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Prevalence of Depression and Anxiety Symptoms in People Affected By Flood in Kashmir

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ABSTRACT

Background: Psychosocial impacts of flood event suggest that they can have significant effect on people's wellbeing, relationships and mental health. The commonest psychiatric morbidity in population who are exposed to disaster includes grief, Post traumatic stress disorder, depression and anxiety.
Methodology:-This was a cross-sectional community based study. This study was conducted in different areas of Srinagar and south Kashmir which were most affected during flood of September 2014. A total of 1000 individuals were assessed who had been directly exposed to floods. In this study two standardized questionnaires were used; Hopkins Symptom Checklist-25 (HSCL-25) for symptoms of Anxiety and Depression.
Results: Out of 1000 patients, Prevalence Symptoms of Anxiety were present in 462 (46.2%), Symptoms of Depressive symptoms were present in 326 (32.6%), symptoms of anxiety more in females 374(56.8%) and in age group 35-49yrs 270 (50.2%) and symptoms of depression more in age group of ≥ 50 years 80 (40.4%), and in females 240(36.5%).
Conclusion:-This study examined the impacts of flooding on mental health conditions among the vulnerable population in Kashmir. It is necessary to strengthen mental health care and psychological consultation facilities, in order to control and prevent mental illness. This will reduce the number of long term psychological cases.

Keywords: Depression, Anxiety, Disaster, floods.

INTRODUCTION

Disaster whether natural or man-made is an event causing severe disruption to normal functioning of a society, material, or environmental losses which exceed the natural ability of the affected society to cope with its own resources. [1] The psychological response post disaster has been divided into various phases as immediate, short-term, and long term. [2] Duration of each of the phases vary depending upon the cause of disaster, enormity of disaster, extent of community affected, its preparedness, ongoing disruption, support, past exposure to similar situation, socio-demographic and individual factors. Immediate period is the time when the disaster is occurring followed by short-term lasting three to nine months and then comes the long-term phase, which in some cases even persists lifelong. [3] [4]

Flooding is now the most frequent type of major disaster. Over the last 10 years, floods in Europe have killed more than 1,000 people and affected over 3.4 million others. [5] Floods can have significant effect on people's wellbeing, relationships and mental health. Flooding can pose substantial social and welfare problems that may continue over extended periods of time because of not only being

flooded (the primary stressor), but also because of the secondary stressors (those stressors that are indirectly related to the initial extreme event, i.e. economic stress associated with rebuilding) that arise as proper try to recover their lives, property and relationships. [6] The prevalence of psychological problems among survivors after a natural disaster ranging from 20% to 35%. The commonest psychiatric morbidities in population who are exposed to disaster include grief, Post traumatic stress disorder, depression and anxiety. [7] [8]

The Jammu & Kashmir has experienced three of the total 14 major natural disasters in Indian history since 1991. Unfortunately, three of the disasters happened in short duration gap in last 9 years. The worst ever natural disaster in September 2014 caused an unparalleled devastation in 20 out of 22 districts of Kashmir. Heavy rains led to a breach in the embankments of the Jhelum river in various parts of the state. Large swatches of the valley including Srinagar was heavily flooded leading to a massive damage to property, business, agriculture sector, tourism and numerous other segments.

As different countries apply different policies and practice these policies in different ways, by providing different services which mostly does not reach the areas with least facilities e.g. a developing country like India having a population of around 133.92 crores is vastly deprived of psychiatric treatment. In order to understand and address this gap due to which the impact of floods has been unclear, this study will help us to examine the prevalence of Symptoms of anxiety and depression among flood affected population in Kashmir. In addition to it, role of risk factors, particularly incident management variables, has been included in the study as these can be modified or addressed in the future to minimize the psychosocial impacts associated with flooding.

AIMS AND OBJECTIVES

1. To identify the prevalence of symptoms of Depression and Anxiety in people affected with flood in Kashmir.
2. To study the socio-demographic profile such age, gender, residence, education, and socio economic status in people affected with flood in Kashmir.
3. To study the association of anxiety and depressive symptoms with age and gender in studied flood victims in Kashmir.
4. To study the distribution due to Damage to property of people affected with flood in Kashmir.

