

# Awareness on Man-Made Disasters among Secondary School Students

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**Abstract:** Day by day we come to know different types of disasters at various parts of the world. Especially most of the disasters are due to human error, which are Man-made. Disasters are sudden calamitous event producing great material damage, loss and distress. Manmade disaster is resulting from human intent, negligence, or error. The results are usually wide scale destruction and high cost. The present study aims to find out the awareness on Man-made disasters among secondary school students. The study also finds out whether there is any gender difference in the awareness on man-made disasters. The sample of the study constituted 120 secondary school students of Kozhikode district of Kerala. Data collected by using an Awareness test on Man-made disasters. Earlier the secondary school curriculum of Kerala state was devoid of the concept disasters and its management. The last curriculum revision included this concept in the secondary level. But it is found that due importance is not given to this concept yet. Presently our state witnesses a number of disasters whether manmade or natural. Hence the study suggests awareness programs, and more useful strategies in managing disasters. Secondary school students are at early adolescence period. By providing awareness in this stage have long lasting effect in their life.

**Keywords:** Man-made disasters, Secondary School students.

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## Introduction

The Indian subcontinent is very vulnerable to droughts, floods, cyclones, earthquakes, landslides, avalanches, and forest fires. Among all Indian states and Union Territories, 22 are prone to disasters. When it comes to Kerala, the state is vulnerable to a multitude of disasters and is categorized as a multi-hazard prone state. The state experiences various kinds of disasters of recurrent nature which results in loss of life, livelihood and property (public and private) and disruption of economic activity besides causing immense misery and hardship to the affected population (Kerala State Disaster Management Policy, 2010). 'Disaster is a crisis situation that far exceeds the capabilities' (Quarentelly, 1985). Natural disasters are part of the environment that we live in. Human made disasters which are also known as anthropogenic disasters admits that all disasters are caused by humans. Disasters whether it is

natural or manmade results in a substantial loss of life or human suffering or damage to and destruction of property or damage to and degradation to environment, and is of such a nature and magnitude, which is beyond the coping capacity of the community of the affected area. But the destruction can be minimized by warning system combined with other activities of the communities.

Preparing one for managing disasters can reduce the fear, anxiety and losses that disasters cause. This is disaster management which is a multi-disciplinary area in which a wide range of issues that range from forecasting, warning, evacuation, search and rescue, relief, reconstruction and rehabilitation are included. Disaster management includes activities in the pre-disaster, during disaster, and post-disaster plans. These activities ensure the combined role of administrators, scientists, planners, volunteers and communities. Disaster management is everyone's responsibility. Students are the becoming youth. It is high time to educate the students about disasters and its management.

'Most of the disaster prone countries initiated disaster education programs, considering the major disasters on their land in their curriculum. The results support the world's science based developments and emphasizes that education and training in disaster awareness in formal education is very important' Gerdan (2014). One of the major responsibilities of teachers is to give training, practice of mock drill and counseling to students as a part of disaster management. For effectively managing disasters awareness of disasters is very essential.

### **Manmade Disasters**

Human made disasters or emergencies can be fast or of slow attack. "Manmade disasters are also known as anthropogenic disasters and they are caused by human action, negligence, error, or involving the failure of a system" Paul and John (2011). Manmade disasters admit that all disasters are caused by humans. Examples are forest fires, deforestation, pollution, epidemic, nuclear disasters, biological disasters, chemical disasters, road or train accidents, riots or terrorism, food poisoning etc. As the human beings are direct agents causing manmade disasters, the awareness and its management is urgent. The adolescent period is also very apt to understand about disasters and its management. From the analysis of different curriculum of the students it is found that the place given to this concept is different in different boards. Hence the aim of this paper is to find out the extent of awareness on Man-made disasters among secondary school students.

### **Objectives of the study**

The objectives of the study are

- To find out the extent of awareness on Man-made disasters among secondary school students.
- To find out whether there is any significant difference in the mean scores of awareness in man-made disasters between boys and girls.

### **Methodology**

The sample of the study constituted 120 secondary school students of Kozhikode district. Data were collected by using an Awareness Test on Man-made Disasters. The test contains 30 multiple choice test items. The various disasters considered here are Setting of fires / Forest fires, Deforestation, Pollution, Epidemic, Nuclear disasters, Biological disasters Chemical disasters, Accidents, Riots or Terrorism, and Food poisoning. The maximum marks given are 30.

