

Need for Disaster Management in Curriculum at School Level – an Explorative Study

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ABSTRACT: The present study is an explorative research approach to assess the extent of awareness about disaster and their management among school going children. Subjects of the present study are 200 students both boys and girls, studying 8th and 9th classes in various Government and Private schools in and around Tirupati of Chittoor District, Andhra Pradesh. A survey method is employed in the study to assess the knowledge, attitude and practices followed by the participants about the disaster management. The data is collected and is subjected to statistical analysis. Results indicate that the most of the students do not have satisfactory levels of knowledge about disaster management. As per Disaster Management Act 2005, every institute is entrusted to develop a suitable module for the awareness and knowledge of disaster management. Thus, from the study it can be concluded that Disaster management can be made compulsory in the school academic curriculum of all the students.

KEY WORDS: Disaster, Disaster management, Training.

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I. INTRODUCTION:

India, due to its physio – geographic conditions, land characteristics and climatic conditions, is one of the most disaster prone countries in the world, exposed to different kinds of natural hazards. As per Centre for Research on the Epidemiology of Disaster (CRED), Belgium (2018), ‘A disaster is a situation or event which overwhelms local capacity, necessitates a request to a national or international level of external assistance’. CRED (2018), considers an event as an disaster if it kills more than 10 people/impacts or displaces more than 100 people/it is declared a national emergency/the country had to receive international assistance. To reduce the effects and aftermath of such a disastrous event, disaster management and disaster mitigation are necessary.

According to United Nations International Strategy for Disaster Reduction (UNISDR, 1999) disaster management is, ‘the immediate response involving various agencies and communities, which can control emergencies and minimize the aftermaths and help people recover from the effects of disaster’. Though, every emergency has its own characteristics and demands, but the basic measures included under the disaster management are same namely- Mitigation, Preparedness, Response and Recovery.



Fig 1: Disaster management Cycle

(Source: Environmental health in emergencies and disasters: WHO, 2002)

Disaster management aims to reduce, or avoid the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster, and achieve rapid and effective recovery. The Disaster management cycle illustrates the ongoing process by which governments, businesses, and civil society plan for and reduce the impact of disasters, react during and immediately following a disaster, and take steps to recover after a disaster

has occurred. Appropriate actions at all points in the cycle lead to greater preparedness, better warnings, reduced vulnerability or the prevention of disasters during the next iteration of the cycle.

Among the disaster affected population, old aged and children are more vulnerable to the aftermaths, especially there is a loss of the adult in the family on whom the children depend. On the other hand, schools themselves are direct victims of the disasters as in majority cases of disasters, schools are turned into shelter homes for the affected individuals. At many times, disasters have occurred in the schools as well such as fire at a school in Tamilnadu (2004), bus accident in Madhya Pradesh (2012) and earthquake in China (2008). Under the 12th Five Year Plan, Government of India realised that as more than 30% of the Indian population is below 15 years of age, it is apt to equip the students with skills of safety and security during and after disasters. The National Disaster Management Act, 2005 has entrusted the educational institutions to impart the necessary skills to the students regarding disaster management and mitigation. NIDM, New Delhi has also released an “Activity Book on Disaster Management for School Students”. But, there is a lacuna in the implementation of this idea in the regular curriculum of the school syllabus, due to need of trained people and experts in this area of disaster management. The present study focuses on the assessment of levels of present knowledge about disaster management among the students and the need for further development of skills in this area so as to mitigate future disaster events.

II. REVIEW:

Priyesh et al (2018) in a study to assess awareness on disaster management among school going children in Gwalior, revealed that out of 110 students 87.2% had knowledge about disaster management, but after intervention 98.2% gained the knowledge of disaster management. A gain of 15% has been observed by conducting intervention programmes. Findings emphasized that the extent of knowledge is not yet satisfactory and there is severe need of providing knowledge to the school children about disaster management.

