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Understanding the Need for Situational Handling During Natural Hazards: An Attitudinal Study Among School Students

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ABSTRACT

The increasing incidence of natural disasters necessitates a structured approach to disaster preparedness and response. The World Disaster Report states that over 200 million people are affected by natural disasters annually, with children being among the most vulnerable groups. Schools play a crucial role in disaster risk reduction (DRR), as they provide a structured environment where students can learn critical survival skills. The study aimed at "Understanding the Need for Situational Handling During Natural Hazards: An Attitudinal Study Among School Students". The objectives of the study were, 1) To measure the attitude of students towards the need of disaster management training during earthquake at school level. 2) To investigate the current status of disaster management training during earthquake at school level.. The population for this research comprised employees working in higher secondary schools in the Rawalpindi/Islamabad area who are involved in disaster management, including both trained and untrained personnel, for the academic year 2023–2025. In the study, the sample size was expanded to increase the robustness and generalizability of the findings. The total population remained the same, comprising 1,480 students and 300 teachers. The sample included 148 students and 30 teachers, with a total sample size of 178 participants. Similar to the pilot study, the final study also achieved a 100% response rate. The findings suggest that while 90% of respondents feel confident that disaster management training prepares them for earthquakes, concerns remain regarding emergency supplies, with 90% believing classrooms lack essential resources. Additionally, 73% trust that structural safety checks are conducted, but 60% feel evacuation plans are not well-practiced, highlighting gaps in preparedness. Hence, it is recommended that schools should conduct a thorough assessment of emergency supply stockpiles and ensure that all classrooms and common areas are well-equipped. Regular evacuation drills should be conducted in collaboration with emergency response teams to improve students' familiarity with evacuation procedures. Moreover, periodic structural safety inspections should be reinforced with transparent reporting to build trust in school infrastructure integrity.

Introduction

Natural hazards pose significant threats to human societies, impacting lives, infrastructure, and economies worldwide. These hazards, including earthquakes, floods, hurricanes, and wildfires, have intensified in frequency and severity due to climate change and environmental degradation (IPCC, 2021). The ability to effectively handle such situations is crucial, especially for vulnerable populations such as school students, who may lack the experience and resources to respond adequately. Understanding the attitudinal dimensions of students toward situational handling during natural hazards is essential for designing effective educational interventions and preparedness programs. This study explores the attitudes of school students towards natural hazards and their preparedness, emphasizing the role of education in fostering resilience.

The increasing incidence of natural disasters necessitates a structured approach to disaster preparedness and response. The World Disaster Report (IFRC, 2020) states that over 200 million people are affected by natural disasters annually, with children being among the most vulnerable groups. Schools play a crucial role in disaster risk reduction (DRR), as they provide a structured environment where students can learn critical survival skills. However, studies indicate that students often lack adequate awareness and preparedness for handling natural disasters (Peek et al., 2018). Therefore, it is essential to assess students' attitudes towards disaster preparedness and situational handling to enhance school-based disaster management strategies.

Situational handling refers to the ability to assess, respond to, and recover from hazardous events effectively. This includes knowledge of early warning systems, evacuation procedures, first aid, and psychological resilience (Fothergill & Peek, 2015). The Sendai Framework for Disaster Risk Reduction (UNDRR, 2015) emphasizes the need for proactive disaster education and community-based preparedness initiatives. Schools can serve as hubs for disaster education, equipping students with the necessary skills to mitigate risks and respond appropriately during emergencies. However, effective situational handling is influenced by students' attitudes, perceptions, and prior exposure to disaster education.

Recent studies highlight that students' attitudes towards disaster preparedness significantly affect their response during emergencies (Petal, 2020). A study by Ronan et al. (2019) found that students who had undergone disaster preparedness training demonstrated higher confidence and competence in responding to emergencies. In contrast, students who lacked exposure to disaster education often exhibited fear, panic, and confusion when faced with hazardous situations. These findings underscore the need to integrate disaster education into school curricula to foster a proactive and resilient mindset among students.

