Insights from the Frontliners: Understanding the Experiences of LDRRMO Rescuers in Disaster and Emergency Operations

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ABSTRACT

Disasters and emergencies are unpredictable events with the potential of causing property damage and loss of life. Rescuers, as the first responders, play a vital role in mitigating the effects and impacts of such crises. This qualitative descriptive study aims to investigate the psychological experiences of Local Disaster Risk Reduction Management Office (LDRRMO) rescuers during disaster and emergency operations. Additionally, it explores the coping mechanisms used by these rescuers to manage their mental well-being. This study employed a qualitative descriptive design to gain in-depth understanding of the specific situations and events encountered by rescuers during their deployments. Five LDRRMO rescuers with a minimum of ten years of experience, purposefully selected from municipalities in Luzon (Ilocos Sur, Santiago City, and Echague, Isabela), participated in the study. Their extensive experience ensured they were experts in the field. Unstructured interview guides were used to gather detailed information about their experiences and coping mechanisms. The study revealed that the psychological experiences of LDRRMO rescuers involved in disaster and emergency operations encompass a range of emotions. These include emotional distress and empathy arising from witnessing injuries and loss of life among victims. Interestingly, the findings also highlight the role of preparedness training in empowering rescuers to manage these challenging situations. Additionally, the study identified seeking support from friends and loved ones as a key coping mechanism employed by the participants. These findings emphasize the importance of mental health support for LDRRMO rescuers. It ensures they are well-equipped to handle the psychological demands of their profession while maintaining their well-being.

Keywords: LDRRMO rescuers, Psychological Experiences, Disaster and Emergency Operations, Coping Mechanisms, Preparedness Training

INTRODUCTION

The occurrence of disasters is growing globally. Disasters are unforeseeable, abrupt, extensive, and catastrophic events that result in a significant number of injuries or fatalities (Mao et al., 2019). When a disaster happens, rescue workers who respond are exposed to high stress levels, which may have a negative impact on their post-disaster adjustment.

Disasters are a kind of crisis event that causes societal disturbance, disorganization, and displacement, resulting in trauma, fear, stress, and shock (Stoltman et al., 2007). Another approach to view a catastrophe, from a psychological standpoint, is as a catastrophic and stressful event in which the stressors are characterized by enormous force, quick onset, excessive demands on individual and community coping resources, and broad effect. Furthermore, such catastrophes are often beyond the sphere of regular daily experience, beyond the victims' immediate control, and as near to universally distressing as events can get (Stoltman et al., 2007).

According to Yasien et al. (2016), rescuers who work to help people often experience and witness human suffering (death and injuries), natural disasters (earthquakes, floods, and storms), and acts of terrorism or violence (bomb blasts and gun violence). These experiences can make them more susceptible to developing

psychological symptoms and distress.

Additionally, experienced rescue workers have a main responsibility to respond in life-threatening emergencies, such as situations where someone is at risk of drowning. Engaging in the task of saving individuals from drowning can be highly fulfilling. It has the potential to increase job happiness, promote team functioning, and provide a good sense of purpose to work and life. Conversely, these processes can also generate stress. These factors, such as time pressure, communication issues, personal risk, and encounters with death or badly damaged children, might contribute to this situation (Van Der Velden & Van Loon, 2014). The frequency of both positive and bad encounters may differ throughout situations and among individual rescue workers. Van Der Velden and Van Loon (2014) additionally stated that the outcome will be contingent upon the particular conditions of the event, as well as other factors such as prior experiences and functioning prior to the incident. When unpleasant event-related experiences are prevalent, it is likely that workers will face stress reactions or health problems in the short or long term.

In response to these challenges, Republic Act 10121, signed into law in 2010, established the National Disaster Risk Reduction and Management Plan. This legislation established a network of trained responders operating under local government units and provincial government units. These individuals play an important role in disaster and emergency operations, highlighting the need to understand their experiences, challenges, and the overall impact of their work in the field. By conducting research on the experiences of LDRRMO rescuers, this study aims to provide valuable insights into their invaluable contributions. Consequently, it aims to enhance disaster response and management strategies, ensuring more effective and efficient outcomes in the face of future disasters and emergencies.

LITERATURE REVIEW

This section presents the related literature which were reviewed by the researchers to gain insight into the conduct of the study.

While the psychological impacts of disasters on survivors have been extensively recorded, the immediate and enduring psychological challenges encountered by emergency rescue workers in these cases are sometimes overlooked.