MATERIALS AND METHODS

STUDY AREA: This study was conducted in different areas of Srinagar and south Kashmir which was most affected during flood of September 2014. The study was approved by the institution's ethical committee of Sheri-Kashmir-Institute of Medical Science. A total of 1000 individuals were assessed who had been directly exposed to floods. People were assessed at their homes, relief camps and at their relative's houses. This study was conducted in order to study psychiatric morbidity especially depression, anxiety among the people affected. Alongside, the assessment for the presence of psychiatric morbidity, attention was paid to certain variables like property loss.

Property loss:- was measured by four questions: To what extent did you experience damage or loss to:

(1) the structure of your house,

(2) the contents and belongings of your house,

(3) personal belongings with sentimental value,

(4) your car.

Respondents could answer from 1='not at all' to 5='fully damaged/lost. The total Property Loss score was the average of the four items.

PARTICIPANTS: This study was conducted in different areas of Srinagar and south Kashmir which was most affected

during flood of September 2014. 1000 individuals were assessed who had been directly exposed to floods. The study includes both males and females.

Semi structured proforma and few standardized questionnaires were used to collect information regarding socio-demographic details such as age, gender, socioeconomic status, residence, education.

In this study two standardized questionnaires were used; Hopkins Symptom Checklist-25 (HSCL-25). [9] The scale was translated to Urdu language and then was back translated to English with the help of department of linguistic university of Kashmir. If there was a problem in understanding, then the proforma and questionnaire were explained verbally. In case the participants were not literate then whole proforma and questionnaire was read in the language they understood.

RESULTS

The Below results shows that out of 1000 individuals most of the individuals were in the age group 35-49 years 539 (53.8%) rest of the individuals were in 20-34yrs 264(26.4%) and >50yrs (198%). Most of them were females 658(65.8%) than males 342(34.2%). Most of the individuals were from rural 529(59.2%) areas than urban area 408(40.8%). Out of 1000 individuals 618(61.8%) were unemployed, 210(21%) were employed, 100(10%) were students and 72 (7.2%) were labourer. Most of the individuals had no formal education 546(54.6%). Married participants 876 (87.6%) were more than unmarried 126 (12.6%).

Sociodemographic profile		
Age (years)	**Frequency**	**Percentage**
20-34	**264**	**26.4**
35-49	**538**	**53.8**
≥ 50	**198**	**19.8**
Total	**1000**	**100**
Gender	**Column1**	
Male	**342**	**34.2**
FEMALE	**658**	**65.8**
Residence		
Rural	**592**	**59.2**
Urban	**408**	**40.8**
Occupation		
Employed	**210**	**21**
Unemployed	**618**	**61.8**
Labour	**72**	**7.2**
Student	**100**	**10**
Education		
No Formal Education	**546**	**54.6**
Primary	**32**	**3.2**
Secondary	**234**	**23.4**
Graduate	**128**	**12.8**
Post Graduate	**60**	**6**
Marital status		
Married	**876**	**87.4**
Unmarried	**126**	**12.6**

Prevalence of Symptoms of anxiety and depression in studied flood victims			
Symptoms		**Frequency**	**Percentage**
Anxiety	**Present**	**462**	**46.2**
	Absent	**538**	**53.8**
Depression	**Present**	**326**	**32.6**
	Absent	**674**	**67.4**

The above results shows that Prevalence of Symptoms of Anxiety were present in 462 (46.2%), Symptoms of Depressive symptoms were present in 326 (32.6%).

Showing association of anxiety symptoms with age and gender in studied flood victims						
Demographic Variables		**Anxiety Symptom Present**		**Anxiety Symptom Absent**		**P-value**
		No.	%age	No.	%age	
Age (years)	20-34	100	37.9	164	62.1	0.067
	35-49	270	50.2	268	49.8	
	≥ 50	92	46.5	106	53.5	
Gender	Male	88	25.7	254	74.3	<0.001*
	Female	374	56.8	284	43.2	

*Statistically Significant Difference (P-value<0.05)

The above results show Symptoms of anxiety were more in females 374(56.8%) and in age group 35-49yrs 270 (50.2%) individuals and is statistically significant (P-value =<0.001*).

