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Research Paper

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“A descriptive study to assess the knowledge regarding safety measures to be adopted by adolescents during disaster in selected school of Haldwani, Uttarakhand”.**Ms. Preeti Malara¹***Nursing Tutor, Graphic Era Hill University, College of Nursing, Bhimtal, India*
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10.48047/AFJBS.6.12.2024.2111-2122**Abstract**

Disasters are significant interruptions to a community's normal operations that beyond its ability to recover through internal means. Hazards that are man-made, natural, or technological and other variables that affect a community's susceptibility, can all result in disasters.[1]Quantitative research approach, descriptive design was used. By using purposive sampling technique data was collected from 80 students in age group of (15-18 years) from Beersheba Senior Secondary School of Haldwani using structured knowledge questionnaire. The researcher found that maximum 73 (92%) of the adolescents have inadequate knowledge and only 7(8%) adolescents have adequate knowledge on safety measures to be taken during disaster which revealed that there is no significant relationship between knowledge of adolescent regarding safety measures and selected socio-demographic i.e. age, gender, source of information.This study concluded that the majority of the adolescent had inadequate knowledge regarding safety measures to be adopted during disaster.

Key words-Knowledge, Safety measures, Adolescents, Disaster**I.INTRODUCTION**

A disaster occur when a society's everyday activities are disrupted to the point where there is an environmental or widespread loss greater than what the affected society can recover from on its own. A disaster arises when a hazardous event, such as an earthquake, flood, landslide, etc., occurs in a vulnerable area, such as a city, town, or community.[2]

Impact of disaster caused heavy loss of precious lives and extensive damage to private properties and public infrastructure.[3]millions of individuals suffer gravely from disasters every year because of absence of coping mechanisms, or inadequate knowledgeregarding the disastermanagement.[4]Risk reduction can be take place in two ways:

Preparedness- It is protective process, which embraces measure that enable governments communities and individuals to respond rapidly to disaster situations to cope with them effectively.

Mitigation- It embraces all the measures taken to reduce both the effect of hazard itself and the vulnerable condition to it, in order to reduce the scale of a future disaster.[5]

In 2013, 107700 affected (in developing state 1,00000 pilgrims were trapped in villages that led to Kedarnath shrine. 5,700 were dead 1000 were missing) the flash floods and slides continued for 4 days from 14 June to 17 June, 2013. Uttarakhand flash floods are considered the most disastrous floods in the history of India.[6]

In 15 August 2018, severe floods affected the south Indian state Kerala, due to unusually high rainfall during monsoon season. It was the worst flooding in Kerala in nearly a century. Over 483 peoples died, 14 are missing. At least a million people were evacuated from various district of the state which were placed on red alert.[7]

On June 7, 2018, Mumbai received 27.6mm to 37.8mm of rainfall. The IMD has forecast heavy rainfall for the city over the weekend and per private weather forecast skymet, it could be heaviest since July 26, 2005, when It rained 944mm in just 24 hours, resulting in massive flooding, death over 500 people and losses over 550 crores in claims.[8]

In our environment today, the disasters may happen at any time or in any moment, thus the health care personal or the other community people required special training on how to respond to different peoples need in an emergency or who all are suffering from disaster. The people should know how to manage the situation at the time of disaster. so, it is must to know about the management and preventive measures to be used during the disaster.[9]

According to the reports of union of home ministry listed. Punjab is a most vulnerable state of floods. Along with this Punjab is also listed as among top 10 states facing the highest risk of heat waves death in the country. The cumulative loss is Rs. 1,2,19,23 crore, by floods in Punjab in 2019. [10]

II. OBJECTIVES

- To assess the knowledge regarding safety measures during disaster.
- To identify the safety measures adopted by adolescents during disaster.
- To find out association between knowledge of adolescent regarding safety measures and selected socio-demographic variables.

III. METHODOLOGY

Quantitative research approach, descriptive design was used. A total of 80 students in age group (15-18 years) were selected from Beersheba Senior Secondary School of Haldwani by using purposive sampling technique. Structured knowledge questionnaire was used to assess their knowledge regarding safety measures adopted by adolescent during disaster.

IV. RESULT

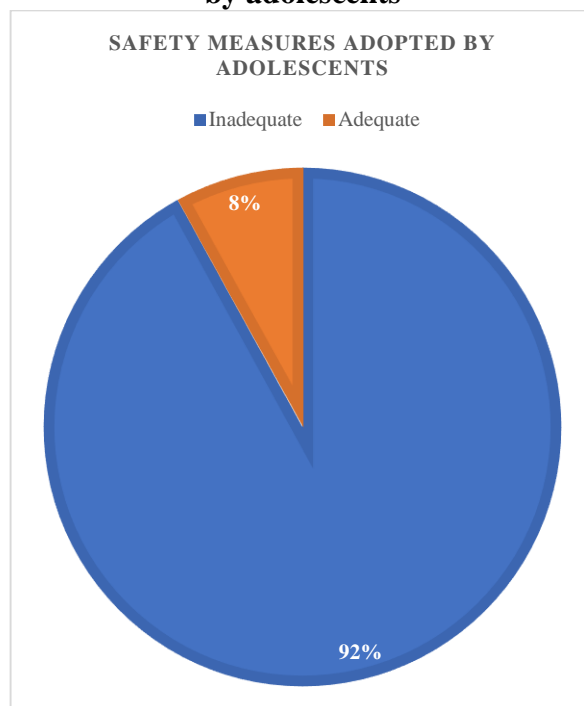
Table No. 1: Frequency and percentage distribution of the socio-demographic characteristics

