Protective Factors of Resilience Among Natural Disaster Responders: A Rapid Systematic Review

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The safety of those forced to intervene is significantly impacted by how natural disasters are managed. To protect operators' mental health and enable a successful community response, it is critical to identify and take advantage of the elements that support their resilience and well-being. After searching the databases Scopus, Web of Science, PubMed, and PsycINFO for relevant literature, 876 items were found. The goal of this brief systematic literature review is to find and evaluate information about the protective qualities of resilience and wellbeing in assistance workers during natural disasters. After a thorough textual analysis, we evaluated 84 submissions for potential inclusion. The findings show that a variety of participant samples and procedures were used in the investigations. The resilience and welfare of relief workers are influenced by a number of important elements, including individual traits, adaptive techniques, and the degree of catastrophe or community involvement. Other elements include education, internal disputes, group support, and the organization's or society's overall preparedness. As this succinct assessment shows that empowering supporters is a critical component of resilience, it is imperative to foster internal resilience by improving team and internal resources, offering training in self-care approaches, and putting in place extra supportive programs.

Key words: Safeguards, Resilience, Health, Human Assistance, Environmental Disaster Occurrences, And Quick, Methodical Evaluation.

Introduction:

A disaster occurs when a major ecological disturbance breaks a community's bond with its surroundings, resulting in a shortage of resources. Societal structures collapse when a calamity surpasses a community's adaptive strategies, leaving survivors unable to respond or function appropriately. These disasters are known as natural hazard events, and they are typically brought on by sudden changes in the surroundings. The term "natural" disaster is used for simplicity, although the intensity of the effects depends on how people and communities respond to the dangers of unanticipated natural events. The degree of the consequences will therefore depend on human behavior—or lack thereof. It is also important to quickly distribute a variety of resources to deal with the aftermath of a natural disaster. Only thru the cooperative efforts of numerous agencies, authorities, experts, and organizations involved in disaster management can public safety, assistance, and community rehabilitation and reconstruction be achieved. It is crucial to protect the emotional and psychological health of those who are under distress during times of crisis. Humanitarian groups should collaborate to improve community resilience.

The Latin word resilire, which means "to bounce back" or "to rebound," is the source of the English word resilience. It conveys the idea of spanning multiple areas. The ability of a system to withstand shocks while maintaining critical functions is referred to as resilience;

Holling initially proposed this concept in 1973 [1]. According to the American Psychological Association (APA), resilience is the capacity to adapt constructively in the face of severe stress or adversity. According to research, trauma adaptability [2], good affect, and useful coping mechanisms all have an impact on resilience. Crucial elements of crisis management and the personal resilience of employes and volunteers include leadership strategies in management, support and encouragement from coworkers [3], and efficient communication and teamwork[4].

Therefore, it is crucial to realize that the ability to assess and protect the persons engaged is critical to the success of the emergency response in this situation. As a result, it is crucial to recognize the efforts of both paid employes and volunteers who offer support during emergencies. This includes emergency responders, volunteers, humanitarian workers, and representatives of non-governmental organizations. It is particularly important to identify the linguistic and cultural intermediaries in highly vulnerable and diverse environments. The duration of the response framework, the effectiveness of the relief activities, and the general empowerment of the affected community are all influenced by the psychological and social well-being of the main organizations in charge of providing humanitarian aid.

Over the past few decades, research on catastrophe reactions and mental health has mostly concentrated on documenting the psychological effects that people have encountered. Research funding for psychopathology has historically been higher than for resilience. Research on post-disaster mental health issues and interventions, particularly PTSD and maladaptive emotional reactions, has produced positive results in meta-analyses and systematic reviews [5] [6]. [7] [8] note that when assessing methods to enhance coping therapy following natural catastrophes, existing literature frequently examines specific components like self-coping abilities or improvisational skills in isolation. Developing a comprehensive resilience framework is difficult, according to [7], yet most of these studies still focus on the effects of specific disasters. Because of this, there aren't many research that try to integrate organizational, social, and psychological components into a coherent framework for resilience that can handle different natural disasters in diverse cultural and geographic contexts.

The goal of this accelerated systematic review is to find ways to improve caregivers' resilience and general health. It is stressed how crucial it is to adequately prepare rescuers and protect their physical and mental well-being. This analysis emphasizes the importance of organizational and contextual aspects for the well-being of operators by viewing resilience as a shared attribute relevant to the entire team, organization, or system rather than an individual feature.

The extent of the investigation:

We perform literature research to find elements that improve resilience among professionals and volunteers in order to gather and assess these organizations' resources. These resources are crucial for advancement and reconstruction after catastrophic disasters. Therefore, our primary goal will be to address the following question:

What steps can we take to ensure the safety and resilience of those working to lessen the effects of natural disasters?

Our primary goal was to look into the following issues:

How could helpers' personal traits impact their resilience and well-being when managing natural disaster events?

How might societal and organizational factors impact the wellbeing and resilience of persons engaged in disaster management?

Methods:

A Method for Conducting Quick Systematic Reviews:

In April 2025, a quick systematic review of the literature focused on protective characteristics for the benefit of aid workers' health and resilience during a disaster. In order

to produce information more quickly, a rapid review is a type of knowledge synthesis that simplifies or skips several elements of the systematic review process. Due to time and resource constraints, this strategy was crucial and is consistent with the theoretical frameworks for conducting quick reviews.

