

# The Importance of Disaster Knowledge in Early Childhood for The Future Investment

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**Abstract.** Disasters carry consequences for humans and their environment. One of the vulnerabilities to disaster is caused by a lack of knowledge of disasters. Indonesia is a region prone to disasters. This is due to Indonesia's position which is surrounded by three world tectonic plates and also located in the ring of fire, the most active volcano in the world. According to data from the National Disaster Management Agency (BPNN), during 2018-2019 there have been 3860 natural disaster incidents. The attitude that needs to be raised in minimizing the existence of a disaster is the anticipatory attitude that is accompanied by knowledge to deal with the disaster. Disaster education is one of the directives of the president in disaster management. In line with this directive, it is necessary to transfer disaster knowledge to the community especially to early childhood. Early childhood is a golden period, where the brain develops very quickly and can receive and absorb any good or bad information. For this reason, the purpose of this article is to examine the importance of disaster knowledge for early childhood. This article was compiled using the literature study. Strengthening disaster knowledge about early childhood is the first step towards realizing a disaster-aware society. Disaster aware society will have a better capacity in dealing with disasters so they are capable of threatening disasters around them. Early childhood is one of the future investments and is one of the vulnerable groups to disasters, it is very important to increase disaster knowledge because Indonesia in the future will be led by today's early generation.

**Keywords:** Disasters, Early Childhood, Future Investment, Knowledge, Vulnerability

## INTRODUCTION

Disasters carry consequences for humans and their environment. Vulnerability to disasters can be caused by inappropriate disaster management, environmental impacts or from humans themselves. Indonesia is a region prone to disasters. This is due to Indonesia's position which is surrounded by three world tectonic plates, namely the Indo-Australian Plate, Eurasia, and the Pacific Plate. Besides, Indonesia is also in the Pacific of fire, the most active volcano in the world. According to data from the National Disaster Management Agency (BPNN), throughout 2018-2019 there have been 3860 natural disaster incidents, such as floods, landslides, floods and landslides, abrasions, tornadoes, droughts, forest and land fires, earthquakes, tsunamis, earthquakes and tsunamis, and volcanic eruptions. Based on data in Indonesia, recorded that between January 2019 and March 2019, 1312 natural disasters had occurred.

The definition of disaster in the Constitution of the Republic of Indonesia Number 24 of 2007 about Disaster Prevention, Disaster Management is an event or series of events that threaten and disrupt people's lives and livelihoods caused by both natural, non-natural and human factors, resulting in human casualties, environmental damage, property losses, and psychological impacts. Indonesia is known as a disaster market, there are so many kinds, both natural and non-natural disasters. Natural disasters are one of the

phenomena that cannot be estimated at the time they occur, even though knowledge and tools have increasingly developed. Disaster risk reduction needs to be done with various efforts and various considerations from the aspect of sustainability as well as the participation of all elements of society. The Constitution of the Republic of Indonesia Number 24 of 2007 mentions preparedness is a series of activities undertaken to anticipate disasters, through the organization as well as through the appropriate steps effectively and efficiently. Knowledge and attitudes possessed by a person to reduce disaster risk. Knowledge is a major factor and is the key to preparedness. Knowledge and attitude of a person are one of the efforts in disaster risk reduction activities (Rosida & Adi, 2017).

The attitude that needs to be raised in minimizing the existence of a disaster is the anticipatory attitude that is accompanied by knowledge to deal with the disaster. Disaster management is an important factor in planning and setting up to prepare before a disaster occurs and resolve it. Disaster management requires not only individual participation, but effective disaster management requires collaboration between the public, private, and related organizations. Disaster management is very dynamic, disasters with one another are different ways of dealing with it as well as the geographical conditions. The ability to anticipate and overcome disasters in Indonesia is still a low bit, this is also a problem in itself besides the problem of the disaster. For

example, as in the tsunami disaster that hit the Sunda Strait at the end of 2018, which was not detected and surprised many parties. Early warning systems require a clear, flexible and alert structure, as well as socialization that can touch various levels of society. The goal is to build a community that is always alert to disasters and its consequences as a result of living in disaster-prone areas.

