

Disaster Management Skills of B.Ed., Trainees in Relation to Awareness of Natural Calamities

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Natural calamities such as floods, cyclones, earthquakes, and droughts pose serious challenges to human life, property, and sustainable development. Teachers play a crucial role in creating disaster-resilient communities by educating and preparing students to respond effectively to such emergencies. In this context, the present study examines the level of disaster management skills among B.Ed. trainees and explores their relationship with awareness of natural calamities. A survey method was adopted for the study, and data were collected from a representative sample of B.Ed. trainees using standardized tools. Descriptive and inferential statistical techniques were employed to analyze the data. The findings reveal that most of the trainees possess a moderate level of awareness regarding natural calamities and an average level of disaster management skills. A significant positive relationship was found between awareness of natural calamities and disaster management skills, indicating that higher awareness contributes to better preparedness and response abilities. The study highlights the need to strengthen disaster education in teacher training programmes to enhance the capacity of future teachers to manage emergencies effectively. Implications for curriculum development and teacher education policy are discussed.

Keywords: *Disaster Management Skills, Awareness of Natural Calamities, B.Ed. Trainees.*



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1. Introduction

Natural disasters have become increasingly frequent and intense in recent decades due to environmental degradation, climate change, and rapid urbanization. Events such as floods,

earthquakes, cyclones, landslides, and droughts not only result in loss of life and property but also disrupt educational systems and community functioning. In a disaster-prone country like India, the importance of disaster preparedness and risk

reduction cannot be overstated. Education plays a pivotal role in equipping individuals with the knowledge, attitudes, and skills necessary to face such challenges effectively.

Teachers, as agents of social change, have a vital responsibility in fostering disaster awareness and preparedness among students and the wider community. B.Ed. trainees, who represent the future teaching workforce, must therefore possess adequate awareness of natural calamities and practical disaster management skills. Awareness enables individuals to understand the nature, causes, and impacts of disasters, while disaster management skills empower them to take appropriate preventive, protective, and response measures before, during, and after a calamity.

Despite the recognized importance of disaster education, it is often observed that formal teacher training programmes¹дел limited emphasis to systematic disaster management training. As a result, many trainee teachers may lack the confidence and competence required to handle emergency situations in schools or communities. Studying the level of disaster management skills among B.Ed. trainees and examining how these skills relate to their awareness of natural calamities is therefore essential for improving teacher education practices.

The present study is undertaken with the aim of assessing disaster management skills of B.Ed. trainees and investigating their relationship with awareness of natural calamities. By identifying existing strengths and gaps, the study seeks to provide evidence-based suggestions for integrating disaster education more effectively into teacher training curricula.

2. Need and Importance of the Study

Natural calamities such as floods, earthquakes, cyclones, and droughts pose serious threats to human life and social stability, particularly in disaster-prone countries like India. In such a context, education plays a vital role in promoting disaster preparedness and risk reduction. Teachers, as key agents of change, are expected to guide students in matters of safety and emergency response. Therefore, it is essential that B.Ed. trainees, who represent the future teaching workforce, possess adequate awareness of natural calamities and practical disaster management skills.

Although disaster-related topics are included in some educational frameworks, systematic and skill-based disaster training in teacher education programmes remains limited. Many trainee teachers may have only partial knowledge and insufficient hands-on experience in handling emergency situations. This creates a strong need to assess the existing level of disaster management skills and awareness among B.Ed. trainees.

The present study is important as it helps identify gaps in preparedness and examines the relationship between awareness of natural calamities and disaster management skills. The findings can provide useful inputs for curriculum development, teacher training, and policy planning, ultimately contributing to the creation of safer and more resilient school communities.

3. Operational Definitions of the Study

3.1. Disaster Management Skills

In the present study, disaster management skills refer to the ability of B.Ed. trainees to understand, plan, and respond effectively to natural calamities. These skills include knowledge of safety measures, first aid practices, evacuation procedures, risk reduction strategies, and post-disaster recovery actions. Operationally, disaster management skills are measured through the scores obtained by the trainees on a standardized Disaster Management Skills Scale developed and validated by the investigator.

3.2. Awareness of Natural Calamities

Awareness of natural calamities denotes the extent to which B.Ed. trainees possess factual knowledge, understanding, and sensitivity regarding various types of natural disasters, their causes, consequences, and preventive measures. In this study, awareness is operationally defined as the total score obtained by the trainees on the Awareness of Natural Calamities Scale administered by the investigator.

