

# Mental Health in Disaster Volunteering: Exploring Stress, Depression, and Social Support Dynamics

## Abstract

**Background:** Community-based volunteering generally fosters camaraderie, instills a sense of purpose and mastery, and develops general coping strategies. Disaster volunteering, however, is also characterized by exposure to potentially traumatic environments and limited organizational or peer support necessary for effective coping.

**Methods:** To explore these conflicting effects on disaster volunteers, this study explored used a quasi-experimental survey design with ten explanatory variables to assess self-reported stress and depression among volunteers. The survey was launched between October and December 2023 using systematic social media recruitment and snowball sampling ( $n = 110$ ).

**Results:** Statistical regression analysis of the relationship between volunteer stress and disaster volunteerism was inconclusive. However, volunteer depression could be significantly explained by one explanatory variable, social support satisfaction. Specifically, higher levels of social support satisfaction result in lower levels of self-reported volunteer depression. Open-ended responses augment quantitative findings by elucidating various volunteer motivations, coping mechanisms, and reintegration experiences associated with disaster volunteering in the United States.

**Implications:** The results of this study corroborate prior research findings, underscoring the crucial role of social support in fostering positive mental health outcomes among disaster volunteers.

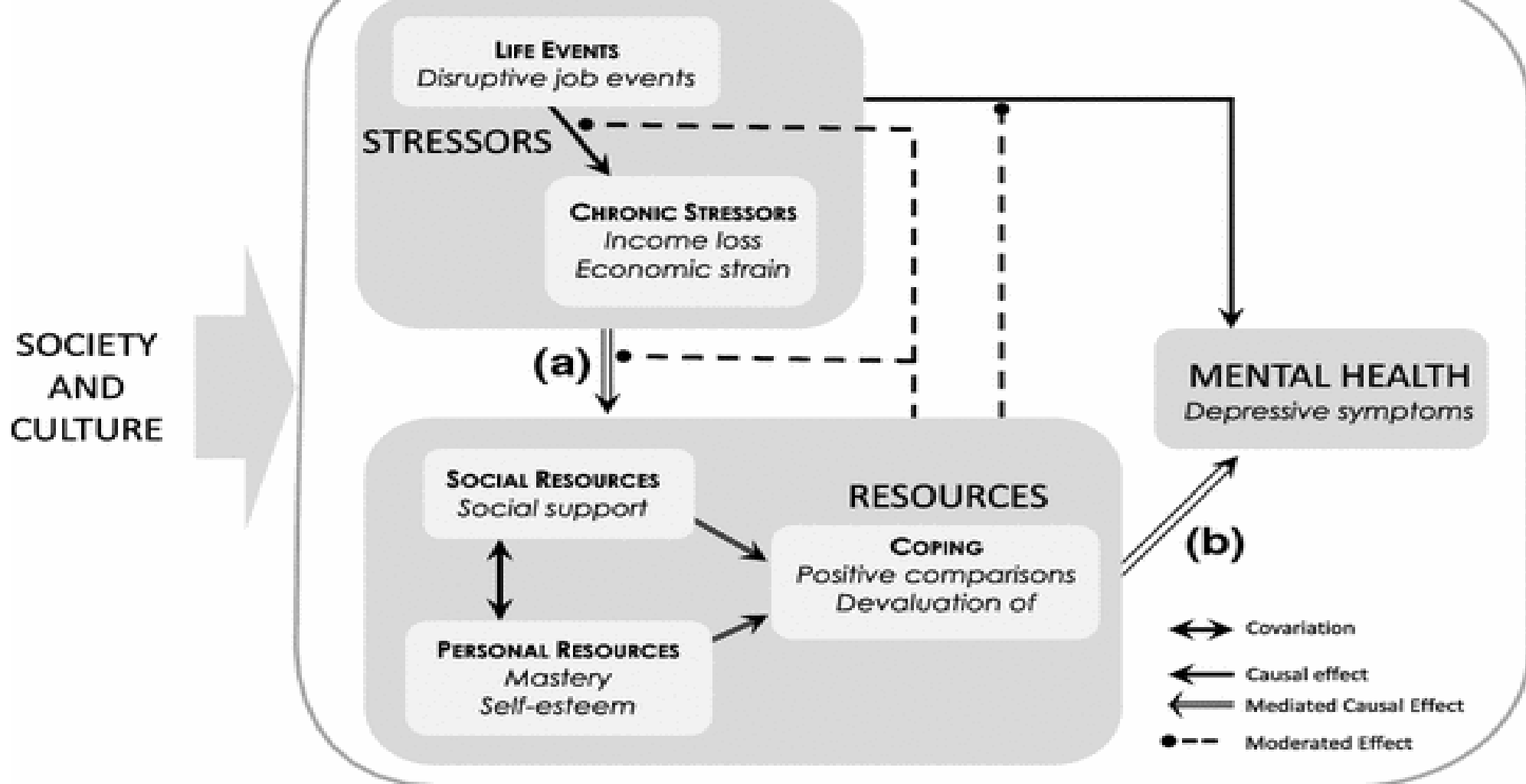
## Introduction

**Definition of Stress:** Stress demands can lead to negative psychological, behavioral, and physical effects (Griffin & Clarke, 2011).

**Health Benefits of Volunteering:** Volunteering enhances psychological well-being, fostering feelings of belonging, community support, and life satisfaction. It reduces isolation and boosts self-esteem and optimism, serving as a protective factor against mental health morbidities.

**Disaster Volunteers and Mental Health:** Disaster volunteers face varied psychological effects based on their involvement type (affiliated vs. unaffiliated). Affiliated volunteers generally have better mental health outcomes, while spontaneous or unaffiliated volunteers may experience higher PTSD risks. Disaster volunteers also experience positive outcomes, like "compassion satisfaction" and personal growth.

