease (Hypothesis 7).

Both the fifth and sixth regression models were estimated with one interaction term at a time, and only significant interactions are presented in Table 5, which displays regression results. The variance inflation factor score showed that including all interaction terms within one model was not appropriate due to multicollinearity, and therefore, the individual interaction models are interpreted.

RESULTS

Table 1 displays results for Pearson's correlation analysis of motivators, their relation to one another, and their relation to the dependent variable of willingness to volunteer in the future. All variables were weakly or very weakly correlated.

Characteristics of Spontaneous Flood Volunteers

Table 2 displays the demographic characteristics of the 236 spontaneous flood volunteers in the sample. Of the sample, 68.64% were female and 31.36% male. The majority of respondents were white (95.76%) with 4.24% being another race, which is consistent with West Virginia's demographics (US Census Bureau 2017). About 8.47% had graduated high school or earned a GED, and 32.63% had at least some college education or an Associate's degree; 26.69% had a Bachelor's degree while 32.30% had an advanced degree (Master's, Doctorate, or Professional Degree, such as a JD or MD). At the time of the flood, 64.15% of the sample were employed while 24.26% were unemployed. The average age of respondents was about 42 years old with a median household income of \$75,000. Finally, 49.58% of respondents in the sample were married and 9.01% of volunteers reported that they were also victims of the 2016 flooding in southern West Virginia. The average "willingness score" for respondents was 16.20 out of a possible 20 points.

Donation Behavior

Table 3 reflects the donation and volunteerism behaviors of respondents before, during, and after the occurrence of the 2016 flooding. More than half of respondents reported making monetary donations to charitable organizations before the flood (72.64%) with the median donation being \$100. This was also the median monetary donation amount during the flooding, but the percentage of respondents making donations decreased to 60.59%. Monetary donations increased after the flood at 66.10% with a median value of \$100. The majority of respondents also reported making nonmonetary donations to charitable organizations during the flood (80.00%).

Volunteerism Behavior

The majority of respondents reported participating in formal volunteering before the flood (91.10%) at least two to three times in the twelve months prior to the flood (40.25%). Many had also previously volunteered for disaster relief (33.05%). Most respondents reported that they volunteered for the 2016 flood relief informally (65.25%) with only 31.36% reporting formal volunteering, but it is important to note that many formal volunteering organizations such as the Red Cross or Volunteer WV were not present within communities until hours or days after flood volunteering was underway. Regardless, the median number of hours for respondents' informal flood volunteering was 42.50 hours while the median number of hours for those volunteering formally was 20.00. The majority of respondents (78.81%) incurred out-of-pocket costs as a result of their volunteering.

Spontaneous flood volunteers continued in their volunteerism efforts after the flood in a variety of ways. For example, 33.47% reported continued flood relief volunteerism, 70.21% reported continued formal volunteering at least two to three times after the flood (43.90%),

67.37% continued volunteering informally, and 32.63% continued volunteering for other disaster relief efforts unrelated to the 2016 flooding.

Motivations

Table 4 displays the percentage of respondents reporting each egoistic and empathy motivator as “important” or “very important” in their decisions to volunteer for the flood relief efforts. This table shows that all empathy motivators were reported as “important” or “very important” at higher rates than the ego motivators. For empathy, the most important motivator was feeling responsibility towards community and fellow citizens at 90.68%. The least important motivator in this category was volunteering because the respondent knew someone affected by the flooding (42.80%). For egoism, the most important motivator was feeling that something could be gained from the volunteer experience (34.32%) while the least important was a desire to meet new people and make friends (6.78%).

Regression Estimation: Motivators, Experiences, and Willingness to Volunteer in the Future

Table 5 displays the results of five out of six Ordinary Least Squares (OLS) regression models. For the first model, demographic control variables are analyzed for their impact on willingness score. Two variables are significant: married ($p=0.01$) and the natural log of income ($p<.05$). According to this model, those who are married are less likely to be willing to volunteer in the future than those who are not married. Additionally, those with higher incomes have a higher willingness score as a 1% increase in income is associated with a 0.35-point increase in willingness to volunteer. The adjusted R^2 for this model is 0.05.

In the second model, empathy and ego motivators are added. Married and the natural log of income remain significant in this model ($p<.05$) along with two motivators: the empathy motivator “those with more should help those with less” and the ego motivator of wanting to

meet new people through volunteerism ($p=.01$ and $p<.05$, respectively). This means that the more important these motivators are to respondents in their decision to become a flood volunteer, the more willing they will be to volunteer in the future. For example, higher levels of importance for helping those with less and meeting new people through volunteerism are associated with a 0.30 and 0.29 increase in willingness score, respectively. From this model, Hypothesis 1 is not supported. The adjusted R^2 for this model increases to 0.10.