N=80

Sl.No.	Variable	f	%
1	Age		
	a) 15-16yrs	61	76%
	b) 17-18yrs	19	24%
2	Gender		
	a) Male	49	61.2%
	b) Female	31	38.8%
3	Religion		
	a) Hindu	78	97.5%
	b) Others	2	2.5%
4	Type of family		
	a) Nuclear family	42	52.5%
	b) Joint family	33	41.3%
	c) Extended	5	6.2%

	family		
5	Education status of mother	6	7.5%
	a) No formal education	16	20%
	b) Primary education	35	43.7%
	c) High school	23	28.8%
	d) Graduate		
6	Education status of father	2	2.5%
	a) No formal education	9	11.25%
	b) Primary education	35	43.75%
	c) High school	34	42.5%
	d) Graduate		
7	Area of residence	43	53.75%
	a) Urban	20	25%
	b) Semi-urban Rural	17	21.25%
8	Source of information		
	a) Parents	24	30%
	b) Teacher	35	43.75%
	c) Media	15	18.75%
	d) Others	6	7.5%

The data presented in table 1 shows that (76%) Majority of adolescent belongs to the age group of 15-16 years, (61.25%) were male. (97.5%) of participants belong to Hindu religion. 52.5% of adolescents live in a nuclear family. Majority of mother's education were high school (43.75%). (42.5%) education of father was graduate. (53.75%) of adolescents wereliving in urban. Maximum (43.75%) of the source of information was gathered from teachers.

Figure 1: Pie Graph showing percentage of knowledge score regarding safety measures adopted by adolescents

The pie diagram given above shows the percentage of knowledge score regarding safety measures adopted by adolescents. Majority of the adolescents (92%) were having inadequate level of knowledge whereas only 8% of the adolescents had adequate knowledge.

Table No. 2: Frequency and percentage of structured knowledge questionnaire (N=80)

Sl.No.	Structured knowledge questionnaire	f	%
1	Main cause of disaster are		
	• Poor infrastructure	3	3.75%
	• Soil erosion	-	-
	• Deforestation	14	17.5%
	• All of the above	62	77.5%
2	First step should be taken if earthquake strikes in school hours	60	75%
	• Hide under the table	4	5%
		13	16.25
		3	3.75%
	• Stand there		
	• Runaway		

	<ul style="list-style-type: none"> • Shouting 		
3	During earthquake the safest place is <ul style="list-style-type: none"> • Open ground areas • Under a tree • Under the electrical poles • Jumping into water 	68 4 2 6	85% 5% 2.5% 7.5%
4	In an emergency the number you should dial <ul style="list-style-type: none"> • Police (100) • Fire (109) • Ambulance (108) • All of the above 	8 5 15 52	10% 6.25% 18.75% 65%
5	Earthquake is measured by <ul style="list-style-type: none"> • Richter scale • Anemometer • FPP scale • SS scale 	51 16 8 5	63.75% 20% 10% 6.25%

Data presented in the above table:2 shows that (77.5%) of the adolescents had knowledge about the cause of disaster. (30%)adolescents know about the effects of disaster, (48.75%) of the adolescents knows about the recurrent disaster. (47.5%) majority had knowledge for frequency of natural disaster.

(68%) of the adolescent were having knowledge regarding the most affected group during disaster.

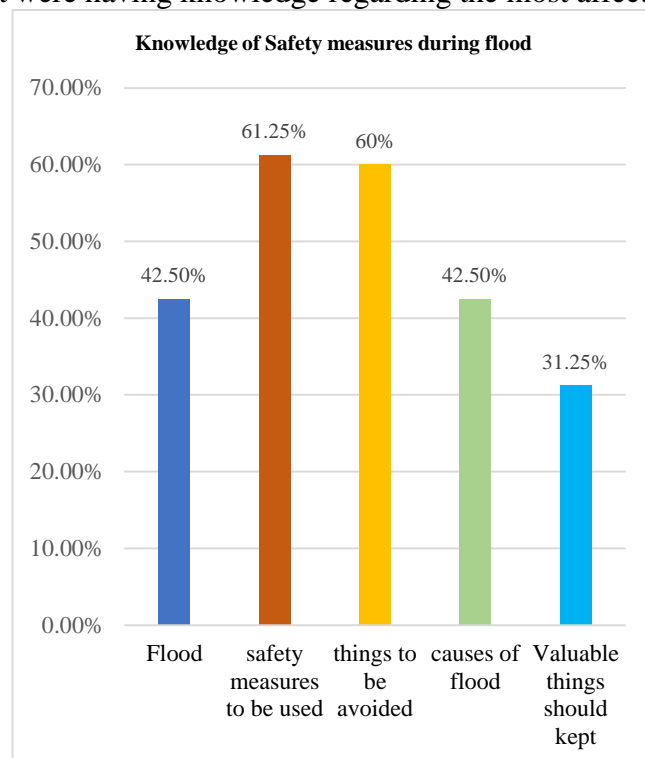


Figure 2: Bar graph on frequency and percentage of knowledge related to safety measures during flood.