Children in one of the vulnerable groups in disaster emergencies (Peraturan Presiden Number 21 of 2008). Children are vulnerable to becoming victims of disasters due to their lack of knowledge and ability in disaster mitigation. Besides, it is caused by a factor of limited understanding of the risks around them, which results in a lack of preparedness in the face of disasters (Pahleviannur, 2019). Disaster education in children has an important role in saving lives and protecting the community. Disaster education must start at an early age because every year children are always victims of the effects of disasters. Physically young children are still weak to save themselves when a disaster occurs. Children will also feel a deep trauma and can interfere with their psychological. Disaster awareness socialization is an activity that is intended to help and persuade the public to know the importance of caring for natural and non-natural events that have not yet occurred, will occur and are happening by learning the signs, the forms of anticipation that need to be done, and what should be done when the event. This happens so as not to cause a large loss, even if the event can be prevented.

Through disaster management education, it does not mean the risk of disaster impacts can be reduced so that it does not cause an impact at all. The aim and hope are to achieve the minimum risk of disaster impacts. Anticipating and handling disasters is a shared responsibility, not just the responsibility of the government, humanitarian agencies, volunteers and professionals. By learning about disaster management that is dynamic, continuous, and integrated, it is expected that later it can bring impact to the wider community to be able to live in harmony with the disasters that occur. The importance of knowledge about disaster and disaster risk reduction from an early age is because an early age is a golden age that will lead the country. Thus, we need to realize that the knowledge about the disaster needs to have, as one of the efforts in the context of disaster risk reduction. Giving knowledge of disaster in early childhood is one of the first steps to build community disaster awareness.

## MATERIALS AND METHODS

The method used in this research is descriptive method with a qualitative approach. Qualitative research is research that produces and processes data that is descriptive in nature, such as interview transcriptions,

field notes, images, video recordings and others. The stages of the research carried out were preparation, implementation and analysis. The data collection technique used in research is to conduct literature studies from various sources for later analysis descriptively.

## RESULTS AND DISCUSSION

### Understanding Disasters

Indonesia's geographical location is at the confluence of three active plates, namely Indo-Australia, Eurasia, and the Pacific which results in the condition of the Indonesian state having a high level of vulnerability to geological and hydroclimatological disasters. Understanding Disasters according to UNISDR (2002) disaster is a serious disruption to the functioning of the community, causing widespread damage to human life in terms of material, economic, or environmental, and disruption beyond the ability of people to cope with using their own resources. While the definition of disaster based on the The Constitution of the Republic of Indonesia Number 24 of 2007 about Disaster Management is an event or series of events that threaten and disrupt people's lives and livelihoods caused, both by natural factors and / or non-natural factors as well as human factors resulting in human casualties, environmental damage, property losses, and psychological impacts.

In The Constitution of the Republic of Indonesia Number 24 of 2007 disasters are grouped into 3 categories, namely:

1. Natural disaster is a disaster caused by an event or a series of events caused by nature including but not limited to earthquakes, tsunamis, volcanic eruptions, floods, droughts, hurricanes and landslides.
2. Non-natural disaster is a disaster caused by an event or series of non-natural events which include but is not limited to technology, modernization, epidemics and disease outbreaks.
3. Social disaster is a disaster caused by an event or series of events caused by humans, which includes social conflict between groups or between communities, and terror.

Based on data from the National Disaster Management Agency (BNPB) in 2018, the disasters that occurred in Indonesia experienced 3,397 incidents, with 3,874 people dead and missing. In the last ten years from 2009-2018, the impact of disasters varied greatly, ranging from damage, losses, to fatalities. This condition shows the still lack of preparedness for disasters in Indonesia. According to Law Number 24 of 2007, Preparedness is a series of activities carried out to anticipate disasters through organizing as well as through appropriate and efficient steps. Preparedness is defined as actions taken in the pre-disaster stage.

Included in preparedness measures are the preparation of disaster management plans, resource maintenance and personnel training. While the definition of preparedness according to Carter (1991) in (Hidayati, et al., 2016) is "Actions that enable governments, organizations, communities, communities and individuals to be able to respond to a disaster situation quickly and effectively. Included in preparedness measures are disaster management plans, maintenance of resources and training of personnel."