The third regression model is estimated with the addition of the variable accounting for spontaneous flood volunteers' positive experiences. The four significant variables from the previous model remain significant, but no additional variables show a significant relationship with the dependent variable. Hypothesis 2 is not supported because this model does not show a significant impact of volunteer experience on willingness score. The adjusted R^2 in this model remains at 0.10.

The fourth regression accounts for volunteer experiences using the "challenge score" variable. In this model, relatively few changes from the previous model are present, except for minor fluctuations in coefficients. Hypothesis 3 is not supported because this model shows no relationship between challenge and willingness scores. The adjusted R^2 for this model remains at 0.10.

The fifth regression model interacts volunteer experiences with the motivator of feeling sorry for flood victims as this motivator by experience interaction was the only significant interaction term in an iterative process of estimating models with one interaction term at a time. In this model, the variables accounting for marital status, household income, meeting new people, and helping those with less lose significance. However, feeling sorry for flood victims and its interaction with experience are significant ($p<.05$). Interestingly, feeling sorry for victims

is negatively associated with willingness to volunteer in the future since higher levels of importance are associated with a 2.31-point decrease in willingness score. On the other hand, when this variable is interacted with volunteer experience, it is positively associated with willingness score at a 0.39-point increase. This provides partial support for Hypothesis 4 and Hypothesis 6, which stated that positive experiences would heighten volunteer willingness for empathic motivation and negative experiences would decrease volunteer willingness for empathic motivation. However, Hypothesis 5 and 7 are not supported because no interactions between experiences and egoistic motivations were significant. A graph of this interaction term is provided in Figure 1 and shows that increasing importance of feeling sorry for victims and increasingly positive ratings of experiences are associated with higher willingness scores. The adjusted R^2 for this model slightly increases to 0.11.

The sixth and final regression accounts for volunteers' negative experiences using the challenge score variable. This model followed the same iterative process as the previous model, and no motivators or their interaction terms are significant, which means that Hypotheses 6 and 7 are not supported (results not shown).

DISCUSSION

Results from these regressions suggest that spontaneous disaster volunteers of the 2016 summer flooding in southern WV may have experienced a range of motivations, including egoistic and empathic types, in their decisions to volunteer, and that the influence of these motivations on future volunteerism may have been impacted by volunteer experiences. While the lowest rated motivator was that of meeting new people and making new friends (34.32% of the sample) it appears to be somewhat influential in spontaneous disaster volunteers' participation decisions. The belief that those with more should help those with less may also play a role in these decisions as well.

Results also indicate that the experience volunteers have during their work may interact with motivations in nuanced ways, producing potentially different outcomes in future volunteerism. From the fifth regression model, we saw that the empathic motivation of feeling sorry for flood victims actually made spontaneous disaster volunteers less willing to volunteer in the future. This could be due to feelings of powerlessness in the face of disaster. However, when this motivation was interacted with positive experiences, the willingness of volunteers was positively influenced and represented a greater willingness for future volunteerism. This could mean that even though disaster volunteers may feel helpless when facing larger natural or social forces which may discourage them from volunteering, positive experiences of effective agency and interactions in helping victims may encourage volunteers to believe they will be useful in future disaster situations or other volunteer opportunities.

Other results from this same model point to the possibly complex nature of the impact of volunteers' experiences and implications for future volunteerism, such as variables accounting for marital status and household income losing significance along with the motivators of meeting new people and helping those with less while the motivator of feeling sorry for victims and its interaction term gain significance.

Although participants rated empathic motivators much higher than egoism motivators, some motivators of both types held a relationship with willingness for continued volunteerism (meeting new people [egoism] and helping those with less [empathic]). As a real-world test of Batson's Empathy-Altruism Model, which was developed primarily through lab experimentation, one must call into questions the accuracy of its assertion that prosocial actors have one "ultimate goal" and that those with empathic motivations will exhibit a higher frequency of prosocial acts. As seen in this analysis, there are many other potential contextual

and experiential factors that could interact with motivations to produce lesser or greater willingness for or actual volunteerism or other prosocial actions. As George C. Homans states, “If the experimental work has anything to do with real life – and I am persuaded that it has everything to do – its propositions cannot be inconsistent with those discovered through field work” (1958; p. 597).

Additionally, as can be seen in Table 1, empathic and egoistic motivations held very weak correlations with one another, and some motivations were even negatively correlated. It is possible that these motivations are capturing different components of egoism and empathy, rather than directly representing each concept, so interpretation of results based on these motivations should be made cautiously. This is also evident in the presence of low R^2 values in each model, and this means that the models are explaining five to eleven percent of the variance in willingness for future volunteerism.

