

The Prevalence of Major Depression in a Rural Flood Affected Area of Pakistan

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ABSTRACT

Aim: To find out the prevalence of major depression in rural flood affected area of Pakistan

Study Design: Cross-sectional survey

Duration of Study: September 5th till September 8th 2010

Methods: This study comprises of 52 subjects from medical camps of Mohsin Wala and Umer Sheikh near Kot Addu, Dist. Muzaffargarh, Punjab. Sampling technique was non-probability, convenience sampling. The interviews were conducted in complete privacy. The data was collected and compiled in the computer and analyzed using SPSS version 17.

Results: Results were analyzed by comparing the percentages of patients diagnosed with depression and those who were not. Results were stratified on the basis of gender which showed that males were more affected than females. (p-value 0.030). Data of diagnosed cases was divided into two groups on gender basis and then stratified according to age. The population pyramid showed that significant number of both males and females diagnosed with depression were below 40 years of age.

Conclusion: Psychiatric services should be incorporated with rest of the Health services in order to provide relief to victims of disaster.

Keywords: Depression, flood affected area, rural population

INTRODUCTION

Depression has been recognized as a major public health problem evidenced by its ranking of fourth position among the global burden of diseases. Many believe it will occupy second position by the year 2020. 340 million people above the age of 18 suffer from depressive disorders that contribute to a high suicide rate^{1,2}. In developing countries 10–44% suffers from depression and anxiety disorders, less than 35% receive care and according to an estimated 50.8 million people suffer from major depression³. Lifetime prevalence for major depression is 26.5%. Both life time and current prevalence rates are twice as high in women than men^{4,5}. Factors positively associated with anxiety and depressive disorders were female sex, middle age, low level of education, financial difficulty, being a housewife, and relationship problems. Chronic difficulties with housing, finances, and health were significantly associated with anxiety and depressive disorders.^{6,7} Recognition of specific psychosocial factors associated with depressive illness has strong clinical implications since it helps in meeting the specific treatment needs of the patients⁸ The natural disaster is a situation mainly caused by such hazards like flood, earthquakes, cyclones, volcano eruption, etc. They cause massive damage both to human beings

and the other materials. Abrupt changes due to global warming or as a result of other human actions aimed to harm opponents may also result in one or other form of disasters. In this regard, changing weather patterns may cause more rain and a greater risk of floods in some areas⁹. Natural disasters affect many aspects of human life but its psychological implications are long lasting and deep rooted which are neglected during relief and rehabilitation work¹⁰

The occurrence of floods gave rise to mental disorders like anxiety and depression, which are often for months and years¹¹. Victims of natural disasters sometimes experience psychological problems and continue to suffer for a larger part of their lives¹⁰.

Paranjothy S et al reported greater mental health impact for women, and for those with prior health problems who were flood affected. Previous study suggests that the prevalence of mental health symptoms rose with the level of flood water in the home¹². The prevalence of all mental health symptoms was two to five-fold higher among individuals affected by flood water in the home. People who perceived negative impact on finances were more likely to report psychological distress (OR 2.5, 1.8-3.4), probable anxiety (OR 1.8, 1.3-2.7) probable depression (OR 2.0, 1.3-2.9) and probable PTSD (OR 3.2, 2.0-5.2). Disruption to essential services increased adverse psychological outcomes by two to three-fold. Evacuation was associated with some increase in psychological distress but not

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significantly for the other three measures. Disaster specific variables such as evacuation and damage to property have also been identified as risk factors for mental ill health in some affected populations^{12,13}

Kar N and Bastia BK reported prevalences of PTSD, major depressive disorder and generalised anxiety disorder were 26.9%, 17.6% and 12% respectively after facing supercyclone in Orrissa India. The results underscore that in post-disaster psychiatric surveys it is important to look for comorbidities; as they may give a holistic picture of the reaction to catastrophic stresses like natural disasters and help in management plan of the victims¹⁴

