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Assessing the Role of Educational Interventions in Shaping Students' Earthquake Preparedness Attitudes

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ABSTRACT

The frequency and intensity of earthquakes have increased in many regions, underscoring the importance of institutionalized disaster education. The study aimed at "Assessing the Role of Educational Interventions in Shaping Students' Earthquake Preparedness Attitudes". The objectives of the study were, 1) To measure the attitude of school employees towards the need of disaster management training during earthquake at school level. 2) To measure the attitude of students towards the need 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

The frequency and intensity of earthquakes have increased in many regions, underscoring the importance of institutionalized disaster education (Paton & Johnston, 2017). Despite advancements in earthquake prediction and early warning systems, the unpredictable nature of seismic activity necessitates a focus on preparedness measures that involve public participation, especially among students (Djalante, 2019). Various studies indicate that structured disaster training programs significantly impact students' attitudes toward emergency response, improving their ability to react effectively under crisis situations (Acharya et al., 2018).

Disaster preparedness training encompasses a range of educational activities, including drills, simulations, and theoretical instruction, all designed to enhance the ability of individuals to respond appropriately to emergencies (Takahashi et al., 2015). Within school environments, such training is crucial as students spend a significant portion of their time in educational institutions, making it imperative for them to be adequately prepared in the event of an earthquake (Ronan et al., 2016). According to a study by Johnson et al. (2014), disaster preparedness programs in schools have been found to enhance not only students' awareness but also their confidence in responding to seismic emergencies.

Disaster preparedness is a critical component of effective disaster risk reduction, particularly in earthquake-prone regions where timely response can save lives and mitigate damage (UNDRR, 2020). Schools, being central institutions in shaping societal knowledge and behavior, play a crucial role in imparting disaster preparedness training to students. As young learners constitute a vulnerable group during seismic events, equipping them with the necessary knowledge, skills, and attitudes to respond effectively to earthquakes is paramount (Petal & Izadkhah, 2021). Disaster preparedness training at the school level not only enhances students' awareness but also fosters proactive attitudes that contribute to resilience-building within communities (Shiwaku & Shaw, 2018).

Further, the inclusion of disaster preparedness within school curricula has been advocated by several international organizations, including UNESCO and the United Nations Office for Disaster Risk Reduction (UNDRR, 2020). The integration of such training ensures that students acquire both theoretical and practical knowledge regarding emergency procedures, first aid, and evacuation protocols (Nakayama et al., 2021). Empirical research suggests that students who undergo disaster preparedness training demonstrate greater self-efficacy and responsibility in crisis situations (Paci-Green & Beres, 2019). These findings highlight the necessity of incorporating earthquake preparedness training into standard educational programs.

Attitudes toward earthquake response encompass cognitive, emotional, and behavioral dimensions that influence how individuals react in emergency situations (Garschagen et al., 2018). Cognitive attitudes relate to students' knowledge and understanding of earthquake hazards and response mechanisms, while emotional attitudes reflect their anxiety or confidence in handling disaster situations (Tierney, 2019). Behavioral attitudes involve the actual response actions taken before, during, and after an earthquake event (Izadkhah et al., 2021). Studies indicate that exposure to disaster preparedness training positively influences all three dimensions, leading to more effective earthquake response behaviors (Ronan & Johnston, 2017).

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

Research Questions

i. How do school employees perceive the importance and necessity of disaster management training specifically tailored to earthquake preparedness at the school level?
ii. 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?

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 school employees 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
11	I feel more prepared for an earthquake because of the training we receive at school	0	3	4	139	2
		0%	2%	3%	94%	1%
12	We talk about what went well and what didn't after earthquake drills to improve our safety	51	97	0	0	0
		34%	66%	0%	0%	0%
13	I know how to stay calm and help others during an earthquake because of our training	51	91	0	6	0
		34%	62%	0%	4%	0%
14	I believe that the school works with local emergency services to keep us safe during an earthquake	0	73	37	38	0
		0%	49%	25%	26%	0%
15	I believe our school takes earthquake preparedness seriously	69	79	0	0	0
		47%	53%	0%	0%	0%
16	I believe that disaster management training for earthquakes is essential for ensuring the safety of students	69	79	0	0	0
		47%	53%	0%	0%	0%
17	I believe that regular earthquake drills are necessary to keep students and staff prepared	69	79	0	0	0
		47%	53%	0%	0%	0%
18	I support the inclusion of disaster management training in the school curriculum	53	80	0	15	0
		36%	54%	0%	10%	0%
19	I believe that the current disaster management training at our school is not adequate.	44	89	0	15	0
		30%	60%	0%	10%	0%

