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A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge and Practice Regarding Triage Assessment in Case of Disaster Among Staff Nurses Working in Selected Hospital at Anand District

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Abstract

The study aimed to assess the effectiveness of a planned teaching program on triage assessment in case of disaster among staff nurses working in selected hospitals in Anand District. The objectives were to assess knowledge and practice before and after the program, and to determine the correlation between post-test knowledge and practice scores. Research design selected for the present study was one group pre-test and post-test design. In this study 50 were samples using a convenient sampling technique. The data analysis revealed a significant increase in knowledge and practice among staff nurses, with the majority aged 31-40 years, female, with professional qualifications and experience. The mean pre-test knowledge score was 14.18, and the mean post-test knowledge score was 20.14. The correlation between pre-test and post-test knowledge and practice scores was moderately positive, rejecting the null hypothesis and accepting the research hypothesis. The study concluded that the planned teaching program was effective in improving the knowledge and practice of staff nurses in Anand District.

Keywords: Disaster Preparedness, Triage Assessment, Knowledge And Practice, Staff Nurses, Planned Teaching Program, Effectiveness Of Training.

1. INTRODUCTION

1.1. BACKGROUND OF STUDY

The world's population is at risk of emergencies and disasters every day, leading to numerous injuries and health impacts. Mortality due to injuries is increasingly turning into a global public health epidemic, with 15,000 people dying daily from various injuries. The main difference between daily incidents and injuries with mass casualty is the large number of injuries and recurrent visits to health centers, outstripping available resources and facilities. In emergencies and disasters, the limited resources, medical personnel, short time to provide medical care, and delay in treatment can endanger the lives of injured patients. Triage systems are used to manage resources and provide medical services to injured people in emergencies and disasters. Triage is the process of categorization, classification, or separation, and refers to the categorization and classification of injured people and prioritization of them based on the need for

treatment. Triage is derived from the French word "trier," which means separating, categorizing, or classifying, and refers to the categorization, classification, and prioritization of patients. Disasters are a complex global problem, disrupting mental health and well-being, and disrupting economic and social development. The United Nations International Strategy for Disaster Reduction (UN-IDSR) defines disaster as a serious disruption of a community or society causing widespread human, material, economic, or environmental losses that exceed the ability of the affected community or society to cope using its own resources.

1.2.NEED OF STUDY

The Global Disaster Alert and Coordination System (GDACS) has identified 22 major natural disasters worldwide for the first two months of 2023.

The most dramatic climatic events of the period include:

- The Series Of Earthquakes In Turkey And Syria,
- The Forest Fires In Chile,
- The Tropical Cyclone "Freddy" In Madagascar And Mozambique,
- The Floods In Brazil,
- Hurricane Gabriel In New Zealand,
- Cyclone Batsirai In Madagascar.

79,732 people have lost their lives and 108 crore people were affected in 321 incidences of natural disasters in India, according to a report by United Nations Office for Disaster Risk Reduction. The glacier burst at Chamoli in Uttarakhand has once again brought to focus India's fragile ecosystem. In fact, India ranks among the top three countries in the world that bore the maximum brunt of natural disasters in recent years.

Besides the United States, China and India have taken the hardest hit from natural disasters due to their massive population. Both nations accounted for over 280 crore disaster-affected people between 2000 and 2019, which is around 70 per cent of the global total. Some 79,732 people have lost their lives and 108 crore people were affected in 321 incidences of natural disasters in India in the same duration, according to the United Nations Office for Disaster Risk Reduction. While China recorded 577 natural disasters affecting 173 crore people and leading to 1.13 lakh deaths, the United States witnessed 467 incidents affecting 11 crore people in this period.

1.3. STATEMENT OF THE PROBLEM

"A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge and Practice regarding Triage assessment in case of Disaster among Staff Nurses Working in Selected Hospital at Anand District."

1.4. OBJECTIVES OF THE STUDY

1.4.1. To assess the Knowledge of staff nurses before and after administration of the Planned Teaching Programme regarding Triage assessment in case of Disaster in selected hospital at Anand district.

1.4.2. To assess the Practice of staff nurses before and after administration of the Planned Teaching Programme regarding Triage assessment in case of Disaster in selected hospital at Anand district.

1.4.3. To find out correlation between post-test knowledge score and Practice score regarding chest Triage assessment in case of Disaster in selected hospital at Anand district.

