

ORIGINAL ARTICLES

Effectiveness of Information Booklet on Knowledge Regarding Natural Disaster Preparedness

Megha Kurmi

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ABSTRACT

A natural disaster is a major adverse event resulting from natural processes of the Earth; examples include floods, volcanic eruptions, earthquakes, tsunamis, and other geologic processes. A natural disaster can cause loss of life or property damage, and typically leaves some economic damage in its wake, the severity of which depends on the affected population's resilience, or ability to recover. So the researcher selected a study to assess the effectiveness of information booklet on knowledge regarding Natural Disaster Preparedness among adults.

Objectives:

- To assess the knowledge regarding natural disaster preparedness among adults (age group of 21-35 year).
- To provide information booklet regarding natural disaster preparedness to adults (age group of 21-35 year).
- To assess the post test knowledge regarding natural disaster preparedness among adults (age group of 21-35 year).
- To assess the effectiveness of information booklet regarding natural disaster preparedness among adults.
- To find out the association between knowledge and selected socio-demographic variables.

Aims: To assess the effectiveness of information booklet on knowledge regarding natural disaster preparedness among adults residing in selected area of Bhopal.

Settings and Design: Research design adopted for this study one group pre-test and post test design judge the effects of the treatment by the differences between the pre-test and post test scores without comparing with a control group. In this study the investigator selected Indrapuri area of Bhopal. The sample were selected by non-probability convenient sampling technique. The adult's male and female who are under 21-35 years had selected for the study.

AUTHOR'S AFFILIATION:

Associate professor, SAIMS College of Nursing, Indore, Madhya Pradesh, India.

CORRESPONDING AUTHOR:

Megha Kurmi, Associate professor, SAIMS College of Nursing, Indore, Madhya Pradesh, India.

E-mail: mkurmi14@gmail.com

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Methods and Material: The research approach adopted was Quantitative research approach. Research design was Pre-experimental one group pre-test post-test design. Non probability convenient sampling technique was used in the study. The sample consisted of 60 adults residing in selected area of Bhopal. The tool used for the data collection was structured knowledgequestionnaire.

Statistical analysis used:

- Before the administration of information booklet, only (9) of the participants had good knowledge, (30) of the adult had average knowledge and (21) had poor knowledge. The pre-test mean score was 19.3 and after the administration of information booklet, the post test mean score was showed 25.2.
- The overall mean score of knowledge increased from 19.3 to 25.2.
- The post test mean score of knowledge of 25.2 was comparably more than the pre test mean score of 19.3 and it was found to be statistically significant (t-value=18.27, p<0.0001) at 0.05 level, i.e. p<0.05.

Results: Finding related to the socio demographic variables of adults was found that majority of adults 36.4% aged 21-25year were females, Regarding Majority i.e. 31.7% were High School. In reference to source of information on Natural Disaster Preparednessmost of the adults i.e. 35% had heard from Mass media. Finding related to the effectiveness of information booklet on Natural Disaster Preparedness among the adults was found out through paired 't' test (t=18.27) at p<0.0001. According to the mean was there was significant difference between pre test and post test knowledge score was increased from 19.3 to 25.2 after administering information booklet.

Finding related to the section wise difference between pre-test and post-test knowledge score according to mean there was significant section wise difference between pre-test and post-test. In disaster (*section-1*) knowledge score increased from 17.6 to 23.3. In earthquake (*section-2*) knowledge score increased from 16 to 22.4. In flood (*section-3*) knowledge score increased from 18-23. In tsunami (*section-4*) knowledge score increased from 18.25 to 23.5. In disaster management (*section-5*) knowledge score increased from 16.6 to 22.3 after administering the Information Booklet.

Conclusions: On the basis of the finding, the investigator concluded that the Information Booklet is significantly effective on improving the knowledge regarding Natural Disaster Preparedness among adults. Hence the adults should be encouraged to attend health education programme.

KEYWORDS

- Knowledge • Information Booklet • Natural Disaster Preparedness • Adults

INTRODUCTION

A disaster is a serious disruption of the functioning of a community or a society involving widespread human, material, economic environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resource.¹ India is very large country and has more than its share of major natural hazards like drought, floods, earthquakesand cyclone throughout its of civilization. Nature is providing sources through which all basic need of the human being get fulfilled but man never get satisfied and want more and more, whichresults in misbalancing of nature, results in Disaster. Disasters happen anywhere and

anytime, and when disaster strikes one may not have much time to respond. Disaster preparednessiscommonlyviewedasconsisting of activities aimed at improving response activities and coping capabilities. However, emphasis is increasingly being placed on recovery preparedness that is, on planning not only in order to respond effectively during and immediately after disasters but also in order to successfully navigate challenges associated with short- and longer-term recovery.