MATERIAL AND METHODS

This cross sectional study was carried out in Medical camps of Mohsin Wala and Umer Sheikh near Kot Addu, Dist. Muzaffargarh, Punjab from September 5th till September 8th 2010 on 52 subjects. Subjects who have been directly affected by the flood, healthy attendants who accompanied sick patient to medical camps between the age of 14 to 70 years of both genders were included in the study. Subjects having Prior history of depression, other psychiatric illnesses, long term morbidity like COPD, DM, hypertension, stroke or physical disability were excluded from the study. Based upon the study inclusion criteria subjects were selected from the villages of Mohsin Wala and Umer Sheikh. After their expressed consent, the volunteers were subjected to the DSM IV criteria through a specially designed questionnaire.

RESULTS

Results of 52 patients were analyzed. Frequency of depression diagnosed was significant with a cumulative percent of 61.5, represented in the pie chart below. Results were analyzed by comparing the percentages of patients diagnosed with depression

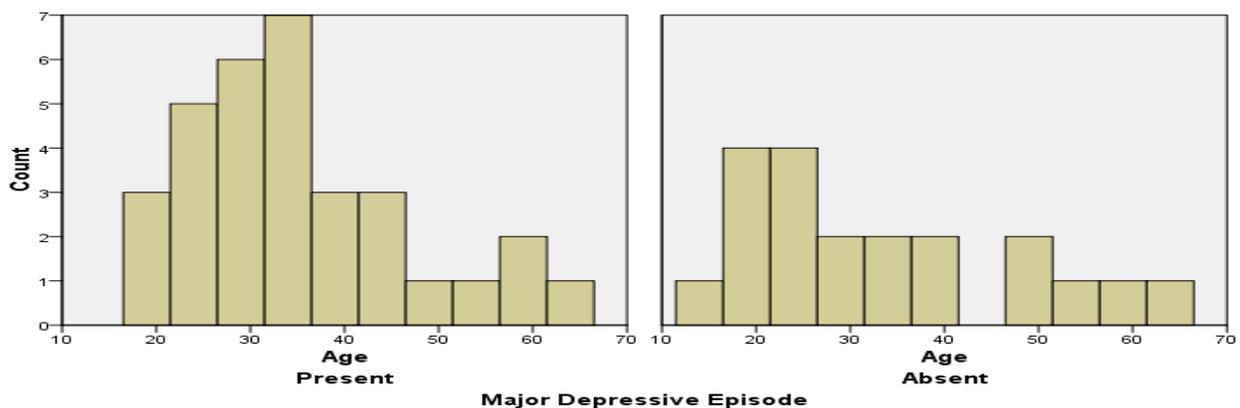
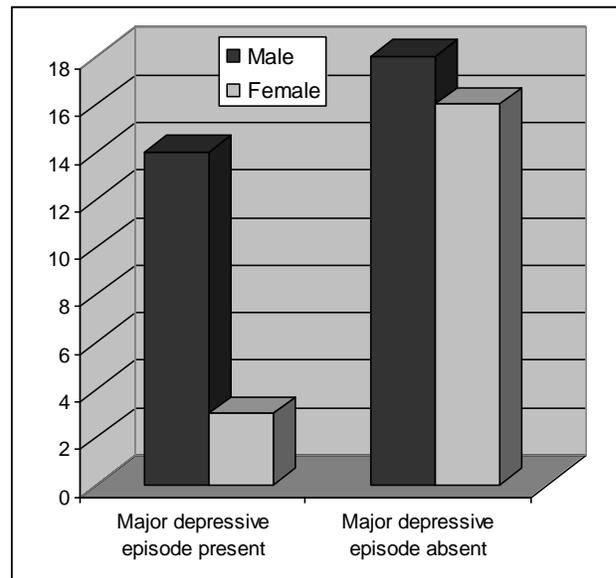
and those who were not. Results were stratified on the basis of gender which showed that males were more affected than females (p-value 0.030).

