



# A survey on perspicacity of school children on disasters in Visakhapatnam, India

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## Abstract

*Disasters are natural catastrophes which strike with no such prior intimation disturbing the normal life of people and animals creating emergency conditions. Despite disaster prediction and issue of warning alarm to the public, disaster preparedness and knowledge on these natural events to school children are very meager leading to casualties. The present study is a survey conducted in few randomly selected schools to understand the knowledge of school children on disasters and their perceptions. The study revealed that most of the students are not sentient of the term disaster or natural calamity while few answers were quite shocking and indeed sad to underrate the teaching, teachers and the school management in providing students with knowledge pertaining to disasters even in metropolitan cities.*

**Keywords:** Disasters, schools, children, perceptions, preparedness.

## Introduction

Natural disasters are catastrophic events which occur without any prior notice causing huge loss to the people and the property. Urbanization and budding population is leading to over exploitation of natural resources pressurizing the planet "earth" to vent out the extreme pollutants it is holding since decades in the form of natural calamities such as floods, earthquakes, tsunamis, cyclones, hurricanes etc; With advent of modernization even the natural events are considered human induced or triggered disasters. Disasters affect the most vulnerable section of people who do not have knowledge of a disaster's intensity. The other end these calamities are considered a threat not only to the people's security but also to the national and international security<sup>1</sup>. Over the years several researchers studied the occurrence of disasters and its impacts but none could find the ways to stop any natural event due to their devastating intensities. Scientists and disaster management authorities around the globe monitor the upcoming disaster and are successful in warning the public which in few cases gave ample time to reduce human life loss and to have an effective post – disaster management. It is estimated that out of 95% of deaths that occur due to natural disasters, 20% is more in developing countries than in developed nations<sup>2</sup>.

**Cognition of Students on Disasters:** Disasters or any unusual situations victimize and frighten children to an extent of disturbing their mental abilities. Children suffer physical, as well as emotional and psychological trauma<sup>3</sup>. Studies revealed that post-disaster trauma in children when in schools is higher than those at home with parents. Disasters often result in delayed academic progress, missed social opportunities and increased exposure to various life stresses such as

illness<sup>4</sup>. Preparedness at home and support of parents to children during natural calamities is a major reason of children being able to survive the situation. Parental upset may aggravate children's fear making them not respond to any help lend to them in time of emergencies<sup>5</sup>. In addition the programs aimed at providing awareness from school level were useful for community disaster preparedness<sup>6,7</sup>. In general the misconception and fear in students on disasters is due to the environment and locality they are living in, lack of literacy and awareness<sup>8</sup>. Many previous studies proved effective promising outcomes on student's participation in disaster education programmes<sup>9</sup>.

In addition researchers earlier proved the correlation between education and people's readiness to respond to any disaster<sup>10</sup>.

## Methodology

To assess the knowledge of children on disasters in the present study a quaternary method was employed. The survey was carried out in ten randomly selected private schools belonging to English medium in Greater Visakhapatnam city which is an upcoming smart city. To have a better picture of disaster preparedness in the selected schools, students belonging to tenth grade have been chosen. A total of 120 students participated in the quaternary where 12 students from each school were asked to answer the questionnaire.

During the survey to avoid any kind of influence from the co-students the individual candidates were called to the concerned member collecting the information. The questionnaire used in the present study includes the following heads presented in Figure-1.

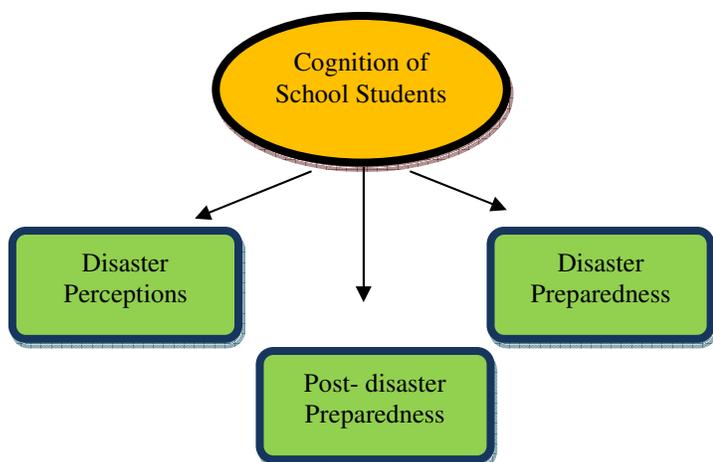


Figure-1: Questionnaire Heads.