3.3. B.Ed. Trainees

B.Ed. trainees refer to the individuals who are studying Bachelor of Education (B.Ed.) degree programme at a College of Education/ Department of Education in and around Cuddalore, Mayiladuthurai, Nagapattinam and Thiruvarur Districts.

4. Objectives of the Study

The following are the objectives of the present study is to find out:

- The level of disaster management skills of B.Ed., trainees.
- The level of awareness of natural calamities of B.Ed., trainees.
- If there is any significant difference in disaster management skills among B.Ed., trainees based on gender.
- If there is any significant difference in disaster management skills among B.Ed., trainees based on Exposure to Natural Disasters.
- If there is any significant difference in awareness of natural calamities among B.Ed., trainees based on gender.
- If there is any significant difference in awareness of natural calamities among B.Ed., trainees based on Exposure to Natural Disasters
- The relationship between awareness of natural calamities and disaster management skills among the B.Ed., trainees.

5. Hypotheses of the Study

- The level of disaster management skills of B.Ed. trainees is low.
- The level of awareness of natural calamities of B.Ed. trainees is low.
- There is no significant difference in the disaster management skills among B.Ed. trainees based on gender.
- There is no significant difference in the disaster management skills among B.Ed.

7.1. Descriptive Analysis

Hypothesis 1

The level of Disaster Management Skills of B.Ed. trainees is low.

Table-1

Variable	N	Mean	SD
Disaster Management Skills	1037	127.24	15.419

Table-1 (a): Disaster Management Skills scores of B.Ed. trainees in Percentage.

	Range	Frequency	Percent
Low	Below 118	265	25.55
Average	Between 118-138	496	47.83
High	Above 138	276	26.62
Total		1037	100%

trainees based on Exposure to Natural Disasters

- There is no significant difference in the awareness of natural calamities among B.Ed. trainees based on gender.
- There is no significant difference in the awareness of natural calamities among B.Ed. trainees based on Exposure to Natural Disasters
- There is no significant relationship between awareness of natural calamities and disaster management skills among B.Ed. trainees.

6. Method of the Study and Sample Used

The Normative Survey Method was employed to collect data from the selected sample. In order to collect the required data, the tool was prepared.

- **Disaster Management Skills (DMSS)** (2024) Constructed and Validated by Mary Priyanka. S.V and Ambedkar. V
- **Awareness of Natural Calamities Scale (ANCS)** (2023) Constructed and Validated by Mary Priyanka. S.V and Ambedkar. V

7. Analysis of Data and Interpretation

The following statistical techniques were used for the analysis of data in the present study:

1. Descriptive Analysis (Mean and Standard Deviation)
2. Differential Analysis ('t' test and 'F' test)
3. Correlation Analysis and (Karl Pearson Product Moment Correlation)

From the above table-1 the calculated mean and standard deviation for Disaster Management Skills among B.Ed. trainees for the total sample were (Mean=127.24, Standard deviation=15.419), table- 1 (a) which indicates that the level of disaster management skills among B.Ed. trainees is average. Hence, the framed hypothesis 1 is rejected.

Hypothesis 2

The level of Awareness of Natural Calamities of B.Ed. trainees is low.

Table-2

Variable	N	Mean	SD
Awareness of Natural Calamities	1037	109.50	12.845

Table-2 (a) Awareness for Natural Calamities scores of B.Ed. trainees in Percentage

Awareness for Natural Calamities	Range	Frequency	Percent
Low	Below 102	273	26.33
Moderate	Between 102-118	483	46.58
High	Above 118	281	27.09
Total		1037	100%

From the above table-1 the calculated mean and standard deviation for awareness of natural calamities among B.Ed. trainees for the total sample were (Mean=109.50 and Standard deviation=12.845) table-2 (a), respectively, indicating a moderate level of awareness among the B.Ed. trainees. Hence, the framed hypothesis 2 is rejected

7.2. Differential Analysis

Hypothesis 3

There is no significant difference in the disaster management skills among B.Ed. trainees based on gender.

Table-3

Variable	Sub-Variable	N	Mean	SD	't' Value	Significance
Gender	Male	273	127.30	14.372	1.082	Not Significant
	Female	764	127.22	15.785		

With respect to gender, the calculated 't' value ($t = 1.082$) is not statistically significant, indicating that there is no significant difference in disaster management skills between male and female B.Ed. trainees. Hence, the framed hypothesis 3 is accepted.