The evaluation's urgency and time limits prevented it from being included in a public database, which is a standard procedure for accelerated evidence syntheses.

The Investigative Route:

Described the methods used in the review that followed PRISMA guidelines. We first looked at the relevant literature on the chosen study topic in order to make the keyword search easier to organize. This made it possible for us to identify the main features. The subsequent terms were selected: "relief operator," "relief worker," "first responder," "humanitarian relief worker," "helper," "relief organization," "first aid responder," "public health worker," "rescue personnel," "volunteer," and "natural disaster," "earthquake," "flood," "hurricane," "tsunami," "wildfire," "drought," "tornado," or "volcano," along with "protective factor," "wellbeing," "well-being," "growth," "psychological well-being," "development," or "mental disorder*.

Inclusion and Exclusion Standards:

Only peer-reviewed academic research on the resilience and well-being of first responders during natural disasters that was published in English-language journals was included in our examination of the literature. This assessment refers to both paid employes and volunteers as "helpers" when discussing people who offer support during emergencies. For this reason, we did not include accounts of those affected by natural disasters or any other type of disaster, including man-made disasters, ecological disasters, conflicts, etc. Only studies using quantitative or mixed-method approaches were included in this brief systematic review. Critiques, theses, and book passages that weren't specifically relevant to the topic were not included. Publications that did not discuss operators' resilience, mental health, or wellness in any way were not included in our evaluation in order to preserve objectivity. Articles that were only available in non-English languages or whose whole texts were unavailable were also ignored.

Information Selection and Acquisition:

Using Scopus, PsycINFO, Web of Science, and PubMed, we found 1,468 sources for the literature review. Because of the intricacy of this problem, we investigated databases regardless of publication date or field of study in an effort to gain a thorough knowledge. After entering data into the Rayyan.ai software, an Intelligent Research tool intended to enhance the coding and selection of literature, scholars correctly integrated citations, eliminated redundancies, collaborated in groups, and explained the reasoning behind inclusion or exclusion.

After the studies were chosen by a single reviewer, an anonymous secondary author offered dubious retrospective validation. Time and budget constraints forced our decision for a quick, thorough assessment. This approach may have the drawback of introducing bias into the selection process even if it complies with strict requirements for accelerated assessments.

A duplication checking method generated 592 replicas when it was first executed. As a result, 876 recordings were selected for the abstract and title review. 490 records were removed for having irrelevant themes, 167 records were discarded for using an inappropriate sample, 23 records were removed for having incorrect publication types, and 1 record was excluded for having an inappropriate disaster analysis due to concerns about the title and abstract. An additional 111 entries were removed after the thorough text evaluation because they lacked sufficient content and did not correspond with the article's main themes. Consequently, based on their compliance with the inclusion criteria, 84 records were finally considered appropriate for evaluation. A PRISMA flowchart showing the selection procedure is shown in Figure 1.

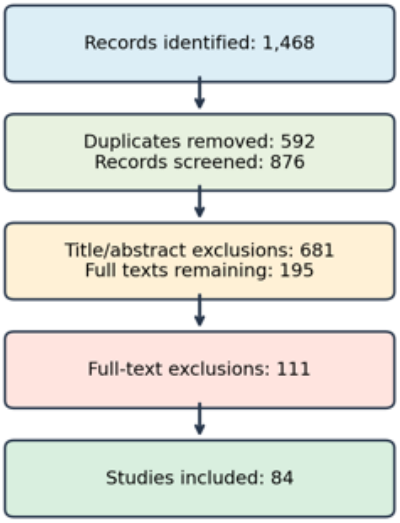


Figure 1. Study identification and selection flow (reconstructed from reported counts).

Evaluating the Included Studies' Quality:

The [9] standards for both quantitative and qualitative research were used to evaluate the 84 eligible papers. For mixed-method research, the Mixed-Methods Appraisal Tool was utilized. By reducing potential bias and making sure that all included studies followed the proper procedures, this evaluation aimed to improve the validity and reliability of the results from this quick systematic review. The MMAT and CASP offer organized approaches for evaluating the rigor, validity, and reliability of specific research projects. Enhancing the present understanding of resilience and well-being in connection to first responders to natural disasters was our goal in conducting this systematic review.

All studies included in the review met or exceeded the requirements for adequate methodological quality if they received scores of six or higher on the CASP and three or higher on the MMAT. All the information needed for the quality evaluation is included in the Supplementary Materials.

Outcome:

Types of Research:

Listing 1's articles were categorized:

Twenty-three studies—including those by [10]—use qualitative methods. On the other hand, 53 studies used quantitative approaches, including studies conducted by [11]. Two of the eight studies using mixed-methods are [12].

Table 1. Distribution of included studies by reported research approach

Research approach	Number	Share of 84 included studies
Qualitative	23	27.4%
Quantitative	53	63.1%
Mixed methods	8	9.5%
Total	84	100.0%

Selected Research Samples:

An overview of the research specimens that were looked at is provided in this section. Because there are many stakeholders involved in disaster management, the academic community considered it essential to apply this classification in the assessment to provide a more accurate depiction of the focused topic. The study's samples, which include both compensated and uncompensated first responders and volunteers, fairly represent the larger population.

