

Role and Capacity Building of School Teachers in Disaster Preparedness and Prevention

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Abstract

This paper attempts to gain an insight into the capacity building of school teachers and their role in the disaster preparedness and prevention in the schools of Delhi. Attempts have been made to document the responsibilities of a teacher during a disaster, process of evolving a contingency plan, processes and frequency of the development of disaster management plan, resources identification and availability of resources for disasters related to electric faults, fire and earthquake. Schools were identified from different part of the City of Delhi. The study included teachers from schools who are teaching different classes. It may be noted that a particular teacher may be teaching more than one class. The sensitization and involvement of social science and science teacher was far more compared to the other teachers in the Disaster Management Team of the schools. In spite of well defined guidelines by the National Disaster Management Authority (NDMA) and Central Board of Secondary Education (CBSE), infrastructure and facilities were found to be limited. Although the teachers were well aware of their roles and responsibilities for the disaster preparedness in their schools and in-service training was being provided, certain gaps in terms of structural mitigation, preparedness in capacity building of the students, teachers and other people can be given more emphasis.

Keywords: School Teachers, School Disaster Management, Capacity Building,

Methodology

The National Disaster Management Authority with the collaboration of the Education Department of State of Delhi made it mandatory to have in the schools. The Disaster Management Teams consist of the school administrator and other teachers from the same school. As it was felt that the teachers and school administrators from the same school would have better insight into the structure and processes of that school and would be present right there if an emergency/disaster occur. These teams have been oriented by the National Disaster Management Authority.

Findings



The teachers were well aware of their roles and responsibilities for the disaster preparedness in the schools. It was also found that the teachers were hesitant to give answer related to the disaster management in the schools. According to them, the social science and science teacher would provide the right answers on the disaster management. But being the major member of the school community, every teacher should be aware of various aspects of the disaster and should be capable of immediate response to the disasters.

The school disaster management team basically comprises of the school administrators, vice principal, in charge of the schools, teachers and students. The school disaster management teams have outlined specific roles to the members of the school disaster management teams. Majorly, social science teacher and physical educators of the school are involved in the planning and implementation of the outlined plan in the schools.

It was found that disaster management awareness and basic preventive measures were taken by the school as per the National Disaster Management Authority (NDMA) and CBSE guidelines. But the actual importance of it was missing in the responses of the respondents and the school infrastructure and facilities. There were gaps in terms of structural mitigation, preparedness in capacity building of the students, teachers and other people in it. The participation of the students in the school disaster management should be encouraged by introducing interactive information awareness communication means.

1. Introduction

DISASTERS

According to WHO , 'A disaster is any occurrence that causes damage, ecological disruption, loss of human life, or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area'. (World Health Organization, 1995) .The International Decade for Natural Disaster Reduction defined disaster as 'a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources' (DHA/IDNDR 1992).

The State of Delhi has been prone to various disasters both natural as well as manmade. The Government of NCT of Delhi recognized the need to have a proactive, comprehensive and sustained approach to disaster management to reduce the detrimental effects of disasters on overall socio-economic development of the State. Further, on a day-to-day basis, Delhi is at risk to numerous hazards, such as earthquake, flood, bomb-blasts, other acts of terrorism, fires, industrial and nuclear, biological & chemical hazards, flash floods, building collapses, road accidents, water logging, etc (Delhi Disaster Management Authority)



A disaster is an overwhelming ecological disruption occurring on a scale sufficient to require outside assistance. It is an event or series of events which seriously disrupts normal activities.

According to the Natural Disasters Organization(1987), disaster is a serious disruption to community life which threatens or causes death or injury in that community and/or damage to property which is beyond the day-to-day capacity of the prescribed statutory authorities and which requires special mobilization and organization of resources other than those normally available to those authorities.

The Bhuj earthquake (2001) saw nearly, three million children directly affected in 18 districts of the Gujarat State. The fire tragedy (2004) in a school in Kumbakonam (Tamil Nadu State) claimed the lives of 90 children, tsunami in 2004 led to about 60,000 children losing their lives. In all the above cases the number of deaths and losses was mainly due to the limited preparedness of the concerned authority and the children having not been sensitized to the do's and don'ts regarding such events. Moreover, it needs to be highlighted that the disaster management and mitigation plans are often prepared in isolation without considering target population.