This study supports some findings from previous research on volunteerism as it shows that the majority of spontaneous disaster volunteers had volunteered in the past, strengthening the argument that those with a history of volunteerism are likely to continue (Delemater, Myers, and Collett 2014; Barraket et al 2013; Bekkers 2010; Einolf 2010). In addition, this study found that those with higher incomes are more likely to be willing to volunteer, which is mirrored in other studies of volunteerism (Beyerlein and Sikkink 2008; Bittman and Fisher 2006; Penner 2004; Bussell and Forbes 2002; Horton Smith 1994).

However, this study contradicts some literature on volunteerism, including the finding that those who are married volunteer more than those who are not, which was not the cases in this analysis (Delemater, Myers, and Collett 2014; Barraket et al 2013; Bekkers 2010; Einolf 2010). This could be due to the difficulty of participating in spontaneous volunteerism when one

has obligations to immediate family members. Furthermore, some relationships between demographic characteristics and volunteerism are not apparent in this study, such as the link between education or race and volunteering.

LIMITATIONS

A major limitation of this research is its reliance on an online survey posted through social media, which is not a representative sample of all volunteers who participated in flood relief efforts in WV in 2016. Not all individuals have equal access to the internet and internet services such as social media, especially in rural states like WV where broadband coverage is sparse in comparison to other states (Broadband Now 2016). However, considering the largely informal nature of volunteerism in this case and the great difficulty of collecting data in chaotic disaster situations, the online survey and posting the survey link on social media proved useful for contacting and recruiting flood volunteers even after considerable time had passed since the disaster event. In addition, this study included a limited number of motivations that cannot encompass the range of socioemotional processes that take place within individuals when faced with the decision to volunteer.

Another limitation of this study pertains to its statistical analysis of interaction terms. A small sample size and interaction terms using the same variables may have caused attenuation of variables' significance in the full model. Some of these variables may have retained significance had there been a larger sample. Also, these statistical models overall did not explain much of the variation in willingness for continued volunteerism as indicated by low R^2 values for each model. On the other hand, this study provided the opportunity to test the Empathy-Altruism Model against real-world data rather than in laboratory experimentation.

Additionally, as mentioned above, it appears as though the motivations used in this study are not complete measures of either egoism or empathy, but this study has provided an opportunity to begin exploring the relationships between motivations and their types.

FUTURE RESEARCH

Future research should consider continued investigation of the interplay between volunteer motivations and experiences to see if some of the same interactions included in this study, or others, will prove to be influential across different volunteer situations, disaster-related or otherwise. Furthermore, researchers should seek to create consistent scales and other measures to be used in this type of research so we can begin to develop a valid understanding of the complex socioemotional and motivational factors that can lead individuals to prosocial behavior. In addition, since results of this study are inconsistent with some results of other studies on formal volunteerism, more research on spontaneous disaster volunteerism should be pursued in order to examine how those who participate in spontaneous disaster volunteerism differ from formal volunteers, especially when no history of volunteerism is apparent for spontaneous volunteers. This study also underscores the importance of continued research on informal volunteerism, which is common in rural regions like southern WV, which is represented in this study by the majority of spontaneous flood volunteers reporting of informal volunteerism.

Figure 1: Interaction of Empathic “Feeling sorry for victims” Motivation and Experience Rating

Table 1: Pearson's Correlation for Empathy and Ego Motivators and Willingness to Volunteer in the Future (n=236)

	Feeling sorry for victims	Feel responsibility toward others	Knew someone affected	Those with more should help those with less	Cope with stress	Gain something from volunteering	Meet new people and make friends	Someone close to highly values volunteering
Feeling sorry for victims	1.00	—	—	—	—	—	—	—
Feel responsibility toward others	-0.07	1.00	—	—	—	—	—	—
Knew someone affected	0.10	-0.07	1.00	—	—	—	—	—
Those with more should help those with less	0.17	0.14	0.08	1.00	—	—	—	—
Cope with stress	0.24	0.02	0.29	0.11	1.00	—	—	—
Gain something from volunteering	0.04	0.005	0.07	0.07	-0.03	1.00	—	—
Meet new people and make friends	0.20	-0.04	0.09	0.14	0.25	-0.03	1.00	—
Someone close to highly values volunteering	0.15	-0.02	0.15	0.16	0.19	0.01	0.15	1.00
Willingness to volunteer in the future	0.14	0.006	-0.03	0.23	0.003	-0.02	0.10	0.16

Table 2: Characteristics of Spontaneous Flood Volunteers (N=236)

