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EXPLORING DIVERSE DISASTER EXPERIENCES OF SRI LANKA AIR FORCE PERSONNEL UNDERGOING TRAINING IN DISASTER MANAGEMENT

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ABSTRACT

This study explores the diverse disaster experiences of Sri Lanka Air Force (SLAF) personnel undergoing disaster management training. Using a qualitative exploratory design, semi-structured interviews were conducted with 20 trainees aged 18–45 years, representing both officers and other ranks with service periods ranging from 1 to 16+ years. Participants reported exposure to both natural disasters (64%), including floods, droughts, lightning, and fires, and human-influenced crises (36%) such as the Easter Sunday attacks, political unrest, and the COVID-19 pandemic. Floods were the most frequently experienced disaster (70%). Nationally significant events such as the Easter Sunday attacks and the Aragalaya protests reflected the multifaceted nature of disaster exposure. Findings revealed the dual role of SLAF personnel as both responders and victims, intensifying psychosocial strain. Results highlight the importance of embedding psychosocial resilience, stress management, and mental health awareness within SLAF training curricula. In line with international disaster definitions (IASC, 2007), this study categorizes COVID-19 as a human-influenced crisis due to its extensive social, economic, and psychological consequences that were shaped by human systems and responses. These insights can guide policy reforms and training curricula that prioritize responder mental health.

***Keywords*:** Disaster Management Training, First Responders, Human-Influenced Crises, Natural Disasters, Psychosocial Impacts

Introduction

Sri Lanka is a nation prone to a wide range of natural and human-influenced disasters, including floods, droughts, landslides, political unrest, and pandemics (Jayasinghe & Pathirage, 2019). Military personnel, particularly those in the Sri Lanka Air Force (SLAF), occupy a unique position as they often serve as both victims and first responders in disaster situations. This dual role exposes them to distinctive psychological and operational challenges that require systematic study (McFarlane & Williams, 2012).

Globally, researchers have found that repeated exposure to disasters increases the risk of cumulative trauma, post-traumatic stress disorder (PTSD), depression, and burnout among first responders (Norris, Friedman, & Watson, 2002). Conversely, structured disaster management training programs that include psychosocial support and resilience-building components enhance coping, adaptation, and long-term mental health (Cox, Danford, & Hill, 2020).

In the Sri Lankan context, major events such as the Easter Sunday attacks and the COVID-19 pandemic have highlighted the dual burden borne by SLAF personnel as protectors of the public and as individuals directly affected by crises within their own communities. Despite their significant involvement in disaster response operations, research on the lived experiences of SLAF personnel undergoing disaster management training remains scarce.

The current study addresses this research gap by exploring the diverse disaster experiences of SLAF trainees at the Disaster Management Training School, Digana. The focus is on identifying the types of disasters encountered, their levels of impact, and the psychosocial consequences arising from repeated exposure.

Research Questions

1. What types of disasters have SLAF personnel experienced?
2. At what levels (individual, community, or national) have these disasters impacted them?
3. How have these experiences affected their psychosocial well-being and coping strategies?

Literature Review

Defining Disasters and Context

A disaster is defined as a serious disruption of the functioning of a community or society that causes human, material, economic, or environmental losses exceeding the community's ability to cope using its own resources (Inter-Agency Standing Committee [IASC], 2007). Disasters can be categorized into natural hazards such as floods, droughts, and earthquakes, and human-influenced crises, including terrorism, political unrest, and

pandemics. Each type produces significant physical, social, and psychological consequences (Norris, Friedman, & Watson, 2002).

Sri Lanka's geographic and socio-political context makes it particularly vulnerable to multiple hazards. Annual monsoons and droughts cause recurring floods and crop failures, while man-made crises such as the civil conflict, the 2019 Easter Sunday terrorist attacks, and the COVID-19 pandemic have further intensified national instability (Jayasinghe & Pathirage, 2019).

Military Personnel and Disaster Response

Globally, military forces are recognized as essential contributors to disaster response because of their organizational discipline, logistics capability, and capacity for rapid mobilization (Cox, Danford, & Hill, 2020). However, this dual role, being both responders and victims, creates unique psychosocial and ethical challenges. During major crises such as terrorist attacks or pandemics, service members often experience personal loss while simultaneously performing life-saving operations (McFarlane & Williams, 2012).

In Sri Lanka, the military, and particularly the Sri Lanka Air Force (SLAF), has played a pivotal role in humanitarian operations. SLAF personnel frequently engage in evacuation, relief distribution, and reconstruction during floods, droughts, and other national emergencies (Guruge, Jayasuriya-Illesinghe, & Perera, 2020). This operational involvement exposes them to repeated traumatic experiences that may accumulate over time and lead to cumulative stress or post-traumatic growth, depending on available institutional and social support systems.