1.4.4. To find out association between post-test Knowledge score with their socio demographic variable

regarding Triage assessment in case of Disaster in selected hospital at Anand district among staff nurses.
1.4.5. To find out association between post-test Practice score with their socio demographic variable regarding Triage assessment in case of Disaster in selected hospital at Anand district among staff nurses.

1.5 HYPOTHESIS

H_1: The mean Post Test Knowledge score of staff nurses in selected hospital of Anand district regarding Triage assessment in case of Disaster will be higher than the mean pre-test score as measured by the structured knowledge questionnaire after administering the planned teaching programme at 0.05 level of significance.
H_2: The mean Post-test Practice score staff nurses in selected hospital of Anand district regarding Triage assessment in case of Disaster will be higher than the mean pre-test score measured by the structured expressed practice questionnaire after administering the planned teaching programme at 0.05 level of significance.
H_3: There will be significant co-relation between post test Knowledge Score and Post test Practice score regarding Triage assessment in case of Disaster at 0.05 level of significance.
H_4: There will be association between post-test Knowledge score with their socio demographic variable regarding Triage assessment in case of Disaster among staff nurses.
H_5: There will be association between post-test Practice score with their socio demographic variable regarding Triage assessment in case of Disaster among staff nurses.

1.6 DELIMITATION

This study is delimited to:
1. The sample size of the study is 50 sample.
2. Staff Nurse who are working in Hospital of Anand District only and accessible during the data collection will be selected for the sample.
3. Staff nurse who are willing to participate at the time of data collection.

2. METHODOLOGY

The present study was conducted to assess the knowledge and practice regarding Triage assessment in case of Disaster among Staff Nurses Working in Selected Hospital at Anand District Further study was also aimed of determining the effectiveness of Planned Teaching Programme regarding Triage assessment in case of Disaster The study was conducted in two phase.
Phase I Includes to assess the Knowledge of staff nurse regarding Triage assessment in case of Disaster through structured knowledge questionnaire.
Phase II Includes to assess the Practice of staff nurse regarding Triage assessment in case of Disaster through structured Exposed observational checklist.

Research Approach And Rationale

A Pre Experimental approach was used in the study to evaluate the effectiveness of Planned Teaching Programme in terms of improving the knowledge and practice of regarding Triage assessment in case of Disaster among staff nurse total control over the variables under the study was not completely possible and the groups were not randomized, the pre experimental approach was the appropriate in this study.

Research Design

Research design selected for the present study was one group pre-test and post-test design.

Independent Variable:
Planned Teaching Programme regarding triage assessment in case of disaster.
Dependent Variable:
Staff nurse who had Knowledge and Practice regarding triage assessment in case of disaster among staff nurse working at selected hospital of Anand District.
Research Setting
This study was conducted in selected hospital of Anand districts .Investigator divide area in to 3 zone wise for conducting the research study and among 2 zone Investigator had chosen 1 zone for conducting the pilot study by lottery method.
Sample Size
Out of entire population of the staff nurse the researcher selected 50 staff nurse who were work in selected hospital of Anand district.
Sampling Technique
Non probability convenience sampling technique was used for the study.
Criteria for Sample Selection
The sample selection was based on the following inclusion and exclusion criteria
Inclusion Criteria:
- Staff nurse who are willing to participate at the time of this study.
- Staff nurse who can read and write English.

Exclusion Criteria:
Staff nurse who are not willing to participate at the time of this study.
Selection Of Tool For Data Collection:
1. Structured Knowledge Questionnaire
2. A observation checklist
3. Planned Teaching Programme regarding Disaster

Development Of Tools For Data Collection
Development of structured knowledge questionnaire
Development of structured Expressed observation checklist
Development of Planned Teaching Programme
Description Of Tools For Data Collection
Structured Knowledge Questionnaire
Section –I: Consists of five items on personal data of samples such as Age, sex, professional qualification, professional experience and have you attended in service education on disaster management.
Section—II: Comprised items on Knowledge regarding. There were total 30 multiple choice items having one correct answer. Total items were30 and total maximum score is 30. Blue print was prepared according to the content area as well as level of cognitive domain – Knowledge, Comprehension and Application. 30 items were divided in three sub-areas of the content **-:** meaning, type, disaster management, impact and phases of disaster, triage assessment and methods of triage assessment.

