Evaluating the Efficacy of Self-Learning Modules (SLM) in Enhancing Disaster Management Knowledge Among School Teachers in Maharashtra: A Quasi-Experimental Study

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Abstract: *Background Of Study: Disaster can affect anyone, but children are the most vulnerable. School play an essential rile during disasters because children spend most of their time in such institutions, and teachers are among the untapped groups whose potential roles in disaster risk reduction and management are not yet fully realizes.1Disaster is defined as phenomena caused by environmental events or armed conflicts that lead to fatalities, injuries, stress, physical damage and economic breakdown of great significance. They occur on a scale that overwhelms local resources, usually requiring external assistance. Improving the effectiveness and efficiency of interventions, and the fairness of their distribution, is crucial in the field of disaster response. For that reason, increasing and improving the scientific evidence for disaster relief is essential. Research is also vital to accurately describe phenomena in disaster, also called humanitarian emergencies or crise. Problem Statement: "A study to assess effectiveness of self - instructional module (SIM) on knowledge regarding disaster management among school teachers in selected schools of Maharashtra. Objectives of the Study: 1. To assess the existing level of knowledge regarding disaster management among school teachers in selected schools of Maharashtra.2. To determine the effectiveness of self - instructional module on the level of knowledge regarding disaster management among school teachers in selected schools of Maharashtra.3. To find out association between pre - test levels of knowledge on disaster management with selected socio demographic variables. Methodology: Pre experimental research design, one group pre - test post - test research design was used to assess the effectiveness of Self - Instructional Module regarding Disaster Management among school teachers in selected school of Maharashtra. In this study 60 samples selected Non - Probability Purposive Sampling technique. The data obtained were analysed using descriptive and inferential statistics based on objectives and research questions of the study. Analysis and Result: In the school teachers with respect to the age majority 29 (48.9%) of the teachers belongs to 41 - 50 years, 25 (41.7%) of teachers belongs to 31 - 40 years, 5 (8.3%) of teachers from 51 and above year and only 1 (1.7%) was in from 21 - 30 year of age. In case of gender majority 35 (58.3%) were male and 25 (41.7%) were female. Regarding education status of the school teachers the majority 43 (71.7%) were educated up to B. Ed., 13 (21.7%) were M. Ed. and 4 (6.7%) were educated up to D. Ed. The majority 23 (38.3%) teachers having 11 - 15 years' experience in teaching, 18 (30.0%) are having 6 - 10 years' experience and 19 (31.7%) are having 16 years and above experience in teaching. Majority 38 (63.3%) were used T. V. as source of knowledge regarding disaster management. and 22 (36.7%) were used newspaper as source of knowledge regarding disaster management. Knowledge wise comparison of study subject in pre - test revels 30 (50.0%) were had poor knowledge regarding disaster management, 24 (40.0%) were had average knowledge regarding disaster management and 6 (10.0%) teachers were had good knowledge regarding disaster management. In the post - test result 0 (0.0%) were had poor knowledge regarding disaster management, 0 (0.0%) were had average knowledge regarding disaster management and 60 (100.0%) teachers were had good knowledge regarding disaster management. There is no significance association between knowledge score and demographic variables. Conclusion: After the present study to assess effectiveness of Self Instructional Module regarding disaster management among school teachers, study proves that having the need to improve the knowledge regarding disaster management. And also the Self Instructional Module is effective for to improve knowledge.*

Keywords: School teachers, Disaster Management, Self Instructional Module

1. Introduction

Human being is affected by various disaster rightly from the origin of mankind. Disaster can be generally categorized as natural and human made Natural disaster are earthquake, hailstorm, cyclone, landslide, cloud bursts, flood soil erosion and snow avalanche etc. While human - made disaster is fire, road, air, railway accidents and disaster due to chemicals or nuclear pollutions etc.[1] Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk reduce exiting disaster risk and manage residual risk, contributing to the strengthening for resilience and reduction of disaster losses. The approaches to disaster management can be classified as prospective, corrective, compensatory, community based and local or indigenous approach to disaster risk.[2]