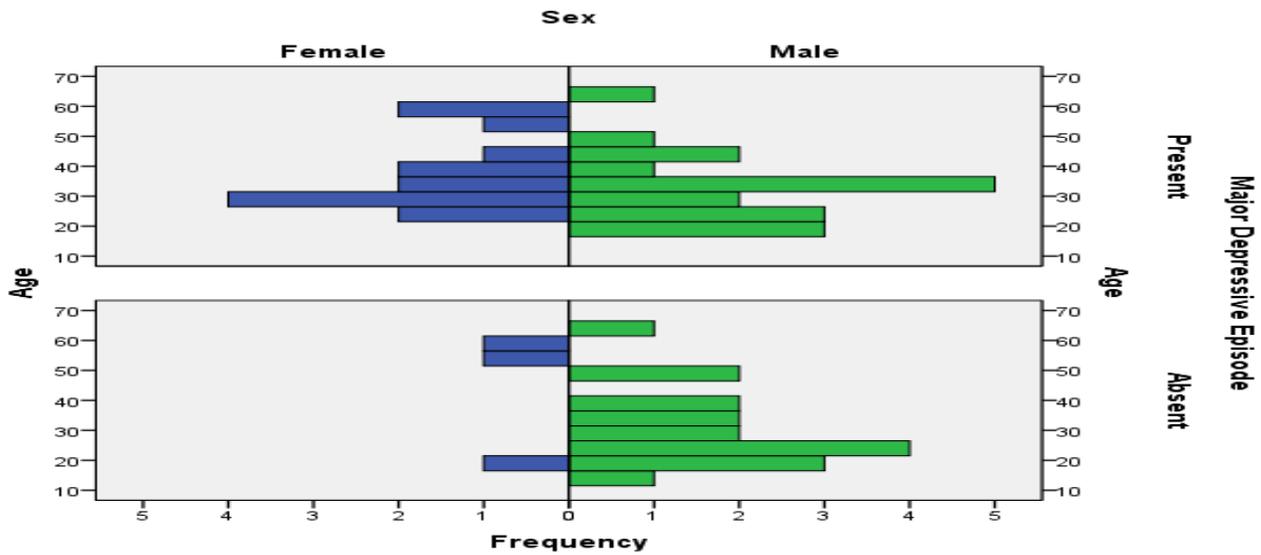
Analysis was done between diagnosed cases of depression to determine which age groups were affected more. The histogram showed that majority of the diagnosed cases was below 40 years of age.

Data of diagnosed cases was divided into two groups on gender basis and then stratified according to age. The population pyramid showed that significant number of both males and females diagnosed with depression were below 40 years of age.

Major Depressive episode cross tabulation

Gender	Major Depressive Episode		Total
	Present	Absent	
Male	18	17	35
Female	14	3	17





DISCUSSION

The risk of mental health symptoms was greater in flood affectees.¹² This is in line with findings in our study, the frequency of depressive episode was 61% which is significantly high and calls for attention regarding the policies in dealing with survivors of floods or any other disaster. This increased importance of non-communicable diseases such as anxiety and depressive disorders presents a particular challenge for low income countries, where infectious diseases and malnutrition are still high.⁴ The prevalence of all mental health symptoms was two to five-fold higher among individuals affected by flood water in the home.¹² This finding of current study is in line with previous study reporting two to five time increase in incidence of depression.

Post-disaster adversities contributing to the psychological problems of the victims and delaying their recovery have been suggested.¹⁴ It has been reported that post-disaster psychosocial support influences the psychiatric morbidity.¹⁴ Prolonged periods of helplessness and lack of adequate post-disaster psychological support were perceived as probable influencing factors, as well as the severity of the disaster.¹⁴ subjects were interviewed in present study just after the floods and high incidence of depression could be due lack of provision of psychosocial support. In our study number of males with depressive disorder was high as compared to females which is in contrast to previous studies^{6,7,12,13} this difference could be to small sample size.