The above bar diagram depicts that 42.5% adolescents had knowledge about flood. 61.25% knows safety measures to be used during flood. Majority of the adolescents 60% had knowledge about the things to be avoided during flood and 42.50% adolescents were aware about the cause of flood.

As shown in table number 3 the majority of adolescents (67.5%) had knowledge about earthquake. (75%) of the adolescents had knowledge about first step to be taken if earthquake strikes during school hours, (85%) of the adolescents had knowledge safest place during earthquake, (65%) majority of the adolescents had knowledge about emergency dial No. (63.75%) knows about scale to measured earthquake.

Table No. 3: Frequency and percentage of knowledge related to safety measures during earthquake. (N=80)

Sl.No.	Knowledge related to safety measures during earthquake	f	%
1	Earthquake is	4	5%
	a) Deforestation	54	67.5%
	b) Movement of tectonic plates		

	c) Shaking of earth	17	21.5%
	d) None of the above	5	6.25%
2	First step should be taken if earthquake strikes in school hours	60	75%
	• Hide under the table	4	5%
	• Stand there	13	16.25
	• Runaway	3	3.75%
	• Shouting		
3	During earthquake the safest place is	68	85%
	• Open ground areas	4	5%
	• Under a tree	2	2.5%
	• Under the electrical poles	6	7.5%
	• Jumping into water		
4	In an emergency the number you should dial	8	10%
	• Police (100)	5	6.25%
	• Fire (109)	15	18.75%
	• Ambulance (108)	52	65%
	• All of the above		
5	Earthquake is measured by		
	• Richter scale	51	63.75%
	• Anemometer	16	20%
	• FPP scale	8	10%
	• SS scale	5	6.25%

Table No. 4: Frequency and percentage of knowledge related to safety measures during landslides (N=80)

Sl. No.	knowledge related to safety measures during landslides	F	Percentage (%)
1	Landslide is a) Shaking of earth b) Excessive water in land region c) Displacement of the soil d) None of the above	11 6 59 4	13.75% 7.5% 73.75% 5%
2	Preventive measures should be taken if you know about high-risk area a) Either you will go to the high-risk area b) You won't go and inform others not to go there c) Go and check what is happening d) Don't do anything	10 50 12 8	12.5% 62.25% 15% 10%
3	Area prone to landslides a) Field area b) Hilly area less number of trees c) Hilly area with high rainfall d) Coastal area	7 30 32 11	8.75% 37.5% 40% 13.75%
4	Landslide occur due to	18	22.5%

	a) Cutting of rocks b) Low rainfall region c) Deforestation d) Both (a) and (c)	7 14 41	8.75% 17.5% 51.25%
5	During rainy season travelling in hilly area is safe a) Stay away from affected area b) Very risky to travel c) Should travel with safety measures d) None of the above	8 31 31 10	10% 38.75% 38.75% 12.5%
6	Steps to be taken to prevent landslides a) Afforestation b) Construction of roads c) Urbanization d) Deforestation	46 13 10 11	57.5% 16.25% 12.5% 13.75%

The data presented in above table-4 shows that the (73.75%) majority of the adolescents had knowledge about landslide. (62.25%) of the adolescents had knowledge about preventive measures, (22.5%) of the adolescents had knowledge about the causes of landslide and (57.5%) had knowledge about the steps to prevent landslides.

Table No. 5: Association between knowledge and selected socio-demographic variable

S l . N o .	Va ri a b l e s	In a d e q u a t e K n o w l e d g e	A d e q u a t e K n o
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			w l e d g e		
1	Age - 15- 16 ye ars - 17- 18 ye ars	45 29	0 4 0 2		
2	Gender - Ma le - Fe ma le	57 17	0 4 0 2		
3	Source of information - Par ent s - Te ac her s - Me dia - oth	24 30 14 6	0 2 0 5 0 1 0 0		

	ers				
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Table number 5 shows that there is no significant relationship between knowledge of adolescent regarding safety measures and selected socio-demographic variables. i.e. age, gender, source of information.

IV. CONCLUSION

On the basis of study findings, knowledge of the students regarding safety measures adopted during disaster total population (80) researcher found that 92% adolescents have inadequate knowledge and 8% of the remaining adolescents have adequate knowledge regarding the knowledge of safety measures during disaster. It was also concluded that there is no significant relationship between knowledge of adolescents regarding safety measures in relation to their socio- demographic variables.

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