

Knowledge, attitudes, and practices of medical internship students regarding disaster preparedness at a tertiary-care hospital of Udaipur, Rajasthan, India

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Abstract

Background: Disasters are contingent and unpredicted and can only be dealt by effective disaster management plans. Disaster never happened does not mean, it cannot happen. Medical internship students can be proving useful medical workforce in such situation. Medical intern students need to know basic strategies carried out in disaster management plan.

Objective: To access the knowledge, attitudes, and practices of medical internship students regarding disaster preparedness.

Materials and Methods: Study design is facility-based, descriptive, cross-sectional survey. The study population included the medical internship students. The study duration was 1 month. The study was conducted utilizing a self-administered, pretested, prestructured questionnaire.

Result: Eighty-seven of the 102 internship students completed a self-administered questionnaire. The response rate was 85.29%. Medical internship students exhibit an excellent basic knowledge of disaster plan and preparedness in the hospital. Their awareness and attitude for the disaster plan and preparedness were significantly positive. They were deficient in the knowledge and attitude regarding their functions during drill. The practices regarding disaster preparedness training and performance of drills were largely negative, and sincere work needs to be done in this direction. Majority of students responded positively to include the disaster training in internship program.

Conclusion: It can be concluded that the level of practice was largely negative with acceptable knowledge and positive attitude regarding disaster preparedness in medical internship students.

KEY WORDS: Disaster, preparedness, emergency, medical, internship

Introduction

Disasters are contingent and unpredicted and can only be dealt by effective disaster management plans. Disaster never happened does not mean, it cannot happen. The number of

natural and man-made disasters in present era continues to rise worldwide. Medical internship students can be proving useful medical workforce in such situation. Medical intern students must understand their role and the gravity of situation if a disaster happens, and they have to know basic strategies carried out in disaster management plan.

As per the WHO, disaster is a serious disruption of the functioning of a community or society causing widespread human, material, economic, or environmental losses, which exceeds the ability of the affected community or society to cope using its own resources.^[1]

A disaster is internal if the hospital itself is involved. A disaster is external if the disaster is outside the hospital, and multiple casualties are taken to the hospital, or the hospital must

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dispatch a team to the disaster site. Disasters can be owing to natural events (such as storms, drought, earthquakes, and disease epidemic), or technological events (such as explosions, structure collapse, and radiological accidents) or civil/political events (such as strikes, terrorism, and biological warfare).^[2]

World Disasters Report 2015 reported 317 natural disasters worldwide in 2014, affecting 94 countries. About 48% of all disasters occurred in Asia in 2014. Over 85% of those killed and 86% those affected globally were also in Asia. The higher attribution of deaths in Asia comes in 1 year, which also saw a lower mortality rate in the Americas, where 8% were killed when compared with the 25% average.^[3]

As per the Department of Homeland Security/Federal Emergency Management Agency, disaster preparedness is a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response.^[4]

The aims of disaster preparedness in the hospital are to reduce morbidity and mortality, to provide health-care assistance to victims immediately, and to help in achieving rapid and durable recovery.

Objective

1. To determine the knowledge, attitudes, and practices (KAP) of medical internship students at a tertiary-level hospital of Udaipur city regarding disaster preparedness in the year 2015.
2. To assess the current status of knowledge and awareness of the medical internship students regarding disaster preparedness.
3. To determine the attitudes of medical internship students toward disaster management plans and drills.
4. To determine the current practices of medical internship students with regard to disaster preparedness.

Materials and Methods

The study design was a facility-based, descriptive, cross-sectional survey conducted utilizing a self-administered questionnaire with structured and open-ended questions, after taking an informed consent. The questionnaire included four tools to collect data of demographic information and KAP currently taking place on disaster plans and preparedness. Questionnaires were given to internship students at their posting place. The study population included 102 medical internship students. The survey was conducted during the month of August 2015 for the duration of 1 month.

Inclusion Criteria

The study includes those who were:

1. Available during the time of data collection
2. Willing to participate in the study.

Exclusion Criteria

The study excludes the participants who were:

1. Sick/ill/absent during the time of data collection.
2. Not cooperative.
3. Exposed to any education program related to disaster management.

Respondents who refused to complete the informed consent were excluded from study, because they did not want their names appearing in any form even though confidentiality and anonymity were guaranteed.

Data Analysis

The data collected were entered in Microsoft Excel and analyzed statistically using descriptive statistics namely mean, standard deviation, and percentage wherever applicable by using SPSS software.

Result

Eighty-seven of the 102 internship students completed the questionnaire. Among them, 18 were female and 69 male students of 22–25 years age group (mean age 23.66 years). The response rate was 85.29%. Ten students were day scholar, and the rest 77 were residing in the hostel.

Theoretical knowledge regarding disaster preparedness among medical internship students was found to be excellent and satisfactory. All students knew what a disaster is, while about 92% students knew what a disaster plan is. Only 51.72% said they knew where to find the disaster plans. Of 102 students, 76 (87.36%) knew what disaster preparedness is. Knowledge of drills is largely absent. Only 11.49% knew what drills are, and only 2.30% said they knew their functions during a drill [Table 1].

Responses received from medical internship students regarding disaster preparedness attitude are summarized in Table 2 which are as follows. Almost 80% students agreed to the need to know about disaster plans, 94.25% said management should be adequately prepared when a disaster occur, 90.80% believed that disaster planning is for all people in the health-care setting, 80.46% agreed that potential hazards likely to cause disaster should be identified and dealt with, 77.01% thought that training is necessary for all health-care management, 89.66% said that disaster plan is necessary, and 86.20% said that it needs to be regularly updated. Only 22.98% students said disasters are unlikely to happen in their hospital. Those who disagreed that disaster management is only for doctors and nurses only were 94.25%. They believed that disaster management is for the entire management. Those who said that drills should be conducted in the hospital were 65.52% [Table 2].