Hypothesis 4

There is no significant difference in the disaster management skills among B.Ed. trainees based on Exposure to NaturalDisasters

Table - 4

Variable	Sub-Variable	N	Mean	SD	't' Value	Significance
Exposure to Natural Disasters	Experienced	489	128.47	14.892	2.519	Significant
	Not Experienced	548	126.01	15.884		

In relation to exposure to natural disasters, the calculated 't' value ($t = 2.519$) is statistically significant, indicating that B.Ed. trainees who have experienced natural disasters possess more disaster management skills than those who have not experienced them. Hence, the framed hypothesis 4 is rejected

Hypothesis 5

There is no significant difference in the awareness of natural calamities among B.Ed. trainees based on gender.

Table - 5

Variable	Sub-Variable	N	Mean	SD	't' Value	Significance
Gender	Male	273	111.29	12.714	3.480	Significant
	Female	764	108.86	12.830		

In order to find out whether there is any significant difference between male and female B.Ed. trainees, 't' value is calculated. the calculated 't' value ($t = 3.480$) is statistically significant, indicating that male B.Ed. trainees have more mean scores in awareness of natural calamities than female trainees. Hence the stated hypothesis-5 is rejected.

Hypothesis 6

There is no significant difference in the awareness of natural calamities among B.Ed. trainees based on Exposure to Natural Disasters.

Table-6

Variable	Sub-Variable	N	Mean	SD	't' Value	Significance
Exposure to Natural Disasters	Experienced	489	112.50	12.705	4.689	Significant
	Not Experienced	548	107.19	12.476		

Regarding exposure to natural disasters, the calculated 't' value ($t = 4.689$) is statistically significant, indicating that B.Ed. trainees with disaster experience have awareness than those who have not experienced natural disasters. Hence the stated hypothesis-6 is rejected.

7.3. Correlation Analysis

Hypothesis 7

There is no significant relationship between Disaster Management Skills and Awareness of Natural Calamities among B.Ed. trainees.

Table - 7: Co-efficient of correlation(r) between Disaster Management Skills and Awareness of Natural Calamities

Variable	N	r	Sig.	Level
Disaster Management Skills & Awareness of Natural Calamities	1037	0.583**	<.001	Significant

**Correlation is significant at the 0.01 level (2-tailed).

Table-7 describes the co-efficient of correlation (r) between Disaster Management Skills and Awareness of Natural Calamities among B.Ed. trainees. The obtained correlation value is $r = 0.583$, which is positive and statistically significant at the 0.01 level.

This indicates that there is a positive relationship between Disaster Management Skills and Awareness of Natural Calamities among B.Ed. trainees. As the level of Awareness of Natural Calamities increases, the level of Disaster Management Skills also tends to increase. Hence,

the framed hypothesis 9 is rejected, and it is concluded that there is a positive and significant relationship between Disaster Management Skills and Awareness of Natural Calamities of B.Ed. trainees.

8. Findings of the Study

- The level of disaster management skills among B.Ed. trainees was found to be average.

- The level of awareness of natural calamities among B.Ed. trainees was found to be moderate.
- No significant difference was found based on gender.
- A significant difference was found among B.Ed. trainees in disaster management skills based on exposure to natural disasters.
- A significant difference was found among B.Ed. trainees in awareness of natural calamities based on gender and exposure to natural disasters.
- A significant difference was found among B.Ed. trainees in awareness of natural calamities based on exposure to natural disasters.
- A positive and significant relationship was found between disaster management skills and awareness of natural calamities among B.Ed. trainees.

9. Conclusion

The study provides valuable insights into the disaster readiness of B.Ed. trainees by analyzing their disaster management skills and awareness of natural calamities. The overall results show that the trainees possess a reasonable level of preparedness, with disaster management skills at an average level and awareness at a moderate level. The findings further reveal that exposure to real-life disaster experiences significantly enhances both awareness and practical skills, highlighting the importance of experiential learning. Although gender did not influence disaster management skills, it showed a notable difference in awareness levels, indicating the need for more inclusive awareness-building initiatives.

A strong and positive relationship was found between awareness of natural calamities and disaster management skills, suggesting that improved understanding of disasters directly supports better preparedness and response capabilities. This underscores the necessity of integrating disaster education more systematically into teacher training programmes. Incorporating practical activities such as mock drills, first-aid training, simulations, and community-based disaster preparedness programmes can greatly strengthen the competence of future teachers.

In conclusion, preparing B.Ed. trainees with both theoretical knowledge and practical disaster management skills is essential for building resilient school environments. The study emphasizes the responsibility of teacher education institutions in shaping disaster-aware educators who can safeguard students and contribute meaningfully to community resilience. The findings offer useful direction for curriculum planners, teacher educators, and policymakers seeking to strengthen disaster preparedness through education.

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