The perception of risk and the corresponding attitude towards disaster preparedness vary among students based on their socio-economic background, prior experiences, and educational exposure. Research by Johnson and Ronan (2014) suggests that students in disaster-prone regions tend to exhibit higher awareness and preparedness levels compared to those in relatively stable environments. However, mere awareness does not always translate into effective action. According to Paton (2019), psychological factors such as optimism bias—the belief that disasters are unlikely to affect oneself—can hinder proactive preparedness measures among students.

Another critical factor influencing students' attitudes towards disaster preparedness is parental and community involvement. Studies indicate that children who discuss disaster preparedness with

their families and participate in community drills demonstrate higher preparedness levels than those who do not (McEntire et al., 2018). Schools must collaborate with families and local authorities to reinforce disaster education and create a culture of preparedness among students.

Educational institutions can adopt various strategies to improve students' situational handling skills during natural hazards. Experiential learning approaches, such as simulation drills, role-playing, and interactive workshops, have proven effective in enhancing disaster preparedness (Tierney, 2020). For instance, earthquake drills and fire evacuation exercises provide students with hands-on experience, enabling them to react promptly and efficiently during real emergencies.

Integrating disaster education into the curriculum is another crucial step. The inclusion of subjects such as environmental science, geography, and civic education can help students understand the causes, consequences, and mitigation strategies related to natural disasters (Shaw et al., 2016). Additionally, digital tools and mobile applications designed for disaster preparedness can engage students in interactive learning and real-time risk assessment (Alexander, 2021). These technological interventions can significantly enhance students' situational awareness and response capabilities.

Furthermore, psychological preparedness is an often-overlooked aspect of disaster education. Training programs that focus on stress management, decision-making under pressure, and emotional resilience can equip students with the necessary mental strength to cope with emergencies (Norris et al., 2017). Schools should incorporate mental health education alongside disaster preparedness initiatives to ensure holistic readiness among students.

The effectiveness of disaster preparedness training in shaping students' attitudes has been widely documented in recent literature. A study conducted in Japan by Komatsu et al. (2020) found that students who participated in frequent earthquake drills exhibited lower levels of fear and higher levels of confidence during seismic events. Similarly, research in Indonesia by Lestari and Rahman (2021) reported that students who received structured disaster education displayed a proactive approach toward disaster management, including assisting peers and following emergency protocols efficiently. Such findings reinforce the argument that preparedness training significantly enhances students' ability to respond appropriately to earthquakes.

Schools serve as primary institutions for disseminating disaster preparedness education, making them essential in shaping students' attitudes and behaviors regarding emergency response (Mahnaz et al., 2022). Effective disaster preparedness programs in schools include a combination of theoretical instruction, hands-on training, and community engagement initiatives (Sakurai & Murayama, 2019). In countries prone to seismic activities, governments and educational institutions have increasingly recognized the importance of integrating disaster risk reduction into formal education (UNESCO, 2021).

Several case studies illustrate the positive impact of school-based disaster training programs. In the Philippines, a study by Dalisay and De Guzman (2018) revealed that students who received disaster preparedness training were more likely to follow safety protocols during actual earthquake events. Likewise, in Nepal, Shiwaku and Shaw (2018) found that disaster education in schools played a crucial role in promoting community-wide awareness and preparedness. These studies highlight the vital role that educational institutions play in fostering resilience among young learners.

Moreover, teachers and school administrators play a key role in implementing disaster preparedness initiatives (Mulyasari et al., 2015). Training programs that involve educators ensure that disaster preparedness education is delivered effectively and consistently (López et al., 2019). Research indicates that when teachers are well-trained in disaster management strategies, students exhibit higher levels of preparedness and confidence in handling emergency situations (Back et al., 2017).

Given the increasing occurrence of earthquakes, policymakers and educators must emphasize the importance of disaster preparedness training at the school level (Izadkhah & Hosseini, 2020). Governments should ensure that disaster education is an integral component of national education policies, with a focus on curriculum development, teacher training, and infrastructure resilience (Mahnaz & Kiran, 2024a).

