



RESEARCH ARTICLE

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING DISASTER PREPAREDNESS AND MITIGATION AMONG FINAL YEAR B.SC NURSING STUDENTS OF SELECTED COLLEGES BANGALORE

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Abstract

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Introduction:-

Disaster has been defined as an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community. Disasters are unforeseen events that cause great damage, destruction and human suffering. Though often caused by nature, disasters can have human origins. It requires immediate, coordinated and effective response by multiple government, voluntary and private sector organizations, to meet human needs and speed recovery. In the past decades the number of disasters and their impact on human and economic development worldwide has shown a steady increase. About seventy five percent of the world's populations live in areas affected at least once, between 1980 and 2000, by earthquake, tropical cyclones, floods or drought. More than 184 deaths per day due to disasters are recorded in different parts of the world. "One billion people are living in the world's unplanned shantytowns, and forty of the fifty fastest growing cities are located in earthquake zones. Another ten million people live under the constant threat of floods." - International Federation of the Red Cross and Red Crescent, World Disasters Report.

Objectives:-

Objectives of the Study

1. To assess the knowledge on disaster preparedness among B.SC Nursing.
2. To determine the association between knowledge on disaster preparedness and demographic variables selected
3. To develop an information booklet on disaster preparedness.

Methodology:-

Inferential approach is a kind of quantitative approach where in the purpose is to form a data base from which to infer characteristics or relationships of population. This usually means survey research where a sample of population is studied to determine its characteristics, and it is inferred that the population has the same characteristics.³⁵ Hence survey approach has been adopted for the present study. **Research setting is the specific place where the data collection occurs.¹¹ The present study was undertaken in Mahalakshmi Puram, Bangalore, due to the geographical proximity, feasibility of the study and availability of the samples.**

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Variables Under the Study**Research Variable:**

Knowledge on disaster preparedness.

Demographic Variables:

Age, Sex, Marital Status, Education, Occupation, Religion, Family Income/Month, Type of Family, Previous Experience of Disaster and Source of Information about Disaster.

Sample:

A sample is a subset of population elements. In the present study the sample comprises of men and women between 21-50 years of age residing in Mahalakshmi Puram, Bangalore, who fulfilled the inclusion criteria for the study.

Inclusion Criteria:

1. Men and women between 21-50 years of age.
2. People willing to participate in the study.
3. People present in the community at the time of the study.

A structured questionnaire on aspects of disaster and disaster preparedness was framed to assess the knowledge of people. It was found to be the most apt instrument to elicit responses from the people.

Section A: Demographic data

This section consists of 10 items for obtaining information about selected demographic factors such as age, sex, religion, education, occupation, income, marital status, type of family, previous disaster experience and source of information on disaster.

Section B: Self-Administered Questionnaire

This section deals with Self-Administered Questionnaire to assess the knowledge of people on various aspects of disaster preparedness. It consists of 40 items dealing with the general concepts of disaster, earthquakes, floods, bomb blasts, fire accidents and disaster preparedness kit. Each item has 3 options with one correct answer. A score of '1' is awarded for the correct answer and a score of '0' is awarded for the wrong answer. Total score is 40.

The knowledge level has been arbitrarily divided into three categories based on the scores in the structured questionnaire.

- | | |
|----------------------------------|-------------------|
| 1. Inadequate knowledge | : <50 percent |
| 2. Moderately adequate knowledge | : 51 – 75 percent |
| 3. Adequate knowledge | : > 75 percent |

Data Collection process

Data was collected after obtaining permission from the Medical Officer, Urban Family Welfare Center, Mahalakshmi Puram. The investigator introduced self to the subjects and explained the purpose of the study. She obtained written consent from those who were willing to participate in the study. Instructions were given and the tool was administered. Time to fill up the questionnaire was given as per the respondents' request. After collecting the filled forms, the answers were given and the respondents were thanked. Data collection was terminated.

However, certain difficulties arose during the data collection period. There were many drop outs. Many participants refused to take part after giving initial consent. Some of them returned the questionnaire unfilled. The investigator had to continue collecting data till she got 100 samples.