Preparedness is one part of a disaster management process, the importance of preparedness is one of the important elements in proactive disaster risk reduction activities (Hidayati, et al., 2016). Another definition of preparedness stated by the International Federation of Red Cross and Red Crescent Societies (IFRC) in (Triyono, Kurniah, Andriana, Kusumawati, & Hardianto, 2014) preparedness is an activity that makes planning in dealing with disasters. The planning made must be effective, realistic and coordinated, and maximize the role of all aspects in society, households and disaster prepared communities. Not just stopping at planning, preparedness activities will also respond to preparedness efforts that have been made. Preparedness aims to prevent situations worse than the disaster itself and also aims to save as many lives as possible and ultimately to help victims return to normal life after a disaster in a short period of time.

In an affected area, the experience and impact felt as a result of the disaster affect the level of community preparedness. Preparedness efforts aim to ensure that the resources used to respond in a disaster event can be used effectively and efficiently during a disaster and know how to use it (Mardhiah, 2014). The purpose of preparedness is to reduce threats, reduce vulnerability, reduce consequences, and establish cooperation.

Natural disasters are natural phenomena that no one is able to predict when they occur, although humans with all their knowledge try to read these natural phenomena (Emosda, Lela, & Fadzlul, 2014). Natural disasters can occur at any time without the public knowing. When facing a disaster, people who have not been able to handle it themselves must wait for help, which sometimes does not come immediately because of the distance of the location of the incident, while in the first seconds when the disaster occurs is a very important moment in an effort to reduce the impact of a greater disaster. Disaster risk reduction efforts are carried out with consideration of several aspects, such as sustainability aspects and participation of all elements of the community. In the age group of children, the impact of disasters is seen as more worrying, so that in The Constitution of the Republic of Indonesia Number 24 of 2007 about Disaster Management, children are classified in the vulnerable category. This means that children need special efforts regarding understanding disaster mitigation.

Based on the definition of disaster above, it can be concluded that a disaster is a series of events caused by natural and non-natural events which can cause damage, loss to fatalities both children and adults. Children in this case are very vulnerable to become victims in the event of a disaster that occurs. Meanwhile children are the next generation of this nation, therefore it is important to do preparedness to anticipate all forms of disasters that occur early on.

### **Early Childhood**

Understanding early childhood, in general, is children under the age of 6 years. The Government through the National Education System Act defines early childhood as children aged 0-6 years. Soemiarti Patmonodewo quoted opinions about early childhood according to Biecheler and Snowman, which meant preschoolers are those aged between 3-6 years. The limits used by the National Association for the Education of Young Children (NAEYC), and experts in general are: "Early childhood" Early childhood is a child from birth until the age of eight. So starting from the child is born until he reaches the age of 6 years he will be categorized as an early child. Some people refer to this phase or period as the golden age because this period will determine what they will be like when they mature both in terms of physical, mental and intellectual.

Early childhood is the most important and basic early period throughout the growth and development of human life. This period is marked by various important periods in the child's life until the period of their development. One period that characterizes the early period is the golden period. Many of the concepts and facts found to provide an explanation of the golden period in the early days, namely the future of all children's potential to develop the fastest. Some concepts are juxtaposed for the past, the past, the sensitive period, the play period, and the period of defiance in the beginning. However, on the other hand, early childhood in a critical period, namely the child's golden period will not be repeated in the future, if the potential is not optimally and optimally stimulated at that early age. The impact of not stimulating the various potential moments of gold will hinder the development of the next child. So, the golden age is only once and cannot be repeated again (Suryana, 2014).

While the nature of early childhood is a unique individual where he has a pattern of growth and development in physical, cognitive, socioemotional, creativity, language and communication aspects that are specific to the stage being passed by the child. From various definitions, researchers conclude that early childhood is children aged 0-8 years who are in the stage of growth and development, both physically and mentally.