Rescue workers are often seen as personnel who are involved in rescuing others and leading the masses to engage in self-help and mutual assistance actions to minimize casualties of both life and property in the event of an environmental pollution disaster or when the survival of the environment is compromised (Lu et al., 2014). They are the unseen victims of tragic incidents (Dyregrov et al., 1996). While serving humanity, they were exposed to and witnessed human suffering (death, injuries, and so on), natural disasters (earthquakes, floods, storms, and so on), and terrorism or violence (bomb blasts, gun violence, and so on), all of which may increase the risk of developing psychological symptoms and distress. According to Ahmad et al. (2015), 32.6% and 45.7% of 1122 rescue personnel suffer from severe to extremely severe depression and anxiety symptoms.

Additionally, rescuers sent to disaster areas are sometimes said to have had inadequate training for rescue operations and to have faced weak collaboration among team members, resulting in unpleasant experiences after their deployment (Mao et al., 2018). Due to the nature of disaster work, rescuers, particularly healthcare workers, are at a high risk of suffering from psychological problems, including acute stress disorder (ASD), anxiety and depression, post-traumatic stress disorder (PTSD), and other psychological disorders hence, the negative impact on rescue workers can be long-lasting (Mao et al., 2018). A study of Neria et al. (2011) stated that disaster responders to the World Trade Center (WTC) 9/11 attack indicated that 9.7% and 7.9% of the rescuers experience current and remittent PTSD respectively even though 11–13 years had passed since performing the rescue work.

Moreover, Patwary et al. (2023) states that experiencing directly the loss of life caused by catastrophic events is frequently psychologically distressing. They additionally emphasized that physical demands of rescue workers, such as extended periods of time and the carrying of heavy objects, can heighten the likelihood of accidents and injuries, as well as have adverse effects on mental well-being, such as tiredness, fatigue, heightened stress levels, and reduced resilience.

Theoretical/Conceptual Framework

The study on the psychological experiences of LDRRMO rescuers in disaster and emergency operations can be anchored in several relevant theories and concepts.

Social Cognitive Theory (Bandura, 1986). This theory suggests that learning happens in a social setting where people, their surroundings, and their behavior interact in a dynamic and reciprocal way. It considers the distinctive way in which individuals learn and keep up the behavior, while also considering the social environment in which individuals perform the behavior (LaMorte, 2022). The study can grasp how the experiences, convictions, and viewpoints of LDRRMO rescuers influence their decisions and actions during emergency and disaster operations. This can lead to a higher efficiency at work by providing improved support for the well-being of the rescuers.

In the course of their duties, rescuers often deal with massively difficult situations which somewhat affect their overall wellbeing. The level of its impact sometimes varies depending on how individuals perceive their capacity to handle tough circumstances which influence their reactions to stress and in turn, their well-being (May-Varas, Margolis, & Mead, 2023). The study can explore how rescuers can confront situations of high stress and what can help them to mitigate its negative effects.

Conservation of Resources (COR) Theory (Hobfoll, 1989). This theory describes how people strive to safeguard and improve their resources in order to reduce stress, handle hardship, and enhance wellbeing (Hobfoll, 1991 & Hobfoll, et.al. 1995). This concept is particularly relevant when understanding the experiences of rescuers in disaster and emergency operations, which highlights their decision-making, problem-solving, and overall performance during emergency operations.

Resilience Theory (Rutter, 2006). This theory defines an interactive concept that is concerned with the combination of serious risk experiences and a relatively positive psychological outcome despite those experiences (VicHealth, 2015). LDRRMO rescuers might suffer negative psychological and or emotional consequences during disaster rescue operations. The study can explore how rescuers adapt and recover from these trauma and challenges.

To gain a better understanding of the study, Input-Process-Outputs were utilized. The input loads the psychological experiences of LDRRMO rescuers involved in disaster and emergency operations, the coping mechanisms, and resilience factors utilized by LDRRMO rescuers to manage their psychological experiences during disaster and emergency operations. The process loads the qualitative descriptive research design, the unstructured interview guide, and the thematic analysis to analyze the data. The output loads the results of the psychological experiences, the coping mechanisms utilized by LDRRMO rescuers to manage their psychological experiences during disaster and emergency operations.