2. Need for Study

Disasters have been increasing all over the world. Todays, with technological advancement, acquiring knowledge and its application in the realm of action is regarded as the only effective way for prevent disasters or reducing its effects. Disaster education aims to provide knowledge among individuals and groups to take action to reduce their vulnerability to disaster. According to World Health Organization, vulnerability is a degree to which a population, individual or organization cannot predict, cope, resist and rehabilitate after the disaster and vulnerable people such as children, pregnant women, the elderly, malnutrition and people with disabilities.[3]

The number of disasters has increased by a factor of five over the 50 years period, driven by climate change, more extreme weather and improved reporting. Between 1970 to 2019, weather, climate and water hazards accounted for 50% of all

disaster, 45% of all reported deaths and 74% of all reported economic losses, according to World Meteorological Organization. According to the world economic forum, 7, 348 disaster events have been recorded in the past 20 years, which have claimed the lives of 1.23 million people. During the period between 2000 - 2019, China reported 577 disasters – the highest, followed by the US (467) and India (321).[4]

Problem Statement

"A Study to assess effectiveness of self instructional module (SIM) on knowledge regarding disaster management among school teachers in selected schools of Maharashtra.

Objectives of the Study

1) To assess the existing level of knowledge regarding disaster management among school teachers in selected schools of Maharashtra.
2) To determine the effectiveness of self - instructional module on the level of knowledge regarding disaster management among school teachers in selected schools of Maharashtra.
3) To find out association between pre - test levels of knowledge on disaster management with selected socio demographic variables.

Hypothesis

H0 – There is no significant difference between mean pre - test and post - test level of knowledge regarding disaster management among school teachers in selected schools of Maharashtra.

H1 – There is significant difference between the mean pre - test and post - test level of knowledge regarding disaster management among the school teachers in selected schools of Maharashtra.

H2 – There will be significant association between pre - test score with selected demographic variables.

Research Approach

A Quantitative evaluative research approach was considered an appropriate research approach for the study. The present study was intended to find out effectiveness of Self - Instructional Module regarding disaster management among school teachers.

Research Design

Pre experimental research design, one group pre - test post - test research design was used to assess the effectiveness of Self - Instructional Module regarding Disaster Management among school teachers in selected school of Maharashtra.

Research Setting

In the present study, the setting was selected schools of Maharashtra.

Population

In the present study, the population refers to school teachers who are selected from selected schools of Maharashtra.

Sample

In the present study, the school teachers from selected schools of Maharashtra and who are resent during the data collection period.

Sample Size

the sample size comprises of 60 school teachers from selected schools of Maharashtra.

Sampling Technique

Samples were selected for the study was Non - Probability Purposive Sampling technique.

Eligibility Criteria

Inclusion criteria

School teacher included in study, who are –Working in selected school

- Willing to participate in the research study.
- Able to understand English or Marathi

Exclusion Criteria

School teachers excluded from study, who are –

- Have already attended the programme on the same topic
- Not present at the time of data collection.

Description of the Tool

Section A: It consists of five socio - demographic data questions such as age, gender, qualification, year of experience and source of knowledge regarding disaster management.

Section B: This part of the tool consists of items related to the assessment of knowledge regarding disaster management. It consists of 25 multiple choice questions. Each correct response has been scored with one mark. Total score was 25.

Scoring Method

S. no	Score	Category of knowledge
1	0 - 6	Poor knowledge
2	7 - 10	Average knowledge
3	11 - 25	Good knowledge

3. Analysis and Interpretation of Data

Section A - Analysis of Socio - demographic data of school teacher at selected schools in - terms of frequency and percentage.

S. No.	Socio- Demographical Variables	Frequency	Percentage
1	Age in year		
	a) 21 - 30	1	1.7
	b) 31 - 40	25	41.7
	c) 41 - 50	29	48.3
	d) 51 and above	5	8.335
2	Gender		
	a) Male	35	58.3
	b) Female	25	41.7
3	Educational Qualification		
	a) D. Ed.	4	6.7
	b) M. Ed.	43	71.4
	d) M. Phil.	13	21.7
	c) Ph. D.	0	0.0
4	Experience in teaching		
	a) 0 to 5 years	0	0.0
	b) 6 years to 10 years	18	30.0
	c) 11 year to 15 years	23	38.3
	d) 16 years and above	19	31.7