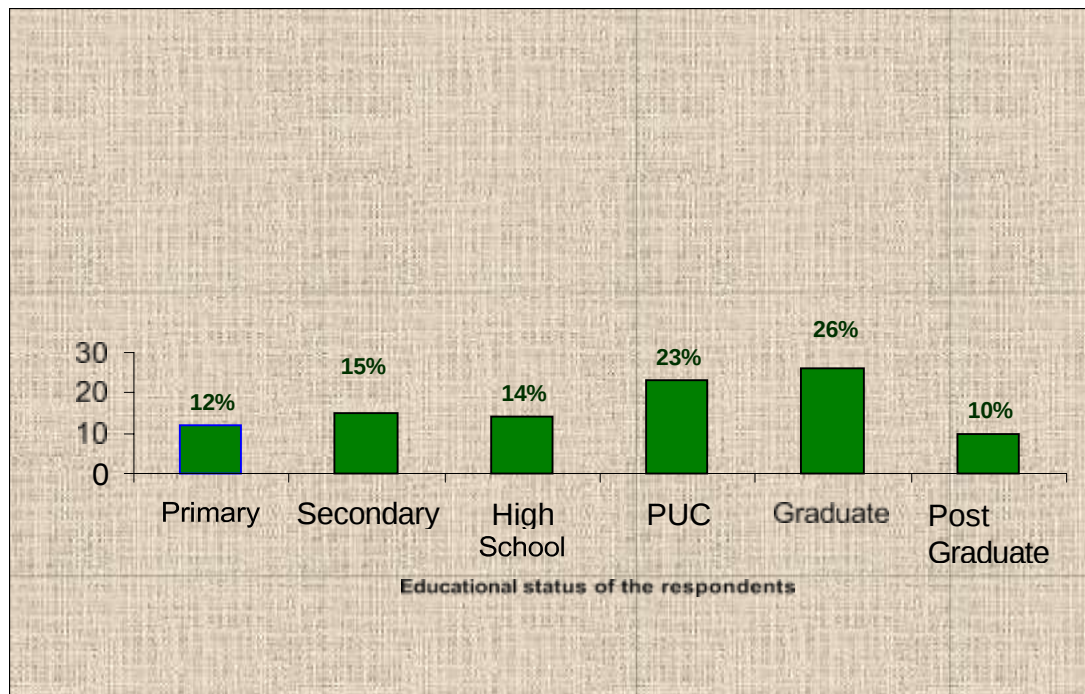
Plan for data analysis

Descriptive and inferential statistics will be used for data analysis. The data will be presented in the form of tables, bar diagrams and pie diagrams. Data will be analyzed by computing mean, standard deviation and chi – square.

Results:-

Statistical analysis helps researchers make sense of the quantitative information. Without statistics, quantitative data would be a chaotic mass of numbers. Statistical procedures enable researchers to summarize, organize, evaluate, interpret and communicate numeric information. Statistics are either descriptive or inferential.

Frequency and percentage distribution of the respondents according to their educational status.



Range of knowledge score, Mean knowledge score and standard deviation score on different assessment domains of disaster preparedness.

Sl. No	Assessment Domains	Max. Score	Range Score	Knowledge	
				Mean	SD
1	Concepts of Disaster	6	0-6	3.54	1.4
2	Earth quake	7	0-7	4.77	1.5
3	Floods	7	0-7	5.13	1.8
4	Fire	3	0-3	1.94	0.8
5	Bomb blast	6	0-6	2.69	1.5
6	Disaster preparedness kit	11	0-11	5.19	1.9
7	Total	40	0-40	23.26	8.9

The total range of score was 0 – 40. The total mean knowledge score was 23.26 with a standard deviation of 8.9.

Association between knowledge on disaster preparedness and selected variables

n = 100

Sl. No. Demographic Variables		Knowledge						D f	χ^2	Table Value
		Inadequate		Moderately Adequate		Adequate				
		n	%	n	%	n	%			
1.	Age 21 -30 31 -40 41 -50	17 9 6	30.9 32.1 35.3	29 14 10	52.7 50.0 58.8	9 5 1	16.4 17.9 5.9	4	1.40	9.488
2	Sex Male Female	15 17	31.9 32.1	24 29	51.1 54.7	8 7	17.0 13.2	2	0.30	5.991
3	Religion Hindu Muslim	26	37.1	40	57.2	4	5.7	4	20.08*	9.488