3. MODELING AND ANALYSIS

3.1.Analysis And Interpretation Of The Demographic Data Of The Sample

Frequency and Percentage Wise Distribution of Samples Based on Demographic Data [N=50]

SR	PERSONAL DATA	FREQUENCY	PERCENTAGE

N0			(F)	(%)
1.	Age	21– 30 year	15	30%
		31 – 40 year	18	36%
		41 to 50 year	07	14%
		Above 50 year	10	20%
2	Sex	Male	21	42%
		Female	29	58%
3.	Professional qualification	GNM	11	22%
		Basic B.Sc (N)	10	20%
		Post Basic B.Sc (N)	11	22%
		Any Other, specify	18	36%
4.	Professional experience	yes	27	54%
		no	23	46%
5.	Attained any in service education on disaster management.	Yes	22	44%
		No	28	56%

3.2.Analysis And Interpretation Of The Data Of Structured Knowledge Questionnaire

Area wise Mean, Mean Percentage, Percentage Gain, Mean Difference, Standard Deviation (SD) of Pre-Test and Post-Test Knowledge Scores of samples regarding . [N=50]

Knowledge	Max. Score	Pre-Test Knowledge Score of Sample			Post-Test Knowledge Score of Sample			Mean Percentage gain (%)	Mean Difference
		Mean Score	Mean Percentage	S.D	Mean Score	Mean Percentage	S.D		
Related to Meaning of Disaster ,type	3	1.7	56.6	0.9	2.28	76	0.75	19.4	0.58
Disaster Management ,impact and phases	4	2.1	52.5	1.18	2.9	72.5	1.14	14.5	0.8
Triage assessment and Methods of Triage Assessment	23	10.3	44.8	4.8	14.96	65.22	5.07	20.42	4.66
Total	30	14.1			20.14				6.04

3.3.Distribution of Samples according to grading of pre-test and post-test Knowledge score:
[N=50]

Score	Grade	Pre –Test		Post –Test	
		Frequency	Percentage	Frequency	Percentage
1-10	POOR	15	30	07	14
11-20	AVERAGE	30	60	18	36
21-30	GOOD	05	10	25	50
TOTAL		50	100	50	100

3.4. Mean Score, Mean Difference, SD & 't' Value of pre & Post -test Knowledge Score of samples
[N = 50]

Knowledge	Mean	Mean Difference	SD	SE	Calculated 't' test	Tabulated 't' Value
Pre-test	14.18	6.04	6.04	0.85	7.011	2.00
Post-test	20.14					

Note: *t= p < 0.05 df= 495

3.5.**Analysis & Interpretation Of Data Related To Practice Of Samples Before & After Administration Of Planned Teaching Programme**

Area wise Mean, Mean Percentage, Percentage Gain, Mean Difference, Standard Deviation (SD) of Pre-Test and Post-Test Practice Scores of samples regarding Triage assessment in case of disaster

Practice	Max. Score	Pre-Test Practice Score of Sample			Post-Test Practice Score of Sample			Mean Percentage	Mean Differ
Triage assessment in case of disaster.	20	8.38	41.9	0.41	12.15	62.9	0.50	21	3.77
Total	20	8.38			12.1				3.77

[N=50]33

3.6.Distribution of Samples according to grading based on Pre-Test and Post-Test Practice scores:
[N=50]

Sr. No.	Practice	Classification	Pre-test		Post-test	
			Frequency	%	Frequency	%
1.	Poor	1-7	22	44	09	18
2.	Average	8-13	23	46	19	38
3.	Good	14-20	05	10	22	44
	TOTAL		50	100	50	100

3.7.Mean Score, Mean Difference, SD & 't' Value of pre & post test Practice Score of samples. [N=50]

Practice	Mean	Mean Difference	SD	SE	Calculated 't' test	Tabulated 't' test
Pre-test	8.38	4.24	4.61	0.60	7.06	2.00
Post –test	12.62					

Note: *t= p < 0.05 df= 49

3.8.Analysis And Interpretation Of Data Related To Correlation Between Post Test Knowledge Score And Practice Score.

TABLE:11: Coefficient correlation between Post-test Knowledge score and Post-test Practice score: [N= 50]

Post Mean Knowledge Score (X)	Post Mean Practice Score (Y)	Total No. of Sample(N)	Correlation Coefficient (r)
20.14	12.62	50	0.82

3.9.Analysis And Interpretation Of Data Related To Association Of Post Test Knowledge Score With Their Sociodemographic Variable Regading Triage Assessment In Case Of Disaster .