## Results and Discussion

**Student’s Perceptions:** From the results it was clearly evident that the individual student’s perceptions on disasters were very different from one student to another. Of all the students participated in the quaternary method, almost 93.33% students are well aware of disasters and their repercussions. However a few students (6.66%) though familiar with the term disaster surprisingly answered they have not witnessed any such event so far which shows their ignorance.

Most of the students (68.33%) feel unsafe staying in school during any catastrophic event or even during a normal rain/cyclone while the remaining students (31.66%) feel school is safer than going homes at that moment. This reveals psychological vulnerability of students towards any disasters. Although students belong to higher grade 56.66% of them don’t have proper knowledge on safe ways to protect themselves from any calamity outburst while 43.33% of students replied with a few ways of saving themselves which was a knowledge they arbitrarily gained from news channels, newspapers and social media etc; Although there is no major difference in students knowledge on being safe during disasters their ways of safety measures were not upto mark or safe enough.

However some students have replied they would be helpless and could not do anything to protect themselves. It was quite pitiable to know that students of tenth standard are not sure of things they need to do in such conditions. During the survey it was understood that almost all schools neglected to conduct any regular drills or awareness camps pertaining to disasters and safety measures which by and large would impart student’s necessary knowledge on the impending damages. Almost 74.16% students believe that regular mock drills, visual aids or any kind of means on disasters, pre and post-disaster preparedness would be of help to overcome the situation. While 25.83% student’s attitude was negative as they think it is merely waste of time getting paranoid for things that have not occurred or when there is no much clarity on their occurrence.

Table-1: Students Perception on Disasters (%).

Disaster Perceptions	Students Response	
	Yes	No
Do you know what a natural disaster is/ Have you ever witnessed any natural disaster?	112	8
Do you feel safe in school during disasters?	38	82
Do you know how to be safe in advent of any disaster?	52	68
Do you think disaster management and mock drills useful?	89	31

**Disaster Preparedness:** Majority of students replied that their schools don’t have any emergency exits and simply don’t understand the necessity of having them which indicates that the students are not conscious of emergency preparedness or risk reduction aspects. In addition around 53.33% students replied that their teachers in schools don’t teach about disasters, effects and basics to survive any such situations rather than regular subjects. This revealed the least priority to disaster preparedness in schools which might be a major reason for schools staying closed for many days to get back to normality after the disaster’s passed. The other 46.66% students reported that their teachers taught basics on occurrence of disasters and their effects but not in depth. During the survey it is also observed that almost all the schools have first-aid kits as a basic requisite in case of emergencies. Out of 120 students around 59.16% students answered that their schools have first- aid kits while the remaining 40.83% students were not sure if their school has a first-aid kit which indicates students lack of information on fundamental provisions their schools are providing. On the other end around 80.83% students feel there’s no safe place to hide in their schools which would make them panic and result in chaos in advent of any accident or disasters. This might probably be the reason where thousands of students were killed in past twenty years affecting the educational institutes<sup>11</sup>. Whereas the remaining 19.16% students answered the only option is to either run out of school or to hide in washrooms. Thus from the answers it was observed that all the ten schools don’t have proper risk reduction or preparedness plans.

Table-2: Response of students to Pre-disaster Preparedness (%).