**Analysis and Discussion**

**1 .Extent of awareness on manmade disasters among secondary school students**

The sample size was 120 secondary school students. The mean of the sample was 18.19 and the standard deviation was 3.08. The mean value shows that the awareness is average. The maximum score given was 30. This shows that the awareness on manmade disasters among secondary school students is average level.

A component wise analysis is presented in the table 1.

**Table 1. Percentage of secondary school students shows awareness in manmade disasters**

| <b>Man-made Disasters</b>      | <b>Percentage of secondary school students shows awareness in manmade disasters</b> |
|--------------------------------|---|
| Setting of fires/ Forest fires | 65%   |
| Deforestation                  | 57%   |
| Pollution                      | 68%   |
| Epidemic                       | 62%   |
| Nuclear disasters              | 43%   |
| Biological disasters           | 35%   |
| Chemical disasters             | 37%   |
| Accidents                      | 76%   |
| Riots / Terrorism              | 85%   |
| Food poisoning                 | 37%   |

The percentage of each component in the table reveals that less than 60% of secondary school students show awareness in certain disasters like Biological disasters, Chemical disasters, Food poisoning, nuclear disasters and Deforestation. The disasters such as Setting of fires /Forest fires, Pollution, Epidemic, Accidents and Riots/ Terrorism etc., in which more than 60% secondary school students shows awareness.

**2. Comparison of mean scores of awareness on manmade disasters between boys and girls**

The mean and standard deviation of the subsamples based on gender is calculated. The comparison of the mean scores of awareness between girls and boys were done by calculating the t value. The result of the comparison is given in table 2.

**Table 2. Data and Results of the test of significance of difference between mean scores of awareness on manmade disasters between boys and girls**

| Gender | N  | Mean  | Mean | t value |
|--------|----|-------|------|---------|
| Boys   | 59 | 17.75 | 3.25 | 1.56    |
| Girls  | 61 | 18.62 | 2.85 |         |

From the table it is evident that the mean scores obtained by boys and girls at secondary level are 17.75 and 18.62 respectively. The standard deviation is 3.25 for boys and 2.85 for girls. The t value obtained is 1.56. It indicates that the mean score of awareness on manmade disasters based on gender is not significant at .05 levels. This shows that there exists no significant difference between boys and girls at secondary level in their awareness on manmade disasters. Vijayakumari and Sabitha (2015) in their study found that secondary

school students in Kerala are not having satisfactory level of awareness in disaster management based on gender, locale and experience with disaster.

### **Educational Implications**

The study revealed average level of awareness on man-made disasters among secondary school students. The present school curriculum of Kerala state is not given due importance to disasters and its management. Presently our state witnesses a number of disasters whether manmade or natural. Hence with deliberate effort it is to be increased the awareness of students at all level about disasters and disaster management. Secondary school students may provide with action oriented lessons, campaigns, seminars etc. related to manmade disasters. The National Policy on Disaster Management addresses the concerns of all the sections of the society including differentially abled, women, children and other disadvantaged groups. One of the major roles of teachers is to give training, practice of mock drill and counseling to students in their schools. The students take decisions according to the disasters and teachers educate the students to be calm and not to create any panic. 'Improvement in knowledge and practices of teachers equip the teachers with knowledge of how to react if an emergency situation arises. Teacher should take initiative to improve their knowledge and practices by using booklet, posters, brochures, charts, etc. The school authority should provide such material to the teachers' Ganpatrao (2014). 'Teachers taken as role models by students who spend most of their time in school also have important responsibilities in disaster education. Teachers' knowledge of this subject will be reflected in students before everything else. Teacher training should also be included in school programs for this reason. Finally, it is suggested that families should inform their children about disasters, give responsibility to all the members of the house for what needs to be done before the disaster, and to conduct a small drill for during and after the disaster' Pinar (2017).

### **Conclusion**

We can find out a number of manmade disasters recently happened in Kerala including road accidents, setting of fires, food poisoning and pollution etc. Recent newspaper reports show that the inactivity or errors of humans create several manmade disasters. The deadly epidemics Nipah virus infections reported from the Kozhikode district of Kerala, killed 12 people out of the total infected persons. 'The proper and timely management of the situation included awareness through media, isolation of the affected and so on. Thus the disaster is managed with a group effort of people and government. Natural disasters are not under our direct control but manmade disasters are caused by humans. So we must pay a little attention to eliminate them. Education promotes and enables disaster risk reduction and it has already been made out by policy makers and researchers. In fact evidences show that students of different age groups actively participate in safety measures of their schools and also help their teachers and other adults in their communities towards reducing the risks during or after disastrous events.

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