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Review Article

Effective Teaching Program on Knowledge and Attitude about Disaster Management: An Overview

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Abstract

Disaster management is a comprehensive approach to both preventing and responding to disasters. All aspects of preparedness, rescue, relief, and rehabilitation activities, as well as preventive and protective measures, are included in disaster management. India's natural landscape is incredibly diversified, and as a result, a significant share of the reported catastrophe victims in Asia in 2015 was from India. Due to its unique geo-climatic conditions, the country is among the ones that are most susceptible to natural disasters in the world. Disaster nursing is the adaptation of professional nursing knowledge, skills, and attitude in recognizing and meeting the nursing, health, and emotional needs of disaster victims. Nurses occupy a unique role in lobbying for organized, profit-driven healthcare amid emergencies. Nurses are necessary to prevent, monitor, and react to any circumstance. Due to the small sample size of the study, the nursing students' understanding of and attitudes regarding disaster management and emergency preparedness were lacking. Nursing students may benefit from a disaster nursing education program that will increase their preparedness for and awareness of disasters. It was discovered that the disaster nursing and management teaching program offered to nursing students improved attitudes toward overall preparedness for disasters, self-efficacy in disaster response, and psychological resilience. Disaster management teaching has a significant impact on nursing students' degree of preparedness for emergencies and knowledge.

Keywords: Attitude, disaster management, knowledge, teaching program

Introduction on Disaster Management

A complete strategy for both preventing and responding to disasters is known as disaster management. Disaster management includes all facets of preparedness, rescue, relief, and rehabilitation operations as well as preventive and protective actions.

Since the dawn of time, disasters have played a crucial role in the lives of people, resulting in early mortality, decreased quality of life, and altered health. Future catastrophes could be brought on by a combination of human causes, climate change, sea level rise, and global warming. Disasters typically fall into one of two categories: natural or man-made. Floods, cyclones, droughts, earthquakes, cold waves, thunderstorms, heat waves, mudslides, volcanoes, tsunamis, and storms are examples of natural catastrophes. Epidemics, deforestation, pollution from prawn farming, chemical pollution, wars, train and road accidents, riots, food poisoning, industrial disaster/crisis, and environmental pollution are all examples of man-made disasters. India has a very diverse spectrum of natural features, accounting for a large portion of the world's reported catastrophe victims in 2015 (62.7 percent in Asia, compared to an average of 80.6% for the decade from 2005 to 2014). The nation is among the most vulnerable to natural disasters in the globe due to its unique geo-climatic circumstances. Drought-prone areas make up about 28% of the total cultivable land in the nation. 76 lakh hectares of land are inundated each year, and 60% of the world's land mass is susceptible to earthquakes. According to a 2009 expert consultation conducted by the World Health Organization, preparedness

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also includes communication, victim, and evacuation plans. The term "triage" (which means "to sort") refers to the process of classifying patients according to the severity of their conditions.[1]

A total of 79732 persons died overall between 2000 and 2019, according to the report of the United Nations Office for Disaster Risk Reduction.

India had reported 321 catastrophic occurrences within the same time frame. After China and the United States, it ranks third globally in terms of the frequency of natural disasters.

The same analysis claims that India has experienced economic losses of almost 80 billion USD over the past 20 years.[2]

Breakdown of Natural Disasters in India per Type of Event and Nature of Losses

	Natural disasters (%)	Material loss (%)	Human loss (%)
Floods	52	63	32
Hurricanes	30	19	32
Landslides	10	-	2
Earthquakes	5	10	33
Droughts	3	5	1
Total	100	100	100

Overview of Disaster Nursing

According to its definition, disaster nursing is "the adaptation of professional nursing knowledge, skills, and attitude in recognizing and meeting the nursing, health, and emotional needs of disaster victims." Global warming's influence on health to the consequences of disease, one of the main causes of death and the main burden of diseases worldwide is injury. With the possibility of a natural disaster or man-made worldwide pandemic increasing, about 16,000 people die from injuries every day. As a result, numerous public, corporate, federal, state, and municipal institutions have created readiness and response plans.[3]