Pre-Disaster Preparedness	Students Response	
	Yes	No
Does your school have emergency exits?	17	103
Does your teacher teach about disasters and there affects?	56	64
Is there any first aid kit in your school?	71	49
Is there any safe place to hide in your school building during any accident/disaster?	23	97

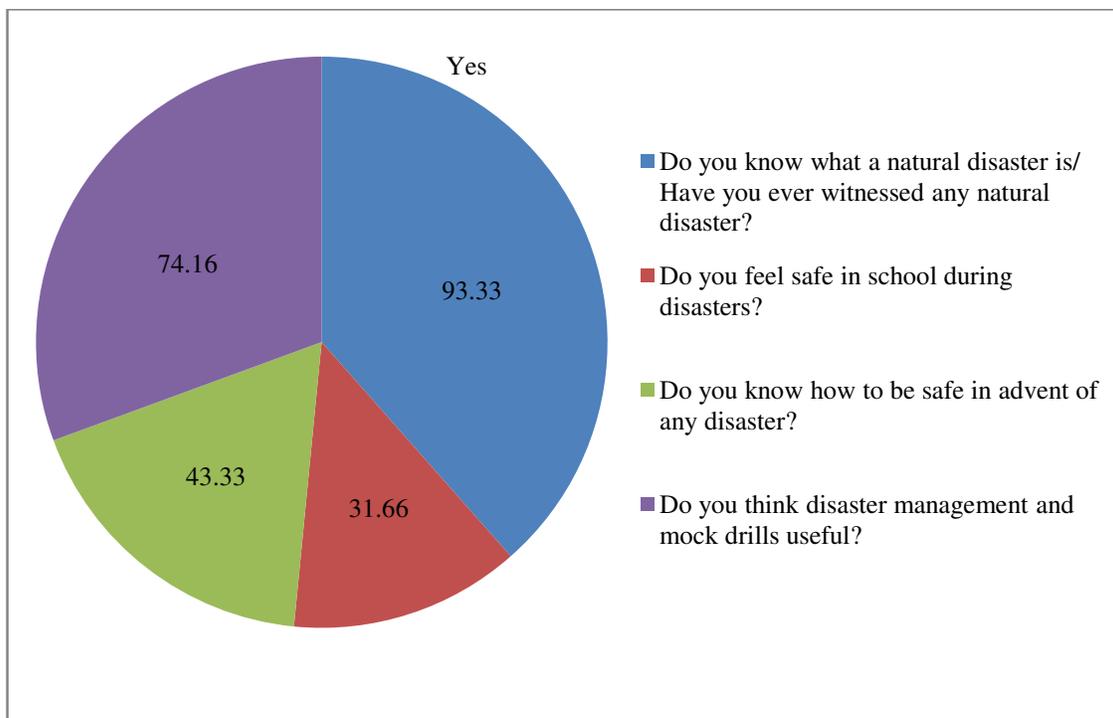


Figure-2: Students Response on Disaster Perceptions.