UNISDR (2017) celebrated the International Day for Disaster Reduction, with a view to spread awareness about natural disaster and various ways to manage the crises. The celebrations witnessed in the form of various activities that are schedules for the entire day. These activities make the community and the people in the community aware about the risks are accompanied by the natural hazards.

Tulhadar et.al (2014) in a similar study concluded that 94 % of the students knew about mechanism of earthquake, but only 65.6% of the students knew the exact safety measures to be followed during earthquake. After an intervention programme, 85.5% of them gained the knowledge about the safety measures and disaster management.

Gautam (2012) in a study on awareness about the Disaster helpline number found that 58.2% of the students knew the Fire Brigade’s number correctly earlier and 80% of them learned this after an intervention. Less than half of the schools visited for the study displayed the Disaster Emergency number.

Rajesh et.al (2011) conducted a survey on Post graduate students in a private dental institute. Among the 125 students surveyed, majority revealed low knowledge and behaviour scores, but high attitude scores regarding disaster management. The year of study and the place of residence were associated with knowledge and behaviour respectively. The study highlights the need for curriculum changes in the dental education and has policy implications for disaster management in India.

National Research Council (1991) viewed that training programmes that focus on contemporary challenges associated with implementing mitigation should be developed and offered at all levels of schooling. Research is needed to develop cost-effective methods for strengthening existing buildings and structures.

Rationale of the study:

Disasters cause a lot of damage to both lives and materials. May it be the 2004 tsunami or the recent floods in Kerala, every year more than 4.8 million of the Indian population is affected and an economic loss of nearly \$9.8 million (UN Global assessment) is calculated every year. Disasters are highly uncertain and unpredictable which makes the people mostly children and old aged, vulnerable to them more easily. Thus, knowledge about disaster management and disaster preparation are necessary to face and handle such emergency conditions. Awareness about disasters and regular training to mitigate the disasters can be done at the school to help the future generations to be disaster prepared. Thus, the present research is carried in this direction, to identify the levels of awareness among then school going children regarding disaster management.

III. METHODOLOGY:

The objective of the study is to assess the extent of awareness about disaster and their management among school going children. A survey method is employed in the study to assess the knowledge and attitude of the participants about the disaster management. Subjects of the present study are 200 students (86 boys and 114 girls), studying 8th and 9th classes in various Government and Private schools in and around Tirupati of Chittoor District, Andhra Pradesh. Among the subjects 72 students have experienced disaster in their life time whereas remaining 128 subjects did not experience any disastrous situations so far. The average age of the subjects is

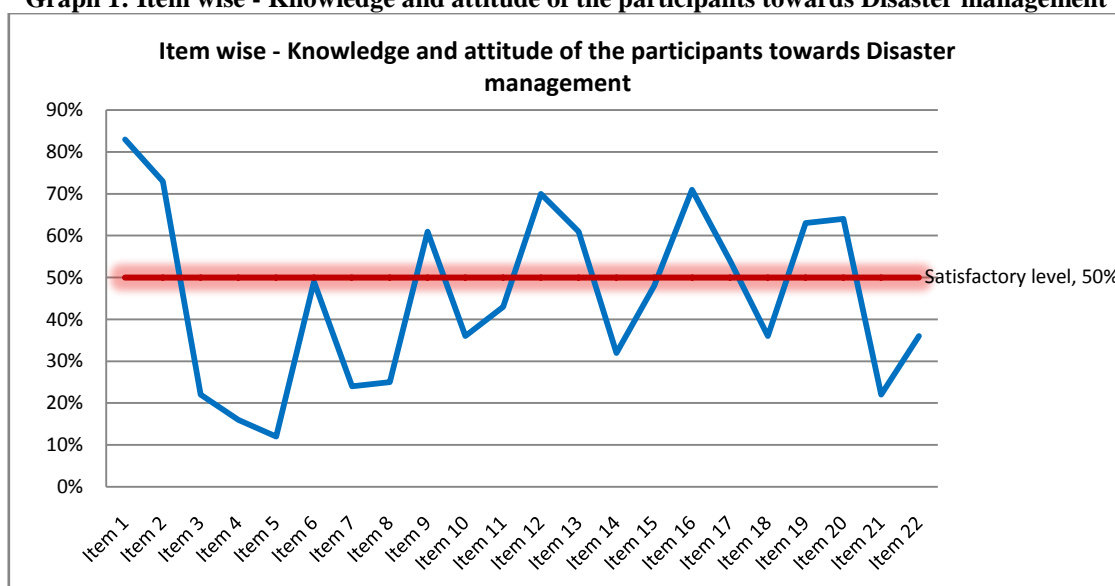
13.6 years. The subjects were approached in their respective schools to conduct the survey. With the willingness of the students a small lecture was delivered explaining about what is a disaster, types of disasters and the importance of the disaster management so as to motivate the students to actively participate in the survey.