MATERIALS AND METHODS

In this study the investigator selected Indrapuri area of Bhopal. The sample were

selected by non-probability convenient sampling technique. The adult's male and female who are under 21-35 years had selected for the study. Non-probability convenient sampling technique was used in this study. Pre-experimental research design adopted for this study one group pre-test and post test design judge the effects of the treatment by the differences between the pre-test and post test scores without comparing with a control group.

RESULTS

Finding related to the socio demographic variables of adults was found that majority of adults 36.4% aged 21-25 year were females, Regarding Majority i.e. 31.7% were High School. In reference to source of information on Natural Disaster Preparedness most of the adults i.e. 35% had heard from Mass media. Finding related to the effectiveness of information booklet on Natural Disaster Preparedness among the adults was found out through paired 't' test (t=18.27) at p<0.0001. According to the mean was there was significant difference between pre test and post test knowledge score was increased from 19.3 to 25.2 after administering information booklet.

Finding related to the section wise difference between pre-test and post-test knowledge score according to mean there was significant section wise difference between pre-test and post-test. In disaster (section-1) knowledge score increased from 17.6 to 23.3. In earthquake (section-2) knowledge score increased from 16 to 22.4. In flood (section-3) knowledge score increased from 18-23. In tsunami (section-4) knowledge score increased from 18.25 to 23.5. In disaster management (section-5) knowledge score increased from 16.6 to 22.3 after administering the Information Booklet.

Section 1: Description of Socio-demographic Characteristics.

Distributions of socio demographic variables of adults

Table 1: Frequency and parentage distribution of adults according to age

N-60		
Age	Frequency	Percentage
21-25 years	20	33.4%
26-30 years	22	36.6%
31-35 years	18	30%
Total	60	100

Table 2: Frequency and percentage distribution of adults according to gender

N-60		
Gender	Frequency	Percentage
Male	36	60%
Female	24	40%
Total	60	100

Table 3: Frequency and percentage distribution of adults according to educational status

N-60		
Educational status	Frequency	Percentage
Middle school	13	21.7%
High school	19	31.7%
H.S. school	18	30%
Graduate & above	10	16.6%
Total	60	100

Section 2: Distributions of knowledge score of adults regarding natural disaster preparedness

Table 4: Frequency and parentage distribution of adults according to knowledge score

Source of information	Frequency	Percentage
News media	21	35
Govt. agency	19	31.6
School & research institution	15	25
Others	5	8.4
Total	60	100

Section 3: Association between the socio-demographic variables and knowledge score of adults regarding natural disaster preparedness

Table 5: Association of knowledge score regarding Natural Disaster Preparedness according to age of adults

Age	Knowledge regarding Natural disaster preparedness			Total	Chi-square	P-value
	Poor	Average	Good			
21-25 years	5	14	1	20	11.57	<0.05
20-30 years	4	8	10	22		
31-35 year	6	5	7	18		
Total	15	27	18	60		

Table 6: Association of knowledge score regarding Natural Disaster Preparedness according to gender of adult

Gender	Knowledge regarding Natural disaster preparedness			Total	Chi-square	p-value
	Poor	Average	Good			
Male	4	19	13	36		
Female	6	10	8	24	2.052	<0.05
Total	10	29	21	60		

Table 7: Association of knowledge score regarding Natural Disaster Preparedness according to educational status of adult

Educational status	Knowledge regarding natural disaster preparedness			Total	Chi-square	p-value
	Poor	Average	Good			
Middle school	0	6	7	13		
High school	3	13	3	19		
H.S. school	1	10	7	18	7.977	<0.05
Graduate & above	2	4	4	10		
Total	6	33	21	60		

Table 8: Association of knowledge score regarding Natural Disaster Preparedness according to Source of information of adult

Source of information	Knowledge regarding natural disaster preparedness			Total	Chi-square	p-value
	Poor	Average	Good			
Mass media	6	4	5	15		
Govt. Agency	3	9	7	19		
School & research Institution	5	13	3	21	7.003	<0.05
Others	0	3	2	5		
Total	14	29	17	60		

