

## PSYCHOLOGICAL RESILIENCE OF MOUNT SINABUNG ERUPTION SURVIVORS IN NAMAN TERAN DISTRICT OF KARO REGENCY IN NORTH SUMATERA PROVINCE

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### Abstract

*The community of victims of the Mount Sinabung eruption in the Naman Teran district of Karo Province of North Sumatra faces a major challenge to mental and emotional stability, experience of trauma, loss, and drastic changes in everyday life that can give profound psychological stress. Nevertheless, the communities in the Naman Teran district affected by the eruption of Mount Sinabung show resilience and ability to recover in coping with stress, trauma, and social psychological change in the community. The research aims to identify the factors that influence the resilience of the survivors of the Mount Sinabung eruption in Naman Teran District, Karo District, North Sumatra Province, Indonesia. The research uses a qualitative approach with data collection techniques through in-depth interviews, documentation, and participatory observations. The results show that there are several factors that influence the survivor's resilience of the Mount Sinabung eruption, including social support, self-confidence, and adaptability. In addition, factors such as trauma, loss of property, and future uncertainty also affect psychological resilience. This research is expected to provide an innovative contribution to the development of volcanology-based natural disaster management programs that can improve the psychological resilience of the survivors of natural disasters.*

**Keywords:** Resilience, Survivor, Mount Sinabung

### INTRODUCTION

In Indonesia, disasters have caused many victims and damage in recent years. Many disasters occur regardless of the geographic location of the Indonesian nation. Indonesia is located at the confluence of active tectonic plates, active mountain belts, and a tropical climate, making parts of its territory vulnerable to natural disasters (Mahdia, 2013). The spread of active volcanic fire brings blessings to soil fertility, but on the other hand, this mountain can be a threat if it erupts. Indonesia has 127 active volcanoes that can erupt at any time. Apart from volcanic eruptions, other disasters that occur are earthquakes, landslides, floods, tornadoes, forest and land fires, abrasion/tidal waves, tsunamis, and others. Disasters that hit Indonesia often have an impact on the community; some lose family/relatives, and some also lose treasures (Nirmala, 2022)

Volcanic eruptions are natural disasters that have the potential to cause considerable damage. As a Pacific Ring of Fire country, Indonesia is vulnerable to volcanic activity (Nur, 2018) Mount Sinabung in Karo Regency, North Sumatra Province, is one of the mountains that frequently experiences fires. Social psychological resilience refers to the ability of individuals or groups to overcome stress, trauma, and psychological changes resulting from disasters or difficult situations. Societies with high levels of resilience have a greater likelihood of adapting, recovering, and even growing through difficult experiences. Thus, an in-depth understanding of the factors that influence the social and psychological resilience of communities affected by the eruption of Mount Sinabung in Karo Regency will provide valuable insights for post-disaster recovery efforts. On the other hand, research to the social and psychological aspects of community resilience in natural disasters still needs to be completed. Therefore, this research aims to analyze the social and psychological resilience of the communities affected by the eruption of Mount Sinabung in Karo Regency, North Sumatra Province. This study will provide a deeper understanding of how communities affected by

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natural disasters face psychological challenges and how social, cultural, and environmental factors influence people's ability to recover and maintain mental stability (Subandi, 2016)

### **LITERATURE REVIEW**

Mount Sinabung has experienced eruptions since 1600 but then became active again with an eruption in 2010, which continues to this day. As a result of the eruption, there was a burst of ash, which reached a height of 3000 meters. According to information from the Head of the Center for Volcanology and Disaster Mitigation (KPVMB), 21 refugee posts have been established, with a total number of refugees reaching 21,141 people, including more than 5000 children (Hafni *et al.*, 2016).

Mitigation of the Mount Sinabung eruption disaster includes several steps that must be taken, according to the National Disaster Management Agency (BNPB, 2017). among others:

1. Mapping and monitoring  
Mapping areas potentially affected by the eruption of Mount Sinabung was carried out to determine disaster-prone zones. Continuous monitoring of Mount Sinabung's activity is also carried out to detect early signs of eruption.
2. Public education and awareness  
Communities around Mount Sinabung must be educated about the risks and actions that must be taken when an eruption occurs. Increasing public awareness of the importance of following evacuation procedures and protecting yourself will help reduce the risk of loss of life.
3. Evacuation and placement of refugees  
When Mount Sinabung erupted, evacuation became an important step to save the affected people's lives. The placement of refugees in safe places and adequate facilities must also be considered.
4. Improved infrastructure and early warning systems  
Infrastructure development resistant to Mount Sinabung's eruption, such as evacuation roads and refugee resting places, needs to be improved. Apart from that, an effective early warning system must also be implemented to provide information to the public before an eruption occurs.
5. Recovery and rehabilitation  
After the eruption of Mount Sinabung subsides, recovery and rehabilitation steps must be taken to restore the condition of the affected communities and environment. This includes restoring facilities and infrastructure, improving the community's economy, and environmental rehabilitation.

According to (Reivich. K and Shatte. A, 2002) resilience is the ability to overcome and adapt to complex events or problems that occur in life. Surviving under pressure and even dealing with adversity or trauma experienced in life. This indicates that each community group has different abilities and capacities in responding to the disasters they face. Apart from that, resilience can also be interpreted as success in adapting to the pressures that occur. Adaptation is building resilience and maintaining a boundary between positive and negative emotional levels that illustrates an individual's fundamental strength in adapting flexibly to recover quickly from environmental stress.