The Status Report (2008) on Disaster Education in India emphasizes that a Education program with a wider range of people representing entire age groups needs to be strongly advocated. The best way out is to include the disaster management education in the school / college curriculum. Education and awareness programme should be designed in such a way that it is sustainable and continuous process as the target population continuously changes and grows.

Impacts of Disasters on School Communities

These disasters can all be mitigated with knowledge and planning, physical and environmental protection measures, and response preparedness. The impacts of disaster are in the area of physical, educational, economic as well as psychological.

The slogan for the UN International Strategy for Disaster Reductions (2006-8) global campaign **“Disaster Reduction Begins at School”** is a very accurate and pertinent one.

Basic education and disaster prevention go hand in hand. The methods for recognizing and assessing the future impact of hazards, vulnerabilities, risks and identifying strengths and capacities happen to contain the fundamentals of scientific thinking as well as the basics of good citizenship and participatory governance. The values, attitudes and technologies needed for physical protection; informed planning, environmental stewardship disaster-resilient design and construction, are the same as those fundamental to sustainable development and livelihood security. The skills and provisions for disaster response are empowering and confer safety in everyday life. Disaster resiliency is built upon a foundation of analytical and problem-solving skills and draws from the development of personal and inter-personal intelligences (Petal, 2008)



Literature Review

The Global Assessment Report on Disaster Risk Reduction 2013 warns that the worst is yet to come. It stated that in a world of on-going population growth, rapid urbanization, climate change and an approach to investment that dis- counts disaster risk, the potential for future losses is enormous. The global community continues to mix a destructive ‘cocktail of disaster risk’ despite catastrophic losses in recent years from the Japan earthquake and tsunami, floods in Pakistan and Thailand and the destructive Super Storm Sandy. Disaster risk management reduces uncertainty, builds confidence, cuts costs and creates value. (Global Assessment Report on Disaster Risk Reduction , 2013)

Education is a human right, universal and inalienable. Education is especially important in enabling people to reach their full potential and exercise other rights. This right does not disappear or get suspended because of disasters and emergencies. When education is interrupted or limited, students drop out, with negative and permanent economic and social impact for students, their families, and their communities. Natural hazards are part of the context for educational planning. Whether it is annually floods, a once – in – 5 generations earthquake, the increasing severity of storms and cyclones, water shortages or the slow onset of rising sea water levels, these known and expected hazards can be mitigated with the determined application of knowledge , education and ingenuity.

School safety and educational continuity require a dynamic, continuous process initiated by management and involving workers, students, parents, and the local community. School disaster management involves the following steps: assess hazards, vulnerabilities, capacities and resources, plan and implement for physical risk reduction, maintenance of safe facilities, standard operating procedures and training for disaster response, test mitigation and preparedness plans and skills regularly, with realistic simulation drills.

The four disaster management phases illustrated here does not always, or even generally, occurs in isolation or in this precise order. Often phases of the cycle overlap and the length of each phase greatly depends on the severity of the disaster.

- Mitigation - Minimizing the effects of disaster. Examples: building codes and zoning; vulnerability analyses; public education.
- Preparedness - Planning how to respond. Examples: preparedness plans; emergency exercises/training; warning systems.
- Response - Efforts to minimize the hazards created by a disaster. Examples: search and rescue; emergency relief.



- Recovery - Returning the community to normal. Examples: temporary housing; grants; medical care.

School Disaster Management is the process of assessment and planning, physical protection and response capacity development designed to:

1. Protect students and the staff from physical harm;
2. Minimize disruption and ensure the continuity of education for all children;
3. Develop and maintain a culture of safety.

Significance of the study

Disaster management in schools plays significant role in educating and developing the basic skill to face any disaster. The disaster management not only makes the students aware but also inculcates the right attitude to respond to the disasters. Training and capacity building enhance the ability of the students and school communities to take the right decision during any emergency.