Figure 1. Concept Map
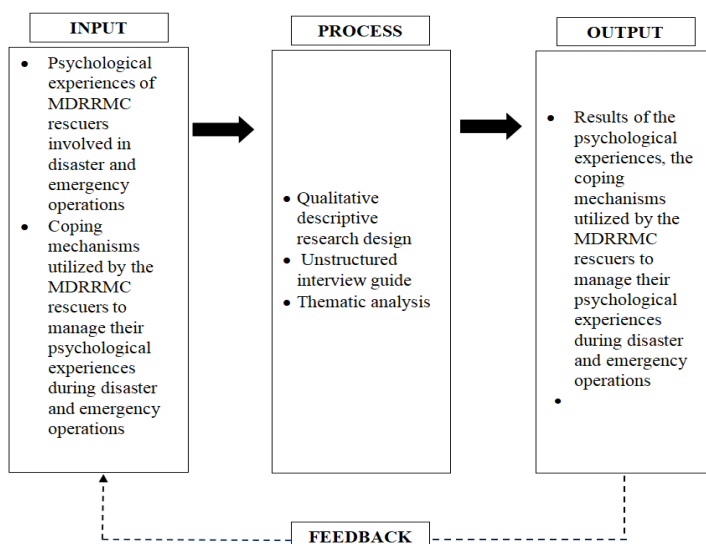
Significance of the Study

This study addresses the need to understand the experiences of LDRRMO rescuers in disaster and emergency operations focusing on psychological experiences and their coping mechanisms. Gaining a deeper understanding on these aspects can provide valuable insights which can identify areas that need development and improvement to enhance the overall well-being of rescuers. By shedding light on the psychological impacts of their role, it can increase awareness and attention to the need for a support system that can holistically cater their wellbeing.

The physical and well-being of rescuers directly influence their performance on their role. Through recognizing the issues being encountered by rescuers, this study intends to raise consciousness to the need for mental health support for LDRRMO rescuers. More resilient rescuers are better equipped to handle the demands of their role, leading to more improved disaster response strategies, better service and a safer community. By prioritizing the well-being of disaster and emergency rescuers, this study contributes to the overall effectiveness and efficiency of disaster and emergency operations.

Objectives of the Study

The main objective of this study is to explore the psychological experiences and coping mechanisms utilized by the LDRRMO rescuers in disaster and emergency operations. Specifically, it aims to:

1. To investigate the psychological experiences of LDRRMO rescuers involved in disaster and emergency operations; and

2. To explore the coping mechanisms utilized by LDRRMO rescuers to manage their psychological experiences during disaster and emergency operations.

METHODOLOGY

Research Design

The study used qualitative descriptive research design because this research method provides information about human issues that are inconsistent with their belief, behavior, opinions and relationship with another human. Qualitative descriptive research design was used to describe the specific events and situations that rescuers encountered during disaster and emergency operations.

Participants and Locale of the Study

To gain in-depth insights from experienced responders, the researchers employed purposive sampling. Five LDRRMO rescuers were selected from Luzon, specifically from the municipalities of Ilocos Sur, Santiago City, and Echague, Isabela. These participants all possessed a minimum of ten years of experience in emergency and disaster response, ensuring their expertise in the field of study. Those who did not meet this experience criterion were excluded.

Data Gathering tools

The researchers opted for an unstructured interview guide to gather rich, qualitative data from the rescuers as participants of this study. Unlike structured interviews with pre-determined questions, unstructured interviews allow for a more natural, conversational flow. The interviewer utilizes open-ended questions and adapts follow-up inquiries based on the participants' responses. This flexibility allows for in-depth exploration of the research topic and the emergence of unexpected insights. While there's no rigid script, the interviewer maintains control, ensuring the conversation stays relevant and focuses on the participants' experiences.

Data Gathering Procedures

For proper guidance and procedures, the researchers from the different provinces within Luzon communicate with their respective local government units, particularly the local disaster risk reduction management, to ask

permission to collect information about the past emergencies and disasters encountered by their respective locality, and to allow the researchers to identify and interview possible participants that suit the aforementioned criteria. Rest assured that participants will not be obliged to participate in the said study.

Analysis of Data

Thematic analysis was used to analyze the data following the six-phase guide by Braun and Clarke (2006). The researchers began by familiarizing themselves with the data by reading and re-reading transcripts. Followed by generating initial codes, organizing each data segment into meaningful chunks for the creation of themes. After which, researchers reviewed and modified preliminary themes, analyzed the data associated with each theme, and determined their relevance to the entire data set. Finally, the researchers named and defined themes aligned to the set of data extracted. The researchers then wrote their thematic analysis report, establishing the research question, aims, and approach.