	Percentage
<i>Gender</i>	
Males	31.36%
Females	68.64%
<i>Race</i>	
White	95.76%
Other	4.24%
<i>Education</i>	
High School Graduate or GED	8.47%
Some College or Associate Degree	32.63%
Bachelor's Degree	26.69%
Advanced Degree	32.20%
<i>Employment at Flood</i>	
Employed	64.15%
Unemployed	24.26%
<i>Marital Status</i>	
Married	49.58%
Not married	50.42%
History of Volunteering	77.63%
	Mean
	(std.
	deviation)
Average Age	42.02
	(16.24)
	Median
	(std.
	deviation)
	\$75,000
Income	(\$54,132.91)
Average Willingness Score	16.20/20.00
Victim of Flood	9.01%

Table 3: Volunteering and Donation Behaviors Before, During, and After the 2016 Flood (N=236)

<i>Donations</i>	
Monetary Donations to Charitable Organizations Before Flood	72.64%
Median Donation Amount	\$100
Monetary to Donations to Charitable Organizations During Flood	60.59%
Median Donation Amount	\$100
Nonmonetary Donations to Charitable Organizations During Flood	80.00%
Monetary Donations to Charitable Organizations After Flood	66.10%
Median Donation Amount	\$100
<i>Volunteering</i>	
Volunteering Before Flood	91.10%
Modal Frequency	2-3 times in last 12 months
Disaster Volunteering Before Flood	33.05%
Formal Volunteering During Flood	31.36%
Median Hours	20.00
Informal Volunteering During Flood	65.25%
Median Hours	42.50
Incurred Out-of-pocket Cost	78.81%
Continued Flood Volunteering	33.47%
Continued Formal Volunteering After Flood	70.21%
Modal Frequency	Two to three times
Continued Informal Volunteering After Flood	67.37%
Continued Other Disaster Volunteering After Flood	32.63%

Table 4: Motivations of Spontaneous Flood Volunteers (N=236)

	Percentage
<i>Empathy Motivations</i>	
Felt responsibility to community and fellow citizens	90.68%
Felt sorry for flood victims	75.85%
Those with more should help those with less	68.22%
Knew someone affected by the flood	42.80%
<i>Egoism Motivations</i>	
Felt something could be gained from volunteer experience	34.32%
Felt getting involved would help in coping with stress	21.18%
Others they know place high value on volunteering	19.07%
Wanted to meet new people and make friends	6.78%

Percentages represent respondents reporting "important" or "very important" for each item.

Table 5: Linear Regression Estimation of Spontaneous Flood Volunteers' Willingness to Volunteer in the Future (n=236)

Dependent Variable: Willingness	Coefficient (std. error)				
	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Independent Variables: Empathy Motivators</i>					
Feeling sorry for victims		0.16 (0.13)	0.16 (0.13)	0.15 (0.13)	-2.31* (1.10)
Feeling sorry X Experience					0.39* (0.18)
Feeling responsibility toward community		-0.01 (0.18)	-0.01 (0.18)	-0.05 (0.18)	0.43 (0.87)
Knew someone affected by flood		-0.05 (0.09)	-0.05 (0.09)	-0.06 (0.09)	-0.18 (0.82)
Those with more should help those with less		0.29** (0.11)	0.30** (0.11)	0.29** (0.11)	0.16 (0.88)
<i>Independent Variables: Ego Motivators</i>					
Stress coping		-0.09 (0.11)	-0.09 (0.11)	-0.08 (0.11)	0.09 (1.12)
Felt something could be gained from volunteering		-0.05 (0.09)	-0.05 (0.09)	-0.05 (0.09)	-0.96 (0.65)
Wanted to meet new people and make friends		0.30* (0.15)	0.30* (0.15)	0.32* (0.15)	1.14 (1.03)

Someone I am close with values volunteering		0.10 (0.12)	0.10 (0.12)	0.09 (0.12)	1.20 (1.00)
<i>Independent Variable: Experiences</i>			0.03 (0.12)	0.02 (0.16)	-0.95 (0.85)
<i>Independent Variable: Challenge Score</i>				0.07 (0.06)	0.05 (0.06)
<i>Control Variables</i>					
Age	0.002 (0.009)	-0.0008 (0.009)	-0.001 (0.01)	-0.001 (0.01)	-0.01 (0.01)
Natural Log of Income	0.35* (0.15)	0.32* (0.15)	0.32* (0.15)	0.32* (0.15)	0.29 (0.15)
Female	0.50 (0.31)	0.48 (0.31)	0.48 (0.31)	0.50 (0.31)	0.53 (0.32)
Married	-0.77** (0.30)	-0.71* (0.30)	-0.72* (0.30)	-0.67* (0.31)	-0.56 (0.30)
White ^a	-1.07 (0.59)	-0.91 (0.53)	-0.91 (0.54)	-0.83 (0.56)	-0.99 (0.52)
Employment at flood	0.12 (0.34)	0.15 (0.35)	0.16 (0.35)	0.16 (0.35)	0.04 (0.35)
Past volunteering	0.71 (0.48)	0.69 (0.48)	0.68 (0.35)	0.72 (0.48)	0.81 (0.48)
Previous donations to philanthropic organizations	0.56 (0.30)	0.50 (0.31)	0.50 (0.31)	0.48 (0.31)	0.45 (0.34)