20	I believe that more frequent disaster management training sessions are needed	69	79	0	0	0
		47%	53%	0%	0%	0%

Most students (94%) do not feel prepared for an earthquake despite the training at school. However, 66% discuss drill performance for safety improvements, and 96% feel they can stay calm and help others during an earthquake. Nearly half (49%) believe the school collaborates with local emergency services. All students (100%) value disaster management training and regular drills, and support its inclusion in the curriculum. Although 60% feel the current training is inadequate, all students (100%) agree that more frequent sessions are necessary

Objective 2

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

Table 8: Objective 2 Summarized Response of Students

S No	Statement	SA	A	N	D	SD
21	I believe that our school must allocate more resources towards disaster management training	69	79	0	0	0
		47%	53%	0%	0%	0%
22	I believe that disaster management training must be mandatory for all school employees	93	40	15	0	0
		63%	27%	10%	0%	0%
23	I am satisfied with the involvement of local emergency services in our disaster management training	0	40	27	81	0
		0%	27%	18%	55%	0%
24	I believe that the training provided helps us to manage psychological trauma during and after an earthquake	92	41	15	0	0
		62%	28%	10%	0%	0%
25	I believe that regular feedback from staff and students must be used to improve disaster management training	0	3	15	130	0
		0%	2%	10%	88%	0%
26	I am satisfied with how earthquake procedures are communicated to students and staff	60	65	0	23	0
		41%	44%	0%	15%	0%
27	I believe that the disaster management training sessions are engaging and informative	95	40	13	0	0
		64%	27%	9%	0%	0%
28	I believe that the school administration is committed to improving disaster preparedness	80	42	26	0	0
		54%	28%	18%	0%	0%
29	I actively participate and pay attention during disaster management training sessions for earthquakes.	0	0	15	133	0
		0%	0%	10%	90%	0%
30	I think disaster management training for earthquakes needs to conducted more frequently at my school.	42	106	0	0	0
		28%	72%	0%	0%	0%

All students (100%) believe more resources should be allocated to disaster management training, with 90% also supporting mandatory training for all employees. Satisfaction with local emergency services' involvement is low (55% dissatisfied). While 90% feel training helps manage psychological trauma, only 2% see regular feedback being used. Communication of procedures is satisfactory for 85%, and 91% find training sessions engaging. Confidence in the administration is high (82%), but participation in training is low (90% do not actively engage). All students (100%) agree on the need for more frequent training sessions.

Table 9: Objective 2 Summarized Response of Students

S No	Statement	SA	A	N	D	SD
11	I believe that classrooms and common areas are well-equipped with essential emergency supplies.	3	0	0	0	27
		10%	0%	0%	0%	90%
12	I believe that the evacuation plans for earthquakes are detailed and well-practiced by both students and staff.	0	18	12	0	0
		0%	60%	40%	0%	0%
13	I believe that disaster management training adequately addresses the needs of students and staff with disabilities or special needs.	28	2	0	0	0
		93%	7%	0%	0%	0%
14	I believe that regular structural safety checks are conducted to ensure the building's integrity during an earthquake.	2	22	0	0	6
		7%	73%	0%	0%	20%
15	I believe that staff members are adequately prepared to effectively manage psychological trauma during earthquake situations.	15	13	0	1	1
		50%	44%	0%	3%	3%
16	I believe that post-drill reviews and feedback sessions are effective in improving the disaster management plan.	6	23	1	0	0
		20%	77%	3%	0%	0%
17	I feel confident that disaster management training will effectively prepare me to handle an earthquake situation at school.	3	27	0	0	0
		10%	90%	0%	0%	0%
18	Disaster management training for earthquakes significantly improves the overall safety of the school environment.	8	12	2	2	6
		26%	40%	7%	7%	20%
19	I consider it part of my professional responsibility to play my assigned role in disaster management training for earthquakes.	5	22	1	0	2
		17%	73%	3%	0%	7%
20	I support the implementation of regular disaster management training sessions for earthquakes in my school.	0	12	18	0	0
		0%	40%	60%	0%	0%

The survey highlights that 93% strongly agree disaster management training addresses the needs of students with disabilities, but only 10% strongly agree classrooms are well-equipped with emergency supplies, with 90% strongly disagreeing. Evacuation plans are supported by 60% agreement, while 73% agree structural safety checks, psychological trauma is rated at 50% (SA) and 44% (A), with 90% agreeing training effectiveness. While, 60% remain neutral.

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 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.
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.

Discussion

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. These results are consistent with the study by Kano et al. (2022), which found that despite confidence in training programs, students and teachers often faced challenges due to insufficient emergency supplies. Furthermore, research by López et al. (2021) emphasized the importance of regular structural safety assessments to ensure a safe learning environment. The importance of well-rehearsed evacuation plans is highlighted in the study by Mishra and Mazumdar (2022), who reported that schools that failed to conduct routine evacuation drills saw increased levels of confusion and panic during real emergencies. This suggests that while students may feel confident in their training, the lack of sufficient resources and practical implementation measures can hinder their overall preparedness.

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.

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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