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SCHOOL SAFETY AND DISASTER RESILIENCE

Dr. Swapna Bijayini
Assistant Professor
Capital Law College, Affiliated to Madhusudan Law University

ABSTRACT

School safety and disaster resilience have emerged as essential components of sustainable educational development in the modern era. Children are among the most vulnerable groups during disasters, facing risks such as injuries, displacement, psychological trauma, interruption of education, and health hazards. Since schools serve as critical institutions for learning and social development, ensuring their safety is vital for protecting children and strengthening community resilience. This paper examines the concept of school safety, its relationship with disaster resilience, and the role of educational institutions in disaster risk reduction. It highlights the significance of safe infrastructure, hazard identification, disaster management planning, awareness generation, and capacity building within schools. The study further discusses the role of teachers, students, and stakeholders in creating a culture of preparedness and prevention. Special emphasis is given to the Sendai Framework for Disaster Risk Reduction and the National School Safety Programme initiated by the Government of India to promote safer educational environments. The paper concludes that integrated planning, community participation, regular mock drills, and resilient school systems are essential for reducing disaster risks and ensuring uninterrupted education during emergencies. A safe school environment not only protects children but also contributes significantly to building a disaster-resilient society.

Keywords: School Safety, Disaster Resilience, Disaster Management, Risk Reduction, Emergency Preparedness, School Disaster Management Plan, Capacity Building, Hazard Assessment, Sendai Framework, National School Safety Programme.

1. INTRODUCTION

Disaster – "Suddenly it comes, slowly it goes; and leaves behind, tales of woes." Disasters are unavoidable. We must all be prepared to survive current and future disasters. While we cannot control nature, we can be vigilant and prepared. Structured and preplanned preparedness, along with a healthy response to disasters, can help save lives. Our success lies in unity and harmony, free from discord, as preached by great people past and present.

Educational institutions are places where future citizens of the country are moulded and guided to become better human beings. Apart from home, children spend most of their time in schools. Thus, a school must be safe and resilient to hazards. A safe school can go on to become a foundation block for a disaster-resilient society.

1.1 School Safety

In the current socio-economic and environmental scenario, children face different risks ranging from death, injuries and diseases due to hazard vulnerability. Developmental issues such as poor access to water and sanitation, poverty, nutritional deficiencies, etc., exacerbate the risks. Long-term effects of disasters, such as psychological trauma, displacement, and disruption of education during the developmental years, greatly increase the vulnerability of children. Thus, in developing countries where the government is functional and working

towards the welfare of the society, various measures are being implemented to minimise the risk of children.

Providing safe schooling facilities is one of the principal components to minimise risks for children. "School Safety has been defined as the creation of safe environments for children, starting from their homes to their schools and back. This includes safety from large-scale 'natural' hazards of geological/climatic origin, human-made risks, pandemics, violence, as well as more frequent and smaller-scale risks like fires, road accidents and other emergencies, and environmental threats that can adversely affect the lives of children." (Ahmedabad Action Agenda for School Safety, 2007)

Schools help children in their critical years of development. They create a safe space and a creative environment to nurture the talent of children. It is indispensable for effective teaching and learning. It adds human capital to the country's economy. Hence, schools are considered critical infrastructures and, therefore, the safety of critical infrastructures is an essential component. Many of the school children were deprived of education due to different kinds of disasters for a long duration due to the lack of schooling infrastructure. Thus, school safety is a crucial component in developing disaster resilience. Programme strategies should inform, pursue and integrate the issue of safety in order to create safer schools.

1.2 School Safety and Disaster Resilience

Resilience as a concept has different understandings in different disciplines; it is a complex and multifaceted concept. IFRC, in their World Disaster Report of 2004, defines resilience as "The capacity to survive, adapt and recover from a natural disaster. Resilience relies on understanding the nature of possible disasters and taking steps to reduce risk before an event, as well as providing for a quick recovery when a natural disaster occurs. These activities necessitate institutionalised planning and response networks to minimise diminished productivity, devastating losses and decreased quality of life in the event of a disaster". (Paton, 2006) Thus, the idea of resilience offers a strategy for promoting effective disaster readiness and response. Some of the common elements identified in the concept of resilience include Communication, Learning and Adaptation, Risk Awareness, Trust and Social cohesion (capital), good governance, adequate planning and preparation, redundancy of critical systems, regional economic capacity and economic diversification and lastly, state of the population's underlying physical and mental health(Castleden, McKee, Murray, & Leonardi, 2011).

2. Sendai Framework (SFDRR) and School Safety

Recognising the critical role that schools play, the Sendai Framework for Disaster Risk Reduction (SFDRR) identifies as a priority "Investing in disaster risk reduction for resilience".