Volunteers who are involved According to the most recent publications, several studies relied on citizen volunteers, and the samples used in each study differed. While focused

on people who helped during the 2016 earthquake in central Italy. The significance of Red Cross volunteers in post-disaster interventions. As a result, additional organized volunteer groups were incorporated. The focus of [13] research was on volunteers working in disaster relief.

The significance of volunteer, unpaid participation has been highlighted by recent research. While [14] looked into volunteers who used online mental health services, [15] study concentrated on volunteers who voluntarily took part in disaster response. Most of the people who took part in the remote support programs for improving resilience and reducing stress were regular people. More diverse volunteer organizations have been the focus of later studies. Examples of such studies include, who looked at volunteers and their coordinators; [16], who looked into female relief workers after the 2012 Indian tsunami; and [17], who looked at volunteers who distributed linens, made meals for displaced people, and maintained camp hygiene. [18] assessed disaster responses by contrasting qualified professionals with untrained volunteers.

Additionally, studies concentrated on those with special abilities or those hired for certain tasks. An evaluation of the volunteer dog handlers engaged in search and rescue activities. Participants who sought mental health care were included in both the quantitative investigation by[19]. Authors included student volunteers in their diverse sample, in contrast to [11][20], who primarily concentrated on student volunteers taking part in mental health programs at both undergraduate and graduate levels.

People Taking Part in Helping and Responding in Crisis Situations:

Several studies have looked into the logistical and psychological challenges faced by different types of humanitarian workers and disaster response. Many projects were sparked by people working as professional first responders. Studies have also focused on people working in law enforcement and related professions. The following studies show similarities: [21]. [22][23]focused solely on firemen, in contrast to [24] who looked at the perspectives of both police officers and firefighters.

Many studies have focused on humanitarian relief agencies and the workers engaged in regional and international disaster response programs. While examined the reactions of rescue team members involved in corpse recovery following the Haitian earthquake, focused on local disaster relief officials and workers participating in healthcare delivery, supply distribution, and reconstruction operations. [25] examined a diverse group of local and foreign disaster responders, mostly from the medical, urban rescue, and management domains, while conducted interviews with emergency personnel from the logistics, management, security, and medical support sectors. Similarly, looked at earthquake-related issues from the perspective of Turkish emergency management and disaster management presidency employes.

Researchers have looked at disaster responders regardless of their level of pay. The 2021 German flood response was examined by [26][15], who concentrated on both professional and volunteer operations teams, in contrast to the wide range of student volunteers, Red Crescent employes, and firefighters examined Similarly, looked at a cohort that helped Katrina evacuees in Texas in conjunction with volunteer or free assistance from faith-based relief organizations.

Conducted a study with eleven experts in Nepalese crisis management, including academics, government officials, law enforcement officers, and humanitarian recruiters; [27] compared local people with a larger sample size. According to conventional responders such as ambulance, fire, police, and military forces are different from non-conventional responders such as utility workers, construction teams, educators, Māori Wardens, and NGO staff. Finally, few studies have examined certain demographics of local staff or responders; for example, [11] only examined male emergency responders. According to the only people who were

categorized as first responders were public sector employes, firefighters, and medical professionals.

Some authors also cited research on the mental health of emergency personnel and healthcare professionals. While [10] examined a multidisciplinary team that included emergency physicians from Munich-Schwabing, psychologists, paramedics, pastors, psychiatrists, and people with trauma therapy experience, used a diverse sample that included ten counselors, three psychiatric nurses, four psychiatrists, and six social workers. Lambert and Lawson focused on counselors in their 2013 study.recruited 24 psychiatrists, 15 paramedics, and 14 psychologists from medical-psychological emergency units in France using a similar methodology to the previous study.

Many studies have examined public health professionals' perspectives on disaster response. While some studies have focused on Florida public health workers [28], other studies have looked at the experiences of nurses, social workers, doctors, and administrative staff associated with the Modena Local Health Authority [12]. Similarly, focused on medical emergency responders, including doctors, nurses, and organizational leaders, while [4] included a wide range of healthcare professionals, including nurses, epidemiologists, program managers, social workers/psychologists, and organizational executives. A systems-focused training program with emergency medical first responders from 42 hospitals across six Chinese regions. The study evaluated coping mechanisms, occupational satisfaction, and psychological well-being. Numerous studies have looked at medical rescuers from different units, including local and auxiliary ones [29] While [22]concentrated on EMTs, studied paramedics in Tainan City. The experiences of physicians and nurses working on disaster relief teams were examined in a study conducted [30] are notable studies that focus on nurses providing timely assistance in emergencies. Similarly, included 819 social welfare workers in their study.

While [31][32][33] include school psychologists, counselors, and mental health practitioners in their research, [34]describe the experiences of mental health responders deployed after Hurricane Katrina. In the end, Ng et al.'s training program included evaluation and assessment (2009). Throughout China, volunteers and experts in disaster mental health worked together on this project.

Military Personnel:

While concentrated on male soldiers involved in disaster management following the Wen-Chuan earthquake, [35] studied 434 conscripted military personnel involved in rescue missions with 154 non-rescuers. Among the three primary divisions of the Japanese military, [36] examined the Japan Ground Self-Defense Force.

Classroom Staff:

Disaster relief workers connected to educational institutions were the subject of research investigations. Teachers working in the aftermath of the 2017 earthquake in Christchurch, New Zealand, were included in[31][32] investigated how training programs affected educators, teachers, and school counselors.