5	Source of knowledge regarding disaster management		
	a) Newspaper	22	36.7
	b) T. V	38	63.3
	c) Radio	0	0.0
	d) Social media	0	0.0

In the school teachers with respect to the age majority 29 (48.9%) of the teachers belongs to 41 - 50 years, 25 (41.7%) of teachers belongs to 31 - 40 years, 5 (8.3%) of teachers from 51 and above year and only 1 (1.7%) was in from 21 - 30 year of age. In case of gender majority 35 (58.3%) were male and 25 (41.7%) were female. Regarding education status of the school teachers the majority 43 (71.7%)
were educated up to B. Ed., 13 (21.7%) were M. Ed. and 4 (6.7%) were educated upto D. Ed. The majority 23 (38.3%) teachers having 11 - 15 years experience in teaching, 18 (30.0%) are having 6 - 10 years experience and 19 (31.7%) are having 16 years and above experience in teaching. Majority 38 (63.3%) were used T. V. as source of knowledge regarding disaster management. and 22 (36.7%) were used newspaper as source of knowledge regarding disaster management.

Section B
Assessment of Pre - test knowledge regarding disaster management among school teachers in selected schools of Maharashtra.

Knowledge	No. of items	Range		Pre - test knowledge score			
		Min	Max	Mean	SD	Median	Mean%
Total Knowledge	25	6.0	13.0	7.5	2.0	6.5	30.0

Section C
Assessment of Post- test knowledge regarding disaster management among school teachers in selected schools of Maharashtra.

Knowledge	No. of items	Range		Post - test knowledge score			
		Min	Max	Mean	SD	Median	Mean%
Total Knowledge	25	18.0	23.0	21.0	1.0	22.0	84.0

Section D
Comparison of pre - test and post - test knowledge scores to determine the effectiveness of SIM (SELF INSTRCTIONAL MOLUDE)

Section E
Association between pre - test knowledge regarding disaster management among school teachers with their selected demographic variables.

Statistical significant was calculated using chi square test. There is no significance association between knowledge score and demographic variables.

4. Conclusion

The present study to assess effectiveness of Self Instructional Module regarding disaster management among school teachers in selected schools of Maharashtra.

The study concluded that in the pretest, the mean percentage 30.0% with mean and SD of 7.5±2.0. In the post test In the post test, the mean percentage of knowledge was 84.0% with mean and SD of 21.0±1.0. The mean difference was 14.2. The calculated paired t test value was 50.7at the degree of freedom 59, the p value was 0.000. There was no significant difference between pre - test knowledge on disaster management with selected socio demographic variables. Hence self - instructional module was effective in enhancing the knowledge regarding disaster management among school teachers.

5. Implication of Study

In this study the following implication for the study which is vital concern in the field in the nursing practice, nursing education, nursing administration and nursing research Some of the implications for the present study in various areas as follows:

Nursing Practice
- The nurses working in the health care services should update the knowledge about disaster management.
- Self- instructional module regarding disaster management is distributed to school teachers in selected school teachers.

Knowledge	Mean	SD	Mean%	R	t – value	p – value	df
Pre	7.5	2.0	30.0	0.110	50.7	0.000	59
Post	21.7	1.0	84.0				
Diff	14.2		54.0				

Nursing Education
- Conference, workshops and seminars can be held to impart and update the knowledge and thus bringing the changes in the attitudes.
- In - service education for updating the knowledge skill in various health setting can be given.
- Nursing curriculum has to focus on enabling the nursing students to develop skill in to manage and how to prevent disasters at community level.
- Short term courses can be organized for the nurses, who are working in Triage in disaster management.

Nursing Administration
- The present study is proposed to help the health administrations to Self- Instructional Module and fulfil the needs of school teachers.
- The administrators in both private and government sectors should take initiative actions to update the knowledge regarding disaster management.
- The administrator can encourage the nurses for conducting research in various aspects.
- The administrator can organize conference, workshop and seminars for nurses working in the community.
- The nursing administration should awaken to the fact that patient education is a necessity and provide resources in terms of manpower, money and material.

Nursing Research

- The study will be a valuable reference material for further researchers.
- This study is a preliminary set up for exploring the concept of knowledge regarding disaster management.

References

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