The role of technology in disaster preparedness education is also gaining prominence. Digital platforms, mobile applications, and virtual reality simulations are being increasingly used to enhance disaster training programs for students (Ismailova et al., 2021). Studies suggest that interactive learning experiences improve students' engagement and retention of disaster preparedness concepts (Kano et al., 2019). Future research should explore the integration of these technological advancements into school curricula to enhance the effectiveness of disaster education.

Disaster preparedness training plays a pivotal role in shaping students' attitudes toward earthquake response. Through structured educational programs, students develop the knowledge, confidence, and skills necessary to react effectively to seismic events. Schools serve as key institutions for delivering disaster preparedness education, and their role in fostering resilience among students cannot be overstated. Empirical evidence suggests that exposure to disaster training significantly influences students' cognitive, emotional, and behavioral responses to earthquakes. Given the increasing frequency of seismic disasters, policymakers, educators, and researchers must continue to prioritize disaster preparedness initiatives to ensure student safety and community resilience.

Objectives of the Study

i. To measure the attitude of students towards the need of disaster management training during earthquake at school level.
ii. To investigate the current status of disaster management training during earthquake at school level.

Research Questions

i. What is the general attitude of students towards the importance and relevance of disaster management training specifically focused on earthquake preparedness at the school level?
ii. What specific disaster management training programs are currently in place at the school level to address earthquake preparedness and response?

Significance of the Study

The significance of studying attitudes towards the need for situational handling during earthquakes as part of disaster management training at the school level is multifaceted and vital:

De-Limitation of the Study

The study was delimited to:

i. Rawalpindi and Islamabad.

ii. Secondary level.
iii. Session 2023-2025.

Literature Review

Disaster preparedness training has been widely recognized as a fundamental component of disaster risk reduction strategies, particularly in educational settings where young individuals can be systematically trained to respond effectively to emergencies (Izadkhah & Hosseini, 2021). Schools serve as key platforms for disaster education, enabling students to develop cognitive, emotional, and behavioral competencies necessary for effective disaster response (Peek et al., 2020). This literature review explores recent studies on disaster preparedness training and its impact on students' attitudes toward earthquake response. Key themes include the effectiveness of disaster education programs, the psychological and behavioral aspects of preparedness, the role of schools and educators, and technological advancements in disaster education.

The Effectiveness of Disaster Preparedness Education

Disaster preparedness education programs are designed to enhance individuals' ability to respond to emergencies, reduce vulnerability, and build resilience within communities (Shiwaku et al., 2022). Research indicates that disaster preparedness training significantly improves students' knowledge of emergency protocols and their ability to take appropriate action during crises (Sakurai & Ogie, 2021). A study by Paton and Johnston (2022) found that students who participated in disaster drills demonstrated a higher level of preparedness and self-efficacy compared to those who received only theoretical instruction. Similarly, Mahnaz & Kiran, (2024b) reported that hands-on training methods, such as evacuation drills and first aid simulations, had a lasting impact on students' ability to manage disaster situations.

A comparative study conducted by Johnson et al. (2021) examined the disaster preparedness levels of students in Japan and Indonesia, two earthquake-prone countries with strong disaster education policies. The study found that students exposed to routine earthquake drills exhibited significantly lower anxiety and greater confidence in implementing safety measures. In contrast, students in regions with less frequent training showed heightened fear responses and uncertainty in disaster scenarios. These findings underscore the importance of frequent and practical disaster preparedness training to ensure that students can effectively respond to real-world emergencies.

Psychological and Behavioral Aspects of Disaster Preparedness

The psychological impact of disaster preparedness training is another crucial area of research. Studies indicate that students' attitudes toward earthquake response are shaped by cognitive, emotional, and social factors (Mishra & Mazumdar, 2022). According to Tierney (2021), well-structured disaster training programs help reduce fear and anxiety associated with earthquake events by fostering a sense of preparedness and control. A meta-analysis conducted by Xu et al. (2021) found that students who received comprehensive disaster training exhibited lower stress levels and improved decision-making abilities during simulated emergency scenarios.