Combined Information:

A combination of geographic and demographic parameters was used in the research. looked at respondents from a variety of backgrounds. This included nurses, surgeons, firefighters, police officers with specialized dogs, and members of the communication team. In their studies on the disaster response in Christchurch, New looked at a diverse group of first responders, including firefighters, police officers, paramedics, clergy, mental health professionals, and emergency phone responders. Finally[37],interviews with decision-makers and information providers regarding flood incidents, whereas worked with women's groups, Batticaloa NGOs, and international humanitarian organizations.

Facilitating Components for Sturdiness and Health During Natural Disasters:The characteristics that protect the resilience and wellbeing of helpers were the subject of a

thematic study by three researchers. To find the themes, we used a combination of manual coding, iterative reading, and consensus-driven conflict resolution. No statistical methods were used because this was a qualitative and interpretive study. The main conclusions about the elements that safeguard the resilience and welfare of those who offer aid during natural catastrophes are summarized in Table 2.

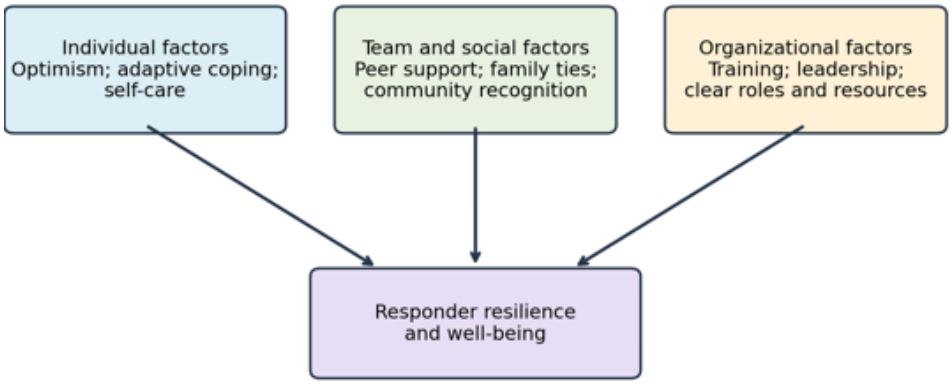


Figure 2. Multilevel protective factors associated with responder resilience and well-being.

Table 2. Thematic synthesis of protective factors and implementation considerations

Theme	Protective elements discussed	Practical consideration
Training and preparedness	Technical skills, psychological first aid, culturally appropriate training	Combine practical and psychosocial preparation.
Personal characteristics and coping	Optimism, hope, acceptance, planning and self-care	Support adaptive coping without assuming uniform effects.
Exposure and community involvement	Meaningful participation; exposure management; grounding and debriefing	Consider dual responder/survivor roles and exposure intensity.
Organizational support	Clear roles, supportive leadership, communication and supervision	Strengthen coordination, manageable duties and rest.
Social and peer support	Coworker, family and community connections	Facilitate contact and peer support while recognizing mixed findings.

Development of instruction:

Research shows that training is critical to the resilience of rescue workers and relief workers. Disaster preparedness training must include both technical skills and psychological and ethical aspects in order to properly teach rescue personnel in the retrieval and handling of common emergency situations

According to [18]exercise reduces stress and the risk of psychopathological disorders. According to [33], physical activity can also enhance self-efficacy, self-mastery, self-compassion, and self-care. Training programs significantly improve local and national capacities to administer psychological first aid and supervise psychosocial therapies in communities affected by disasters, according to numerous studies. This strengthens the community and its supporters, according to [31]. Unassociated volunteers had a higher risk of injury, but post-deployment health assessments and training helped reduce this risk, according to It seems that beginners were more vulnerable than experts.

Two studies, one by [33] and the other by Berger et al. (2016), examined the impact of several training sessions using the ERASE-Stress intervention, a comprehensive school-based strategy intended to improve resilience. Improvements in participants' optimism, sense of mastery, professional self-efficacy, and cognitive coping techniques were found in the [33]

study. In addition to improving coping strategies, optimism, hope, resilience, professional self-efficacy, and compassion satisfaction, the intervention reduced symptoms of burnout, PTSD, and compassion fatigue [32].

The importance of psychological training and self-care techniques for emergency responders has been highlighted by a number of recent studies [19]. Additionally, [34] both stressed the need of a cultural perspective in community-oriented mental health therapy. They argued that in order to meet the demands of employes and the goals of survivors, training should be based on local settings and cultures rather than abstract ideas or foreign frameworks. They emphasized how teachers' attitudes and behaviors affect students.

Together with their participation in emergency management and any relevant training that may have lessened the possibility of unfavorable results, the individual's experience as a rescuer is considered essential to their training

However, psychological vulnerability seems to rise with age, which may be related to a decrease in resilience or an accumulation of stress [36]

There is conflicting data about training's ability to predict health-related quality of life [29] and the lack of psychopathology Legislators are advised by this study to reevaluate military personnel's pre-deployment rescue training. A comprehensive and structured training program must be completed by those who provide disaster relief.

Character-Related Elements:

People's unique viewpoints and life experiences had an impact on how resilient they were when faced with difficulties. Personal perspectives, how situations were interpreted, and coping mechanisms all had an impact on the level of motivation, initiative, and persistence. This suggested that some people were more adaptive and resourceful than their colleagues[4].