Psychosocial and Cultural Dimensions

Research demonstrates that disaster exposure affects not only physical safety but also emotional and social well-being. Survivors and responders often report elevated risks of post-traumatic stress disorder (PTSD), anxiety, depression, and burnout (Norris et al., 2002; McFarlane & Williams, 2012). Yet, coping and resilience are shaped by cultural and contextual factors. Hsu and Hwang (2016) emphasized the "healing power of cultural meaning," noting that indigenous belief systems, religious practices, and social networks can buffer against trauma.

In the Sri Lankan context, Buddhism and collective community support frequently serve as protective mechanisms in recovery from disaster-related distress (Equinet, 2017). However, Fernando, Miller, and Berger (2020) found that ongoing exposure to war and terrorism can result in long-term psychological distress that exceeds individual coping capacity, underscoring the need for culturally sensitive psychosocial interventions.

Research Gap

Although global literature extensively documents the psychological impact of disasters on first responders, empirical studies focusing on Sri Lankan military personnel remain limited. Previous research has largely addressed community-based interventions (Guruge et al., 2020) and disaster governance (Jayasinghe & Pathirage, 2019), with minimal exploration of the lived experiences of SLAF personnel. Understanding these experiences is crucial to inform the design of comprehensive disaster management training programs that integrate psychosocial preparedness alongside operational competence.

The reviewed literature highlights that disaster exposure among military personnel results in a complex interaction between operational duties, psychological strain, and cultural resilience. Despite the Sri Lanka Air Force's (SLAF) active role in national disaster response, little empirical evidence exists on how SLAF personnel personally experience and cope with these events during their training in disaster management.

Therefore, this study adopts a qualitative exploratory design to capture the depth and diversity of these experiences. The following section outlines the research methodology, including design, participants, data collection procedures, ethical considerations, and analytical framework.

Methodology

Research Design

1.1.3. A qualitative exploratory design was adopted to examine the disaster experiences of Sri Lanka Air Force (SLAF) personnel undergoing disaster-management training. This approach allowed for an in-depth understanding of participants' lived experiences and contextual meanings that cannot be captured through quantitative methods.

Study Setting

1.1.4. The study was conducted at the Disaster Management Training School, Digana, where SLAF personnel complete an 18-week program that equips them with both technical and psychosocial competencies for disaster response.

Participants and Sampling

1.1.5. Twenty SLAF trainees (commissioned and non-commissioned officers, aged 18–45 years) participated. Participants were temporarily attached from various SLAF stations across the country. Purposive sampling was used to ensure the inclusion of personnel with prior disaster-response experience. The final sample size was justified based on data saturation, achieved when no new themes emerged during the last interviews.

Data Collection

1.1.6. Data were collected through semi-structured interviews using an interview guide developed by the researcher. Questions explored:

- service history (rank, years of service, education);
- types of disasters encountered;
- perceived psychological, social, and operational effects; and
- coping strategies.

1.1.7. Each interview lasted 30–60 minutes and was conducted in Sinhala. Audio recordings (with consent) were transcribed and translated into English. Translation accuracy was confirmed through independent back-translation by a bilingual expert.

Ethical Considerations

1.1.8. Ethical approval was obtained from the Ethics Review Committee (ERC Approval No. 119). Participants were informed about the study aims, confidentiality, and voluntary participation, and all provided written consent. Pseudonyms (P1–P20) were assigned to protect identity.

Data Analysis

1.1.9. The data were analysed using thematic analysis following the six-step framework of Braun and Clarke (2006):

1. Familiarization with transcripts;
2. Generation of initial codes;
3. Identification of potential themes;
4. Review of themes;
5. Definition and naming of final themes; and
6. Production of the analytic narrative supported by verbatim quotations.

1.1.10. Basic descriptive statistics (frequencies and percentages) summarized the distribution of disaster types and levels of impact. All tables and figures follow APA 7th-edition formatting conventions.

Results

1.1.11. Participant Demographics

Twenty Sri Lanka Air Force (SLAF) personnel participated in the study, including both commissioned and non-commissioned officers currently enrolled in the Disaster Management Training School, Digana. Participants represented diverse age groups (18–45 years) and service periods ranging from 1–16+ years. Educational backgrounds varied from Ordinary Level to graduate qualifications, ensuring a broad representation of training and experience.