Association of Variable of Staff Nurses Respondents with Knowledge Score. [N= 50]

SR N0	Variable		Knowledge				Calculated value	Tabulated value
			Good	Average	Poor	Total		
1.	Age in year	21-30 year	06	07	02	15	1.97	12.59NS
		31-40 year	08	07	03	18		
		41-50	03	04	00	7		
		Above 50	08	00	02	10		
2.	Gender	Male	10	08	03	21	9.57	5.99S
		Female	15	10	04	29		
3.	Professional qualification	GNM	06	05	00	11	5.54	12.59NS
		Basic B.Sc (N)	04	05	01	10		
		Post Basic B.Sc (N)	05	03	03	11		
		Any other, specify	10	05	03	18		
4.	Professional experience	Yes	09	16	02	27	9.57	5.99 S
		No	16	02	05	23		
5.	Attained any in service education on	Yes	10	08	04	22	7.21	5.99 S
		No	15	10	03	28		

	disaster management							

3.10. Analysis And Interpretation Of Data Related To Association Of Post Test Practice Score With Their Sociodemographic Variable.

TABLE:12: Association of Variable of Staff Nurses Respondents with Practice Score [N= 50]

SR N0	Variable		Practice				Calculated value of $\chi 2$	Tabulated value of $\chi 2$
			Good	Average	Poor	Total		
1.	Age in year	21-30 year	07	06	02	15	9.65	12.59 NS
		31-40 year	07	08	03	17		
		41-50	03	02	02	07		
		Above 50	05	03	02	10		
2.	Gender	Male	10	08	03	21	8.25	5.99 S
		Female	12	11	06	29		
3.	Professional qualification	GNM	06	05	00	11	2.40	12.59 NS
		Basic B.Sc (N)	03	06	01	10		
		Post Basic B.Sc (N)	05	02	04	11		
		Any other, specify	08	06	04	18		
4.	Professional experience	Yes	12	11	04	27	7.99	5.99 S
		No	10	08	05	23		
5.	Attained any in service education on disaster management	Yes	10	12	00	22	7.01	5.99 S
		No	12	07	09	28		

4. RESULTS AND DISCUSSION

4.5.RESULTS

Findings related to Description of Demographic Data of Samples.

It revels that out of 50 respondents under study the majority of the findings were,19(38%) belongs to age group of 31-40year, sex belongs to 29(58%)were female, professional qualification 18(36%) were with any other specify. professional experience , 27(54%) having experience and 28(56%)hadn't attained any workshop or training regarding Triage assessment in case of disaster .

Findings related to Knowledge of Sample regarding Triage Assessment In Case Of Disaster

The mean pre-test knowledge score was 14.18 while mean post-test knowledge score was 20.14.Hence the difference of mean between pre &post test knowledge score was 6.04. The Standard Deviation (SD) of 6.04 respectively. The calculated't' value is 7.011 at 49 degree of freedom with 0.05 level of significance.

The calculated 't' value (7.011) was greater than tabulated 't' value (2.00). So the investigator concluded that there was significant increased in the mean post-test Knowledge score as compared to the mean pre-test knowledge score after the administration of the Planned Teaching Programme which was statistically proved. So the null hypothesis H_{01} was rejected and research hypothesis H_1 was accepted.

The data of the study reveals that 50 respondents reveals that 15(30%) had poor knowledge 30(60%) had average knowledge and 5(10%) good knowledge in pre-test. Whereas in the post-test 50 reveals respondents that 07(14%) had poor knowledge, 18(36%) respondents had average and 25(50%) respondents had good knowledge.

Findings related to Practice of Samples regarding Triage Assessment In Case Of Disaster.

The mean Pre-test Practice score was 8.38 while mean Post-test Practice score was 12.62 Hence the difference of mean between pre & Post-test Practice score was 4.24.

The calculated 't' value (7.06) was greater than tabulated 't' value (2.00). So the investigator concluded that there was significant increase in the mean post-test Practice score as compared to the mean pre-test Practice score after the administration of the Planned Teaching Programme which was statistically proved. So the null hypothesis H_{02} was rejected and research hypothesis H_2 was accepted.