<i>Education^b</i>					
Low	0.24 (0.56)	0.09 (0.55)	0.10 (0.55)	-0.01 (0.56)	-0.07 (0.52)
Medium	0.52 (0.38)	0.28 (0.40)	0.29 (0.40)	0.25 (0.40)	0.32 (0.40)
High	0.19 (0.37)	0.15 (0.38)	0.16 (0.38)	0.12 (0.38)	0.08 (0.38)
Out-of-pocket expenses	0.08 (0.33)	0.07 (0.35)	0.06 (0.35)	0.05 (0.34)	0.16 (0.38)
<i>Intercept</i>	11.88*** (1.71)	11.01*** (1.80)	10.82*** (1.97)	10.82***	17.47*** (5.83)
<i>Adjusted R²</i>	0.05	0.10	0.10	0.10	0.11

* $p \leq .05$, ** $p \leq .01$, *** $p < .001$

^aReference group is “nonwhite.”

^bReference group is Bachelor’s degree.

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Appendix A. Map of WV Counties Impacted by June 2016 Flooding

Appendix B. Respondent Recruitment Sources

Name	Type	Members at Time of Survey
“WV Flood Relief Community Connection”	Facebook Group	1,001
“WV Flood Relief – Clay, Clendenin, Elkview”	Facebook Group	4,922
“Greenbrier County Flood Relief and Info”	Facebook Group	2,536
“White Sulphur Springs Flood 411”	Facebook Group	1,054
“Radio Free Elk River – Free Flood Donations and Requests”	Facebook Group	1,932
Center for Service and Learning	West Virginia University Institutional Office	--
Volunteer WV	West Virginia State Government Office	--

Appendix C. Survey Blurb

ATTENTION FLOOD VOLUNTEERS: Please consider participating in this survey (link below) to help us better understand the volunteer experiences of those who helped out during the flooding that occurred in West Virginia in 2016. This research is taking place through West Virginia University, in collaboration with other organizations, with the purpose of improving volunteer recruitment and management strategies during disasters. The survey takes less than 15 minutes to complete. You must be 18 years of age or older to participate, and you may choose to drop out of the survey at any time.

Appendix D. Informed Consent

Dear Participant,

This letter is a request for you to take part in a research project to assess how the motivations and experiences of flood volunteers influence future volunteerism. This project is being conducted by Erin Hudnall, a graduate student in the Sociology and Anthropology Department at WVU with supervision of Dr. Katie Corcoran, an assistant professor in the Sociology and Anthropology Department, for a Master's Degree in Sociology. Your participation in this project is greatly appreciated and will take approximately 15 minutes to fill out the attached questionnaire.

Your involvement in this project will be kept as confidential as legally possible. All data will be reported in the aggregate. You must be 18 years of age or older to participate. I will not ask any information that should lead back to your identity as a participant. Your participation is completely voluntary. You may skip any question that you do not wish to answer and you may discontinue at any time. If you are a student at WVU, your class standing will not be affected if you decide either not to participate or to withdraw. West Virginia University's Institutional Review Board acknowledgement of this project is on file.

I hope that you will participate in this research project, as it could be beneficial in understanding how to recruit, manage, and retain volunteers during disaster situations. Thank you very much for your time. Should you have any questions about this letter or the research project, please feel free to contact Erin Hudnall at (304) 640-2167 or by e-mail at ehudnall@mix.wvu.edu.

If you experience any negative emotional or mental reactions from your participation in this study, please contact the WVU Carruth Counseling Center at 304-293-4431 or the National Alliance on Mental Illness at 1-800-950-6264.

Thank you for your time and help with this project.

Sincerely,

Erin Hudnall

Chestnut Ridge Research Building

886 Chestnut Ridge Road

PO BOX 6845

Morgantown, WV 26505-6845

Phone: 304-293-7073

Fax: 304-293-3098

<http://oric.research.wvu.edu>

Appendix E. Volunteer WV Volunteer Reception Center Locations

Reception Center	Location
Mount Tabor Church	Elkview, WV
Used Car Lot	Clendenin, WV
Richwood Armory	Richwood, WV
High Rocks Hub	Lewisburg, WV
Episcopal Church	White Sulphur Springs, WV
Shopping Center	Rainelle, WV
Volunteer WV Office	Charleston, WV
Clay County High School	Clay, WV

Source: Volunteer West Virginia

Appendix F. Survey

What is your age in years?