Table 1 Participant Demographics

Participant	Age Range	Service Period	Rank	Education Level	Events Participated
P1	26–35	1–5	Commissioned	A/L	Katunayake airport bomb attack
P2	36–45	16+	Non-commissioned	O/L	Road accidents, floods, lightning, fires
P3	36–45	16+	Non-commissioned	O/L	Flood, fire, village-level conflicts
P4	18–25	1–5	Commissioned	A/L	None
P5	36–45	16+	Non-commissioned	O/L	Fire, flood, drought, Easter attack, COVID-19
P6	36–45	16+	Non-commissioned	O/L	*Aragalaya*, Easter attack, COVID-19
P7	18–25	1–5	Commissioned	Graduate	COVID-19, flood
P8	26–35	11–15	Non-commissioned	O/L	None
P9	26–35	1–5	Non-commissioned	O/L	Flood

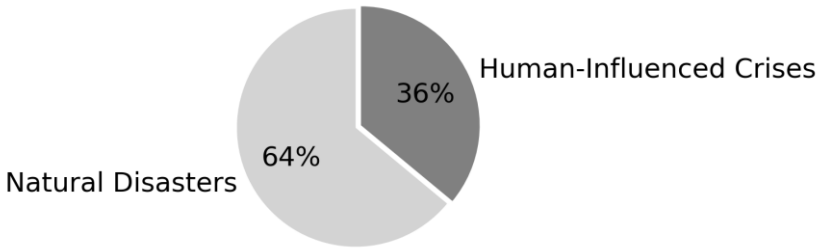
P10	36–45	16+	Non-comm.	O/L	Floods (Kalutara, CBO)
P11	36–45	16+	Non-commissioned	O/L	Meethotamulla garbage collapse
P12	36–45	16+	Non-commissioned	O/L	Floods, tree falls, and parapet wall collapse
P13	36–45	16+	Non-commissioned	O/L	Droughts, multiple floods
P14	36–45	16+	Non-commissioned	O/L	Floods (2 major events)
P15	36–45	16+	Non-commissioned	O/L	Floods (4 events)
P16	36–45	16+	Non-commissioned	O/L	Unlimited floods, house fires
P17	18–25	1–5	Commissioned	A/L	None
P18	36–45	16+	Non-commissioned	O/L	Floods, Easter attack
P19	36–45	16+	Non-commissioned	O/L	Easter attack, floods
P20	36–45	6–10	Non-commissioned	O/L	None

Note. **Data are based on semi-structured interviews with SLAF trainees at the Disaster Management Training School, Digana.**

Types of Disasters Experienced

Participants reported exposure to both natural and human-influenced disasters. Approximately 64% had encountered natural hazards such as floods, droughts, fires, and lightning, while 36% had experienced human-influenced crises such as the Easter Sunday attacks, the COVID-19 pandemic, and the Aragalaya protests.

Figure 1. Distribution of Natural vs. Man-made Disasters



1.1.12. Detailed Breakdown of Disaster Types

Floods were the most frequently experienced disaster (70%), followed by fires (25%), pandemics (20%), terrorist attacks (15%), droughts (10%), and accidents or structural failures (8%). These findings highlight the multi-hazard operational environment in which SLAF personnel function

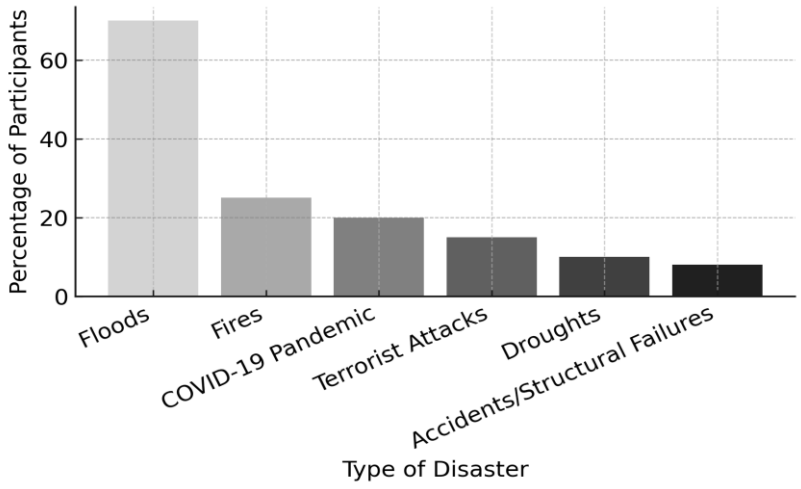
.