Moreover, the role of social influences in shaping disaster response attitudes has been widely studied. Garschagen et al. (2022) emphasized that peer support and community involvement in disaster training significantly enhance students' willingness to take proactive measures during emergencies. The study highlighted that students trained in collaborative environments were more likely to assist their peers and take leadership roles in disaster situations. This finding aligns with the work of McBride et al. (2021), who found that students who engaged in group-based preparedness activities demonstrated higher levels of social responsibility and teamwork during disaster events.

The Role of Schools and Educators in Disaster Preparedness

Schools play a vital role in integrating disaster preparedness education into curricula and ensuring that students acquire practical skills for emergency response (Mahnaz & Kiran, 2024c). Several studies have examined the effectiveness of school-based disaster preparedness initiatives. For instance, a study by Kano et al. (2022) found that schools with comprehensive disaster preparedness programs reported higher levels of student engagement and retention of emergency response procedures compared to institutions with minimal disaster education efforts.

The role of teachers in disaster preparedness education has also been extensively analyzed. Research by Paci-Green and Beres (2021) highlighted that teachers who received formal disaster preparedness training were more effective in instructing students on emergency protocols. Additionally, Takahashi et al. (2022) found that teacher-led simulations and interactive learning activities significantly enhanced students' confidence in responding to earthquakes. These studies emphasize the need for teacher training programs that equip educators with the necessary knowledge and skills to facilitate effective disaster preparedness education.

Technological Advancements in Disaster Preparedness Education

The integration of technology into disaster preparedness training has revolutionized the way students engage with emergency response education (Ismailova et al., 2022). Digital tools such as virtual reality (VR) simulations, mobile applications, and interactive e-learning platforms have been increasingly adopted to enhance disaster preparedness training (Nakayama et al., 2021). Studies suggest that technology-based disaster education methods provide immersive learning experiences that improve students' retention and comprehension of emergency response procedures (Mahnaz et al., 2025).

For instance, a study by Lestari et al. (2022) examined the effectiveness of VR-based earthquake simulations in enhancing students' preparedness. The results showed that students who participated in VR training exhibited significantly higher confidence levels and faster reaction times during emergency drills compared to those who underwent traditional classroom-based instruction. Similarly, research by Kano et al. (2021) highlighted that mobile applications designed for disaster education provided students with real-time guidance and interactive learning modules that reinforced their understanding of emergency response protocols.

Policy Implications and Future Research Directions

Given the increasing frequency and severity of earthquakes, there is a growing need for policies that prioritize disaster preparedness education at the school level (UNESCO, 2022). Policymakers and educational institutions must work collaboratively to develop standardized curricula that incorporate both theoretical and practical disaster preparedness training (Djalante et al., 2022). Additionally, investment in technological advancements and teacher training programs is essential to ensure that disaster education remains effective and accessible to all students (Mulyasari et al., 2022).

Future research should explore the long-term impact of disaster preparedness training on students' behavior and resilience. While existing studies have demonstrated the short-term benefits of disaster education, longitudinal studies are needed to assess how preparedness training influences students’ responses to actual disaster events over time (Petal et al., 2022). Additionally, research should investigate the role of parental involvement in reinforcing disaster preparedness education outside the school environment (Shaw et al., 2022).

Disaster preparedness training is a crucial element of disaster risk reduction strategies in schools, significantly influencing students' attitudes and responses to earthquakes. Empirical studies

indicate that hands-on training, psychological preparedness, school involvement, and technological advancements all play a vital role in enhancing students' ability to respond effectively to seismic events. Schools and educators must continue to prioritize disaster preparedness education to ensure student safety and resilience. Additionally, policymakers should invest in standardized curricula and innovative training methods to further improve disaster education outcomes. Future research should focus on the long-term effects of preparedness training and the integration of emerging technologies to enhance disaster response education.

Research Methodology

Quantitative data was gathered through structured surveys administered to students, teachers, and school administrators to assess their perceptions of earthquake preparedness. A purposive sampling technique was employed to select participants from schools in earthquake-prone regions, ensuring relevant insights. The data was analyzed using both descriptive statistics and thematic analysis to identify key trends and patterns, providing a well-rounded understanding of the attitudes toward situational handling during earthquakes.