**Influence of Social Support and Coping:** Strong social networks among volunteers improve coping strategies and emotional resilience. Those with robust support report greater personal agency, transforming trauma into opportunities for growth. Fostering social solidarity can mitigate negative mental health impacts while enhancing positive outcomes.



The Original Stress Process Model. Based on Pfeiffer et al. 1981. (Obtained from Aneshensel and Mitchell 2013)

## Research Questions

To what extent are self-reported levels of stress and depression among short-term disaster volunteers associated with factors such as the number of disaster deployments in the past year, levels of mastery, satisfaction with social support, coping abilities, volunteer trauma, volunteer affiliation, volunteer satisfaction, annual household income, and training level?



## Methods

**Survey Design:** Employed a quasi-experimental survey design using a combination of Likert scale, multiple-choice, and open-ended items to quantitatively assess self-reported stress and depression among disaster volunteers.

**Participant Recruitment:** Used purposive and systematic social media recruitment targeting short-term disaster volunteers affiliated with recognized organizations (e.g., VOAD) and unaffiliated individuals involved in disaster response efforts.

**Eligibility Criteria:** Participants were required to be 18+ and have completed at least one, but no more than sixty consecutive volunteer workdays engaging in disaster relief and recovery activities within the past year, at the time of survey completion.

**Study Recruitment:** Conducted recruitment through social media platforms (Facebook, Instagram, LinkedIn, Reddit) and snowball sampling, ensuring a wide reach and inclusion of volunteers from different geographic areas and disaster response backgrounds within the United States.

Demographic Variable	Percentage of Sample ( $n = 110$ )
White	85.5%
4-year degree or higher	73.6%
55+	49.1%
Male	55.0%
Prior military experience	40.9%
Christian (all denominations)	46.4%
Affiliated w/ Team Rubicon	61.8%
3+ years of disaster volunteer experience	70.8%
Volunteer Leadership Involvement	70.9%

**Dependent Study Variables:** (1) Volunteer stress and (2) volunteer depression.

**Independent Study Variables:** (1) Number of disaster volunteer experiences in the past year; (2) mastery; (3) satisfaction with peer social support; (4) coping strategies; (5) volunteer affiliation status; (6) household income; (7) level of volunteer training; (8) volunteer impact/efficacy; (9) volunteer engagement/support; and (10) volunteer fulfillment/recognition.