School students act as communicators/ mediators of the government to convey the recent policies, guidelines on prevention and preparedness for disasters to the household communities. They are sensitized on different issues related to the disasters, causes and effect , prevention and preparedness practices as well as do's and don'ts of the disaster in the school through school curriculum , capacity building and training by the use of demonstrations, mock drills, seminars and pamphlets. The disaster management in school not works for the sensitization of the school student about disasters but also ensure the safety of the students.

School communities should be encouraged to treat schools as essential community facilities because of the significant impact on students and the locale if a damaged school is closed for an extended period of time. A higher level of protection is appropriate for facilities that will enhance community recovery, including schools which may be designated as emergency shelters, and other buildings that support vital services. A hazard assessment should assure that the school buildings have functioning locks and controlled access.

During any disaster, the children in schools are the most vulnerable group among all the public facilities.

Preparedness and prevention of any disaster by the school authority is one of the important responsibilities in order to protect and provide safety to the children of the schools. Schools need to prepare themselves for major damaging events. Being prepared will improve the ability to respond to disaster.

RESULTS



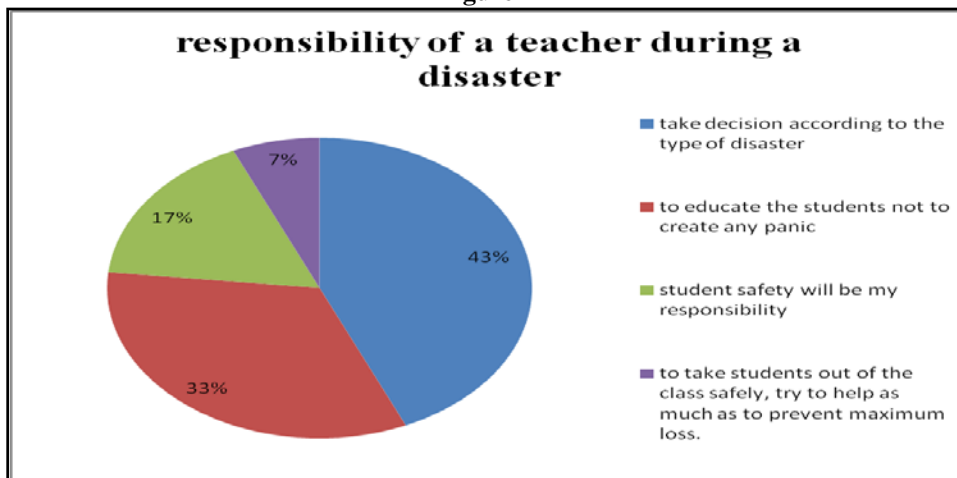
The results of the study are broadly categorized into the following heads:

i) Capacity and Role of Teachers

The capacity and role of teachers is important and their awareness and understanding of the various disasters is imperative to ensure the safety of the students.

When asked about the role of a teacher, when a disaster strikes, about 43.33% of teachers responded that they take decisions according to the type of disaster and 33.33% said that they will educate the students to be calm and not to create any panic.

Figure 1



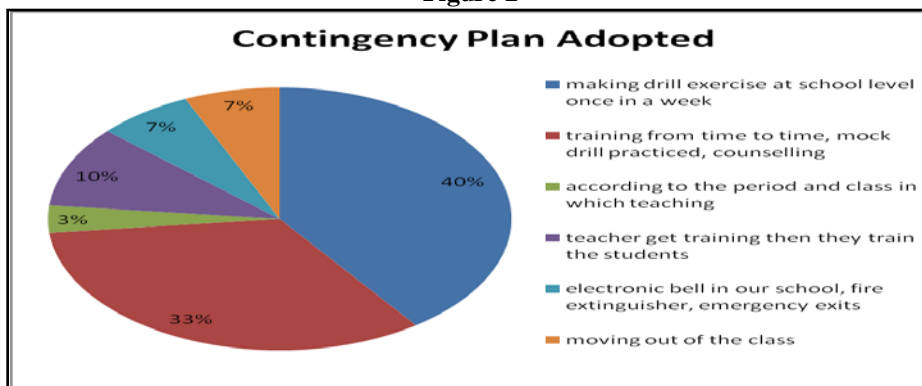
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Similarly 16.67% said that students' safety will be their first responsibility when any disaster strikes while teaching a full class.