As long as nurses have existed, they have participated in catastrophe preparation and response. In advocating for organized, profit-driven healthcare during emergencies, nurses play a unique role. To prevent, monitor, and respond to any situation, nurses are required. Nurses are frequently tasked with helping with triage and screening for health issues, administering first aid and providing psychological support, putting infection control systems into place, and monitoring to prevent a disease epidemic in the communal living environment. Through contact tracing, case investigations, monitoring, reporting, specimen collection, immunizations, and community education, they have consistently been significant participants in catastrophic crises. Consequently, nurses are a crucial component of the team that has helped create refugee camps quickly for people who need them.[4]

Knowledge and Attitude Regarding Disaster Management among the Nursing Students

The preparedness, knowledge, and experience of nursing college students with disasters were investigated. According to this study, disaster awareness scored an average of 3.71 out of 5 while disaster readiness obtained an average of 0.54 out of 4 points. There was no statistically significant association between catastrophe preparedness and awareness. However, awareness of how catastrophic the event was positively correlated with the level of disaster preparedness ($r = 0.10$, $P = 0.036$). A disaster nursing education program may help nursing students become more knowledgeable of and prepared for catastrophes, according to the study's findings. For a closer connection to clinical situations in the real world, disaster teaching should begin at the undergraduate level.[5]

There was a significant association between the students' knowledge level and their age ($P = 0.004$) and educational rank ($P < 0.001$), according to research on the knowledge and attitudes of Delhi nursing students. We concluded that nursing students' knowledge of and attitudes toward disaster management and emergency preparedness were subpar due to the study's limited sample size. Training workshops must be routinely scheduled to provide nursing students with the latest information in the industry.[6] The inquiry into the factors and situations that affect undergraduate nursing students' ability to react to emergencies. The results showed that male undergraduate nursing students are better equipped than female nursing students to provide disaster aid and that their physical and mental health is also better. Disaster rescue knowledge should be taught in a systematic way to improve comprehension of catastrophic procedures and reactions and to boost the degree of practical talent in disaster rescue. We need to draw ideas from the educational philosophies and models of industrialized countries to establish a catastrophe nursing education model in China.[7]

According to the study, 63% of students had a high understanding of disaster management, whereas 29% of students had average knowledge. The average score for knowledge was 2.3133. According to the distribution of subjects according to their attitude scores, 52% of nursing students had a positive attitude toward disaster management, 14% had a negative attitude, and 34% had a neutral view. According to the current study, there is a strong correlation between students' knowledge ratings on disaster management and age ($P = 0.05$). Other demographic factors have not been associated. The results of the current study showed that nursing students have good knowledge of disaster management. The majority of nursing students (63%) have a solid knowledge of disaster management. Age and other well-chosen demographic variables have a correlation; other demographic characteristics do not.[8]

The study examined nursing students' perceptions, experiences, and core competencies related to disaster nursing. 172 nursing students enrolled in a nursing department participated in this

study by answering questionnaires. The outcome revealed that the average score on a scale of 1–25 indicated that people generally viewed disaster nursing to be a serious issue (18.16 out of 25). The subject's key competencies for disaster nursing scored 41.56 out of 75 points, which was a moderate performance. According to the findings, there was a statistically significant positive link between key competencies for disaster nursing and how disaster nursing was perceived. To meet the demands of the industry in Korea, a disaster nursing program must be developed. To fully address this problem, more study is required.[9]

Research on how senior nursing students at the undergraduate level view catastrophe preparedness. The abilities of leadership, manager, and coordinator should be among the disaster competencies of nurses, according to more than half of the students (56.1%); decision-maker, critical thinking, autonomy, and planning skills were mentioned by 42.4% of the students. When it came to education, 56.4% of the students thought their training in disaster nursing was "efficient," but 35.9% said that it was "partly efficient" or "inefficient." The description, characteristics, competencies, and roles of disaster nurses were all correctly articulated by students. Low percentages and a lack of pronouncements, however, indicated a lack of catastrophe readiness. To include curriculum and clinical experiences relating to catastrophes, curricula must be developed or redesigned.[10]