It states that, "To strengthen, as appropriate, disaster-resilient public and private investment, particularly through structural, non-structural and functional disaster risk prevention and reduction measures in critical facilities, in particular schools and hospitals and physical infrastructures; building better from the start to withstand hazards to proper design constructions, including the use of principles of universal design and the standardization of building materials; retrofitting and rebuilding; nurturing a cultural of maintenance; and taking into account economic, social, structural, technological and environmental impact assessments"(Sendai Framework for Disaster Risk Reduction 2015-2030, 2015).

2.1 Disaster Education for Strengthening Resilience

"Disaster Awareness through Education" is the best way to make a safe and disaster-resilient society. School is considered an important instrument to provide knowledge and reduce disaster risk through awareness, innovation and education. Teachers and students play crucial roles in the development of a culture of prevention and preparedness, because knowledge and skill seep into the family and community through them. Thus, school safety programmes play a pivotal role in providing risk knowledge, generating awareness and developing capacity.

A child is influenced indirectly by connections such as family members, teachers and others. Thus, school is an ideal place to impart the knowledge of disaster preparedness and to inculcate disaster resilience in society.

Knowledge provided to teachers and non-teaching staff will help them better assist students in times of crisis. Being the first responders, they can significantly reduce the extent of loss post-disasters when imparted with adequate and practical knowledge.

2.2 Multidimensional Impact of the School Safety Programme

In the aftermath of any disaster, many children go through a phase of psychological trauma and stress. In such a scenario, schools can provide children a haven and help them recover faster. In the school premises, adequate nutrition and WASH facilities can be arranged for the sheltered children while providing them with adequate psycho-social support. Schools also offer a neutral location for relief distribution, providing first aid, setting up makeshift vaccination centres, and temporary shelters, etc. Thus, school safety is an essential component in not only mitigating and preparing for hazards but also in delivering response functions.

Thus, School Safety essentially aims to promote a culture of safety not only in school, but also in society. Sensitisation of children and school communities towards disaster preparedness and safety measures eventually leads to building disaster resilience on a larger scale. Active participation of stakeholders in school safety activities will nurture the resilience in all strata of the community. Schools, being an agency that fosters children and prepares them for the challenges of the outside world, disaster resilience need to go hand in hand with regular schooling.

The key components of developing a school safety programme are as follows:

a. Identification of Hazards

Some hazards may follow a temporal pattern occurring at regular intervals, like cyclones, floods, etc., while some may be very infrequent, such as Earthquakes, tsunamis, whereas at certain places, multiple hazards may co-exist. Thus, schools need to identify and understand the probable hazards through systematic hazard assessment.

Once the hazard assessment is done, such information must be displayed at a designated location in the school premises, so that it can be visible to everyone. Necessary structural mitigation measures must be taken by the school management to ensure the safety of buildings after hazard assessment.

b. Safety of the School building

School buildings are often vulnerable to various types of hazards due to multiple reasons like old constructions, poor hazard knowledge during construction, poor maintenance and so on. Therefore, in order to ensure the safety of children as well as teachers and to minimise the

impact on the education of children, it is extremely necessary to ensure the structural safety of school buildings.

There are spatial and temporal dimensions of hazard risks. India has a multi-hazard profile that ranges from earthquakes, floods, cyclones, to routine hazards such as fire and road accidents. The structure of the school building should be suited to the hazard profile of the region where it is being constructed. And by safety of school buildings, safety of both the school building and the school premises is considered.

c. School Disaster Management Plan

A school disaster management plan is a very useful and beneficial non-structural mitigation component in School Safety Programmes. The process of making a disaster management plan involves the following steps:

- Developing Incident Emergency Operation Plan, Developing an inventory of Capacities available
- Evacuation Planning
- Setting up a body/institution to implement the disaster management plan

After hazards assessment and identification, the next step is to develop the Incident Response System or in other words, the Emergency Operation Plan (EOP). Such an incident response plan identifies persons and establishes procedures to follow during an emergency event. It includes guidelines for school administration, teachers, non-teaching staff and students. Involvement of students in the Emergency Operation planning is particularly important as it encourages student leadership, engages youth in school emergency management planning and contributes to student preparedness.

An EOP should consist of the following-

- Process/circumstances for activation of plan, assigning emergency responsibilities, defining the chain of command, and overall procedure of maintaining the plan.
- The communication process in case of an emergency should be laid out in the plan. This includes guidance on warning and alert systems and operating procedures for all stakeholders involved.
- An inventory should be included in the list consisting of medical supplies and their location, other equipment, and necessary phone numbers.
- A section on hazard or threat specific to the school should be included in the Emergency Operation Plan.

For the implementation of the emergency operation plan, an incident response committee should be established as illustrated in Figure 4. This needs to be based on the principles of the Incident Response System. It should consist of an incident manager and different sections such as Operations, Logistics, Planning and others as required.

Evacuation is an integral part of the disaster response system. Previously, limited to wartime evacuation, today this concept is embodied in Disaster Management in response to earthquakes, floods, fires, etc. However, one needs to think about evacuation in the local context and the nature of hazards and vulnerability identified in a locality. It needs to be planned at the micro and macro levels for schools.