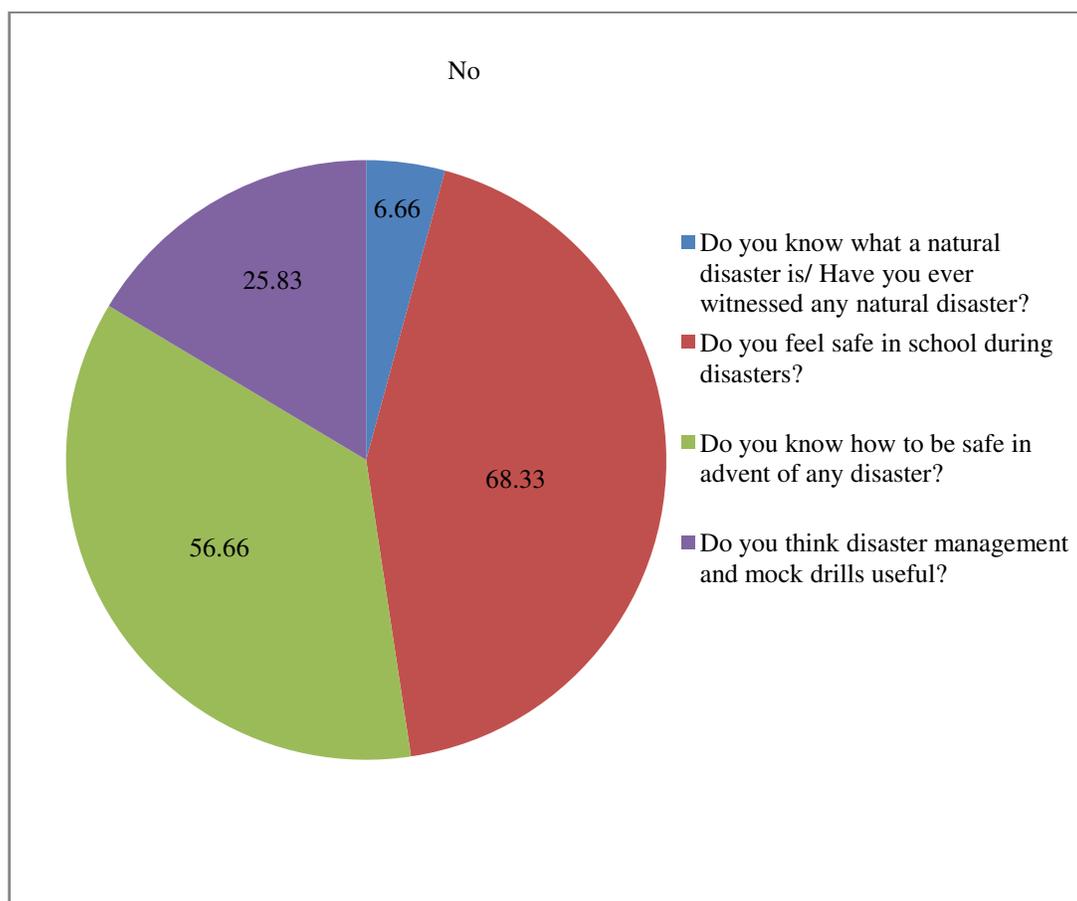


Figure-3: Students Response on Disaster Perceptions.

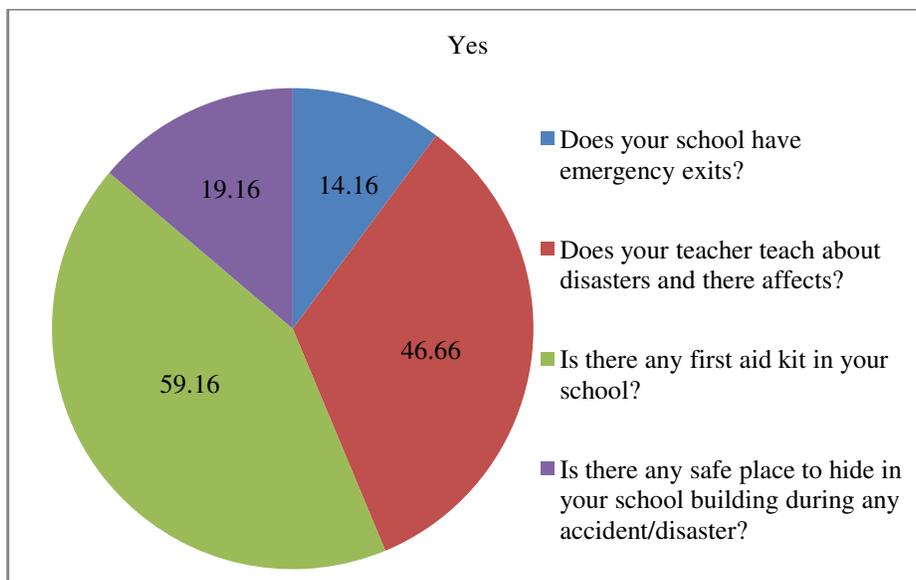


Figure-4: Students Response on Pre-disaster Preparedness (%).