Response option of “17 years or younger,” then individual response options of 18 – 100 years old.

Did you volunteer with any flood relief efforts for the 2016 floods in West Virginia? By volunteer I mean not just belonging to a service organization, but actually working in some way to help others for no monetary pay.

Yes

No

Unsure

What is your ethnicity?

Hispanic

Not Hispanic

What race do you consider yourself?

White

Black

American Indian or Alaska Native

Asian

Native Hawaiian or Pacific Islander

Other

What is your sex?

Male

Female

Other

What is your religious preference?

Protestant

Catholic

Jewish

Muslim

Buddhist

Hindu

Christian

None

Don't Know

What is your marital status?

Married

Never Married

Widowed

Separated

Divorced

Please indicate what **county** and **state** you lived in during the time of the 2016 West Virginia flooding.

What was your employment status *at the time of* the 2016 West Virginia flooding?

Full-time

Part-time

Doing unpaid work

Unemployed

Were you a college/university student *at the time of* the 2016 West Virginia flooding?

No

Yes, part-time student

Yes, full-time student

Were you a student at West Virginia University or one of its satellite campuses during the 2016 West Virginia flooding?

No, I was a student at another college or university

Yes, West Virginia University

Yes, West Virginia University Institute of Technology (Beckley)

Yes, Potomac State College of West Virginia University

Yes, West Virginia University at Parkersburg

What is your *current* employment status?

Full-time

Part-time

Doing unpaid work

Unemployed

How often do you attend religious services?

Never

About once or twice a year

Several times a year

About once a month

Two to three times a month

Nearly every week

Every week

Several times a week

Don't know

How important is religion or your religious faith to you?

Not at all important

Somewhat important

Very important

Extremely important

By far the most important part of my life

Please indicate the highest level of education you have completed.

Less than high school

Some high school

High School Degree

GED

Some college

Associate's Degree

Bachelor's Degree (BA, BS, etc)

Master's Degree (MA, MS, MSW, MSN, etc)

Doctorate (PhD, EdD, etc)

Professional Degree (MD, JD, etc)

Please indicate your yearly household income.

Less than \$10,000

\$10,000 - \$14,999

\$15,000 - \$24,999

\$25,000 - \$49,999

\$50,000 - \$99,999

\$100,000 - \$149,999

\$150,000 - \$199,999

\$200,000 or more

The next few questions are about volunteering and donating before the occurrence of the 2016 West Virginia floods.

Before the occurrence of the 2016 West Virginia flooding, did you ever volunteer with charities, nonprofit organizations, community groups, or other outlets for service work? By volunteer activity I mean not just belonging to a service organization, but actually working in some way to help others for no monetary pay.

Yes

No

Unsure

During the 12 months prior to the 2016 WV flooding, how often did you do volunteer work for charitable or philanthropic organizations?

Never

Once

At least two or three times

Once a month

Once a week

Two or three times a week

More than three times a week

Before the occurrence of the 2016 West Virginia flooding, had you ever volunteered with disaster relief efforts? By volunteer activity I mean not just belonging to a service organization, but actually working in some way to help others for no monetary pay.

Yes

No
Unsure

During the 12 months prior to the 2016 West Virginia flooding, did you contribute monetary donations to philanthropic or charitable organizations?

Yes
No
Unsure

During the 12 months prior to the 2016 West Virginia flooding, what was the total dollar value of all donations you made to philanthropic or charitable organizations? Just a guess is fine.

\$0
\$1 - \$24
\$25 - 100
\$101 - \$300
\$301 - \$1,000
\$1,001 - \$5,000
\$5,001 - \$10,000
More than \$10,000

The next few questions are about volunteering and donating during the 2016 West Virginia floods.

Were you affected by the 2016 flooding in West Virginia, such as experiencing property damage or losing belongings?

Yes
No

In what way were you affected? Mark all that apply.

I lost some of my belongings
I lost all of my belongings
My house or property was slightly damaged
My house or property was significantly damaged
My house or property was destroyed
I lost a friend or family member

Did you contribute monetary donations to philanthropic or charitable organizations *during* the occurrence of the 2016 West Virginia flooding to aid the relief effort?

Yes

No

Unsure

What is the estimated amount of monetary donations to such organizations during this time?
Just a guess is fine.

\$0

\$1 - \$24

\$25 - 100

\$101 - \$300

\$301 - \$1,000

\$1,001 - \$5,000

\$5,001 - \$10,000

More than \$10,000

Did you contribute non-monetary donations to philanthropic or charitable organizations *during* the 2016 West Virginia flooding period (such as clothes, food, and other material items)?

Yes

No

Unsure

Did you volunteer for 2016 West Virginia flooding outside of a formal organization like religious or community groups? For example, you might have gone into the affected communities alone to volunteer without working with a specific organization.