The action plan/contingency plan adopted for disaster reduction in the schools

Figure 2

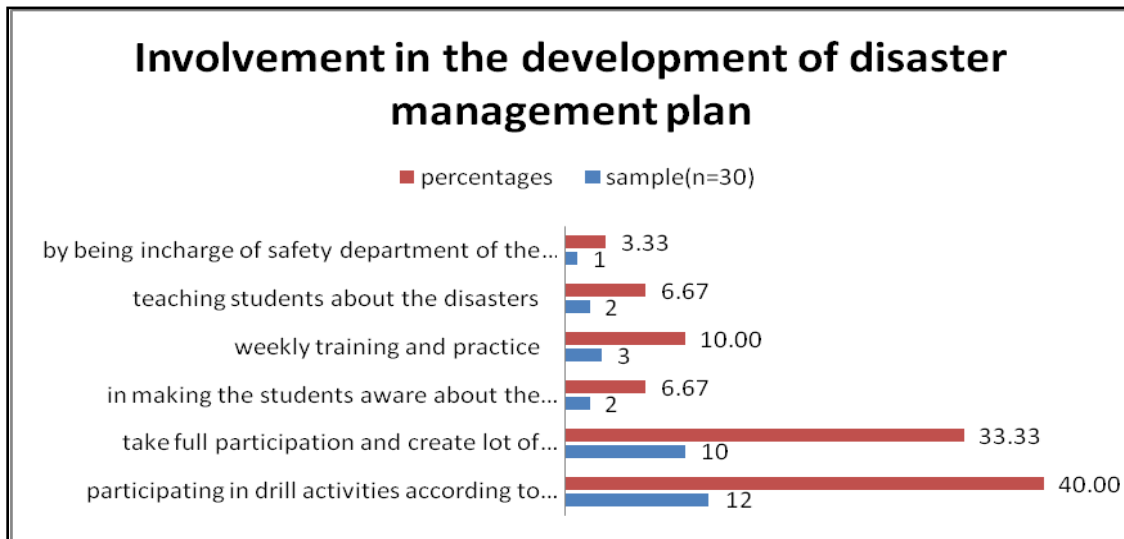


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According to the 40% of teacher from all the six school whether government, government – aided and private schools, making drill exercises at school level once in a week are the regular action plan/ contingency plan adopted in their school. About 33.33% of teachers said that training from time to time, making mock drill practiced and counseling given to students is the basic action plan followed in their schools. Some respondents said that they have been given the evacuation plans of each class and during emergency they will move out accordingly from the class they might be teaching.

Figure 3

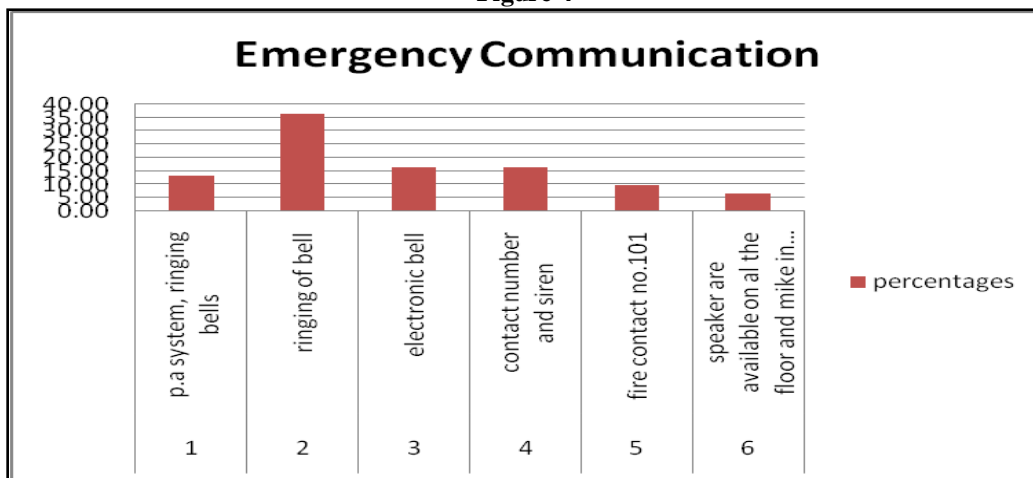




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About 40% of the teachers replied that they participate in the drill activities according to the duty assigned by the head of the school, while 33.3% said that they take full participation and create lot of awareness among children.