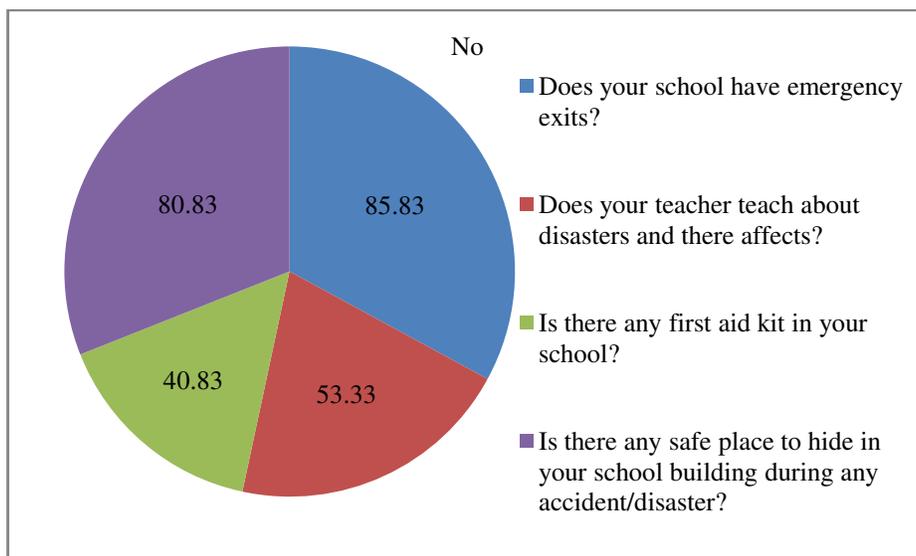


Figure-5: Students Response on Pre-disaster Preparedness (%).

**Post-Disaster Preparedness:** From the study it was satisfactory to know that almost 70% students strongly said their teachers and other members would immediately come to their rescue in emergency which shows the administrations and teachers proactiveness. However 64.16% students also revealed there are no emergency vehicles to carry them in case of any accident/disasters which could ultimately result in casualties. In addition it was avowed that majority students are not happy with their school building construction and opine that classrooms are very narrow, suffocating with no sufficient space to freely walk while few said there are no corridors which is stressful at times to continuously sit in classrooms even in leisure hours. This was a major reason where 90% of students don't want to reconstruct the same building. Although most of the answers were related to personal comfort it is also observed that there is every

possibility of small accident resulting in a major loss of life due to complete closed and blocked ways within the schools.

Table-3: Response of students to post-disaster preparedness (%).

Post – Disaster Preparedness	Students Response	
	Yes	No
Does your teachers and security come to immediate rescue?	84	36
Are there any emergency vehicles to carry injured students?	43	77
Do you want to reconstruct same building after a major disaster?	12	108

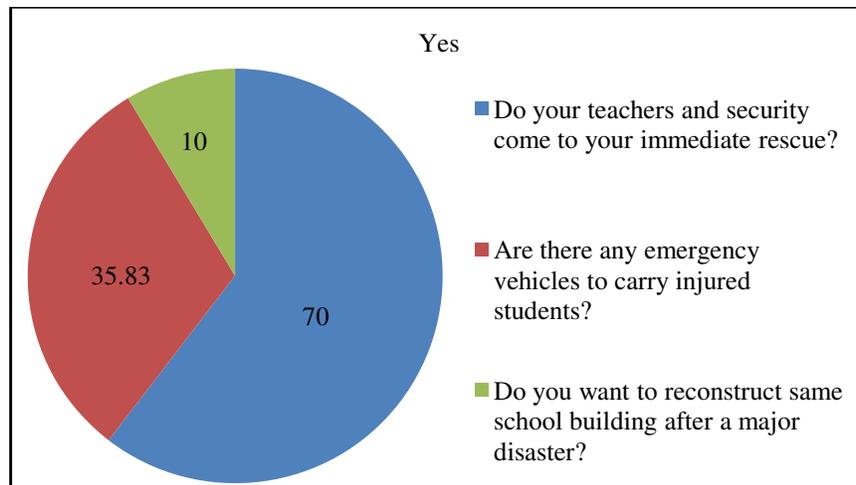


Figure-6: Students Response on Post - Disaster Preparedness (%).