Ethical Consideration

Researchers assigned proxy names such as key informant 1 to 5 to protect the identity of the participants and provided them the right to refuse in responding to some questions, if they wished. In this way, confidentiality of the information was guaranteed through the execution of a Non-Disclosure Agreement by the researchers, stating that the participants' data would not be used freely without permission. Importantly, there would be no audio-recorded interview unless the participant consented. Subsequently, these recordings were coded and transcribed for analysis. To ensure that the results are correct, the researchers sent it back to the participants to validate weather the results are in accordance with their psychological experiences and coping mechanisms.

RESULTS AND DISCUSSION

This section takes into the results of the interview of the ten LDRRMO rescuers gaining their insights as the front-liners in disaster and emergency operations in selected municipalities of Luzon.

Psychological Experiences of LDRRMO Rescuers Involved in Disaster and Emergency Operations

Rescuers are highly trained in their functions and responsibilities in disaster and emergency response. Their priority goal is to save other people's lives during these events, however their role as rescuers goes through a series of situations wherein, they are filled with high levels of stress and pressure. Understanding their psychological experiences gained through time highlights the complex professional environment they operate in. As a result, there were two identified key themes for their psychological experience: emotional distress and empathy due to exposure to injury and loss of life.

Emotional Distress

This theme explores the complex emotions, stressors and challenges faced by the rescuers in responding to emergencies and disasters. It illuminates the emotional challenges that emanate from their exposure to the victims' suffering.

As shared by *Key Informant 1:*

"naiistress sa dami nang naaksidente, syempre andyan yung pagod ka dahil maya't maya may responde." (Getting stressed because of the high number of accidents, of course, there's fatigue from responding frequently).

Rescuers often experienced emotional distress due to the number of operations they responded to during their duty.

Similarly, in the statement of Key Informant 5:

"Nagiging emotional dahil naawa sa mga biktima…" (Becoming emotional because of feeling compassion for the victims).

Rescuers who responded to the emergency and disaster felt emotional which contributed to their distress as they repeatedly witnessed the severe effect of events on victims. This emotional distress may result from a particular circumstance like difficulties in rescue operations (Medical News Today, 2022). Rescuers often experienced emotional distress due to the diverse situations and operations they faced especially in times of emergency and disaster and with the recurring exposure to highly stressful events, this lumping of emotions needs to be addressed in order for the rescuers to fully embrace their functions and responsibilities.

The results highlight the emotional obstacles that rescuers faced in situations of high stress. Recognizing and attending to the psychological impact of rescue operations is essential in providing improved support for the well-being and effectiveness of rescuers in their selfless endeavors to assist others. Brooks et al. (2016) emphasize the need for preparedness measures and suitability assessments for new staff in responder roles to ensure their personality and mental health are suitable for handling job-related stress and to be prepared for the potential psychological impact of the job. This indicates that it will mitigate the negative impact of psychological aspects on the life and experiences of the rescuers during the rescue operation.

Moreover, this result was also supported by the study of Patwary et al. (2023) articulating those physical demands of rescue workers, such as extended periods of time and the carrying of heavy objects, can heighten the likelihood of accidents and injuries, as well as have adverse effects on mental well-being, such as tiredness, fatigue, heightened stress levels, and reduced resilience. Nishi et al. (2012) stated that emergency responders face the challenge of making tough decisions about rescuing lives, which can lead to feelings of remorse or inadequacy. She additionally stated that the emotional strain of this work can result in feelings of grief, remorse, helplessness, and the development of peritraumatic stress disorder or acute stress disorder (Nishi et al., 2012).

Empathy Due to Injury and Loss of Life

The sorrowful experiences of witnessing traumatic incidents of loss of life or severe injuries are haunting each rescuer. The feeling of compassion and/or empathy towards the victims is echoing in their minds, but they can do nothing, but to be helpless and in pain as experienced by Key Informant 2 said:

"naawa sa mga nainvolved sa aksidente, kasi may mga time na makita mo talaga na wala ng pag asang mabuhay or sometimes dead on arrival. may mga time din na na fifirst aid pa pero ma feel mo yung sakit dahil sa dami ng injury nila" (Feeling of compassion for those involved in accidents, because there are times when you really see that there's no hope of survival or sometimes, they're dead-on arrival. There are also times when you're administering first aid but you feel the pain because of the extent of their injuries).

As a consequence of their professional mission, rescuers are undoubtedly exposed to heartbreaking experiences that could result in disheartening compassion. This implies that they tend to be emotionally attached, which causes an effect on their wellbeing.