Figure 4



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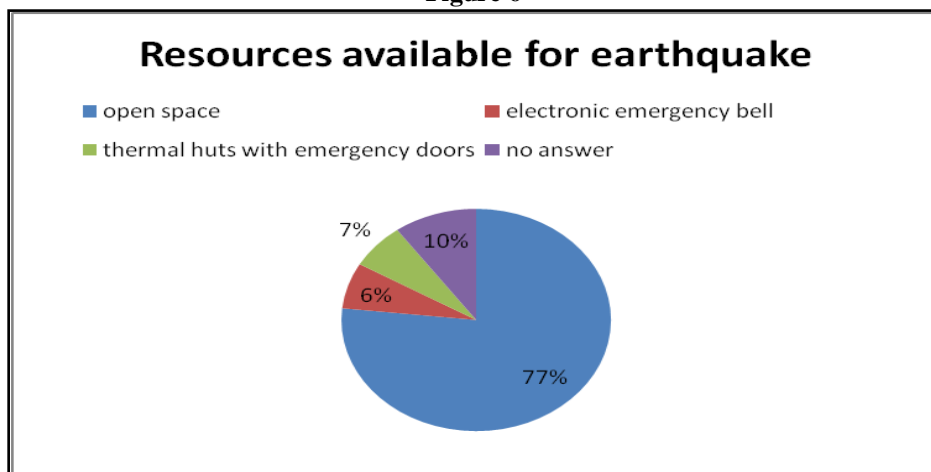
According to the 36.67% of the teachers, the ringing of bell is the one of the current emergency communication practiced in the schools. About 13.33% of the total teachers replied that public address system and ringing of the bell both are the emergency communication in their respective



schools and 16.67% of the teachers feels that emergency contact number and siren are used as the emergency communication system used in their school.

ii. Availability of Resources:

Figure 6

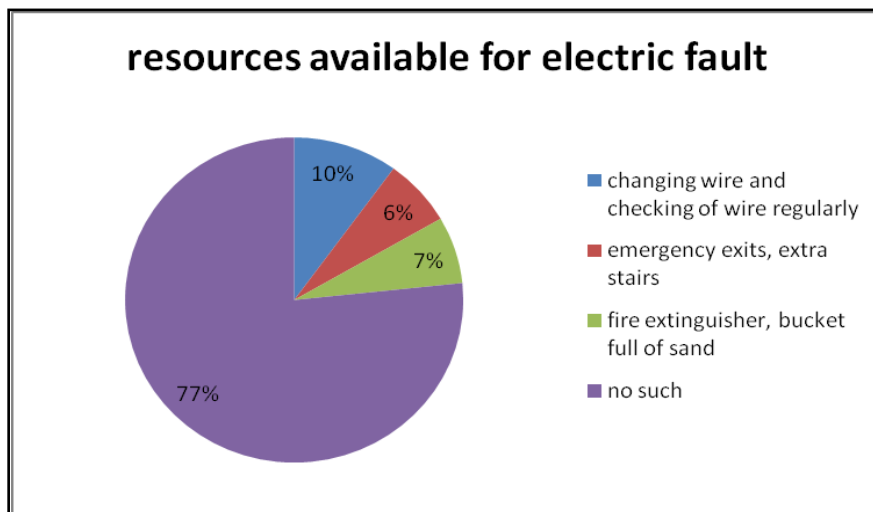


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About 76.67 percent of the teachers replied that open space in the resource available for earthquake preparedness, while 16.63 percent teachers said that electronic emergency bells is the resource available in the school building for the preparedness of earthquake. In one of the government school, the thermal huts have been constructed to accommodate the students of one of the building blocks of the school which is also considered as the resource available for earthquake preparedness in the school.