In order to evaluate their impact on resilience, looked at optimism and hope as facilitators of spiritual support and compassion. Despite cultural differences, African Americans seem to value optimism as a resilience-boosting trait [20] although European Americans have also demonstrated strengths. Furthermore, and came to the same conclusion: optimism is a crucial component of resilience. examine these ideas in line with and discover that optimism has a major positive impact on PTSD symptoms, but compassion has little effect. When given compassionate care, a group of Italian volunteers showed reduced levels of depression, confusion, and general distress [17].

The psychological characteristics and frequency of post-traumatic stress disorder (PTSD) among emergency medical personnel were investigated Unlike introversion and perfectionism, anxiety has been found to be a significant predictor of post-traumatic stress disorder (PTSD). When perfectionism and feelings of shame or guilt were present in the second scenario, there were more cases of post-traumatic stress disorder. The Tainan City Government Fire Bureau provided both research specimens, which provide strong evidence. According to research by [38] and those who are worried or extremely neurotic are more likely to experience stressful situations.

According to research by [23], depending on the level of exposure, coping mechanisms reduced the association between stress and its consequences on people. These mechanisms serve as defenses against mental illnesses. Professionals' self-evaluations of their performance following the disaster were examined, who discovered a notable improvement. Additionally, research shows that while maladaptive coping strategies like denial, emotional expression, and self-reproach are associated with increased post-traumatic stress disorder (PTSD) and decreased resilience, with some gender-specific differences noted, adaptive coping strategies like acceptance and strategic planning are associated with improved resilience. According to [38] PTSD is positively correlated with maladaptive coping mechanisms such self-blame or emotional suppression, which have a slight but long-lasting effect on distress. Certain coping strategies, like emotional detachment and constructive self-evaluation, were linked to less

discomfort, according to research by Chang et al. (2003, 2008). Stress symptoms and passive coping mechanisms like drinking or smoking were found to be more strongly correlated In the end, avoidance and evasion techniques were connected to PTSD. According to [21], law enforcement officers in New Orleans used interpersonal communication, emotional detachment, and prayer as part of their emotion-focused coping mechanisms. Due to the unstable environment and poor infrastructure, problem-oriented coping techniques like strategic planning and direct involvement were never employed. On the other hand, resilience depended on emotional control, friendship, and unofficial peer support.

Coping strategies include finding meaning and purpose in life thru humanitarian endeavors, avoiding or suppressing depression, developing a greater appreciation for life, exhibiting perseverance, letting things happen organically, and making up for lost time discovered that as coping mechanisms, nurses who helped after the 2023 Turkish earthquake used team dynamics, kept a positive outlook, expressed their emotions, asked for family support, maintained professionalism despite fear, and followed ethical norms. Proactive coping, supportive relationships, and general life satisfaction were found to be crucial components of post-traumatic growth in research by [16]. Spiritual coping mechanisms were investigated. Burnout risk was lower in faith-based relief organizations that used effective coping techniques, such as religious support and spiritual connections thru group activities like prayer, scripture study, and worship claim that self-directed religious coping, an unhealthy tactic linked to burnout, entails people viewing their autonomy as a divine gift or duty and depending on their own decisions and resources to deal with stress. [24] found statistically significant indications of a variety of mental health outcomes among police and firefighters that are associated with traumatic experiences, such as physical abuse throughout early childhood or adolescence.

Assessment of Community Vulnerability and Catastrophe:

[36]found that military personnel's participation in disasters had a negative impact on their mental health, while found that humanitarian workers who survived benefited from disaster relief efforts. In the dual roles of responder and survivor also created emotional complexity. This happens as a result of the person's battle with the psychological conflict between the positive emotions connected to helping others and the negative emotions resulting from their own victimization. According to local rescuers had significantly worse well-being scores than their external counterparts, demonstrating the negative effects of participating in a community in need of assistance.

Additionally, found that higher police officer engagement during Hurricane Katrina was associated with higher Alcohol Use Disorders Identification Test (AUDIT) scores, indicating a relationship between psychological suffering and the level of involvement in emergency operations. The findings of these studies were confirmed by [27], who showed that PTSD incidence increased with exposure intensity. Responders were more likely than community members to report feeling less uncomfortable.

Numerous studies have looked at how disaster exposure affects psychopathological symptoms; for example, and[28] found that higher exposure is associated with worsened symptoms in volunteers and relief workers.. came to similar conclusions in their 2011 study. found that isolated trauma events predict changes in mental health rather than witnessing disasters. found that counselors who experienced a disaster directly had much higher levels of post-traumatic growth than volunteers who were not affected. found that people showed growth and resilience despite the emotional suffering resulting from ongoing exposure to trauma and unfavorable situations.

They also found that self-care techniques, such as exercise, debriefing, and grounding techniques, reduced discomfort. In the study, those with more strength showed a greater

inclination to do physical rehabilitation exercises, indicating a possible advantage to these seemingly harmful activities.

While [35] shows that disaster responders are more likely to display symptoms of post-traumatic stress disorder (PTSD) when they relate to the deceased victims, particularly when they imagine themselves or a companion as a casualty of the disaster, and have categorized the handling of human remains and empathy toward victims as emotionally taxing. Exposure to traumatic imagery, near-fatal encounters contact with cadavers, witnessing dead or critically injured people, severe trauma during rescue operations, or participation at the center of the disaster are all factors that are strongly associated with psychopathology in responders. [14]found that using PFA as a treatment dramatically improved resilience scores and decreased symptoms of involuntary exposure.