**Data Analysis:** After filtering for consent, completion time, and outliers, the initial 217 survey responses were reduced to 110 valid ones. Factor scores from prior analyses informed regression analyses on predictors related to stress and depression. Bivariate and regression analysis was conducted using SPSS29. Open-ended responses were analyzed through tiered coding in Excel, identifying themes around volunteer motivations and coping strategies. Findings were triangulated with quantitative data for validity. The University of Delaware Institutional Review Board exempted this study in Fall 2023.

## Bivariate Correlation Results

At the bivariate level, mastery, social support satisfaction, volunteer impact and efficacy, and volunteer fulfillment and recognition (for stress only) were significantly associated with lower levels of volunteer stress and depression. The other variables showed no significant relationship with volunteer stress or depression.

## Regression Results - Volunteer Stress

The regression model was not statistically significant ( $p = .077$ ) and accounted for 17% of the variance in volunteer stress (adjusted  $R^2 = .171$ ). This means the predictors explained only a small portion of the variability in stress levels.

## Regression Results – Volunteer Depression

The regression model was statistically significant ( $p = .026$ ) and accounted for 21% of the variance in volunteer depression (adjusted  $R^2 = .207$ ). This means the predictors explained a modest portion of the variability in depression levels. Further, social support satisfaction was the only significant predictor in the model with negative directionality ( $b = -.300$ ;  $p = .022$ ,  $t = -2.341$ ).

## Open-Ended Survey Results

### Volunteer Motivations

- Altruism/values
  - Call to serve
  - Influence of past career
  - Use of personal skills and expertise
- Socialization
  - Camaraderie, friendship, and teamwork
- Personal/egoistic
  - Sense of purpose and fulfilment
  - Time and availability
- Disaster event attachment
  - Past disaster experience
  - COVID-19 pandemic

### Volunteer Coping Strategies

- Lack of coping strategies
  - Volunteering as coping itself
- Use of coping strategies
  - Socialization with fellow volunteers, family, and pets
  - Personal care

### Volunteer Reintegration

- Positive reintegration
- Neutral reintegration
- Reintegration challenges

## Selected Quotes from Study Participants

*Not everyone is built to give of themself. I am built that way.*

*My motivation is simply being a part of a team that just want[s] to help people get back on their feet. The camaraderie, good natured banter, and service to others energizes me.*

*When I was in middle school, my area was affected by Hurricane Sandy. Since then, I have made a point to volunteer and assist disaster survivors in the same way that those volunteers helped my community bounce back all those years ago.*

*My disaster volunteer experience actually fulfills me. I've rarely felt the need for coping strategies or wellness assistance.*

*I [have] done it long enough I just compartmentalize the disaster. Returning to daily life is not difficult.*

*Sometimes it feels like re-integrating into society as most people have no real idea of the misery the communities impacted by the disaster are feeling. This combined with the intensity of physical effort for my volunteering period, usually takes about a week for me to recuperate - physically and mentally.*

*Talking around the campfire provides better therapy than any VA session. Greyshirts [Team Rubicon volunteers] understand me and do not judge.*

## Discussion

- Influence of Social Support:** Social support satisfaction was a significant and negative predictor of volunteer depression.
- Increased Volunteerism ≠ Increased Mental Health Morbidities:** Contrary to expectations, more frequent disaster volunteer experiences did not predict higher levels of stress or depression among volunteers.
- Need for Validated Volunteer Trauma Scale:** Due to measurement issues, volunteer trauma was excluded from this analysis, leaving this hypothesis unexplored within this study.
- Limitations of Social Media Recruitment and Sample Diversity:** Skewed dataset with predominantly white, middle-to-high income, and affiliated volunteers with one organization, which limited the ability to generalize findings and explore the experiences of minority and unaffiliated volunteers.

## Recommendations for Practice

- Enhance Social Support Networks:** Strengthen social support networks for volunteers, as satisfaction with social support directly reduces depression and improves mental health.
- Support Reintegration for Volunteers:** Offer emotional and social resources to help volunteers transition back into daily life, addressing potential role conflicts and emotional strain.
- Acknowledge the Positive Emotions of Disaster Volunteering:** Highlight the therapeutic aspects of volunteering, including gratitude and fulfillment, which have restorative effects on volunteer mental health and help with volunteer retention and engagement.