Figure 7

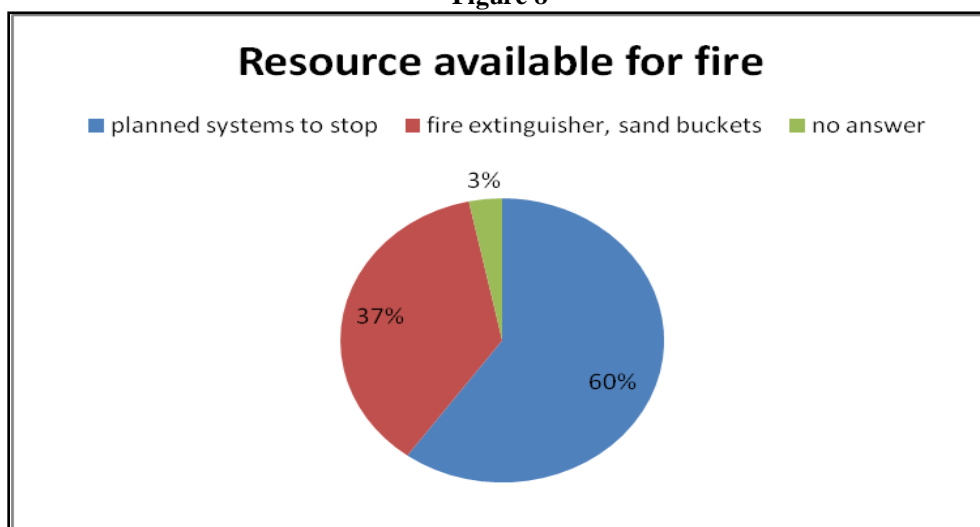




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About 76.67% of the teachers said there were no such resources available in the school for electric faults preparedness in the school building. About 10 percent of the teachers said that regular checking and changing of wires is done in their school for electric fault preparedness. About 6.67% of the teachers said that emergency exits and extra stairs are available for electric fault preparedness.

Figure 8



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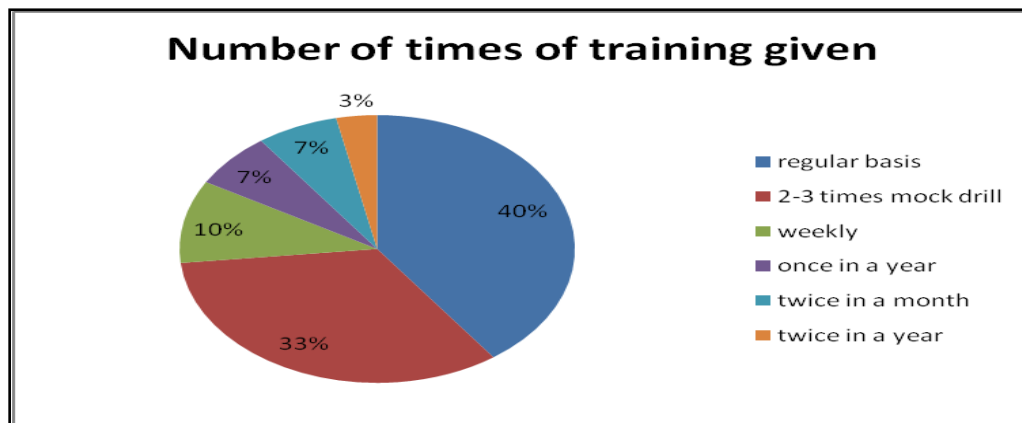
About 60 percent of the teachers said that planned system are available for the fire preparedness in the schools and 40 percent of the teachers said fire extinguisher and sand buckets are available in their school for the same.

Resources to be present in the school

About 90% of the teachers said that more open space and ramps should be present in the school for earthquake preparedness. About 10% of the respondent said retrofitting can be done to strengthen the existing structure. About 56.67% of the respondent said that there should be more fire extinguishers in the schools. The fire extinguisher should be available in each room and corner of the school. About 33.33 % of the teachers said are the resources that should be present in the school. In response to open ended question, 66.67% of the teachers said that time to time checking and repairing of old wires should be done in the school for the electric fault. About 23.33% of the teachers said sand and more emergency aids should be there in the school for the electric fault preparedness.

iii. Number of Training given:

Figure 5



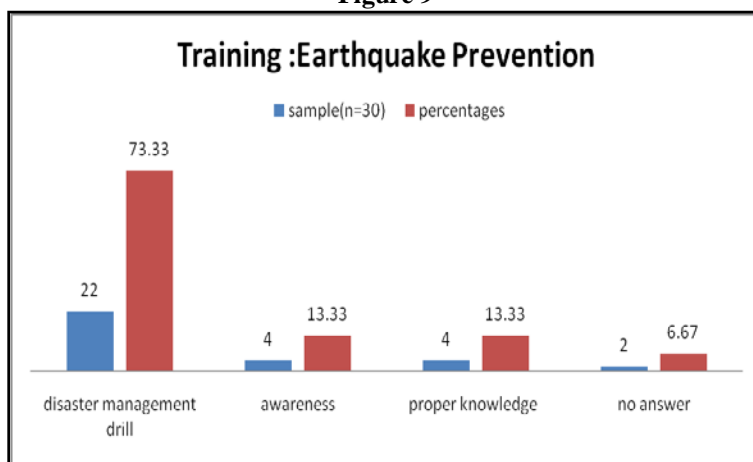
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About 40 % of the teachers said that the training is given to them on the regular basis as they don't want to specify the duration of training. About 33.33% of the teachers said that they get training 2-3 times mock drill in 6 months.

According to the 40 percent of the total teacher said that various mock drill programmes were organized in the school to have better understanding and training related to utilizing the disaster management kits and equipments. About 16.67 percent said that the expert personnel gave firsthand experience to them for the right and precise handling of the kit and equipments.

Training for Prevention

Figure 9

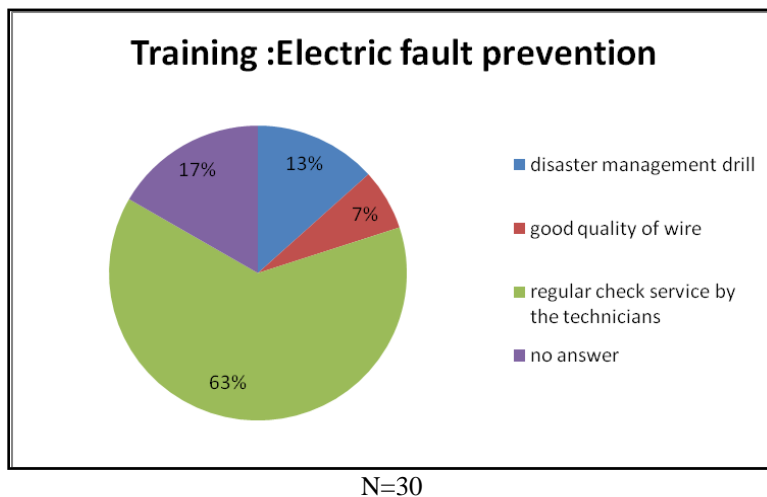


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According to the 73.33% of teachers, mock drill on drop, hold and cover exercise and training is given in the school for the earthquake prevention. About 13.33% said that proper knowledge and awareness are the skill that they have for the earthquake prevention in the school to guide and take care of the student during any earthquake.

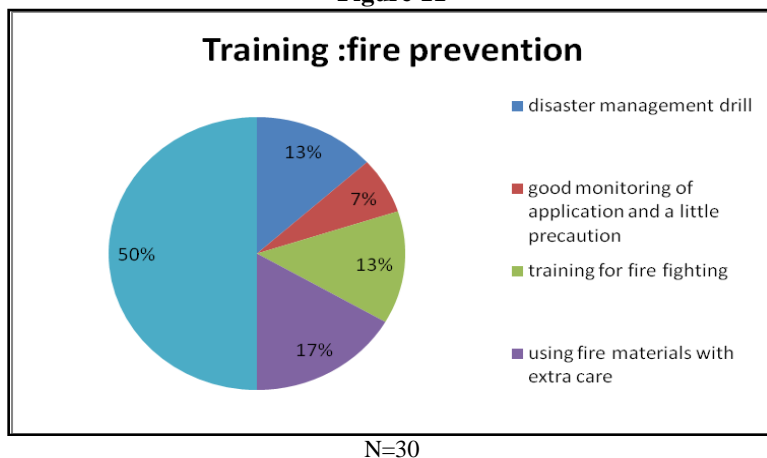
Figure 10





About 63.33% of the teachers said that regular check services by the technicians is one the preventive measures taken by the school for electric fault. Minority of the teacher answered that disaster management drill training given which also helps in prevention of electric fault.

