

# Effectiveness Of Landslide Disaster Education For 6th Grade Elementary School Students In SDN Galendowo, Jombang District

Yulia Vicarista Lengu<sup>1</sup>, Inas Zahra<sup>2</sup>, Putri Aisya Pahlawani<sup>3</sup>, Rany RD<sup>4</sup>,  
Andik Matulesy<sup>5</sup>

<sup>1,2,3,4,5</sup> Program Studi Profesi Psikologi, Universitas 17 Agustus 1945 Surabaya

\*Corresponding Author : Yulia Vicarista Lengu, Email: [1522100053@untag-sby.ac.id](mailto:1522100053@untag-sby.ac.id)

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## ABSTRACT

The objective of this research is to improve the knowledge of sixth-grade elementary school children at SDN Galendowo, Jombang, regarding the topic of landslides. This is based on the fact that the geographical location of Galendowo village poses a risk of landslides. The activities were conducted in the sixth-grade classroom of SD Galendowo using an experiential learning-based training method. The team delivered the education through various methods, including presenting the material, question and answer sessions, and games, in order to achieve the desired knowledge, skills, and abilities. The results of the landslide disaster education showed a difference in the knowledge of the sixth-grade children before and after the training. This means that the knowledge of the sixth-grade children at SD Galendowo regarding landslides differed before and after the training was provided.

*Keywords: Education, Elementary School, Landslides*

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## INTRODUCTION

Indonesia is a country known for its natural beauty, but it is also prone to disasters. According to the Disaster Risk Index by the National Disaster Management Agency (BNPB) in 2021, a significant portion of Indonesia is at high risk of experiencing natural disasters, and the potential for disasters is spread across almost all regions of the country. This is in line with UNESCO's statement that Indonesia ranks 7th as the most disaster-prone country based on geographical, geological, climatological, and demographic perspectives (KOMINFO Data, 2022). According to the National Disaster Management Agency (BNPB), a natural disaster is an event or series of events that threaten and disrupt the lives and livelihoods of communities caused by natural and/or non-natural factors, as well as human factors, resulting in loss of human life, environmental damage, property loss, and psychological impacts. Disasters occur when three elements converge: the disaster threat, vulnerability, and capacity triggered by an event.

According to Situmorang (2021), the National Administration Agency stated that the National Disaster Management Agency (BNPB) recorded 277 natural disasters in Indonesia. The information was collected from January 1st to February 1st, 2021. According to BNPB's calculations, there were 171 cases of floods, followed by 48 cases of landslides, 45 cases of tornadoes, 6 cases of earthquakes,

6 cases of tidal waves and storms, and 1 case of forest and land fires. The distribution map shows that the most frequent disaster-prone locations are found in Central Java, followed by West Java with 43 locations, East Java with 42 locations, and Aceh with 30 locations. The subsequent damage report published by BNPB mentioned 1,206 damaged public facilities, including 603 educational institutions, 512 churches, 91 health centers, 200 offices, and 72 bridges.

As of May 20th, 2022, landslides were the most prevalent natural disaster. Landslides occur mainly in mountainous regions, especially during the rainy season. The tectonic conditions in Indonesia, with high morphological features, faults, easily fragile volcanic rocks, and the tropical wet climate, contribute to the high potential for landslides. Recent changes in land use have also led to an increase in landslide occurrences. The combination of anthropogenic and natural factors often causes landslides, resulting in loss of life and property damage (Naryanto et al., 2019).

Factors affecting slope stability and causing landslides include geological conditions, hydrography, topography, climate, and weather changes. Soil will slide if the driving force exceeds the resisting force, influenced by the slope angle, water, load, and density of the soil and rocks. Geological conditions, such as rock strength and soil density, also play a crucial role. Ineffective hydrography and drainage systems can increase water pressure in the soil. Topography, climate, and weather changes also contribute to slope stability. Understanding these factors is essential for taking appropriate prevention measures in landslide disaster mitigation.

One of the areas in Indonesia prone to landslides is Jombang, specifically in Galengdowo Village, Wonosalam. According to online sources, three villages in the Wonosalam District, Jombang, are mapped as landslide-prone areas, including Galengdowo Village, Panglungan, and Karang Wulung Village.

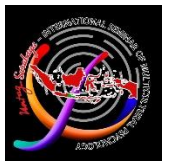
As reported on online news sites, Galengdowo Village in Wonosalam has experienced landslides in 2016, with large rocks and trees as the landslide material. This resulted in damage to the residents' clean water pipes. Additionally, mud inundated two houses. Fallen trees and large rocks.

## **METHOD**

This research was conducted by providing Psychosocial Education on Landslides to 6th-grade students at Galengdowo 2 Elementary School in Jombang. In its implementation, the researcher used the lecturing and discussion methods to deliver the material on Landslide Mitigation. Prior to starting the discussion process, the researcher distributed pre-test sheets to the participants to assess their knowledge of the upcoming material. After that, the researcher explained to the participants what landslides are, the impacts experienced during landslide disasters, and the ways to prevent and protect themselves in such situations. Once the discussion process was completed, the participants were asked to fill out post-test sheets. The post-test was given to assess whether the participants had understood the material provided.

## **RESULTS**

The participants in this activity consisted of 14 sixth-grade students from Galendowo Village Elementary School. Their participation in this activity was highly active, as they were involved in the entire series of activities in each session. This community service activity received support from all parties involved. The team conducted training using various methods, including material presentations,



question and answer sessions, games, simulations, demonstrations, and role plays, in order to achieve the desired knowledge, skills, and abilities.

Based on the SPSS calculations from the 14 students (N), the pre-test mean score was 5.36, while the post-test mean score was 6.57. This indicates an improvement in students' knowledge related to landslides.

## DISCUSSION

The paired samples correlation table contains data on the correlation between the increase in knowledge before and after the education, indicating a relationship between the improvement in knowledge before and after the training. Jombang, particularly in the village of Galengdowo Wonosalam, is one of the areas in Indonesia that is prone to landslides. Therefore, it is necessary to have self-preparedness among the community regarding landslide disaster mitigation. This self-preparedness involves understanding the disaster, prevention measures, and how to cope if such a disaster occurs. This knowledge is crucial for the community, including children.

By increasing the knowledge of elementary school students in the village of Galengdowo Wonosalam, Jombang, it is hoped that children will be more alert and responsive to the dynamic changes in their environment. To achieve this, one of the efforts that can be undertaken is the "Psychoeducation on Landslides to Improve Knowledge Among Children in the Village of Galengdowo, Wonosalam District, Jombang".

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