A concept that emphasizes what allows a society or individual to survive a disaster. It includes the study of various concepts such as disaster adaptation, disaster impacts and prevention techniques, social protection, social movements, and mainstream responses to disasters (Seidman, 2020). Resilience emphasizes the critical concept of surviving and adapting in a crisis. The primary factors for success may differ for each problem, but they involve strategies that enable individuals and society to respond effectively and successfully.

**METHOD**

This type of research is quantitative, using partial tests. The research location is in Naman Teran Regency, Karo District, North Sumatra Province. Data collection was carried out using questionnaires and measurements using SPSS.

**RESULTS AND DISCUSSION**

Vulnerable zone indicators consist of the ability to cope with stress, adaptation, self-confidence, social relationships, ability to make decisions, and relocation.

**Table 1. Percentage of Respondents Based on Vulnerable Zones**

No	Vulnerable Zone Indicator	Respondent		No	Vulnerable Zone Indicator	Respondent	
		Amount	Percentage			Amount	Percentage
1	Ability to Cope with Stress			4	Social Relations		
	Very low	-	-		Very low	-	-
	Low	5	3,76		Low	20	15,04
	Tall	47	39,10		Tall	54	40,60
	Very high	81	57,14		Very high	59	44,36
	Total	133	100		Total	133	100,00
2	Adaptation			5	Ability to Make Decisions		
	Very low	-	-		Very low	-	-
	Low	6	4,51		Low	4	3
	Tall	63	47,01		Tall	51	38,35
	Very high	64	48,48		Very high	78	58,65
	Total	133	100,00		Total	133	100,00
3	Confidence			6	Relocation		
	Very low	-	-		Very low	-	-
	Low	10	7,52		Low	51	49,62
	Tall	42	31,58		Tall	36	34,59
	Very high	81	60,9		Very high	46	49,62
	Total	133	100,00		Total	133	100,00

The vulnerable zone indicator for survivors' ability to cope with stress shows a very high category, with a percentage of 57.14% for attitudes towards social relations and 44.36%. This shows that vulnerable zones still have very high characteristics and behavior, so it is still possible to collaborate with the community in disaster situations. Meanwhile, survivors in vulnerable zones are in the low relocation category at 49.62.

**Table 2. Recapitulation of Resilience Level Scores for Survivors in Vulnerable Zones**

No	Vulnerable Zone Indicator	Average Score	Category
1	Ability to Cope with Stress	81	Very high
2	Adaptation	64	Very high
3	Confidence	81	Very high
4	Social Relations	59	Very high
5	Ability to Make Decisions	78	Very high
6	Relocation	51	Low

Indicators for vulnerable zones assessed from the aspect of ability to cope with stress self-confidence are in the very high category, adaptation, social relationships, and ability to make decisions are in the very high category. Meanwhile, relocation in vulnerable zones is in a low category. This correlates with the distribution value of the relocation indicator, which falls under the low criteria.

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A disaster-prone zone area is an area that has geological, biological, hydrological, climatological, geographical, social, cultural, political, economic, and technological conditions or characteristics which, for a certain period of time, cannot or are unable to prevent, reduce, achieve readiness, so that reducing the ability to respond to the adverse effects of specific hazards (Tondobala, 2011).

**Table 3. Resilience Hypothesis for Community Survivors of the Mount Sinabung Eruption in the Vulnerable Zone**

Range category		Category	Number of Subjects	Percentase (%)
$X > \text{Mean} + \text{SD}$	$X > 78.71$	Tall	37	27.82
Means $\leq$	$78.71 \leq X \leq 53.58$	Currently	77	57.89
$X < \text{Mean} - \text{SD}$	$x < 53.58$	Low	19	14.29
Total			133	100.00

Based on the table above, it can be seen that the resilience of the community who survived the Sinabung volcanic eruption in Sinabung Village was mostly in the medium category (77%), the rest were in the high (37%) and low (19%) categories. Based on this data, it can be seen that the survivor community has not fully developed resilience or bounced back after the disaster occurred.

Based on the results of observations that have been made, it was also found that several disaster survivors still appear to behave as usual in their daily lives, carry out everyday activities, and are even able to provide help or assistance to survivors. Other natural disasters. This shows that many survivors of the Mount Sinabung eruption still have good resilience. However, many survivors still experience difficulties adapting and developing their resilience in the context of the Mount Sinabung eruption disaster.

This is also based on the research results conducted by (Setyawan, 2016). Where the research results show the potential for resilience in the survivor community. According to him, this eruption has the potential to be a source of strength to survive and try to change the situation. So, based on the research results and research support, it can be interpreted that the community's resilience, which survived the impact of the eruption of Mount Sinabung, Nanam Teran District, Karo Regency, already has the potential to recover.

## CLOSING

### Conclusion

Based on research results, the ability of survivors to deal with stress shows a very high category because the community can adapt to disaster situations. Supporting factors that influence the resilience of survivor communities internally and externally. Internal refers to aspects of psychology, individual self-esteem, and the ability to regulate emotions. External refers to social support provided by family, relatives, friends, and the community.

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