Association of anxiety symptoms with exposure variables in studied flood victims						
Exposure Variables		**Anxiety Symptom Present**		**Anxiety Symptom Absent**		**P-value**
		No.	%age	No.	%age	
Damage to property	Fully Damaged (n=358)	222	63.8	148	36.2	<0.001*
	Partially Damaged (n=652)	240	36.8	536	63.2	

The above results show Individuals with fully damaged property has more symptoms of anxiety 222 (63.6%) than partial damaged 240(36.8%). The above result was statistically significant (P-value =0.001*).

Showing association of depression symptoms with age and gender in studied flood victims						
Demographic Variables		**Depression Symptom Present**		**Depression Symptom Absent**		**P-value**
		No.	%age	No.	%age	
Age (years)	20-34	72	27.3	192	72.7	0.108
	35-49	174	32.3	364	67.7	
	≥ 50	80	40.4	118	59.6	
Gender	Male	86	25.1	256	74.9	0.010*
	Female	240	36.5	418	63.5	

**Statistically Significant Difference (P-value<0.05)*

The above results show Symptoms of depression were more in age group of ≥ 50 years 80 (40.4%), and were more present in females 240(36.5%).

Showing association of depression symptoms with exposure variables in studied flood victims						
Exposure Variables		**Depression Symptom Present**		**Depression Symptom Absent**		**P-value**
		No.	%age	No.	%age	
Damage to property	Fully Damaged (n=358)	200	57.5	148	42.5	<0.001*
	Partially Damaged (n=652)	126	19.3	536	80.7	

**Statistically Significant Difference (P-value<0.05)*

The above results show that victims who had fully damaged property 200(57.5%) had more symptoms of depression than partially damaged property 126(19.3%) and is statistically significant (P-value =<0.001*).

DISCUSSION

The mental health consequences of disasters among those indirectly exposed to a disaster may be different than the mental health consequences among those who were directly exposed or close to the disaster epicenter. Our study is based on 1000 individuals, nearly same sample size have been taken by other study S. Tunstall et al. [10] In our study most of individuals were females 658 (65.8%) than males 342(34.2%) that correlates with the study by Panyayong et al. [11] In our study it has been observed that about 32.6% had symptoms of depression, and 46.2%% of survivors had symptoms of anxiety. A number of studies have shown a range of symptoms resulting from flooding. Micheal et al found almost similar results in their study in which the prevalence of clinically significant depression and anxiety was16% and 30% respectively. [12] Many other studies also show almost similar findings consistent to our study. [11,13] Unlike most previous studies, in our study the number of cases of anxiety were seen to be higher because most of them were worried how they can rebuilt and restructure their houses, having limited financial resources.

In our study Symptoms of depression and anxiety were found more in females than in males. Other studies have found similar findings. [12] Reason could be that women have greater emotional attachment with home than men and also be more ready to admit to feelings of anxiety and depression and to seek help in the post disaster.

In our study individuals who had fully damaged property were seen to have more Symptoms of anxiety and depression. Several other studies also found that people who lost property due to a flood had a higher risk of developing mental illness. [14]

Research suggests that post-disaster stressors may be an important cause of depression in disaster-affected populations and, more generally, has related stressful life events with depression. [15],[16] The high prevalence rate of anxiety and depression post floods might be explained by the stressors e.g. loss of property. These stressors were significantly associated with disaster-exposed individuals with anxiety and mood disorders. [13] Both degree of exposure and relocation are associated with an increased risk of poor psychological outcomes as mentioned in the previous researches.

SUMMARY AND CONCLUSION

This study examined the impacts of flooding on mental health conditions among the vulnerable population in Kashmir. The prevalence of psychological disorders increased significantly after the flood. Prevalence Symptoms of Anxiety were present in 462 (46.2%), Symptoms of Depressive symptoms were present in 326 (32.6%), symptoms of anxiety more in females and in age group 35-49 yrs 270 and symptoms of depression more in age group of ≥ 50 years and in females.

It is important to target interventions for the most susceptible groups in order to use the health resources in an efficient manner. The influence of social support, coping strategies and early intervention and medication in the development of mental distress are needed to improve the mental health strategy of the disaster preparedness program. It is necessary to strengthen mental health care and psychological consultation facilities, in order to control and prevent mental illness. This will reduce the number of long term psychological cases. Health education and health promotion are vital in increasing mental health knowledge among the population. Education regarding disaster management and early forecasting will help people to improve their coping strategy. It is our hope that future research will identify resources in communities that are beneficial to decrease mental health problems after a traumatic event.

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