The current study also showed that majority population with depressive episode was below 40 years of age including both males and females this

finding is also in line the study¹⁰ which stated that adult flood affected are exposed to psychological distress four times higher than children. As age advances people gain more insight and maturity and this age group has insight in to the social and psychological problems. Majority of the people remain sad and gloomy as a result of flood induced displacements as they had lost their assets and remained shelter less for a reasonable period of time.¹⁰ Known risk factors for poorer mental health following natural disasters include female gender, older age, lower educational achievement, lower household income, long term health problems and lower social support in the form of networks of family and friends. Disaster specific variables such as evacuation and damage to property have also been identified as risk factors for mental ill health in some affected^{12,13}

The findings in our study were different from previous study as in our study age of the majority of subject who had depression was below 40 years as compared to older age in previous study the reason could be psychological distress they were facing in order to support their families in addition to loss of loved ones and belongings, damage to property, low educational level, low income and long term health problems were identified as risk factors^{12,13}

These variables were not the focus of the present study, however we would suggest that association of these variables should be established.

CONCLUSION

The findings of the current study suggest that depressive illness is significantly high in flood

affected populations. This calls for attention when we plan health services in natural disaster or any disastrous situation. Psychiatric services should be incorporated with rest of the Health services in order to provide relief to victims of disaster. Teams for provision of Health Services by the government should include psychiatrists and psychologists to address Mental Health Issues.

REFERENCES

1. Greenberg P, Stiglin L, Finkelstein S. The economic burden of depression in 1990. *J Clin Psychiat* 1993;54: 405-18.
2. Desjarlais R. *World Health Report*. World Health Organization, Geneva. 2001.
3. W.H.O. *World Health Report*, Geneva, Switzerland. 2001
4. Ritchie K, Artero S, Beluche I. et al Prevalence of DSMIV psychiatric disorder in the French elderly population. *Br J Psychiat* 2004;184:147-52.
5. Ali BS, Rahbar MH, Naeem S, et al. Prevalence of and risk factor associated with anxiety and depression among women in a lower middle class semi urban community of Karachi. *Pak J Med Sci* 2002; 52:513-5.
6. Mirza I and Jenkins R, Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: systematic review. *BMJ*. 2004 ; 328: 794
7. Gadit M and Mugford G .Prevalence of Depression among Households in Three Capital Cities of Pakistan: Need to Revise the Mental Health Policy *PLoS ONE*. 2007; 2: 209
8. Niaz U, Hassan S The Psychosocial factors for depression in upper and upper-middle Class Urban women of Karachi. *JPPS* 2005;2:76
9. Woods, M. and M.B. Woods, 2007. *Disasters showed overreaction in normal situation and started up close: Floods*. North Minneapolis: Lerner Publications Company, pp: 10
10. Abbasi SRS and Shaukat B. Psychological Problems Caused by the Flood Induced Displacement: A Study of the Victims of 2010 Flood in Khyber Phukhtoonkhwa, Pakistan. *World Applied Sciences Journal*. 2012 ; 19 : 1244-1250,
11. Hajat, S., Ebi, K.L. Kovats, S. Menne, B. Edwards, S. and A. Haines, 2003. The Human Health Consequences of Flooding in Europe and Implications for Public Health: A Review of Evidence. *Applied Environmental Science and Public Health*, 1: 13-21.
12. Paranjothy S , Gallacher J, Amlôt R, Rubin JG, Page L, Baxter T, Wight J, Kirrage D, McNaught R, and Palmer SR. Psychosocial impact of the summer 2007 floods in England *BMC Public Health*. 2011; 11: 145
13. DeSalvo KB, Hyre AD, Ompad DC, Menke A, Tynes LL, Muntner P. Symptoms of posttraumatic stress disorder in a New Orleans workforce following Hurricane Katrina. *J Urban Health*. 2007;84:142-52
14. Kar N and Bastia BK Post-traumatic stress disorder, depression and generalised anxiety disorder in adolescents after a natural disaster: a study of comorbidity *Clin Pract Epidemiol Ment Health*. 2006; 2: 17.