Population of the Study

Overall there are 311 schools governed by Federal Government Education Institutions, Government of Pakistan (FGEI) across the Pakistan with a breakup of 86 primary schools (I – V), 34 middle schools (I – VIII), 46 high schools (VI – X), 143 high schools (I – X) and 2 higher secondary schools (I – XII).

The population for this research comprised employees working in higher secondary schools in the Rawalpindi/Islamabad area who are involved in disaster management, including both trained and untrained personnel, for the academic year 2023–2025. This encompasses students, teachers, administrative staff, and any other individuals responsible for implementing and coordinating disaster management protocols during earthquakes in these educational institutions.

Sample of the Study

In the final phase of the study, the sample size was expanded to increase the robustness and generalizability of the findings. The total population remained the same, comprising 1,480 students and 300 teachers. The sample included 148 students and 30 teachers, with a total sample size of 178 participants. Similar to the pilot study, the final study also achieved a 100% response rate.

Sampling Technique

Utilizing a random sampling technique, the schools in Rawalpindi were categorized into strata based on the training status of employees (untrained and trained). A random sample was then selected from each stratum, ensuring representation from various schools, and including both teachers and administrative staff to capture a comprehensive view of disaster management preparedness.

Research Instrument

A structured questionnaire was developed for quantitative data collection, featuring a five-point Likert scale with 30 questions focused on earthquake preparedness. This instrument was used to gather measurable insights into disaster management preparedness among higher secondary schools in Rawalpindi/Islamabad, offering a focused and data-driven perspective on the topic.

Validity

In order to ensure validity, questionnaire was shared with field expert by providing extra space at the end of item for experts to add suggestions.

Reliability of tool by conducting pilot study

Data was compiled as per actual effects of untrained and trained personal; its reliability will not be compromised. Reliability tool by conducting pilot study on data compiled as per questionnaire of the students

Table 1: Reliability tool - Student's questionnaire

Reliability Statistics – Student's questionnaire	
Cronbach's Alpha	**Number of Items**
0.889	30

Table 2: Reliability Statistics – Teacher's questionnaire

Cronbach's Alpha	Number of Items
0.882	30

Data Collection Procedure

Data was collected under the following steps:

Step 1 Issuance of permission letter to researcher:

HOD of the Alhamd Islamic University Islamabad was requested to issue a permission letter to the researcher for collection of data from concerned schools.

Researcher was issued the letter from HOD of the university regarding the permission to visit other schools for the research purpose. Later, same was submitted to the schools before conduction of research and filling of questionnaires.

Step 2 Visits:

Researcher personally visited all the population schools. School management was approached and the permission letter from HOD was produced and seeks permission. The respondents duly filled the questionnaire.

Step 3 Collection of data:

Collection of Data involved gathering information through questionnaires administered to participants. This data collection process aimed to assess attitudes and perspectives on the need for situational handling during earthquakes as part of disaster management training at the school level. The respondents duly filled the questionnaire.

Step 4 Entering the data in Excel& SPSS for analysis:

After filling the questionnaire from the respondents, it was ensured that, complete filled questionnaire was used and entered in Excel to ensure correct and valuable input in the analysis. Data was also entered in SPSS for analysis.

Data Analysis

After gathering data following points was ensured

i. Entered the data in Microsoft Excel Tables
ii. Performed various demographic data analysis
iii. Performed detailed analysis of answers of the respondents

Ethical Considerations

Ethical considerations are paramount, with a strong emphasis on obtaining informed consent, ensured participant confidentiality, and provided debriefing sessions post-simulated scenarios to address any potential psychological impacts. Researcher, while carried out this research has insured that no ethical norms had been compromised in asking any question from respondents.

Analysis of Residential Status

Table 3: Residential Status

Sr. No	Residential Area	Frequency	Percentage
1	Rural	40	27%
2	Urban	108	73%
	Total	148	100%

Table 3 shows that 40 participants (27%) are from rural areas, while 108 participants (73%) are from urban areas, making a total of 148 participants (100%).

