Trauma, Depression and Stress Among Individuals Living in Flood Affected and Unaffected Areas

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Abstract:

Disasters are traumatic events that are dangerous, overwhelming and usually sudden. These are overwhelming because these test the capability of the community and individual to cope up with a massive disruption. Humans have been victims throughout recorded history. One such example is the Flood of September 2014 affected many regions of Kashmir. After about a year of the flood trauma, depression and stress were studied among 200 individuals (100 from the flood affected area and a comparable number from an unaffected area). English version of Brief Trauma Questionnaire (Paula P. Schnurr,et.al), HAM-D and Impact of Events Scale- Revised (IES-R) were used. A significant difference was observed between participants of affected and unaffected areas on all the variables studied.

I. INTRODUCTION

Disasters are traumatic events experienced almost every day, somewhere in the world (Norris et al., 2002). In the ten years prior to 2011, floods are the most common type of disaster globally, accountable for almost 53,000 deaths the last decade alone (23:1 low- versus high-income countries) and for economic losses of nearly US $185 trillion (EM-DAT, 2011). Rising sea levels and more recurrent and tremendous precipitation events are the common cause for boost in occurrence and intensity of floods (IPCC, 2007; Ramin and McMichael, 2009). Flooding events are considered to increase the global burden of disease, morbidity, mortality, social and economic disruptions, and will place a continuing stress on health services, especially in low-resource countries. It is in these countries where most major floods occur and where susceptibility is the highest (Abaya et al., 2009; Ahern et al., 2005; Assanangkornchai et al., 2004; Fundter et al., 2008). Health consequences of floods depend on geographic and socio-economic factors, as well as the baseline vulnerability of the populations affected (Ahern et al., 2005; Du et al., 2010).

Humans have been victims of natural disasters throughout history. On the average a disaster occurs somewhere in the world each day (Norris, et. al, 2002). During their lifetime, 51.2% of women and 60.7% of men are estimated to have experienced at least one traumatic event. Where human sufferings caused by disasters could be immeasurable, these may exact a heavy toll on human life as well. On an average about 510 people lose their lives in disasters in the United States every year.

Any type of disaster, whether natural or not, results in a multidimensional impact on a large number of people. The aftermath of a disaster is a time when survivors experience many psychosocial symptoms such as stress, grief, depression, and anxiety (Cohen, 2002; Reyes &Elhai, 2004). The psychosocial impact is exacerbated and prolonged by personal and property losses, relocation, and disrupted social support networks and daily activities (Mitchell, Witman, &Taffaro, 2008; Nikapota, 2006). In the months following a traumatic disaster, acute reactions are replaced by more chronic psychological conditions that require ongoing management (Madrid & Grant, 2008; Rosser, 2008; Vijaykumar, Thata, John, &Chellappa, 2006). The long-term psychosocial impact of disasters can include serious problems, such as posttraumatic stress disorder (PTSD), substance abuse, and major depression (Leon, 2004).

Globally, 1, 28,000 lives are lost yearly in disasters and 85% of approximately 3 billion people in the world affected by disasters from 1967 to 1991, lived in Asia (Myers and Wee, 2005). The incidence of a natural disaster in a community is thus traumatic for the most and proves to be a large scale environmental stressor because it is sudden, unexpected and damage life and property to a great extent.

Exposure to disasters and other stressful life events not only has physiological effects but also have psychological effects. Previous disaster research has examined a variety of situations, including a hurricane, tsunami, etc. (Kumar, Murhekar, Hutin, Ramachandran& Gupta, 2007; Mills, Edmondson, & Park, 2007). A number of investigators (e.g., Epstein and Erksine, 1983) have reported that exposure to traumatic and stressful events can threaten, destabilize, invalidate and even shatter an individual's fundamental beliefs and implicit assumptions about him or her and about the world. Baum, Fleming and Davidson (1983) observed that while most individuals, who experience natural disasters, may later cope adequately but around 20-40% depending on the nature of the stressor, experiences continual chronic stress and some may continue trauma called post-traumatic stress disorder(PTSD).

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Depressive, anxiety, and post-traumatic symptoms have been frequently related with disaster stress. Alcoholic and somatic symptoms have also been sometimes associated with exposure to disasters. Most previous studies of the effects of disasters and the emergence of mental symptoms have used cross-sectional designs and have seldom included controls.

Major life stressors, such as natural disasters, affect the constitutional status of the body and increase susceptibility to physical illness. Such stressors disrupt bodily equilibrium and evoke a set of nonspecific physiological responses that prepare the body to cope with the demand (re-establish homeostasis). If exposure to the stressor is intense, prolonged, or repeated, the adaptation process is accompanied by an increase in physiological wear and tear (Selye 1983). Major life stressors may contribute directly to the development of a specific illness episode or may have an indirect effect by altering relevant behavioural patterns, including exposure to infection, nutrition, and rest (Mechanic 1977).

Disasters characterized by a high proportion of affected to non-affected individuals; by a sudden, unexpected onset for which there is little warning; by a potential for recurrence; and by terror, horror, and a threat to lives and property have been associated with an augmented rate of psychological impairment.