During pre-test 22(44%) were showing poor practice and 23 (46%) were showing average practice of samples 05(10%) of respondents found in the good practice and after administrating Planned Teaching Programme 09(18%) were showing poor practice,19(38%) were showing average practice and 22(44%) were showing good practice regarding triage assessment.

Findings related to Correlation between Post-Test Knowledge score and Practice score of Samples regarding Triage assessment in case of disaster :

The investigator applied the correlation coefficient formula to find out the correlation between the post-test knowledge score was 20.14 and post-test practice score was 12.62 by applying the appropriate statistics. The investigator got the value coefficient of correlation was 0.82.

Thus the investigator concluded that there was significant moderately positive correlation between the knowledge and Practice of staff nurse working in hospital of Anand district. It proves that if the knowledge of the samples increases then the practice of samples was also tends to increase. Thus the null hypothesis H_{03} was rejected and the research hypothesis H_3 was accepted**.**

Findings related to Association between Post-test Knowledge score between their Socio Demographic Variable regarding Triage assessment in case of disaster .

In the association between post test knowledge and selected demographic variables, the findings revealed that there was significant association between knowledge and sex, professional experience and attained any training /workshop related to Triage assessment in case of disaster at 0.05 level of significance.

Findings related to Association between Post-test Practice score between their Socio Demographic

Variable regarding Triage assessment in case of disaster

In the association between post test and selected demographic variables, the findings revealed that there was significant association between knowledge and sex, professional experience and attained any training /workshop related to Triage assessment in case of disaster at 0.05 level of significance.

4.6.DISCUSSION

The Present Study Addressed To "Assess The Effectiveness Of Planned Teaching Programme On The Knowledge And Practice Regarding Triage Assessment In Case Of Disaster Of Patients Among Staff Nurses Working In Medical Department Of Hospital Of Anand District. Study Consist Of Total 50 Staff Nurses. The Pre Experimental, One Group Pre-Test Post-Test Design Was Adopted For The Present Study. Simple Random Sampling Was Used To Select The Samples. The Data Was Collected From 50 Staff Nurses By Used To Assess Structured Knowledge Questionnaire For Knowledge And Observation Check List For Practice The Findings Of The Study Have Been Discussed With Reference To The Objectives And Hypotheses And With The Findings Of Other Studies. The Pre-Test Knowledge Score Was 14.18 While Mean Post-Test Knowledge Score Was 20.14 Hence The Difference Of Mean Between Pre & Post-Test Knowledge Score Was 6.04. Pre-Test Practice Score Was 8.38 While Mean Post Test Practice Score Was 12.62 Hence The Difference Of Mean Between Pre &Post Test Practice Score Was 4.24 Significance Of The Difference Between Pre-Test And Post-Test Knowledge And Practice Were Statistically Tested Using Paired 'T' Test And It Was Found Significant. Hence It Was Proved That The Planned Teaching Programme Was Effective In Increasing Knowledge And Practice Among Staff Nurse Working In Medical Department Of Hospital Of Anand District. Correlation Was Used To Identifying The Relationship Between Post Test Knowledge Score And Post Test Practice Score Was Moderately Positive Correlation. Association Was Used To Identifying The Relationship Between Post -Test Knowledge Score And Post -Test Practice Score With Their Socio Demographic Variable And It Was Found The Significant.

5. CONCLUSION

Knowledge deficit exit under in all the areas of Triage assessment in case of disaster. The Planned Teaching Programme was found to be effective in enhancing the Knowledge and Practice of the samples regarding Triage assessment in case of disaster. Samples gained significant Knowledge ,enhanced the Practice and skills after exposed to the Planned Teaching Programme. The findings indicate that the Planned Teaching Programme developed by the investigator was effective in enhancing the Knowledge and Practice of the samples Triage assessment in case of disaster. Thus the Planned Teaching Programme can be used for the large population in different settings.

The investigator concluded that there was significance increase in the mean post-test score as compared to mean pre-test score of knowledge and practice after administration of the Planned Teaching Programme on Triage assessment in case of disaster. In Knowledge and practice the calculated 't' value was greater than the tabulated 't' value at 0.05 level of significance which was statistically significant correlation of post-test knowledge and practice score was moderately positive and association with post test knowledge and practice score with their socio demographic variable were significantly found. Thus, the Null hypotheses were rejected and Research hypotheses were accepted. So, investigator concluded that staff nurses working in Medical Department of Hospital gained significant increase in Knowledge, and Practice shows that the Planned Teaching Programme was effective.

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