A semi-structured questionnaire developed by Ashok Mishra (2018) was employed to collect the data. The questionnaire data sheet consists of 22 statements regarding the knowledge, awareness and attitude towards disaster management. Each item has alternate response as YES/NO. The data collected is subjected to statistical analysis such as Mean and Standard deviation and ‘t’ value were calculated to observe any significant difference among the subjects based on gender and prior experience of the any disaster.

IV. RESULTS AND DISCUSSIONS:

200 students participated in the survey study regarding their levels of attitude and knowledge about Disaster management. The participants’ response as ‘YES’, which indicates some knowledge about the disastrous situation as mentioned in the questionnaire, is shown in Graph-1. 50% knowledge has been taken as satisfactory levels of attitude for the age group in the present study.

Graph 1: Item wise - Knowledge and attitude of the participants towards Disaster management



From the graph it is clear that, of 200 students in the study, majority of the participants have lower levels of knowledge and attitudes towards disaster management. 80% of the participants agreed that they have some knowledge about disaster management (item 1). The knowledge about disaster management are satisfactory for the item-2 (73%) which indicates about identification of different disasters; item-9 (61%) which indicates safety measures during earthquakes; item-12 (70%) and item-13 (61 %) regarding causes and safety measures during floods; item-16 (71%) and item-17 (54 %) which indicate the knowledge about the fire disasters and its safety measures. 63% (Item - 19) and 64% (Item - 20) of the participants have knowledge the emergency numbers for help at the time of disasters and fire.

Only 22% of the subjects have attended a lecture on disaster management previously (Item - 3); only 16% of them know about steps involved in disaster management (item - 4) and only 12% of them have knowledge about the Emergency kit (item-5). For the remaining statements, which indicate the various Disaster preparedness stages, the response rates are lower (22% to 48%) than the satisfactory level. Item-21 indicates awareness about the National Disaster Management (NDM) and item-22 indicates the knowledge about NDRF as National Disaster Response Force. For these items also the awareness is lower than the satisfactory levels (22% and 36% respectively). Thus, as a whole out of 22 survey statements, subjects are not aware of majority of the practices and processes involved during disasters, disaster management and disaster preparedness. This makes them more vulnerable to the disaster shocks and aftermaths of the disasters. Certain amount of awareness about disaster preparedness and disaster management can help the subjects to tackle the emergency situations and become more resilient in future.

As the participants included both boys and girls, gender differences regarding the levels of knowledge about disaster management were also studied, and the data is given in table1.

Table 1: Knowledge and attitude of the participants (Gender wise) towards Disaster management:

Gender	N	Mean	S.D	't'	P
Boys	86	12.67	2.61	0.29	Not Sig.
Girls	114	11.91	3.01		

86 boys and 114 girls participated in the survey on awareness about disaster management. Out of 22 items in the questionnaire, boys knew about 12-13 (Mean = 12.67) and girls had knowledge about 11-12 (Mean = 11.91) disaster management practices. Both boys and girls, in the present study have poor knowledge about the disasters, their mode of occurrence and measures to be taken in managing the disasters. As the obtained 't' value is 0.29, which is not significant, it can be concluded that there are no gender differences among the students regarding their levels of awareness about the disaster management.