Research conducted on populations at different time periods after a disaster has documented significant psychological/psychiatric sequelae for both natural and human-made disasters. Feelings of shock and numbness, depression, anxiety, anger, and symptoms of or full-syndrome acute stress disorder (ASD) and post-traumatic stress disorder (PTSD) often are evident over an extended time period in adults and children who have experienced these traumatic events.

II. METHODOLOGY

Objective:

To assess the level of trauma, depression and stress among people living in flood affected areas as compared to the population of unaffected areas.

Sample:

The sample for the study consisted of 200 individuals (100 from the flood affected area and a comparable number from an unaffected area) irrespective of gender belonging to the age range 30 to 70 years. A single adult individual from each family was asked to respond to the questionnaire. All ethical issues were taken into consideration. This study was carried out in Kashmir during the session June 2016.

Tools:

- **Brief Trauma Questionnaire:** The Brief Trauma Questionnaire (BTQ) developed by Schnurr, et al., 1995 is a ten-item self-report trauma exposure screen that can be quickly administered and is suitable for special populations such as persons with severe mental illness as well as for general population groups. The BTQ asks respondents for a simple "yes" or "no" answer to the question "Have you experienced this event?" and lists ten types of traumatic events. For each "yes" response, the respondent is also asked two additional "yes/no" questions: "Did you think your life was in danger or you might be seriously injured?" and "were you seriously injured?" The BTQ is designed to quickly screen for many different and prevalent types of traumatic experiences, including war traumas, serious car accidents, natural disasters, exposure to violent death, life-threatening illness, and physical or sexual abuse.
- **HAM-D:** The Hamilton Rating Scale for Depression (HRSD)is a multiple item questionnaire used to provide an indication of depression, and as a guide to evaluate recovery. Max Hamilton originally published the scale in 1960and revised it in 1966,1967, 1969, and 1980.The questionnaire is designed for adults and is used to rate the severity of their depression by probing mood, feelings of guilt, suicide ideation, insomnia, agitationor retardation, anxiety, weight loss, and somatic symptoms.The original 1960 version contains 17 items to be rated (HRSD-17), but four other questions are not added to the total score and are used to provide additional clinical information. Each item on the questionnaire is scored on a 3 or 5 point scale, depending on the item, and the total score is compared to the corresponding descriptor. Assessment time is estimated at 20 minutes.
- **Impact of Events Scale-Revised (IES-R):** The IES-R was developed in 1997 by Daniel Weiss and Charles Marmar to reflect the DSM-IV criteria for post-traumatic stress disorder (PTSD). The original Impact of Events Scale (IES) predated the adoption of PTSD as a 'legitimate' diagnosis in the DSM-III of 1980 and measured two of the four DSM-IV criteria for PTSD; specifically 're-experiencing / intrusion' and 'avoidance / numbing'. The IES-R was designed to also assess hyper arousal, another of the DSM criteria for PTSD. Other criteria include exposure to a traumatic event, duration of symptoms and impairment due to symptoms. The main strengths of this revised measure are that it is short, quick and easy to administer and score and may be used repeatedly to assess progress. It is intended to be used as a screening tool, not a diagnostic test.

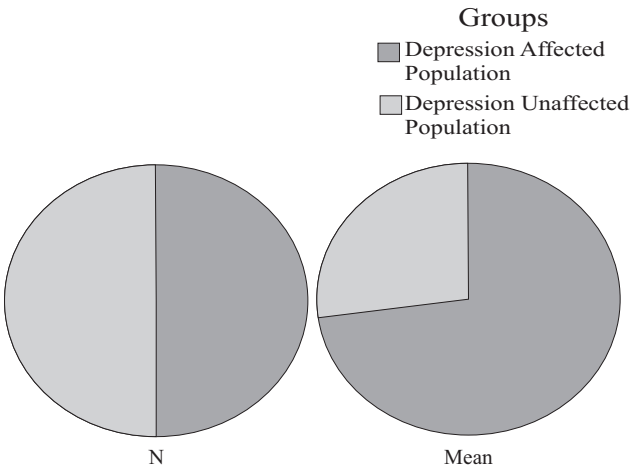
Procedure:

The data was collected on single adult individual from each family from the flood affected area and from an unaffected area by administering different questionnaires that is English version of Brief Trauma Questionnaire, HAM-D and Impact of Events Scale- Revised (IES-R). Prior to data collection researcher had to establish a rapport with the subject. The purpose of the research was explained to the subject to develop the subject's keen interest to cooperate the task and after the subject's readiness to support the purpose, they were asked to fill the questionnaires. After the completion of the questionnaires subject was thanked and informed that his or her responses would be kept confidential and should be used for research purpose only.