Illustrative participant accounts conveyed the emotional intensity of these experiences:
"During floods, we were rescuing civilians while our own families were stranded." (P8)

> "The Easter attacks reminded us that danger could strike anywhere—not just in combat." (P5)

"COVID-19 was different; it was silent, but the fear was constant." (P7)
These quotations reveal the emotional complexity of balancing professional duties with personal vulnerability during disaster operations.

Figure 2. Types of Disasters Experienced by SLAF Personnel

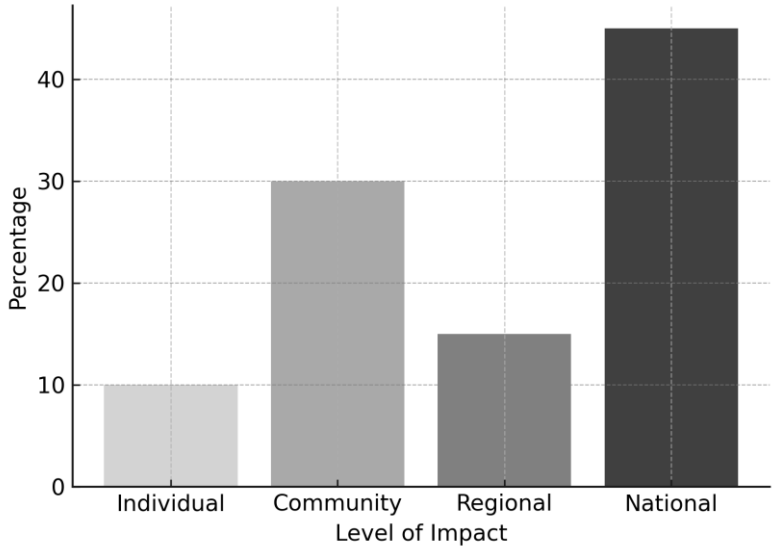


1.1.13. Levels of Disaster Impact

Participants identified varying degrees of disaster impact at the individual, community, regional, and national levels.

- Individual level (10%) – lightning strikes, road accidents.
- Community level (30%) – localized floods and small-scale fires.
- Regional level (15%) – droughts and floods across multiple districts.
- National level (45%) – COVID-19 pandemic, Easter Sunday attacks, and *Aragalaya* protests.

Figure 3. Levels of Disaster Impact



National-level crises were perceived as the most psychologically demanding because they simultaneously disrupted family life, duty expectations, and public morale. One participant reflected:

> "When the whole country is affected, you cannot separate your duty from your own fear. You feel responsible, but you are also scared." (P3)

1.1.14. Themes Identified Through Thematic Analysis

Theme 1: Dual Role as Responder and Victim

Participants frequently described the tension of performing their professional duties while personally affected by disasters.

> "We worked day and night, but my house was flooded too. I couldn't even check on my children." (P12)
>
> "We had to save others first. It's our duty. But in my heart, I was thinking of my family." (P14)

This dual role created emotional conflict, as the responsibility to serve often outweighed personal safety and well-being.

Theme 2: Psychosocial Strain and Burnout

Repeated exposure to disasters caused cumulative fatigue, emotional exhaustion, and moral distress among participants.

> "You don't forget what you see; it stays in your mind long after the mission ends." (P6)

Another participant added:

> "Sometimes you feel empty after everything is over. People think we are strong, but inside, it's different." (P2)

These narratives highlight the importance of ongoing psychosocial support and stress management in disaster-response training.

Theme 3: Coping and Resilience Mechanisms

Despite the challenges, participants demonstrated strong coping strategies rooted in teamwork, discipline, and spirituality.

> "Praying together after a disaster helps us start again." (P19)
>
> "We rely on discipline—it keeps our minds stable when everything else feels uncertain." (P10)

Cohesion, faith, and institutional structure appeared to strengthen resilience and adaptive functioning among trainees.

Discussion

This study explored how Sri Lanka Air Force (SLAF) personnel experience and cope with disaster situations in their operational duties. The findings revealed three main patterns: (a) a strong sense of teamwork and discipline that guided performance during crises, (b) emotional strain and exhaustion caused by continuous exposure to traumatic events, and (c) the use of both constructive and avoidant coping methods. Together, these patterns reflect the dynamic interaction between individual resilience and organizational

support systems. The discussion below interprets these findings through the lenses of Resilience Theory (Bonanno, 2004) and the Stress and Coping Model (Lazarus & Folkman, 1984).