Section 4: Analysis of the effectiveness of information booklet on knowledge score of adults regarding natural disaster preparedness

Table 9: Differences between pre-test and post-test knowledge scores regarding Natural Disaster Preparedness

Knowledge	Mean	SD	T value	P -value
Pre-test	19.3	1.9		
Post-test	25.2	1.41	18.27	<0.0001

Section 5: Analysis of section wise difference between pre-test and post-test knowledge score of adults

Table 10: Analysis of section wise difference between pre-test and post-test knowledgescore of adults

Sections		Mean	SD	T -value	P-value	Results
Introduction of disaster	Pre	17.6	2.23	9.05	<0.0001	Significant
	Post	23.3	2.87			
Earthquake	Pre	16	2	12.5	<0.0001	Significant
	Post	22.4	1.85			
Flood	Pre	18	2.23	7.69	<0.0001	Significant
	Post	23	2			
Tsunami	Pre	18.25	1.50	7.29	<0.0001	Significant
	Post	23.5	2.29			
Disaster management	Pre	16.6	16.6	8.75	<0.0001	Significant
	Post	22.3	22.3			

Section 1: Distribution of socio-demographic variables of adults

Percentage distribution of sample according to their age shows that majority were 22 of them (36.4%) aged 21-25 year, 20 of them (33.6%) were aged 26-30 years and 18 of them (30%) were aged 31-35 years

Percentage of sample according to their gender Shows that in relation to gender, majority of the adult 36(60%) were females and 24(40%) were male. Percentage distribution of sample according to their educational status Shows that in relation to educational status, majority were 19 of them (31.7%) were High School, 18 of them (30%) were H.S. School, 13 of them (21.7%) were Middle school and 10 of them (16.6%) Graduate & above. Percentage distribution of sample according to their source of information shows that majority were 21 of them Mass media (35%), 19 of them (31.6%) were Government agency, 15 of them (25%) were School & Research institution and 5 of them (8.4%) others source.

Section 2: Distribution of knowledge score of adults regarding natural disaster preparedness

The present study shows that highest percentage (50%) of the participants had average knowledge regarding natural disaster preparedness, (35%) of the respondent had poor and (15%) good level of knowledge.

This indicate that majority of them had average knowledge regarding natural disaster preparedness.

Section 3: Association between the socio demographic variables and knowledge score of adults regarding natural disaster preparedness

- Age is 20 in 21-25 years, 22 in 26-30 year, 18 in 31-35 years and chi-square is 11.57 and $p < 0.05$ and the test is statistically significant.
- Gender is 36 in male, 24 in female, and chi-square is 2.052 and $p < 0.05$ and the test is statistically significant.
- Educational status is 13 in Middle school, 19 in High school, 18 in H.S. school, 10 in Graduate & above and chi-square is 7.977 and $p < 0.05$ and the test is statistically significant.
- Source of information is 15 in Mass media, 19 in Govt. Agency, 21 in School & research institution, 5 in others sources and chi-square is 7.003 and $p < 0.05$ and the test is statistically significant.

Section 4: Analysis of the effectiveness of informational booklet on knowledge score of adults regarding natural disaster preparedness.

According to mean there was significant difference between pre & post-test knowledge

score increased from 19.3 to 25.2 after administering information booklet.

Section 5: Analysis of section wise difference between pre-test and post test knowledge score of adults

According to mean there was significant section wise difference between pre-test and post-test. In disaster (*section-1*) knowledge score increased from 17.6 to 23.3. In earthquake (*section-2*) knowledge score increased from 16 to 22.4. In flood (*section-3*) knowledge score increased from 18-23. In tsunami (*section-4*) knowledge score increased from 18.25 to 23.5. In disaster management (*section-5*) knowledge score increased from 16.6 to 22.3 after administering the Information Booklet.

DISCUSSION

The present study was conducted to evaluate the effectiveness of information booklet of adults. In order to achieve the objective of the study, a one group pre-test, post test design with pre-experimental approach was adopted. Non probability convenient sampling was used to select the sample. The data was collected from 60 adults before and after administration of information booklet. The finding of the study have been discussed with specific objectives, hypothesis and with related finding of available studies.

CONCLUSION

On the basis of the finding, the investigator concluded that the Information Booklet is significantly effective on improving the knowledge regarding Natural Disaster Preparedness among adults. Hence the adults should be encouraged to attend health education programme.

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