According to [10], the Disaster Victim Identification team said that in order to protect victims from trauma and illness, they avoided speaking with their family. Damage, and their inability to save lives despite their best efforts.

Organizational Challenges:

The importance of early organizational support, especially six months after a disaster, protects against PTSD, depression, and anxiety, and the association between extended work hours and anxiety as well as subjective health problems at 18 months highlights the crucial role that organizational factors play in the welfare of care workers Their findings, which are consistent with those of regarding law enforcement officers, highlight the importance of volunteers feeling supported and protected, particularly in long-term team leadership. When [39] investigate how leadership affects relief workers' well-being, they find that servant leadership significantly reduces their emotional weariness. A true servant leader puts their team members' needs ahead of their own, fostering an atmosphere that promotes group growth and contributing to the team's accomplishments. According to [39] workplace buoyancy—defined as the ability to successfully negotiate challenges and setbacks typical in the workplace—seems to mitigate the influence of leadership.

In line with earlier research, emphasize the importance of interprofessional collaboration, continuous supervision, and exemplary modeling in promoting psychological safety, while show that nurses' moral commitment to volunteering enhanced their ability to handle organizational coordination and communication challenges. highlight the negative consequences of inadequate internal communication, underscoring the significance of peer support networks in mitigating mental health difficulties. Communication, involvement, organization, roles, and duties are all crucial components to work with in order to strengthen team resilience.

This also applies to first responders' squad. [40] found that extended work hours, sometimes 12 to 16 hours per day, unclear position descriptions, and inadequate deployment techniques were important problems. The scenario was made more stressful by the uncertainty around the workload, disruptions caused by irregular staff overlap, and frequent job reallocations. According to employes of the Turkish Red Crescent organization face stress when they don't get enough rest and assistance.

Both the and studies on psychological issues in the workplace found similar results from inadequate communication; however, the former also identified workplace stigma and fear of discrimination as risk factors. According to Fahim et al. (2014), systemic turmoil and ambiguous expectations greatly exacerbated respondents' emotional discomfort, which was a major factor in their need for assistance. Participants revealed sentiments of apprehension, bewilderment, and ambiguity coming from features including ambiguous responsibilities, inadequate safety protocols, insufficient training, and a lack of emotional and physical aid. also found that without psychological therapy, military responders' mental health declined.

According to the authors, choosing not to seek psychological treatment could be a sign of a propensity to avoid problems, which could lead to PTSD.

[13] found that disaster relief volunteers also mentioned organizational difficulties. Many volunteers voiced their dissatisfaction with the leadership team, claiming that inexperienced or poorly trained leaders were the cause of their inefficiency, impeding timely and efficient decision-making. Volunteers frequently have to go around established procedures by eschewing official channels in order to meet the community's pressing needs. The problem was made worse by the leadership change, which resulted in a breakdown in coordination and a fragmentation of institutional expertise. Additionally, managers' poor interpersonal and communication skills lowered morale and impeded teamwork. While volunteers had difficulties with inter-team relationships, firefighters highlighted role ambiguity, poor leadership, inactivity, insufficient support, and personnel issues as their primary stressors in study. According to organizational inefficiencies that reduce efficacy and increase stress among nursing staff include imprecise needs assessments and poor resource allocation.

Early reaction efforts were disorganized, dispersed, and lacked a clear command hierarchy due to a lack of leadership frameworks and coordination [4]. Interviewees also mentioned problems with the cooperation of all the groups involved in rescue operations. The cooperation required for responders to take coordinated action was weakened by reports of narcissism and territorial conduct, especially from larger businesses. This point, particularly in light of the tense interaction between international aid workers' activities and women's relief efforts in Batticaloa. A lack of connectivity between these two forms of resilience may be the cause of the deterioration of local capacities, shortcomings in international aid programs, and decreased resilience among women in Batticaloa.

Leadership poses particular challenges. Psychiatrists in charge of teams reported higher stress levels as a result of intense workloads, unpredictable surroundings, and new coworkers. on the other hand, claim that volunteers may be protected from deep sadness because of the emotional framework and connections created by participation in rescue operations. The delicate balance between participation and excessive strain is highlighted [36]who caution that prolonged assignments and heavy duties upon return may worsen mental health problems.

In crisis response, volunteers rely on unofficial leaders for instruction and emotional support. These people could be spiritual leaders, local chiefs, or representatives of the community. Even tho they are not formally affiliated with the volunteer group, their presence within communities thru casual conversations and interpersonal interaction boosts morale and reduces stress. According to [18], volunteers' influence—which depends on shared values, cultural affinity, and trust—has a substantial impact on their well-being during times of crisis.

According to [26], a major issue facing assistants is the lack of effective information and communication. This emphasizes the importance of improved digital tools, risk evaluation, and entity transparency. found that coordinators created welcoming spaces for all participants, connected people from different backgrounds, and provided emotional support, organization, and motivation; as a result, the study emphasizes the need for improved training in these areas for volunteers. Inadequate leadership, unclear duties, and long stays in shelters were associated with negative experiences [40] Similarly,[15] found a relationship between emotional stress and variables like lack of sleep, trauma exposure, and uncertainty about responsibilities. Although there was no discernible increase in psychopathological symptoms, participants in the study by reported positive team dynamics, teamwork, and strong support from peers and superiors upon their return.