Figure 11



According to 50% of the teachers, using of fire extinguishers with extra care is one of the basic training given to them for the prevention of fire. About 13.33% of the teachers said that training on fire fighting has been given in the school for the prevention of fire.

Conclusion

The role and responsibility of teacher is critical in the disaster preparedness, prevention and its management. One of the major responsibilities of teachers was to give training, practice of mock



drill and counseling to students is the basic action plan of the teachers followed in their schools. The study has found that the majority of teachers responded that they take decisions according to the type of disaster and educate the students to be calm and not to create any panic. Similarly some also said that students' safety would be their first responsibility when any disaster strikes while teaching a full class.

The study that the capacity building of teachers takes place through various mock drill programmes which were organized in the school in order to understand the utilization of the disaster management kits and equipments by expert personnel from Delhi Disaster Management Authority (DDMA) who gave firsthand experience to them for the right and precise handling of the kit and equipments. The training on mock drills usually takes place 2-3 times in six months.

Study highlighted that teachers replied that open space, electronic emergency bells, alarms, thermal huts are the resource available for earthquake preparedness. The ringing of bell, public address system, emergency contact number of local police officials and siren were used as the emergency communication system in their school. According to the teachers the school should give emphasis on the structural mitigation by retrofitting, providing ramps and open space in the school building for the earthquake preparedness. The fire extinguisher should be available in each room and corner of the school. The fire alarm system should be installed in the school building especially in the government and government aided schools for the safety of the school community. Timely checking and repairing of old wires should be done regularly in the school for the electric fault preparedness.

It was found that the teachers were hesitant to give answer related to the disaster management in the schools. According to them, the social science and science teacher would provide the right answer on the disaster management. But being the major member of the school community, every teacher should be aware of the various aspects of the disaster and should be capable of immediate responding to the disasters. It was also found that disaster management is considered less important among the teachers other than social science and science streams.

In government schools, teachers said that government should provide necessary funds for disaster management in the schools. They said that due to the lack of emergency resources and systematic management, there have been difficulties in the implementation of disaster preparedness and mitigation plan. Hence the role and responsibilities of the teachers was clearly defined to them but the capacity building of the teachers should be enhanced by providing the right resources for structural and non structural mitigation.

REFERENCES



Arya, A. S., Padmanabhan, G., & Karath, A. (December 2004). *School Safety*. Ministry of Home Affairs.

Central Board of Secondary Education (CBSE), *Natural Hazards and Disaster Management*. Delhi: Preet Vihar, 2006.

Coppola, D. P. (2011). *Introduction to International Disaster Management*. China: British Library .

Disaster Education in India - A Status Report (2008).. Division, N. D. *Hazards, Disasters And Your Community*. New Delhi.

P.Shiromony, M. (2009). Disaster Management and Sustainable Development. *Journal of Disaster management and Sustainable Development- Emerging Issues and Concerns* , 1-6.

Pathak, V., & Oza, S. (2008). *Auditing school safety in India: lesson for Asia*.

Petal, M. (2008). *Disaster Prevention for Schools*. Geneva: UNISDR.

Singh, S.K., & Singh,S.(1998). *Disaster Management*. New Delhi: Mittal Publications.

Sundar, I. (2007). *Disaster Management*. New Delhi: Sarup & Sons.

United Nations Development Programme (UNDP), *Disaster Management*

Warfield, C., *the Disaster Management Cycle*, 2008.

GoI- UNDP Disaster Risk Management Programme. (2004). *School Safety Version 1.0* Retrieved Jan from <http://ndma.gov.in/ndma/nssp.html>

(2013). *Global Assessment Report on Disaster Risk Reduction* . UNIDSR.

Petal, M. (2008). Disaster Prevention for Schools. Geneva: UNISDR.