The study looked at nursing students' understanding of disaster nursing and their level of readiness for disasters. The results of this study revealed that there were statistically significant relationships between disaster nursing knowledge scores and students' universities, genders, and whether they had received education about disasters and disaster nursing. It also revealed that the status of receiving disaster nursing education varied depending on the university attended ($P < 0.05$). In terms of their understanding of disaster nursing, their exposure to disaster nursing education, and their knowledge scores on disaster nursing, this study discovered substantial discrepancies between students in both universities.[11]

The research was conducted on the knowledge and skills of disaster nursing among nursing university students who took part in rescue efforts after the 2016 Kumamoto earthquake. According to this study, those who had successfully completed a disaster nursing program performed better than those who had not in terms of all four competences. The knowledge and skills employed by university nursing students in the 2016 Kumamoto earthquake relief efforts fell into four categories. The competencies of those who had completed a catastrophe nursing program were greater than those who were either enrolled in it now or had not yet started.[12] It investigated what influences nursing students' competence in disaster nursing. This study examined the connections between disaster nursing knowledge, attitudes toward preparedness for disasters, and disaster nursing competency among nursing students and examined the variables affecting disaster nursing proficiency. The findings demonstrated the necessity of enhancing nursing students' knowledge of disaster nursing and the significance of rewarding experiences in disaster nursing. This study came to the conclusion that to cultivate nursing students' capacity for disaster nursing, disaster nursing education programs must be created that use a variety of techniques, including case-based learning and mock-situation training. The caregiving skills and interest of nursing students in disaster nursing competencies may rise as a result of these initiatives.[13]

Teaching Program on Knowledge and Attitude Regarding Disaster Management

This study aimed to educate students about disaster management as they are disaster team members. The current study evaluated the students' understanding of disaster management both before and after the structured teaching program. With this importance in mind, the researcher created a structured teaching program on disaster management that was then evaluated using a structured questionnaire. The researcher then gave this to the students to help them learn more about disaster management. The study's findings indicated that the students' knowledge is too little about managing disasters. It was discovered that the structured teaching program is successful in enhancing the students' knowledge. This study has a significant impact on impact management and impact prevention in diverse calamities. In addition to increasing the students' knowledge, this study could be seen as a component of their overall, ongoing professional growth.[14]

Effects of an interactive teaching approach on undergraduate nursing students' perceived disaster nursing competencies were the focus of the research investigation. The experimental group's mean achievement score was statistically substantially higher than the controlling group's ($P < 0.05$) mean achievement score. The subjects in the experimental group had statistically significantly higher mean scores for the nursing competences of prevention and mitigation, readiness, and reaction than the subjects in the control group ($P < 0.001$). It is important to emphasize that theoretical instruction delivered through an integrative teaching approach can improve students' performance, perceptions of their competencies, and motivation to study about nursing responses to catastrophes.[15]

According to the study's findings, just 8% of nursing students had sufficient knowledge about emergency preparedness. The majority of nursing students (62%) had a favorable or good attitude toward disaster preparedness. The paired *t*-test was used to evaluate the effectiveness of the structured instruction plan, and a statistical significance level of 0.05 was established. The results of the study encourage the use of structured teaching programs, routine disaster preparedness training, and routine assessments of knowledge and attitude in nursing students.[16] An analysis of variance was performed and significant results were observed to compare the efficiency of the teaching program on knowledge, attitude, and knowledge of competence between the experimental and control groups. This was true for

post-test II as well (F = 592.53, $P > 0.001$), making it significant (F = 637, $P > 0.001$). When the experimental group looked at the association between post-test knowledge and skill scores, they discovered that it was positive (r = 0.82). In addition, the study showed no correlation between sample characteristics in the two groups and pretest knowledge scores.[17]

Conclusion

The past research has led us to the conclusion that disaster nursing and management teaching programs for nursing students may improve attitudes and knowledge toward overall preparedness, self-efficacy, and psychological resilience in disaster management.

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Conflict of Interest

None.

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