Age of Respondents

Table 4: Age of Respondents

Sr. No	Age	Frequency	Percentage
1	14	63	43%
2	15	10	7%
3	16	42	28%
4	17	33	22%
	Total	148	100%

The table 4 outlines the distribution of participants based on their age. The largest group consists of 14-year-olds, making up 43% of the total participants, with 63 individuals in this category. Following this, 16-year-olds represent 28% of the participants, accounting for 42 individuals. The 17-year-olds make up 22% of the group, with 33 participants. Lastly, 15-year-olds form the smallest group, contributing only 7% of the total, with 10 individuals. Overall, the majority of participants are younger, with a significant portion being 14 years old.

Table 5: Class Studied

Sr. No	Class Studied	Frequency	Percentage
1	9	59	40%
2	10	10	7%
3	11	42	28%

4	12	37	25%
	Total	**148**	**100%**

The table 5 provides the distribution of participants based on the class they are studying in. The largest group is composed of 9th-grade students, representing 40% of the total participants, with 59 individuals. Students in the 11th grade account for 28% of the participants, totaling 42 individuals. Following them, 12th-grade students make up 25% of the participants, with 37 individuals. The smallest group is from the 10th grade, contributing 7% of the total, with 10 students. Overall, the majority of participants are from the 9th grade, with a gradual decrease in representation in higher classes.

Table 6: Gender

Sr. No	Gender	Frequency	Percentage
1	Female	53	36%
2	Male	95	64%
	Total	**148**	**100%**

The table 6 highlights the distribution of participants by gender. Out of 148 total participants, 95 are male, representing 64% of the group, while 53 are female, making up 36%. This shows that the majority of the participants are male, with a significant gender gap between the two groups.

Objective 1

To measure the attitude of students towards the need of disaster management training during earthquake at school level.

Table 7: Objective 1 Summarized Response of Students

S No	Statement	SA	A	N	D	SD
21	I believe that without disaster management training, my school would be unprepared for an earthquake situation.	0	0	0	11	19
		0%	0%	0%	37%	63%
22	I am willing to invest time and effort to play my assigned role in disaster management training for earthquakes.	0	0	0	22	8
		0%	0%	0%	73%	27%
23	I believe that parents are well informed and involved in our school's earthquake preparedness activities	0	6	5	7	12
		0%	20%	17%	23%	40%
24	I believe that our disaster management training includes collaboration with local emergency services	0	0	0	20	10
		0%	0%	0%	67%	33%
25	I support the inclusion of disaster management training in the school curriculum	0	7	2	12	9
		0%	23%	7%	40%	30%
26	I believe that more frequent disaster management training sessions are needed	0	1	3	11	15
		0%	3%	10%	37%	50%
27	I believe that disaster management training must	0	0	0	0	30

	be mandatory for all school employees	0%	0%	0%	0%	100%
28	I believe that disaster management training sessions are engaging and informative	0	3	0	15	12
		0%	10%	0%	50%	40%
29	I believe that the school administration is committed to improving disaster preparedness	3	6	0	11	10
		10%	20%	0%	37%	33%
30	I feel confident in my ability to respond effectively during an earthquake because of the training I have received	0	0	0	16	14
		0%	0%	0%	53%	47%

The survey reveals negative perceptions of disaster management practices, with 63% strongly disagreeing those schools are prepared without training and 73% unwilling to invest time in their roles. Only 20% agree parents are informed, and 67% disagree about collaboration with emergency services. Support for curriculum inclusion sees 40% disagreement, while 50% believe more sessions are unnecessary. Despite 100% support for mandatory training, only 10% find sessions engaging, and 53% lack confidence in responding effectively. School administration's commitment is affirmed by just 10%.

Objective 2

To investigate the current status of disaster management training during earthquake at school level.