The evacuation plan must be simplified and illustrative.

- It should be in the local language, with which children can relate easily and act accordingly. This Plan should have a multi-hazard approach, such as Earthquake, Fire, etc.
- Instead of a separate document, the evacuation plan can be a part of the Emergency Operation Plan. Evacuation plan needs to lay out the Floor plan, Exit points and Assembly points.
- Floor plan should include locations where equipment (Fire extinguishers, first aid kit) is located that may be needed during an emergency.

The evacuation plan also needs to mark Exit Routes, which should be clearly marked and well-lit; is wide enough to accommodate the number of children and unobstructed and unhindered pathway and staircase.

Assembly points are those locations where children can assemble after evacuation and can wait till further instructions. In most of the schools, the playground can be utilised as an assembly point. Those schools that are in the market area or congested and do not have a playground need to think about it separately. In such Schools, assembly points could be another building at a safe distance from the school building.

d. Awareness Generation and Capacity Building

Public Awareness is at the core of disaster risk reduction. The awareness programmes should include information regarding hazards and disasters, and how schools may be affected during and after any disaster. There are several means to deliver the message of safety and resilience, such as lecture series, brochures, leaflets, documentaries/short films, etc. Awareness generation activities such as exhibitions, debates, writing competitions, drawing competitions for students, etc., can be organised.

Capacity building may also include training in first aid, how to use a fire extinguisher and regular mock drills. First-Aid training needs to be given to teachers and students, which may minimise injuries after disasters. Training needs also to be given on the use of fire extinguishers, which should consist of information regarding different types of fire and the usage of various types of extinguishers available to contain the fire. This training should involve a practical demonstration of using fire extinguishers in a controlled manner and environment.

Mock drill is the most common way to disseminate and test an emergency operation plan. During a drill, the school personnel use actual school grounds to practice a response to an event. Mock drills may be done at regular intervals throughout the academic year. One drill can be informed, and the other may be unexpected or without any prior assignment. Mock drill for evacuation during fire or bomb threat is most practised. But depending on local hazards, context-specific mock drills need to be conducted. Evaluation should also be done to get feedback. This feedback may be used to upgrade the school disaster management plan.

3. NATIONAL SCHOOL SAFETY PROGRAMME

The Government of India has implemented National School Safety Programme (NSSP) during the year 2011-13, under the leadership of National Disaster Management Authority (NDMA) in collaboration with Ministry of Human Resource Development (MHRD), State/UT governments and national/ international agencies in 43 districts under 22 States/UT's which lies in seismic zone IV & V according to seismic zonation map.

As per the National Guidelines of school safety, the objectives of NSSP are as follows:

- To initiate policy-level changes for ensuring a safe school environment.
- To sensitise children and the school community on disaster preparedness and safety measures.
- To motivate direct participation of key stakeholders in activities that would help build a disaster-resilient community.
- To promote capacity building of officials, teachers and students.
- To carry out Information, Education and Communication (IEC) activities in schools and the associated environment.
- To implement non-structural mitigation measures in select schools. To carry out demonstrative structural retrofitting in select schools.

3.1 Operational components of NSSP:

- As part of capacity building interventions, training of teachers and master trainers will be carried out.
- Preparation of the school disaster management plan and distribution of disaster preparedness kits to selected schools in the targeted district.
- Development of Information, Education and Communication material for school children in the local language in the written and audio-visual format.
- Sensitisation programmes for government officials, NSS volunteers and other stakeholders who shall be involved in generating awareness among the general public.
- Carrying out a rapid visual screening survey in selected school buildings in the targeted district. Preparation of a standard checklist for the assessment of structural and non-structural risks for school buildings.
- Retrofitting of one school building in one district each in the targeted States/UT's.

3.2 Summary

- Providing safe schooling facilities is one of the principal components to minimise the risk facing children.
- This includes safety from large-scale 'natural' hazards of geological/climatic origin, human-made risks, pandemics, violence, as well as more frequent and smaller-scale risks like fires, road accidents and other emergencies, and environmental threats that can adversely affect the lives of children.
- Recognising the critical role that schools play, the Sendai Framework for Disaster Risk Reduction identifies as a priority "Investing in disaster risk reduction for resilience".
- School safety programmes play a pivotal role in providing risk knowledge, generating awareness and developing capacity.
- School safety programmes also help attain resilience from the grassroots, which trickles down in the community
- School safety programmes also serve the broader goals of ensuring the right to education and safety as a human right

- Components of school safety programmes broadly include Identification of hazards, Safety of the School building, preparing the School Disaster Management Plan and Awareness generation and Capacity building.

Coherent and integrated national and local plans are the need of the hour, as these are the measures through which appropriate steps can be taken to reduce risks and respond better.

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