JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING THE KNOWLEDGE ON EMERGENCY PREPAREDNESS AND DISASTER RESPONSE FOR FINAL YEAR NURSING STUDENTS IN T JOHN COLLEGE AND SCHOOL OF NURSING BANGALORE".

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INTRODUCTION :

Disasters, both natural and man-made, are events that cause widespread destruction, loss of life, and disruption of normal human activities. They can occur suddenly or develop over time, leaving individuals, communities, and healthcare systems vulnerable to severe consequences.

India, due to its diverse geography and population density, faces frequent disasters such as floods, earthquakes, cyclones, droughts, and industrial accidents. According to the National Disaster Management Authority (NDMA), nearly two-thirds of India's landmass is vulnerable to disasters of various types. The health sector plays a crucial role during and after these crises, with nurses and healthcare professionals forming the backbone of emergency response and care delivery. Effective disaster management, therefore, depends heavily on the knowledge, preparedness, and response capacity of healthcare workers, particularly nursing professionals, who are often the first responders in emergency and disaster situations.

Disaster management involves a systematic process of planning, organizing, coordinating, and implementing measures that reduce the impact of disasters. It comprises four main phases— mitigation, preparedness, response, and recovery. Among these, preparedness is the cornerstone of effective disaster response, as it ensures that individuals and institutions are capable of responding efficiently when a crisis occurs. Preparedness involves developing response plans, conducting training and drills, establishing communication systems, and mobilizing resources in advance. In healthcare settings, this preparedness directly affects the quality of patient care, reduces casualties, and enhances community resilience. Therefore, the level of disaster preparedness among healthcare professionals is an essential indicator of a healthcare system's ability to manage emergencies effectively.

Nurses, being the largest group of healthcare professionals, play an indispensable role in all stages of disaster management. They are often responsible for triage, patient stabilization, communication with families, coordination of care, and assisting in recovery operations. Their involvement in disaster situations demands not only clinical competence but also decision making skills, psychological resilience, and teamwork abilities. However, studies conducted across various parts of India have shown that many nurses lack adequate knowledge, training, and confidence in disaster management. This gap poses a significant challenge to achieving effective and timely healthcare responses during emergencies. It becomes imperative, therefore, to assess the existing level of knowledge and preparedness among nursing professionals and identify strategies to strengthen their competence in this critical area.

The issue of inadequate preparedness is not confined to practicing professionals alone. A cross sectional

descriptive study conducted in West Bengal among 400 nursing students from various colleges aimed to assess their perception and preparedness toward natural disasters. The results showed that 41% of the students had inadequate preparedness, while 36% were moderately prepared. Attendance in disaster-related seminars and workshops was found to be significantly associated with higher levels of preparedness ($p<0.05$). This highlights the importance of integrating disaster management training early in the nursing curriculum to prepare future healthcare workers for real-life emergency situations. The study emphasized that theoretical knowledge must be complemented with practical exposure, such as mock drills, community awareness programs, and field training.

Institutional readiness is another crucial component of effective disaster management. A mixed method study conducted in Punjab examined the awareness and preparedness of primary health centers (PHCs) for disaster response. The study included 30 PHCs and 150 healthcare staff members, combining quantitative data and qualitative interviews. The results revealed that 70% of PHCs lacked a formal disaster response plan, and many faced significant challenges such as poor communication systems and inadequate coordination during emergencies. Qualitative findings further highlighted that most healthcare workers were uncertain about their roles during disaster situations. The study concluded that standardized operating procedures, capacity building initiatives, and regular communication drills are essential to strengthen institutional preparedness, particularly in rural and semi-urban healthcare settings where resources are limited.

NEED FOR THE STUDY

The increasing frequency and severity of natural disasters, such as earthquakes, hurricanes, and floods, have highlighted the need for effective emergency preparedness and disaster response strategies. The impact of these events is far-reaching, resulting in significant loss of life, property damage, and social disruption. In this context, the study of emergency preparedness and disaster response is crucial for building resilient communities and reducing the risk of disasters.

Disasters can occur anywhere, at any time, and can have devastating consequences. The risks associated with disasters are complex and multifaceted, involving natural, technological, and human-induced hazards. Understanding these risks is essential for developing effective emergency preparedness and disaster response strategies. By studying the risks and vulnerabilities associated with disasters, communities can take proactive measures to mitigate the impact of these events.

Existing emergency response systems often have gaps, highlighting the requirement for improved strategies to mitigate disaster impact and ensure community resilience. These gaps can include inadequate planning, insufficient resources, and lack of coordination among response agencies. The study of emergency preparedness and disaster response can help identify these gaps and inform the development of more effective response systems.

Community resilience is critical for reducing the impact of disasters. Resilient communities are better equipped to withstand disasters and can recover more quickly. The study of emergency preparedness and disaster response can inform the development of strategies to build community resilience, including public education campaigns, community-based disaster risk reduction initiatives, and training programs for emergency responders.