Integration with Previous Research

The results align with earlier research emphasizing the vulnerability of first responders to cumulative psychological stress (Norris, Friedman, & Watson, 2002; McFarlane & Williams, 2012). Similar to global findings, SLAF participants described persistent anxiety, fatigue, and emotional numbness after repeated deployments. These experiences reflect the universal psychological cost of disaster response and the importance of structured mental-health interventions (Cox, Danford, & Hill, 2020). However, cultural and contextual elements unique to Sri Lanka, such as religious faith, collective prayer, and community cohesion, emerged as strong protective factors. This observation supports Hsu and Hwang's (2016) concept of the healing power of cultural meaning, which suggests that indigenous belief systems and collective rituals enhance coping during adversity.

1.1.15. Application of Resilience Theory

The experiences of SLAF personnel clearly show the main idea of Resilience Theory (Bonanno, 2004): people can recover and remain stable even after facing major stress. Although participants described fear, sadness, and fatigue, they also showed the ability to stay focused on their duties. Discipline, teamwork, and faith in their mission helped them to regain emotional balance.

Within the organization, the SLAF's close relationships, teamwork, and structured environment seemed to protect members and help them stay strong. However, some participants also spoke about tiredness and emotional numbness. This shows that resilience does not mean the total absence of stress, but the strength to continue functioning despite it. Therefore, regular psychological support and rest periods are important to maintain this resilience over time.

1.1.16. Interpretation Through the Stress and Coping Model

Lazarus and Folkman's (1984) Transactional Model of Stress and Coping provides a useful lens for understanding these findings. According to the model, psychological outcomes depend on how individuals appraise a stressor and the coping strategies they employ. SLAF participants demonstrated both problem-focused coping, such as logistical planning, teamwork, and discipline, and emotion-focused coping, including prayer, mindfulness, and mutual encouragement.

When participants perceived disasters as manageable through collective effort, they reported a stronger sense of control and purpose. Conversely, when events were overwhelming (e.g., national crises like the Easter attacks or COVID-19), they described feelings of helplessness, consistent with negative cognitive appraisals in the model. These findings suggest that enhancing positive reappraisal, emotional regulation, and peer support within training curricula could improve long-term psychological adaptation.

1.1.17. Cultural and Institutional Implications

The integration of spiritual coping practices within a military framework reflects the Sri Lankan cultural context, where religion and collective responsibility are intertwined. Incorporating culturally relevant resilience training, mindfulness exercises, and trauma-informed peer support may strengthen both individual and institutional well-being. Furthermore, providing confidential counseling and debriefing sessions after major operations would address burnout and normalize help-seeking behavior among service members.

1.1.18. Limitations

This study was conducted at the Disaster Management Training School, Digana, where participants were temporarily attached for training. However, the sample represented personnel from multiple Sri Lanka Air Force stations across the country. Although data collection occurred within one training context, the diversity of participants enhanced the transferability of findings. The relatively small sample size and qualitative design limit generalization, yet the study offers valuable insights into the lived experiences of SLAF personnel during disaster management operations. Future research could expand across additional training cohorts and integrate quantitative measures to strengthen generalizability.

In summary, SLAF personnel face complex and recurrent disaster situations that test both professional capacity and psychological endurance. Guided by Resilience Theory and the Stress and Coping Model, this study underscores that resilience is a dynamic process shaped by individual effort, institutional culture, and collective meaning. Embedding psychosocial education, peer-support systems, and culturally sensitive coping practices within SLAF disaster-management training can promote sustainable mental health and operational effectiveness.

Conclusion and Recommendations

This study explored the diverse disaster experiences of Sri Lanka Air Force (SLAF) personnel undergoing disaster management training. Findings revealed that participants function in a multi-hazard environment encompassing both natural and human-influenced crises, including floods, droughts, fires, pandemics, and terrorist incidents. The dual role of being both responders and victims created unique psychological and operational challenges. Despite these pressures, participants demonstrated resilience through teamwork, discipline, faith, and a strong sense of duty.

Although data collection took place at the Disaster Management Training School, Digana, participants were temporarily attached from multiple SLAF stations across Sri Lanka, providing a diverse and representative sample. This enhanced the transferability of the findings while maintaining the study's qualitative depth. However, the study's relatively small sample size and single training context limit its generalizability. Future research should extend across multiple cohorts and employ mixed methods to validate and expand on these insights.

The findings underscore the need to integrate psychosocial resilience training within SLAF's disaster management curriculum. Regular debriefing sessions, confidential counseling, and culturally sensitive interventions rooted in mindfulness and collective coping are recommended. Developing structured peer-support systems and trauma-informed leadership practices would further strengthen organizational readiness and long-term psychological well-being.

In conclusion, enhancing resilience within the SLAF is not only vital for operational efficiency but also crucial for sustaining the mental health of those who stand at the forefront of Sri Lanka's disaster response.

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