According to respondents in major organizational problems that contributed to operational inefficiency and chaos were disagreements with the control tower, drawn-out decision-making, and revoked instructions. Additional pressures mentioned by respondents

included unexpected changes in mission priorities and a lack of professional direction. Inadequate preparedness for disasters and poor collaboration with other groups are often mentioned systemic problems. The dynamics of interpersonal connections emerged as a recurring major concern. Volunteers reported strained relationships that reduced team cohesion, uncertainty over responsibilities, and challenges connecting with new team members. Due to heavy workloads and a lack of staff, groups were already under a great deal of stress. After deployment, volunteers reported difficulties such an administrative backlog and a lack of cooperation from coworkers who weren't involved in the response. Lastly, issues inside and between organizations that are pertinent to information providers and decision-makers in disaster management were highlighted by [37] Team tension was much decreased by the open communication between all response components, including outside help. Although a more laid-back and fun approach helps to reduce stress and promote morale, an assertive and authoritative manner is necessary for managing the team; both changes in leadership style were deemed necessary and highly received.

Community Assistance:

According to [38]a number of studies show how social support helps disaster and crisis responders become more mentally resilient. According to interactions with family and the community are part of coping and resilience strategies. Law enforcement officers claim that the crisis has strengthened these partnerships. Additionally, showed how important it is to prevent emotional detachment and promote social and emotional involvement for first responders' mental health.

Numerous researches have shed light on various facets of social support. Well-being is greatly impacted by keeping up personal social ties and talking on the phone with family when deployed [10][30][18]. According to having helpful coworkers is crucial. Despite helpful coworkers and management during rehabilitation, [40] discovered that the ability to rely on loved ones had a substantial impact on psychological well-being. According to being cut off from close relationships increases the likelihood of mental health problems, although frequent family contact and participation in supportive group interactions reduce this risk. revealed that the conflict between work and family responsibilities significantly increases the risk of psychopathological problems, while discovered that community members' criticism increased psychological distress. found an unanticipated association between elevated feelings of social support and increased levels of PTSD, indicating the complexity of this issue. Resilience was a key factor in the unexpected link between social support and PTSD.

According to management has a protective impact, but societal rejection plays a major role in psychopathology. The belief that one has both internal and external resources (such as training, team support, and personal resilience) to overcome difficult situations is known as manageability. According to people who were less resilient had lower levels of social recognition and self-efficacy. Furthermore, how collective efficacy, which is defined by strong community ties and a willingness to work together for the common good, can lessen the personal burden of disaster relief efforts. According to the study's authors, disaster responders in cities with higher levels of collective efficacy had lower incidence of PTSD, both individually and collectively. The idea that resilient communities foster an environment of safety, hope, social support, and personal responsibility to support their residents after disasters is supported by such data.

[25] emphasize the value of social support and stress the significance of casual, peer-focused interactions among team members as a technique for resilience and self-care. Similarly, Walk-around monitoring, buddy care, emotional support, and peer debriefing are effective ways to help people recover from the stress of rescue operations. Employes who feel supported at work are more likely to be flexible, emotionally stable, and integrated into a cohesive team.

Discussion:

Numerous organizational and human characteristics were shown to have an impact on the resilience and general well-being of relief workers engaged in disaster response operations. The basis of this system is the empowerment of both people and groups. Regulations and procedures at the federal, state, and local levels must coincide in order to guaranty the safety of employes and volunteers helping during natural disasters. By improving and expanding the resources accessible to these individuals, this can be accomplished. The review's results, which were drawn from the specific research issues that guided this study, are explained in the following section. After natural catastrophes, a variety of personal issues impact the resilience and well-being of helpers.

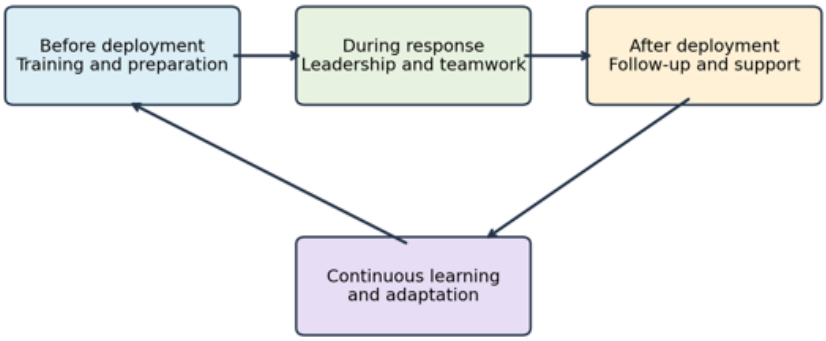


Figure 3. Proposed organizational support cycle across disaster-response phases.