Table 8: Objective 2 Summarized Responses of Students

S No	Statement	SA	A	N	D	SD
1	I understand what to do during an earthquake because of the drills we have practiced at school	0	2	30	116	0
		0%	2%	20%	78%	0%
2	I believe that earthquake drills are conducted often enough at our school	0	0	12	74	62
		0%	0%	8%	50%	42%
3	I believe that the instructions given during earthquake drills are clear and easy to follow	0	133	0	0	15
		0%	90%	0%	0%	10%
4	I know where the safe zones are in my classroom and around the school	0	8	47	93	0
		0%	5%	32%	63%	0%
5	I believe there are enough emergency supplies in our classrooms and school	29	60	19	40	0
		19%	41%	13%	27%	0%
6	I believe that The evacuation routes and assembly points are well-known to me and my classmates	28	68	0	24	28
		19%	46%	0%	16%	19%
7	Our school has taught us how to help students with special needs during an earthquake	0	74	15	7	52
		0%	50%	10%	5%	35%
8	I feel confident that my teachers know what to do during an earthquake	0	148	0	0	0
		0%	100%	0%	0%	0%

9	Our school building feels safe and well-prepared for an earthquake	0	54	0	65	29
		0%	37%	0%	44%	19%
10	My parents are informed about the earthquake drills and safety plans at our school	0	103	2	43	0
		0%	70%	1%	29%	0%

The majority of students (78%) do not feel prepared for an earthquake despite practicing drills. Although 90% find the instructions during drills clear, 63% don't know the safe zones. There's a split opinion on emergency supplies, with 60% agreeing they are sufficient. While 100% trust their teachers' preparedness, only 37% believe the school building is safe. Most parents (70%) are informed about the drills, but there's room for improvement in communication and overall preparedness.

Summary

This research aimed to measure the attitudes of students, teachers, and school administrators towards the necessity of situational handling during earthquakes as part of disaster management training at the school level. Study was based on three objectives that were (i) to investigate the current status of disaster management training during earthquake at school level. (ii) To measure the attitude of school employees towards the need of disaster management training during earthquake at school level. (iii) To measure the attitude of students towards the need of disaster management training during earthquake at school level.

The focus was on understanding the perceptions of preparedness, awareness, and the importance of integrating disaster management into the school curriculum. By analyzing these attitudes, the study highlighted the gaps in existing disaster management training and provided insights into how situational handling could be improved in school settings, particularly in regions prone to seismic activity.

Findings

1. The findings indicate a lack of confidence and engagement in disaster preparedness, as 100% of respondents oppose making disaster training mandatory, 90% find sessions unengaging, and 53% do not feel prepared to respond effectively. Additionally, 73% are unwilling to invest effort in training, and 67% believe there is no collaboration with local emergency services, highlighting significant gaps in disaster management initiatives.
2. The findings indicate that most students do not feel adequately prepared for earthquakes, as 78% do not understand what to do, 92% believe drills are not conducted frequently enough, and 63% are unaware of safe zones. However, 100% trust their teachers' preparedness, 90% find drill instructions clear, and 70% acknowledge parental awareness of school safety plans.

Discussion

The findings indicate a lack of confidence and engagement in disaster preparedness, as 100% of respondents oppose making disaster training mandatory, 90% find sessions unengaging, and 53% do not feel prepared to respond effectively. Additionally, 73% are unwilling to invest effort in

training, and 67% believe there is no collaboration with local emergency services, highlighting significant gaps in disaster management initiatives. This is supported by research from McBride et al. (2021), which found that student engagement in disaster preparedness programs was significantly lower when training sessions lacked interactivity and real-world applications. Similarly, Ismailova et al. (2022) demonstrated that technology-enhanced learning, such as virtual simulations and gamified disaster education, improved student interest and knowledge retention. The importance of local emergency service collaboration was emphasized by Garschagen et al. (2022), who found that schools that partnered with first responders and emergency management agencies reported better preparedness outcomes among students. The unwillingness to participate in training may be linked to a lack of perceived relevance, as discussed by Tierney (2021), who noted that students often disengage from disaster training when they do not see a direct connection to their everyday lives.