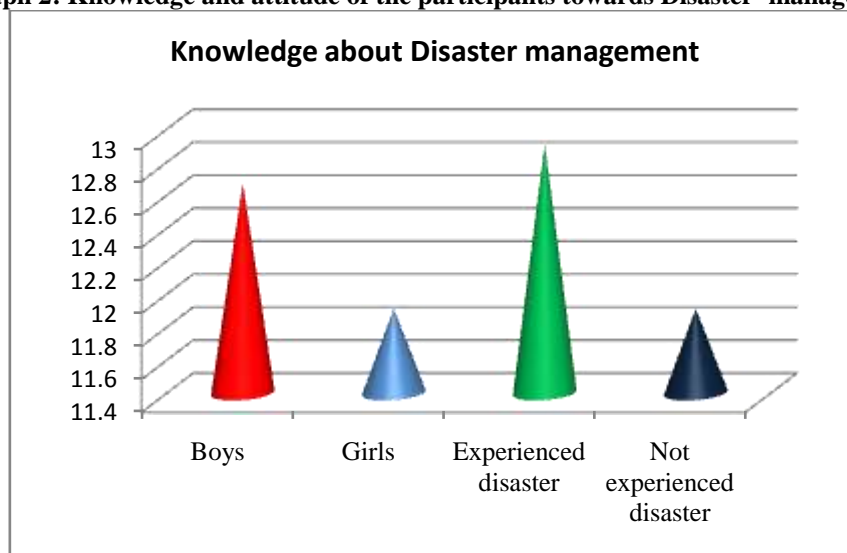
Table 2: Knowledge and attitude of the participants (prior disaster experience) towards Disaster management:

Disaster	N	Mean	S.D	t'	P
Experienced	72	12.91	2.54	0.09	Not Sig.
Not experienced	128	11.91	2.94		

Of the 200 student participants, 72 had a prior experience with some disaster situation. A friendly rapport with the students revealed that, 33 of them have witnessed floods in their native villages due to heavy rainfall and breaking of the tank bunds, 16 of the participants have experienced fires in their neighbourhood, and 9 students revealed that they suffered injuries in major accidents in which many people lost their lives. The remaining 14 students reported that they experienced other kinds of disasters.

From table-2 it is clear that subjects who have prior experience of disaster have scores 12.9 on the disaster management questionnaire which is slightly greater than the mean obtained by the students without any prior experience of disaster, with mean of 11.9. However, the calculated 't' values of 0.09 is quite insignificant, which indicates that there is no significant difference between the group of students with prior disaster experience and those who did not experience any disaster so far.

Graph 2: Knowledge and attitude of the participants towards Disaster management



The above graph depicts that, among the subjects, boys possess greater knowledge about disaster management than the girls. Similarly, students who have experienced some kind of disaster in their life, show higher degree of awareness about disaster management than those students who did not experience any disaster so far.

V. CONCLUSIONS:

1. Most of the students do not have satisfactory levels of knowledge about disaster management.
2. There are no significant gender differences regarding knowledge and attitudes towards disaster management.
3. Students who have experienced disaster earlier also possess lower levels of awareness about the disaster management.
4. As per Disaster Management Act 2005, every institute is entrusted to develop a suitable module for the awareness and knowledge of disaster management. Thus, from the study it can be concluded that Disaster management can be made compulsory in the school academic curriculum of all the students.

Suggestions:

The key to reducing loss of life, personal injuries and damage from natural disasters is widespread public awareness and education. People must be made aware of what natural hazards they are likely to face their own communities. They should know in advance what specific preparations to make before an event, what to do during an earthquake, flood, fire or other likely event, and what actions to take in its aftermath.

Schools can act as a good source for the awareness. Educational materials and training programmes about preparedness, warnings and self protection can be conducted for high school students in the disaster prone areas. Teachers should be given training on integrating the materials into the regular curricula so that all the children receive information they need to protect themselves from disasters. As, the complete disaster management cycle includes the shaping of public policies and plans that either modify the causes of disasters or mitigate their effects on people, property, and infrastructure.

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