Similarly Key Informant 4 stated that:

"ang common na challenges na naranasan ko in responding to vehicular accident is yung panghihinayang lalo na sa mga dead on the spot." (A common challenge I've experienced in responding to vehicular accidents is feeling regret, especially for those   who are dead on the spot).

This statement is supported by the study of Nishi et al. (2012) stating that the responders may have feelings of remorse or inadequacy if they are unable to rescue as many lives as they would want. Nishi et al. (2012) additionally stated that the emotional strain of this work could lead to feelings of grief, remorse, and helplessness, as well as the development of peritraumatic stress disorder or acute stress disorder.

Likewise, Key informant 5 shared that:

"Minsan parang nararamdaman mo din yung sakit dahil sa mga nasustain nila na injury" (Sometimes, it's like you can also feel the pain because of the injuries they sustained).

The statements from the key informants highlight the challenges they experienced during the emergency and

disaster operations. As mentioned by the participants, rescuers not only witness the incidents but also internalize the pain and suffering of the victims. That is why counseling, team building, and other support from agencies are necessary to alleviate the emotional suffering experienced by rescuers (PsychCentral, n.d.). In addition, as cited by Peter (2005), a worker's emotional state is determined by his or her subjective perception and experience with stimuli from the environment. Furthermore, rescuers may experience emotional reactions to the people they save, such as empathy, sympathy, and compassion. These feelings can be motivating, but they can also be draining as responders become emotionally engaged in the result and well-being of individuals they help (Psychvarsity, 2023).

Moreover, Shalev et al. (2008) stated that rescuers frequently witness scenes of devastation, death, and human suffering. This constant exposure to traumatic events can lead to symptoms of post-traumatic stress disorder (PTSD), including nightmares, flashbacks, and hypervigilance.

The Coping Mechanisms Utilized by LDRRMO Rescuers to Manage their Psychological Experiences during Disaster and Emergency Operations

Calmness

This theme explains how rescuers cope with the different challenges they experienced in responding to the different emergency and disaster situations. Calmness helps the rescuers to think clearly and make effective decisions during their response operations, it also allows them to focus on what needs to be accomplished without being overwhelmed by their emotions.

Key Informant 1 shared, "take a break, be calm always, because it is a part of your duty." Controlling rescuers emotions through pauses and relaxation creates positive thinking and effective decisions. In addition, according to Key Informant 2, "Keeping calm in every action makes it easier to respond and perform duties when your mind is clear."

Calmness serves as a coping mechanism for rescuers in times of emergency and disaster as it helps them to think clearly, communicate effectively and make effective decisions. By maintaining a sense of calm amidst difficulties, rescuers can overcome challenges and difficulties. It is also characterized by a good orientation that denotes a release of temporal and imperative pressures to perform, and it can suggest a sovereign direction (Orientation Philosophy, n.d.).

Calmness in emergency and disaster response represents a profound psychological state that liberates rescuers from the burdens of time pressure and unrealistic expectations. It empowers them to navigate challenges with clarity, resilience, and a sense of purpose. The result shows coping mechanisms used by the rescuer during the rescue mission is to always be calm especially when there is an unexpected situation, they need to calm in order for them to do their duty effectively. It is their way as well to control and conquer the negative impact that they experience every time they do a rescue operation. As cited by the various researchers, staying calm allows you to think logically and make decisions accordingly. Clarity of mind is extremely important when you are dealing with problems. If your mind is free and relaxed, your clarity will help you work through solutions much easier and logically (Santos, 2021).

Seeking Support from Friends and Loved Ones

Friends and family can be a wonderful source of social interaction, practical help, and emotional support. Peers are more often present in a person's life and are able to listen, offer support, and assist in maintaining healthy routines (Learn to Live, 2024). Rescuers often feel more resilient when they receive assistance, empathy, and understanding from their family members, friends, and loved ones before, during, and after their operations.

Key Informant 3 shared that: With the support I received from my family and amidst the urgent need to assist many people, it's fulfilling to lend a hand. Receiving support from friends and loved ones not only boosts the morale of rescuers but also enhances their resilience in fulfilling their duties and responsibilities.

It is also supported by the statement of Key Informant 4, *"Hangout with co-officemate para mas gumaan ang*

pakiramdam and sometimes you can share your experience to them during the operation" (Hanging out with my co-office mates lightens the mood, and   sometimes, I can share my experiences with them during our operations).

Sharing experiences and stories after the emergency and disaster operations helps rescuers to release the burden of intense situations.