The study of emergency preparedness and disaster response can inform policy and decision- making at local, national, and international levels. By understanding the complexities of disaster response, policymakers can develop more effective policies and allocate resources more efficiently, ultimately reducing the risk and impact of disasters.

1. Risk Assessment: Identifying potential hazards and vulnerabilities.
2. Emergency Planning: Developing emergency plans and conducting drills.
3. Response Strategies: Developing effective response strategies, including search and rescue, providing aid, and restoring critical infrastructure.
4. Community Resilience: Building resilient communities through public education, community- based

disaster risk reduction, and training programs.

5. Technology and Innovation: Leveraging technology and innovation to enhance emergency preparedness and disaster response.
6. Saves Lives: Effective emergency preparedness and disaster response can save lives and reduce injuries.
7. Reduces Economic Losses: Mitigating disaster impact can reduce economic losses.
8. Enhances Community Resilience: Building resilient communities can facilitate faster recovery.
9. Supports Sustainable Development: Effective emergency preparedness and disaster response can support sustainable development.

In conclusion, the study of emergency preparedness and disaster response is crucial for building resilient communities and reducing the risk of disasters. By understanding the risks and vulnerabilities associated with disasters, identifying gaps in existing emergency response systems, and informing policy and decision-making, we can develop more effective strategies to mitigate disaster impact and ensure community resilience

MATERIALS AND METHODS:

The research design adopted for the study was a Pre experimental with one group pre & post test design. A quantitative descriptive research design with an evaluative approach by taking 60 samples throw purposive sampling technique final year nursing students in T John College and school of nursing at Bangalore were taken. A structured questionnaire was used to assess the knowledge of emergency preparedness and disaster response. The validity of the tool was assessed by obtaining opinion experts in the field of nursing. The Karl Pearson reliability formula was used to assess the reliability of the tool. The correlation coefficient r = 0.03 was found and it showed high degree of reliability of the tool to conduct the study.

RESULTS:

TABLE 1: ASSESSMENT OF KNOWLEDGE REGARDING EMERGENCY PREPAREDNESS AND DISASTER RESPONCE AMONG FINAL YEAR

ASSESSMENT OF PRETEST KNOWLEDGE SCORE

percentage and frequency distribution of Final year according to the level of knowledge in their pretest

n=60

Knowledge	**Pre test**	
	N	**%**
Poor (0 - 14)	50	83.3
Moderate (15 - 22)	10	16.7
Good (23 - 30)	0	0

DESCRIPTION: The above table (2.1) in the pretest knowledge assessment ,out of 60 samples 50 (83.3 %) samples had poor knowledge,10(16.7%)had moderate knowledge and no nursing students have good knowledge regarding emergency preparedness and disaster response.

ASSESSMENT OF POSTTEST KNOWLEDGE SCORE

Table-2- Percentage and frequency distribution to final year nursing students according to level of knowledge in their post test

n=60

Knowledge	**Post test** **N** **%**	
Poor (0-4)	42	70%
Moderate (15-22)	15	25%
Good (23-30)	3	5%

DESCRIPTION: The above table in the pretest knowledge assesment, out of 60 samples 42 (70%) samples had poor knowledge,15(25%)had moderate knowledge and 3 (5%) students have good knowledge regarding emergency preparedness and disaster response

In the above Tables the knowledge level of the pre-test and post-test are presented respectively. The level of knowledge between the pre-test to post-test is significant as there is an increase in the level of knowledge from poor to good.

MEAN , STANDARD DEVIATION AND VARIANCE

Pre test			**Post test**		
Mean	**SD**	**Variance**	**Mean**	**SD**	**Variance**
8.92	4.28	18.32	10.85	6.1	37.21

Table 3:Mean and standard deviation values of test scores of selected students

DESCRIPTION: The above table reveals the mean and standard deviation values of the pre-test and post-test knowledge scores of final year with regard to the test, the total score for the test was 30.

In the pre-test, the mean score of nursing students was 8.92, and the standard deviation was 4.28. The mean score of the pre-test indicated that the majority of the sample had poor knowledge.

In the post-test, the mean score of the final year students was 10.85 and the SD was 6.1. The mean score of the pre-test shows that the majority of the sample had average knowledge. There was a significant increase in knowledge level after intervention indicating the tool is effective.

SECTION 3 : EVALUATION OF EFFECTIVNESS OF STRUCTURED TEACHING PROGRAMME ON DISASTER RESPONSE AND EMERGENCY PREPARDNESS

N	MEAN DIFFERENCE	SD DIFFERENCE	Df	t 98	tcrit	Significance
60	1.93	1.82	98	2.0	±1.9845	significant

SECTION 3: EVALUATION OF EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON EMERGENCY PREPAREDNESS AND DISASTER RESPONSE

Table 3.1: Difference between mean and SD and t-test value of the pre-test and post-test score.