Table 3 illustrates the percentages of the study participants' practice regarding disaster preparedness which are as follows: only 1.15% of the study participants knew that disaster

Table 1: Knowledge regarding disaster among study participants ($n = 87$)

Variables	Yes	No	Do not know
	N (%)	N (%)	N (%)
Do you know what a disaster is?	87 (100.00)	–	–
Do you know what a disaster plan is?	80 (91.95)	–	7 (08.05)
Do you know where to find the plan?	45 (51.72)	15 (17.24)	27 (31.03)
Do you know what drills are?	10 (11.49)	70 (80.46)	7 (08.05)
Do you understand your functions during a drill?	2 (02.30)	72 (82.76)	13 (14.94)
What is disaster preparedness?	76 (87.36)	11 (12.64)	–

Table 2: Attitude regarding disaster preparedness among the study participants ($n = 87$)

Variables	Agree	Disagree	Unsure
	N (%)	N (%)	N (%)
I need to know about disaster plans	70 (80.46)	7 (8.05)	10 (11.49)
Management should be adequately prepared when a disaster occurs	82 (94.25)	–	5 (5.75)
Disaster planning is for a few people in the hospital	3 (3.45)	79 (90.80)	5 (5.75)
Potential hazards likely to cause disaster should be identified and deal with	70 (80.46)	2 (2.30)	15 (17.24)
Training is necessary for all health workers	67 (77.01)	2 (2.30)	18 (20.69)
Do you think it is necessary to have a disaster plan?	78 (89.66)	2 (2.30)	7 (8.05)
Disaster plans need to be regularly updated	75 (86.20)	1 (01.15)	11 (12.64)
Disasters are unlikely to happen in our hospital	20 (22.98)	53 (60.92)	14 (16.09)
Disaster management is for nurses and doctors only	5 (5.75)	82 (94.25)	–
Drills should be conducted in the hospital	57 (65.52)	18 (20.69)	12 (13.79)

Table 3: Practice regarding disaster preparedness among the study participants ($n = 87$)

Variables	Yes	No	Do not know
	N (%)	N (%)	N (%)
Are disaster drills done at your hospital?	1 (1.15)	5 (5.75)	81 (93.10)
If yes, what type of drills is done?	–	–	1 (100.00)
Is there ongoing training?	5 (5.75)	31 (35.63)	51 (58.62)
If yes, how often?	–	–	5 (100.00)
Is the disaster plan periodically updated by authority?	2 (2.30)	3 (3.45)	82 (94.25)
If yes, how often?	–	–	2 (2.30)
Have you ever faced any disaster?	–	64 (73.56)	23 (26.44)
Have you ever been a worker for disaster management team	2 (02.30)	85 (97.70)	–
Do you know about the latest disaster your hospital involved in	–	74 (85.06)	13 (14.94)
Do you believe your practice for disaster preparedness is insufficient	76 (87.36)	–	11 (12.64)
Disaster training should be a part of internship program	87 (100.00)	–	–

drills are done at their hospital, while 05.75% said they are not done, and 93.10% did not know. No one knew the type of drills done. Only 05.75% believed there is ongoing training at their place, and 35.63% said there is no ongoing treatment, while 58.62% did not know about any ongoing treatment. Majority of the respondents were not aware of ongoing training, and,

therefore, may also not be going for training. Majority of students (94.25%) did not know about regular updates of disaster plans. Among students, 73.56% never faced any disaster, and 97.70% students were never a part of disaster management team. No study participants said that their hospital was involved in any disaster in recent last. About 85% said that no

latest disaster was in the hospital, while 14.94% did not know about this. About 87.36% believed that their practice for disaster preparedness was insufficient. All study participants said that disaster training should be a part of internship program. This indicates that there is deficiency in the practices of the management regarding disaster preparedness, and that work still needs to be done regarding preparedness and practices of the disaster management [Table 3].

Discussion

This study was aimed to investigate Medical internship students' KAP regarding disaster preparedness. In an overall view of this study finding, the mean age score of the study participants' was 23.66 years. Regarding knowledge part, the study participants showed an excellent knowledge of disaster plan and preparedness. Their awareness and attitude for the disaster plan and preparedness were significantly positive. They were deficient in the knowledge and attitude regarding their functions during drill. The practices regarding the disaster preparedness training and performance of drills were probably inadequate, and sincere work needs to be done with regard to ongoing training, performance of drills, and the frequency of regular updating of the plans. Majority of students responded positively to include the disaster training in internship program.

In India, only few studies have been conducted on similar issues. In comparison, a similar KAP study on disaster management and mitigation among medical students concluded that the KAP of the undergraduate medical students about disaster preparedness and mitigation is very meagre.^[6] In contrast, our study showed largely positive responses in knowledge and attitude, while responses for practices and drills were similar. Reason may be, such an important issue is limited to theoretical exposure only, and nonparticipation of medical undergraduates in outreach activities occurs in such situations. However, Udaipur area is fortunately not affected by any disaster in near past.

Strength of this study is that the participants were not preinformed about the topic of study, and each participant was personally interviewed at posting place by the main author. A limitation of this cross-sectional study is inability to draw cause-effect associations between the studied variables. Study was conducted in only one batch of one institution;

thus, it could not be generalized for the whole community of medical students. Questions on drill were not understood by participants.

Conclusion

On the basis of results in this study, it can be concluded that the level of practice was largely negative with acceptable knowledge and positive attitude regarding disaster preparedness in medical internship students.

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