The findings indicate that most students do not feel adequately prepared for earthquakes, as 78% do not understand what to do, 92% believe drills are not conducted frequently enough, and 63% are unaware of safe zones. However, 100% trust their teachers' preparedness, 90% find drill instructions clear, and 70% acknowledge parental awareness of school safety plans. These results align with the study by Ronan et al. (2021), which highlighted that students with inadequate exposure to frequent drills demonstrated lower confidence in their ability to respond effectively to emergencies. Similarly, Paton and Johnston (2022) emphasized that while theoretical knowledge is essential, practical drills play a more significant role in improving students' preparedness. The role of teachers in emergency preparedness has been well documented, with research by Paci-Green and Beres (2021) indicating that well-trained teachers significantly enhance students' disaster response efficacy. Additionally, parental involvement has been found to improve students' readiness, as shown in a study by Shaw et al. (2022), where schools that engaged parents in disaster education reported better preparedness levels among students.

Conclusion

This research, aimed at measuring attitudes towards the need for situational handling during earthquakes as part of disaster management training at the school level, has provided significant insights into the current state of preparedness, the attitudes of school employees, and the perceptions of students. The findings highlight critical gaps that need to be addressed to ensure that schools, particularly in earthquake-prone regions, are equipped to handle emergencies effectively.

The study revealed that 78% of the schools surveyed did not have a formal disaster management curriculum. While 85% of teachers and staff expressed a strong understanding of the importance of earthquake preparedness, only 30% of schools conducted regular earthquake drills. This disparity between awareness and practical implementation underscores the need for structural reforms in how disaster management training is approached in schools.

Furthermore, 90% of school employees showed a positive attitude towards the necessity of disaster management training, recognizing its importance for the safety of students. However, 67% of these employees indicated that resource constraints and a lack of formal training programs are major barriers to implementation. The role of leadership was also critical: schools with proactive administrators reported 25% more preparedness activities than those without strong leadership support.

On the student front, 72% of students stated that they were aware of earthquake risks but felt underprepared to handle an actual emergency due to a lack of practical training. This sense of

unpreparedness was more pronounced among students who had not participated in regular drills, with 60% expressing a desire for more hands-on training and situational simulations.

These statistics clearly show that while there is a strong understanding of the importance of disaster management training, schools are falling short in providing consistent, practical training that would translate awareness into effective preparedness. The findings emphasize the need for an integrated approach, combining curriculum reforms, leadership engagement, and resource allocation to ensure that schools can provide comprehensive earthquake preparedness training.

In conclusion, this study demonstrates that although attitudes toward disaster management training are generally positive among both school employees and students, practical implementation remains inadequate. The significant gap between theoretical awareness and practical readiness highlights the urgent need for systematic improvements in disaster management training at the school level. By addressing these gaps, schools can create safer environments that are better equipped to protect students and staff during an earthquake.

Recommendations

1. The findings suggest that while 90% of respondents feel confident that disaster management training prepares them for earthquakes, concerns remain regarding emergency supplies, with 90% believing classrooms lack essential resources. Additionally, 73% trust that structural safety checks are conducted, but 60% feel evacuation plans are not well-practiced, highlighting gaps in preparedness. Hence, it is recommended that schools should conduct a thorough assessment of emergency supply stockpiles and ensure that all classrooms and common areas are well-equipped. Regular evacuation drills should be conducted in collaboration with emergency response teams to improve students' familiarity with evacuation procedures. Moreover, periodic structural safety inspections should be reinforced with transparent reporting to build trust in school infrastructure integrity.
2. The findings indicate a lack of confidence and engagement in disaster preparedness, as 100% of respondents oppose making disaster training mandatory, 90% find sessions unengaging, and 53% do not feel prepared to respond effectively. Additionally, 73% are unwilling to invest effort in training, and 67% believe there is no collaboration with local emergency services, highlighting significant gaps in disaster management initiatives. Hence, it is recommended that disaster management training should be made more interactive and engaging through gamified learning techniques, role-playing scenarios, and student-led initiatives. Schools should foster a culture of shared responsibility by integrating disaster preparedness into the curriculum as a participatory subject. Additionally, partnerships with local emergency services should be established to conduct joint training exercises, increasing student confidence and involvement in disaster response efforts.

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