III. RESULT AND DISCUSSION

Table-1: Showing the difference on the scores of depression among population living in flood affected and non affected areas

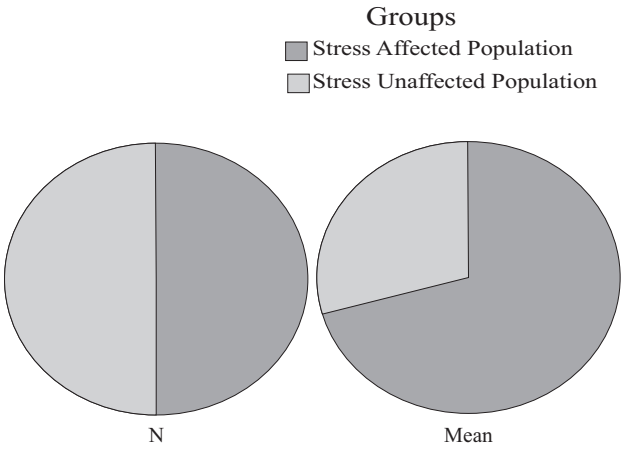
Groups	N	M	S.D	t	95% confidence interval of the difference	
					Lower	Upper
Affected Population	100	19.95	1.908	38.511	11.84094	13.11906
Unaffected Population	100	7.47	2.618	38.511	11.84058	13.11942



Pie Chart showing the difference on the scores of depression among population living in flood affected and non affected areas

Table-2: Showing the difference on the scores of stress among population living in flood affected and non affected areas

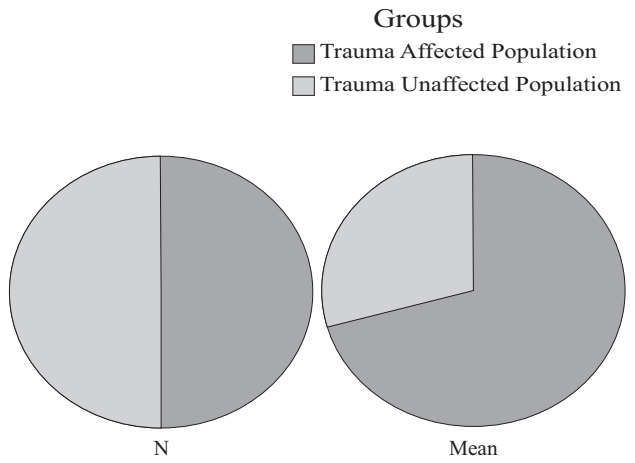
Groups	N	M	S.D	T	95% confidence interval of the difference	
					Lower	Upper
Affected Population	100	318.08	43.939	15.838	154.57624	198.54376
Unaffected Population	100	141.52	102.45	15.838	154.51183	198.60817



Pie Chart showing the difference on the scores of stress among population living in flood affected and non affected areas

Table-3: Showing the difference on the scores of trauma among population living in flood affected and non affected areas

Groups	N	M	S.D	T	95% confidence interval of the difference	
					Lower	Upper
Affected Population	100	38.45	8.075	23.566	19.39852	22.94148
Unaffected Population	100	17.28	3.934	23.566	19.39437	22.94563



Pie Chart showing the difference on the scores of trauma among population living in flood affected and non affected areas.

III. CONCLUSION

The purpose of the present study was to enumerate the difference between the mental states of the people living in flood affected areas as compared to the population residing in the unaffected areas. The sample was collected on 100 people living in Kashmir valley and on the other hand 100 people were taken from flood unaffected area. The result of the study was clearly able to demonstrate the fact that the people living in flood affected areas are much higher on the levels of trauma, depression, stress, anxiety and they are more prone to develop post traumatic stress disorder and also the attempts of suicide are high among them. The damage from a natural disaster is unexpected, sudden and creates a great loss to life and property. Human sufferings caused by disasters could be endless; and theses also exact a heavy toll on human life. The psychosocial impact of disaster on humans is exacerbated and prolonged by personal and property losses, relocation, and disrupted social support networks and daily activities. It takes months or even years to be back on normal track of life. A number of studies have reported that experience of traumatic and stressful events like floods can threaten, undermine, invalidate and even splinter an individual's essential beliefs and implicit assumptions about him or her and about the world. Most victims of the flood may later cope sufficiently but around 20-40% depending on the nature of the stressor, experiences continual chronic stress and some may continue trauma called post traumatic stress disorder (PTSD). The above given tables and pie charts are showing

the difference between the level of depression, stress and trauma among people living in flood affected and unaffected areas. Table 1 is showing the difference in the mean scores of affected and unaffected population that is, 19.95 and 7.47, respectively. Table 2 contains the difference in the scores of stress among affected and unaffected population that is, 318.08 and 141.52. Table 3 consists of the scores of trauma that is, 38.45 and 17.28. The scores of the flood affected population on depression, stress and trauma are much higher than the scores of unaffected population because of the fact that the people living in flood unaffected area are not prone to sudden loss of lives, and property, physical and psychological damage. They are used to live calm and normal life as contrary to the people living in flood prone areas who have to face sudden damage to their lives and properties, psychological issues as well as physical injuries. We can safely conclude that the population living in flood affected areas have worse physical and psychological conditions as compared to people living in unaffected areas.

IV. REFERENCES

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