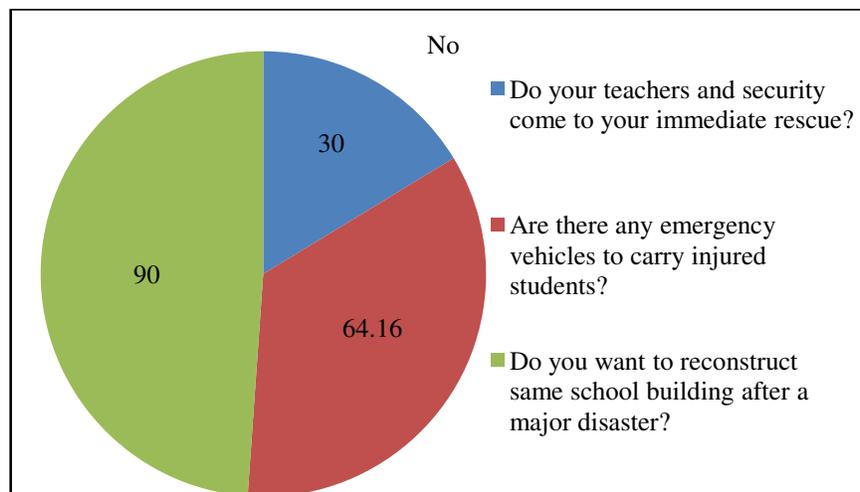


Figure-7: Students Response on Post - Disaster Preparedness (%).

### Conclusion

The present quaternary study exposed very low standards of schools in proper risk reduction and emergency preparedness plans. Although the survey was carried out in private schools it was observed that the students belonging to higher grade are also not clear in their views of disasters and the aftermath. It was clear that the schools are not equipped to overcome or at least keep students safe. Despite priority given to these natural events and the ways to protect the public, from the survey it was proved that the majority of schools are giving least precedence to convey their staff and teachers the importance of emergency preparedness. The survey further affirmed student’s vulnerability when in schools which needs an immediate attention and a regular inspection in schools. Thus the study highlights a more in-depth investigation to overcome all the barriers in knowledge sharing to students and also to make disaster preparedness as a mandate in schools.

### References

1. Mijalkovic S. and Cvetković V. (2013). Vulnerability of Critical Infrastructure by Natural Disasters. Paper presented at the national critical infrastructure protection – regional perspective, University of Belgrade – Faculty of Security Studies, Institute for Corporative Security Studies in Ljubljana, Belgrade, 91-102.
2. Parmar N.K., Dave P.K. and Kant S. (2001). Disaster management an overview In Emergency Medical services & Disaster Management A Holistic Approach (ed). Jaypee Brothers New Delhi, 252-265.
3. Bullock J.A., Haddow G.D. and Coppola D.P. (2011). Managing Children in Disasters; Planning for Their Unique Needs. Boca Raton, FL: Taylor and Francis Group, LLC.
4. Peek L. (2008). Children and disasters: Understanding vulnerability, developing capacities, and promoting

- resilience—An introduction. *Children, Youth and Environments*, 18(1), 1-29.
5. Ronan K.R. and Johnston D. (2003). Hazards Education for Youth: A Quasi-Experimental Investigation. *Risk Analysis*, 23(5), 1009-1020.
  6. Nathe S.K. (2000). Public education for earthquake hazards. *Natural Hazards Review*, 1-4, 191-196.
  7. Shaw R., Shiwaku K., Kobayashi H. and Kobayashi M. (2004). Linking experience, education, perception and earthquake preparedness. *Disaster Prev Manage*, 13(1), 39-49.
  8. Simsek C. (2007). Children's Ideas about Earthquakes. *Journal of Environmental and Science Education*, 2(1), 14-19.
  9. Ronan K., Crellin K. and Johnston D. (2010). Correlates of hazards education for youth: a replication study. *Nat Hazards*, 53(3), 503-526.
  10. Momani N.M. and Salmi A. (2012). Preparedness of schools in the Province of Jeddah to deal with earthquakes risks. *Disaster Prevention and Management: An International Journal*, 21(4), 463-473.
  11. Green R. and Miles S. (2011). Social Impacts of the 12 January 2010 Haiti Earthquake. *Earthquake Spectra*, 27 (S1), S447-S462.