Yes

No

Unsure

With which type of organization did you spend **most** of your time volunteering for 2016 West Virginia flood relief efforts?

Religious Organization

School Organization

Community Organization

Sports Team

Flood Shelter

Donation Center

Red Cross

Salvation Army

Lion's Club

Boy Scouts

Volunteer Fire Department

Volunteer EMS

Other _____

Were you already a member of this organization?

Yes

No

How did you hear about disaster relief efforts for the 2016 floods in West Virginia? Mark all that apply.

Television News

Newspaper

Flyer

Radio

Community Announcement

Social Media (Facebook, Twitter, Instagram, etc)

Congregation bulletin/announcement

Friends

Family

Another volunteer told me about the efforts

Were you asked by another individual or organization to help with disaster relief efforts for the 2016 West Virginia floods?

Yes

No

Please indicate the individual or type of organization that requested your help in the disaster relief efforts of the 2016 West Virginia flooding. Mark all that apply.

Family

Friend

Congregation Member

Someone already volunteering

Flood Shelter Director
Donation Center Director
Red Cross Representative
Boy Scout Representative
Salvation Army Representative
Stranger
Acquaintance
Media Request
No one asked me to volunteer
Other

In total, how many hours did you spend volunteering in the disaster relief efforts for the 2016 West Virginia floods? Just a guess is fine. _____

What relief activities did you participate in during and immediately following the 2016 West Virginia flooding? Mark all that apply.

Cooking food for/feeding victims of the flood
Setting up cots
Watching children of flood victims and volunteers
Sorting Donations
Transporting Donations
Distributing Water
Gathering personal information from flood victims for record keeping
Helping flood victims contact family and friends
Transporting flood victims
    Taking care of the animals of flood victims
    Cleaning up/rebuilding houses and businesses
    Coordinating volunteers and donations between various locations
    Providing medical care
    Cleaning and general upkeep of flood shelters and donation centers
Other

What relief activity did you spend **most** of your volunteer time helping with?

Cooking food for/feeding victims of the flood

Setting up cots

Watching children of flood victims and volunteers

Sorting Donations

Transporting Donations

Distributing Water

Gathering personal information from flood victims for record keeping

Helping flood victims contact family and friends

Transporting flood victims

Taking care of the animals of flood victims

Cleaning up/rebuilding houses and businesses

Coordinating volunteers and donations between various locations

Providing medical care

Cleaning and general upkeep of flood shelters and donation centers

Other

Please indicate how important the following reasons were in your decision to become involved in the 2016 West Virginia floods.

	Not Important	Slightly Important	Fairly Important	Important	Very Important
I felt sorry for the flood victims.	☐	☐	☐	☐	☐
I felt responsibility toward my community and fellow citizens.	☐	☐	☐	☐	☐
I felt getting involved would help me cope with stress caused by the flooding.	☐	☐	☐	☐	☐
I felt getting involved would help me cope with feelings of hopelessness/powerlessness caused by the flooding.	☐	☐	☐	☐	☐

I personally knew someone affected by the disaster.	☐	☐	☐	☐	☐
I wanted to do something constructive to help during the flooding.	☐	☐	☐	☐	☐
I felt I could gain something from the experience of volunteering.	☐	☐	☐	☐	☐
I felt as though I would be judged if I did not volunteer.	☐	☐	☐	☐	☐
Those with more should help those with less.	☐	☐	☐	☐	☐
My friends/family were already volunteering for relief efforts.	☐	☐	☐	☐	☐
Others with whom I am close place a high value on volunteering.	☐	☐	☐	☐	☐
I wanted to meet people and make friends.	☐	☐	☐	☐	☐
Part of my religious beliefs	☐	☐	☐	☐	☐
Volunteering lets me learn through direct, "hands on" experience.	☐	☐	☐	☐	☐
I was already involved in an organization helping with flood relief.	☐	☐	☐	☐	☐

Please indicate whether your volunteer experiences in disaster relief for the 2016 West Virginia floods were negative or positive:

All negative

Mostly Negative

Somewhat Negative

Neither positive or negative

Somewhat positive

Mostly positive

All positive

Which of the following were challenges you faced while volunteering in disaster relief for the 2016 West Virginia flooding? Mark all that apply.

Learning new skills/adapting to the environment

Witnessing the effects of the flooding

Talking to those affected by the flooding

Time-management

Communication

Task-specific challenges

Promoting the cause or getting others to volunteer

Commitment

Travel

Funding/money issues (such as travel costs)

Finding motivation

Weather

Bureaucratic issues

Medical care

Finding the right place to volunteer

Working with others

Disorganization at volunteer site

Other _____

Which of the following represent positive occurrences you had while volunteering in disaster relief for the 2016 West Virginia Flooding? Mark all that apply.