DESCRIPTION: Table values shows that final year students t-test results proved the effectiveness of a structured teaching program on emergency preparedness and disaster response . As mentioned in the above table, the questionnaire used for pre-test and post-test assessment consisted of 30 questions. The difference between the pre-test and post-test scores was calculated. The mean difference was 1.93 and the SD difference was 1.82. The student t-value shows that the structured teaching program is an effective tool t = 8.21 (df=98,<0.05,significant)

PRE TEST-

SECTION 4: ASSOCIATION BETWEEN PRE-TEST AND POST-TEST LEVEL OF KNOWLEDGE WITH THEIR SELECTED DEMOGRAPHIC VARIABLE OF FINAL YEAR NURSING STUDENTS,

Table 4.1: Association between pre-test level of knowledge and selected demographic variables of age, area of residence ,gender, year of study ,level of preparedness ,training on disaster preparedness ,source of information, participation in disaster drills.

DESCRIPTION: The above table 4.1 presents the results of a chi-square analysis of the pre-test scores and demographic variables such ,age, area of residence ,gender, year of study ,level of preparedness ,training on disaster preparedness ,source of information, participation in disaster drills regarding emergency preparedness and disaster response. demographic variable the age group (x ^ 2 = 0.04 , df = 1),gender (x^2=4.88,df=1),place of residence (x^2=0.79,df=2),year of study(x^2=4.03,df=1),level of preparedness (x^2=0.19,df=2), training on disaster preparedness (x^2=0.07,df=1),source of information (x^2=6.95,df=2), participation in disaster drills (x^2=0.25,df=1)

In the pre-association between knowledge level and demographic variable-class of sturdy I * x ^ 2 = 6.7609 df-3: pas 9091) was significant

POST TEST-

Table 4.2: Association between pre-test level of knowledge and selected dernographic variable of age, area of residence, gender, year of study ,level of preparedness ,training on disaster preparedness ,source of information, participation in disaster drills.

DESCRIPTION: The above table 4.1 presents the results of a chi-square analysis of the pre-test scores and demographic variables such as age, area of residence gender, year of study ,level of preparedness ,training on disaster preparedness ,source of information, participation in disaster drills regarding emergency preparedness and disaster response.

demographic variable the age group (x ^ 2 = 0.04 , df = 1),gender (x^2=4.88,df=1),place of residence (x^2=0.79,df=2),year of study(x^2=4.03,df=1),level of preparedness (x^2=0.19,df=2), training on disaster preparedness (x^2=0.07,df=1),source of information (x^2=6.95,df=2), participation in disaster drills (x^2=0.25,df=1)

In the pre-association between knowledge level and demographic variable-class of sturdy I * x ^ 2 = 6.7609 df-3: pas 9091) was significant.

NURSING IMPLICATIONS

Nurses' implication of the study could be discussed under nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE

From the present study, it is evident that many individuals lack adequate knowledge regarding emergency preparedness and disaster management. Therefore, nurses should provide proper health education and training on preparedness measures, immediate response actions, and safety precautions to individuals and communities they come in contact with. This will help in minimizing injuries, reducing loss of life, and improving overall disaster outcomes.

NURSING EDUCATION

Based on the findings of the study, nursing educators can focus on teaching the causes, types of disasters, early warning signs, preparedness strategies, emergency response procedures and post- disaster care. Enhancing this knowledge will help students respond effectively, thereby reducing the impact of disasters and related complication

NURSING ADMINISTRATION

Based on the findings of the study, nurse administrators can implement institutional policies, coordinate in-service education programmes, and strengthen hospital disaster plans to ensure that all healthcare workers are prepared to manage emergencies efficiently.

NURSING RESEARCH

In the modern world, emergency preparedness and disaster response require evidence-based practice. Researchers play an important role in expanding the knowledge base in this field.Nursing research helps identify gaps in preparedness, evaluate current disaster response strategies, and develop effective interventions. It helps nurses improve their practice and enhances patient and community outcomes during disasters. In the present scenario, there is extensive scope for further research to explore innovative strategies, technologies and community-based approaches in emergency preparedness.

RECOMMENDATIONS

The following recommendations are suggested:

- The study can be replicated on a larger sample to enhance the validity.
- A detailed survey can be conducted to identify the level of preparedness, awareness, and response capacity among communities regarding emergency situations and disasters.
- A comparative study can be conducted on the knowledge and practices related to emergency preparedness and disaster response among different population groups such as students, health workers, or community members.
- A comparative study may also be undertaken to evaluate the effectiveness of different training methods such as simulations, mock drills, structured teaching programs, and audiovisual modules.
- Emergency preparedness programs should be strengthened through regular workshops, awareness campaigns, and community engagement activities.

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