When it comes to preventing mental illness, some character characteristics work better than others. Resilience is impacted by respondents' perceptions, personality traits, and coping mechanisms, which in turn affect how they handle crises [4]. Characteristics that promote optimism, hope, spirituality, and kindness are associated with reduced psychopathology and increased resilience [20]. Personal characteristics have a major impact on mental health following a disaster. PTSD has been linked to a number of personality traits, including a tendency toward neuroticism, anxiety, and self-reproach

Adaptive techniques are another important resilience mediator. In contrast to strategies like denial, venting, and self-blame, which are associated with more psychological pain, strategies like acceptance and planning are associated with resilience and reduced PTSD [38]. There are existential and sociological perspectives on coping. Job happiness, a greater appreciation for life, and the ability to draw strength from one's faith, family, friends, and coworkers were all reported by survey participants Helpers' proactive coping mechanisms and social skills were associated with resilience and post-traumatic growth [16]. Because of its strong correlation with personal traits, obtaining this type of evidence is very helpful when recruiting volunteers and employes for emergency positions. Additionally, this data provides leaders and organizations with critical information that enhances their capacity to manage employes and provide better support during and after crises, especially for individuals with elevated risk profiles. It is essential to record this information in order to develop customized training and educational materials for employes working in these delicate situations. This data can be used by organizations and collectives to create workforce-specific health and wellness initiatives.

First responders' psychological health is negatively impacted by extended exposure to disaster sites. Restricting exposure is often recommended for mental rehabilitation. Conflicting findings have been discovered by investigators. did not find any positive psychological effects linked to higher trauma exposure. However, survivors may become more vulnerable when volunteers or professionals share their emotional experiences with them, which may promote resilience and post-traumatic development.

By incorporating this study into organizational policy, individuals' unique needs can be met while encouraging self-care and useful coping and adaptation strategies. Redistributing tasks that expose employes to more trauma and grief may be crucial to improving their mental health and the results of alleviation efforts.

How could organizational and social elements improve people's resilience and coping strategies during natural disasters?

This study demonstrated that in order to empower and support assistants, inter-institutional cooperation, organizational and social support, teamwork, and training are more important than one-on-one help. The analysis of the studies in this paper shows that preparation and training are crucial resources for assistance with this problem. Most studies examining how training affects the resilience and well-being of relief workers have found that it protects them and improves the effectiveness of relief activities. In light of this outcome, legislators should carefully evaluate the effectiveness, relevance, and adequacy of rescue training programs offered to support personnel. Rescuers need to be skilled in the emotional, psychological, and contextual aspects of disaster response in addition to the technical ones. In addition to being culturally aware and sensitive to real-world problems, other goals include fostering individual resilience, professional competence, and team cohesion. Training programs should focus on developing relief workers as a cohesive team rather than just as individuals capable of helping impacted communities. They may create an identity based on common goals and values that can only be attained via cooperative harmony. This is crucial in light of the numerous organizational problems that research participants brought to light. This idea, which includes social support, motivation, strong team dynamics, role recognition, and organized yet flexible leadership and coordination, improves responders' ability to withstand crises. Collectively empowered teams are better at handling emotional challenges and achieving better results when institutional support mechanisms fail.

Conclusion:

Thru instances and analyzes of these traits, this study aims to shed light on the qualities that improve first responders' wellbeing and resilience in the face of natural disasters. Improving resilience requires a focus on organizational-social and psychological factors. While developing self-care routines and adaptive coping mechanisms is essential for individual empowerment, building social ties and team cohesion both inside and outside of organizations is essential for collective empowerment. These tools are crucial for maintaining wellbeing and resilience in stressful situations like emergencies. There are two main reasons why gathering this data is essential. First of all, it regulates how groups and organizations can find, hire, and guaranty the security of experts and volunteers. A combination of institutional and human elements boost supporters' resilience; future research on this topic should focus on clarifying this mechanism. By combining organizational and human elements, future study may try to incorporate aspects of employe resilience and well-being. Since they are made up of people with similar experiences and interests, it is possible to examine the same traits at both the entity and group tiers. These components need more research.

Numerous methodological limitations must be taken into account in this analysis. This is the first time that the review has incorporated gray literature. Publications may nevertheless leave out important information, ideas, and conclusions that are irrelevant to the particular context even after going thru a thorough peer review procedure. Gray literature is important today. Research that shows null, mixed, or context-dependent outcomes is less likely to be featured in scholarly journals, so leaving out these sources increases the risk of publishing bias. Consequently, not all relevant topics may be covered by the evidence basis of this assessment. The only way to gain a deeper understanding of the subject is to use gray literature in subsequent evaluations. The research was chosen by a single reviewer, and when questions arose, the second author offered retrospective validation. Although there is a chance of

selection bias, this method complies with the practical constraints of accelerated systematic reviews. Relying on a single reviewer for the first screening may lead to inadequate coverage and inconsistent implementation of inclusion/exclusion criteria. Incorporating several independent evaluators at each step of the study selection process could enhance dependability and lessen bias in future studies. Gender, age, ethnicity, and cultural background were among the demographic characteristics that were not included in the study. This choice was in line with the study's goals, which were to determine the factors influencing helpers' resilience and to develop conclusions that would support organizational actions intended to enhance helpers' happiness and well-being. The lack of demographic data makes it difficult to evaluate equity-related elements, contextualize results, and provide insights into possible differing effects among subgroups. Future research must incorporate demographic data in order to improve comprehension of the results and offer customized, organization-specific recommendations. We conclude that there are two main ways in which these findings can guide future efforts. First, a more thorough, multifaceted analysis of resilience is needed, including methods for empowering society and individuals as well as assessments of the interplay between organizational and human elements and their long-term impacts. They also establish a foundation for improved communication and cooperation both inside and between organizations, enabling individuals and groups to carry out targeted, data-driven activities.

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