	Christian	· 4 2	30.8 11.8	3 10	23.1 58.8	6 5	41.1 29.4			
4.	Education Up to SSLC P.U.C Graduate +	25 6 1	61.0 26.1 2.8	16 13 24	39.0 56.5 66.7	0 · 4 11	0.0 17.4 30.6	4	35.49*	9.488
5.	Occupation Government Private Business House wife	· 1 13 6 12	14.3 26.0 42.9 41.4	· 4 29 5 15	57.1 58.0 35.7 51.7	· 2 8 · 3 · 2	28.6 16.0 21.4 6.9	6	6.17	12.592
6.	Family Income per month < Rs 10000 Rs. 10000-20000 > Rs. 20000	11 14 7	35.5 29.8 31.8	19 26 8	61.3 55.3 36.4	· 1 7 7	3.2 14.9 31.8	4	8.80	9.488
7	Marital Status Single Married	7 25	19.4 39.1	23 30	63.3 46.9	6 9	16.7 14.1	2	4.13	5.991
8	Previous Experience Yes No	8 24	38.1 30.4	12 41	57.1 51.9	· 1 14	4.8 17.7	2	2.25	5.991
9	Type of Family Nuclear Joint	12 20	21.8 44.4	33 20	60.0 44.4	10 5	18.2 11.2	2	6.91*	5.991

Chi-Square established at 0.05 level of significance denotes that the association between knowledge on disaster preparedness and demographic variables like religion, education and type of family is statistically significant. However, the chi-square value established at 0.05 level of significance denotes that the association between knowledge on disaster preparedness and demographic variables like age, sex, occupation, family income/ month, marital status and previous experience of disaster is not statistically significant.

Discussion:-

The study was conducted in Mahalakshmi Puram. 100 subjects who were willing to participate in the study were chosen by convenience sampling technique using a survey approach. Research design adopted is descriptive design. Self-administered questionnaire was used to assess the knowledge of people on disaster preparedness.

Respondents were between 21–50 years of age. Majority of them (55 percent) of them were between 21-30 years of age, 28 percent of them were between 31–40 years of age and 17 percent of them were between 41–50 years of age. 53 percent of the respondents were females and 47 percent of them were males. 64 percent of the respondents were married and 36 percent were single.

Chi-square value established at 0.05 level of significance denotes an association between knowledge on disaster preparedness and demographic variables like religion, education and type of family.

31.7 percent Hindus, 30.8 percent Muslims and 11.8 percent Christians had inadequate knowledge on disaster preparedness. 57.2 percent Hindus, 23.1 percent Muslims and 58.8 percent Christians had moderately adequate

knowledge on disaster preparedness. 5.7 percent Hindus, 41.1 percent Muslims and 29.4 percent Christians had adequate knowledge on disaster preparedness. Chi-Square value obtained ($\chi^2 = 20.08$) denotes that the association between knowledge on disaster preparedness and religion is found to be statistically significant at 0.05 level of significance. (Table 4). Findings thus suggest that Muslims have better knowledge on disaster preparedness as compared to Hindus and Christians.

61.0 percent (25) of respondents educated up to SSLC, 26.1 percent (6) of respondents qualified as PUC and 2.8 percent (1) of respondents who were graduates and post graduates had inadequate knowledge on disaster preparedness. 39.0 percent

(16) of respondents educated up to SSLC, 56.5 percent (13) of respondents qualified as PUC and 66.7 percent (24) of respondents who were graduates and post graduates had moderately adequate knowledge on disaster preparedness. No respondents educated up to SSLC had adequate knowledge. 17.4 percent of respondents qualified as PUC and 30.6 percent of respondents who were graduates and post graduates had adequate knowledge on disaster preparedness. Chi-Square value obtained ($\chi^2 = 35.49$) denotes that the association between knowledge on disaster preparedness and education is found to be statistically significant at 0.05 level of significance. (Table 3). Findings thus suggest that Post graduates and Graduates have better knowledge in comparison to others.

Conclusion:-

The following are the conclusions drawn from the study

1. 32 percent of the respondents had inadequate knowledge, 53 percent of them had moderately adequate knowledge and only 15 percent of them had adequate knowledge on disaster preparedness.
2. The range of knowledge score was between 0 – 40. The mean score was
3. 23.26 with a standard deviation of 8.9.
4. There is a significant association found between knowledge on disaster preparedness and demographic variables like religion, education, type of family.
5. Religion wise, majority of the respondents who demonstrated adequate knowledge were Muslims (41.1 percent) as compared to Hindus and Christians (Chi-Square = 20.08).
6. Education wise, adequate knowledge on disaster preparedness was demonstrated by a majority of graduates and post graduates (Chi-Square = 35.49).
7. Majority of the respondents living in nuclear families (18.2 percent) demonstrated adequate knowledge as compared to the 11.2 percent of the respondents who lived in joint families (Chi-Square = 6.91).
8. There is no significant association found between knowledge on disaster preparedness and demographic variables like age, sex, occupation, family income, marital status, previous disaster experience.

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