Learning new skills/adapting to the environment

Working alongside others

Helping flood victims

Traveling

Coming together as a community

Meeting new people

Other _____

Did you pay any out-of-pocket expenses while volunteering for West Virginia flood relief, such as paying for personal meals, transportation, housing, etc?

Yes

No

What is the estimated amount of these personal expenses? Just a guess is fine.

_____

The next few questions are about volunteering and donating *after* the 2016 West Virginia floods.

Have you continued to volunteer with disaster relief efforts for the 2016 West Virginia floods such as helping flood victims resettle, working on plans for future disasters, etc?

Yes

No

Which of the following factors have prevented you from volunteering? Mark all that apply.

I am too busy with work or school

Projects/volunteer meetings are at unsuitable times

Could not find volunteer role appropriate for my skills

Could not find volunteer role appropriate for my future goals

Projects/meetings take too much time

Unsuitable location of projects/meetings

Have not found any interesting projects

I can't afford to volunteer

My social life is too busy

I have family commitments

I don't want to volunteer

After the occurrence of the 2016 West Virginia flooding, did you volunteer with charities, nonprofit organizations, community groups, or other outlets for service work that are ***unrelated*** to the disaster relief efforts of the 2016 West Virginia floods? By volunteer activity I mean not just belonging to a service organization, but actually working in some way to help others for no monetary pay.

Yes

No

Which of the following factors have prevented you from volunteering? Mark all that apply.

I am too busy with work or school

Projects/volunteer meetings are at unsuitable times

Could not find volunteer role appropriate for my skills

Could not find volunteer role appropriate for my future goals

Projects/meetings take too much time

Unsuitable location of projects/meetings

Have not found any interesting projects

I can't afford to volunteer

My social life is too busy

I have family commitments

I don't want to volunteer

After the occurrence of the 2016 West Virginia flooding, how often did you volunteer for these types of organizations?

Never

Once

At least two or three times

Once a month

Once a week

Two or three times a week

More than three times a week

After the occurrence of the 2016 West Virginia flooding, did you volunteer ***outside of*** formal community service or aid organizations? By volunteering outside of these organizations, I mean helping others within your neighborhood, community, group, or family.

Yes

No

Since the occurrence of the 2016 West Virginia flooding, have you volunteered with other ***disaster relief efforts unrelated*** to the 2016 West Virginia flooding? By volunteer activity I

mean not just belonging to a service organization, but actually working in some way to help others for no monetary pay.

Yes

No

After the 2016 West Virginia flooding, did you contribute monetary donations to philanthropic or charitable organizations *unrelated* to the 2016 WV flooding?

Yes

No

What is the estimated amount of monetary donations to such organizations during this time? Just a guess is fine.

\$0

\$1 - \$24

\$25 - 100

\$101 - \$300

\$301 - \$1,000

\$1,001 - \$5,000

\$5,001 - \$10,000

More than \$10,000

Please indicate the degree to which you agree with the following statements. After volunteering for disaster relief in the 2016 West Virginia floods:

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Disaster volunteerism is now an important aspect of my life.	☐	☐	☐	☐	☐
I would like to become more involved in other volunteer efforts unrelated to disaster relief.	☐	☐	☐	☐	☐

I feel better
about myself.

☐☐☐☐☐

I made new
contacts that
might help
my business
or career.

☐☐☐☐☐

I was able to
work through
some of my
own personal
problems.

☐☐☐☐☐

I feel more
personally
fulfilled.

☐☐☐☐☐

I made
friends
through
volunteering
for the
disaster relief
efforts

☐☐☐☐☐

I am still in
contact with
people I
volunteered
with during
WV flood
disaster relief.

☐☐☐☐☐

I would be
willing to
help with
other service
opportunities
not associated
with disaster
relief.

☐☐☐☐☐

I believe that
volunteering
is important.

☐☐☐☐☐

I am likely to encourage others to help with disaster relief efforts in the future.

☐☐☐☐☐

I feel that it is likely I will volunteer with disaster relief in the future.

☐☐☐☐☐

I feel that it is likely I will volunteer for community needs in the future other than disaster relief.

☐☐☐☐☐

Please indicate the degree to which you agree with the following statements. After volunteering for disaster relief in the 2016 West Virginia floods:

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
My communication skills improved.	☐	☐	☐	☐	☐
My social/interpersonal skills have improved.	☐	☐	☐	☐	☐
My ability to lead or encourage others has improved.	☐	☐	☐	☐	☐
My ability to work as part of a team has improved.	☐	☐	☐	☐	☐
My ability to make decisions has improved.	☐	☐	☐	☐	☐