### Early Childhood Education

Early childhood education is a level of education before basic education which is a coaching effort aimed at children from birth until the age of six years. This education is carried out through the provision of educational stimuli to help grow into further education, which is held on a formal, non-formal, and informal path. National Education System Law No. 20 of 2003 explains that early childhood education is a coaching effort aimed at children from birth until the age of six years which is done through the provision of educational stimuli to help physical and spiritual growth and development so that children have the readiness to enter further education.

One of the early childhood education leaders, Maria Montessori defines early childhood education as a dynamic process in which children develop according to the provisions in their lives, with their voluntary work when placed in an environment prepared to give them freedom in expression self. Suyadi provides an understanding of early childhood education as a form of education that focuses on laying the foundation for physical growth and development (fine and gross motor coordination), intelligence (thinking power, creativity, emotional intelligence, spiritual intelligence), socio-emotional (attitude and behavior as well as religion), language and communication, in accordance with the uniqueness and stages of development that are passed by early childhood.

According to Glen Dolman, an expert in developing children's abilities, states that the most rapid development of human brain growth occurs at the age of 0-7 years. It is also said that brain development at an early age can be achieved to the maximum if given the right stimuli for all elements of development both stimulation of motor, stimulation of intellectual development, stimulation of social-emotional and stimulation to speak (language development). The availability of adequate facilities and tools and an environment that is appropriate for the age of the children is very important in supporting the development and abilities of the children under five.

### Disaster Education for Early Childhood

Knowledge about disasters should be given to the community, especially children. Because disaster victims do not look at age whether it is children, adolescents, or parents, the socialization of how to handle disasters must also involve children. Children from an early age must be given a proper understanding of the types of disasters that may befall their area and ways to deal with disasters if they come suddenly. Early childhood has the right to education one of which is disaster education. This is a preparedness effort that is instilled early to anticipate all forms of disasters that occur. Children are one of the most vulnerable groups at risk of being affected by disasters (PP No 21, 2008). Children's vulnerability to

disasters is triggered by a factor of limited understanding of the risks around them, which results in a lack of preparedness in dealing with disasters. Based on data on the occurrence of disasters in several areas, many victims of disasters in school-aged children, both at school hours and outside school hours. This shows that the importance of knowledge about disaster and disaster risk reduction from an early age to provide understanding and direction of the steps that must be taken when a threat occurs around it to reduce disaster risk (Sunarto, 2012).

Disaster education must start early. This is based on the fact that approximately 66 million children worldwide are affected by disasters each year (F Herdwiyantri & Sudaryono, 2013). To reduce the risk of disasters, increasing understanding through knowledge has important urgency. One way to increase awareness is to change one's knowledge of something (Duval, et al, 2000). If children's knowledge of disasters is good, it can create a generation that is resilient to disasters and has good preparedness for disasters.

Physically, children are still weak to save themselves when a disaster occurs. Likewise with the knowledge of disaster preparedness that is less known by most children, causing panic in children. One effective transfer of knowledge to early childhood is through education. Education as an investment has developed rapidly, and is believed to be the key in the development sector, especially development of human capital. Human capital investment is expected to later be able to contribute directly to the prosperity and growth of a country. Education must cover a broad spectrum in people's lives. Knowledge related to disaster response given from an early age is important, because early childhood is a golden generation as an investment in the future and forerunner of future generations of nations that must be responsive in various situations and circumstances according to the guidance of the times. If children's knowledge of disasters is good, it can create a generation that is resilient to disasters and has good preparedness. Thus, children need increased knowledge and understanding of disaster preparedness, so that the proper way of communication is through awareness-raising of the disaster (Pahleviannur, 2019). The argument about the relevance of early childhood education to a sustainable society considers children as citizens who are citizens able to contribute significantly to society and the sustainable environment (Didonet, 2008). It is also widely recognized that investing in early childhood interventions is more effective and cheaper than investing in remedial interventions at later time points. (UNICEF, 2014).

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## CONCLUSION

Disaster is a series of events caused by natural and non-natural events which can cause damage, loss to fatalities both children and adults. Children in this case are very vulnerable to become victims in the event of a disaster that occurs. Meanwhile children are the next generation of this nation, therefore it is important to do preparedness to anticipate all forms of disasters that occur early on

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