Similarly, Key Informant 5 shared that *"Seek support and advice from my office mates   helps   me   be   more confident."*

Rescuers work effectively when they receive support from their families and friends, the support of their families and friends motivates them to perform well and help them to think and create strategies effectively. In addition, it also helps them cope with the stress and anxiety they feel during the emergency and disaster operations.

Decision-making plays a critical role in managing rescue situations and can be influenced by various factors. Smith et al. (2018) found that perceived risk, available resources, and time constraints significantly impact the decisions made by emergency responders during rescue operations. These factors can affect the rescuer's ability to make quick and effective decisions, ultimately influencing the success of the rescue mission. Understanding the impact of these factors on decision-making helps rescuers prepare for and manage rescue situations more effectively, improving outcomes for those in need of assistance.

Empowering Rescuers through Preparedness Training

This theme explains the importance of empowering rescuers through preparedness training to immediately adapt to changing situations, experiences, and adjust their strategies and tactics in responding to future emergencies and disasters.

This is supported by the responses of Key Informant 1, *"We conduct briefings and debriefings as a team to ensure everyone is knowledgeable and prepared for our duty and response operations."*

Similarly Key Informant 3 shared, *"our office has conducted many training in different rescue operations, and before we engage in emergency response, we have to be trained and ready for whatever we face in our responding cases."*

Likewise, Key Informant 4: *"It helps me to gain experience and it sharpens my skills like if there is an emergency situation and I know what I will do during disasters."*

First responders are the front line of defense during disasters, and their preparedness can make the crucial difference between life and death. Effective disaster response demands a high level of training and skill development to navigate complex and often hazardous situations. Kings (2023). Stated that the importance of comprehensive training programs for first responders and highlights the key components of skill development that enable them to tackle the challenges of disaster rescue with confidence. In addition, Brett (2020). training helps individuals and organizations to identify areas of improvement, implement solutions, and continuously monitor progress to solve problems.

To put in a nutshell, rescuers of LDRRMO endure heavy and stressful jobs that are emotionally draining. The research shows that they suffer stress from exposure to all sorts of calamitous events, accidents leading to injuries and deaths. Seeing other people suffer leads to feelings of compassion and hopelessness, so rescuers use mechanisms to alleviate the trauma and despair.

Some of the coping strategies they employ is to keep relaxed, sharing emotions support from loved ones, and attending the preparedness efforts. The research also indicates the demand for additional support measures. Mental help interventions are vital to combat potential PTSD. So, the creation of a help system should be done through team building, particular meetings, and qualification programs that make rescuers' help efficient and make them highly qualified to continue offering emergencies to a society.

CONCLUSION

From the results and findings of the study, the researchers conclude that the psychological experiences of the LDRRMO rescuers during disaster and emergency operations include emotional distress and empathy brought about by the exposure to injury and loss of life, as a result, they suffered psychological experiences and stress from traumatic events and high-risk situations they encounter. On the other hand, calmness, seeking support networks of friends and loved ones, and empowerment through preparedness training were the coping mechanisms among the participants to address their psychological experiences that made them more resilient in the performance of their duties and responsibilities during disaster and emergency operations.

RECOMMENDATIONS

The analysis of rescue workers' psychological experiences would appear to report that their jobs are very taxing and place a tremendous burden on their emotional well-being. To protect the well-being of these rescuers and allow them to continue their crucial work, the following recommendations can be made:

1. The LDRRMO may increase the number of trained responders in their Area of Responsibilities (AOR) to address the emotional distress of rescuers with the increasing number of disasters and emergencies.

2. As the exposure to highly stressful events is inevitable in the work environment of a responder, the continuous monitoring of their mental and emotional health may be included as a priority of the administration to ensure that the rescuers can be in their best status during the response situation.

3. Work schemes or scheduling schemes can also be done so rescuers can have a breather from the continuous duty they have. Adopting a schedule that has regular breaks after routinary schedule can actually enhance the concentration of rescuers in their duty.

4. Each LDRRMO may have their own in-house counseling officer that can address or aid in processing the traumatic events experienced by the rescuers. This officer can also be utilized during intense emotionally inclined operations and help the rescuers in overcoming a traumatically formed disorder just like PTSD.

5. Efficiency of the coping mechanisms developed by rescuers may be enhanced with training and development of calmness practices of the rescuers. Also, family members of rescuers must be included in training in particular on making them understand their critical role as an emotional support mechanism of the rescuers.

6. The unit may require standardized debriefings at the end of every deployment. Such sessions that will allow rescuers to share their experiences and specifically outline which needs to be addressed.

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