

A study on relationship between pain, compatibility and psychological characteristics in patients with PTSD in Bam

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Abstract: The aim of this research is to study the relationship between pain, compatibility and psychological characteristics (anxiety and depression) of patients affected by PTSD in Bam. In order to do that, 80 patients with PTSD were used as research sample. These patients were selected by random sampling from available samples in counseling clinics of Bam and Kerman. Measurement instrument includes 3 questionnaires which are as follows: (a) ways of coping (Ways of coping Checklist-WCCL), (b) measuring anxiety and depression (Hospital Anxiety and Depression Scale-HADS) and (c) McGill pain (McGill Pain Questionnaire-MPQ). In this research, T-test has been used to explain the meaningfulness of variables relationships. The results show that there is no meaningful relationship between pain perception, compatibility and psychological characteristics (depression and anxiety) of patients with PTSD in Bam. All patients have affected by PTSD in earthquake, but persistence level of symptoms depends on patients' morale, tolerance threshold, strength, attitude and also social-familial supports. Intensity of event and losing of the dear ones in the event are effective factors on PTSD that increase depression and anxiety and disturb patients' compatibility. The results of this research show that there is no meaningful relationship between perception pain and depression of patients affected by PTSD. Feeling pain and complaining about physical pains are not included the diagnostic symptoms of depression. Patients who complain about physical pain either actual pain or psychological pain, are not necessarily depressive. However, PTSD effects on patients' pain perception and their pain endurance threshold is reduced because of psychological injuries they have suffered.

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1. Introduction:

Our country, Iran, due to various factors is considered as one of the major focuses of natural disasters; their most significant and enduring result is psychological-social problems and post-traumatic stress disorder (PTSD) is one of them. The main feature of this disorder is appearance of some specific symptoms after exposing to an extremely traumatic and stressful stimulus which relates to direct experience of a person such as actual death, threaten to death or serious injury or other events that threaten the physical integrity of patients. Specific symptoms that are occurred in injured person are as follows: Permanent experience or re-experience of traumatic event, permanent avoidance of stimuli related to trauma and lack of general answering, too permanent sings that all these symptoms lead to a significant clinical distress or disorder in social and occupational functions or other important fields. Since Bam earthquake caused high mortality and widespread destruction of homes, it had a high rate of pathological reactions in survivors. In this research, it is reported that 94.4% of patients over 15 and 90.8% of patients fewer than 15 had lost one of their close relatives and the houses of 89.4 % of patients over 15

and 81% of patients under 15 was completely destroyed. PTSD level in boys and girls under 15 was 52.2% and 59% respectively and in boys and girls above 15 was 37.5 % and 33.5% respectively (Parvaresh, 2005:165). This level was compatible with study of Yasami et al (2005) reported one month after Bam earthquake, high prevalence of 58.9% in females and 47.5 % in males; the level shows the traumatic rate of this event (Yasemi, 2005). Although PTSD may be seen at any ages, in young adults are more common because of presence of field accelerators.

Children may also be affected by the disorder (Sadock and Sadock 2003). This discrepancy can be seen more in singles, divorced or widowed and those who are economically poor and socially aloof. Nevertheless, the most important risk factors for disorder are severity, duration and proximity of a person to the actual trauma. It seems that there is a familial model for this disorder and close biological relatives of patients who have depression record are exposed to higher risk for affecting by PTSD. (Sadock & Sadock, 2003).

In this study, the researchers tried to measure performance in patients with PTSD,

psychological features (anxiety and depression) in patients with PTSD, Pain perception in patient with PTSD, Compatibility level in patients with PTSD and studying the relationship between pain, compatibility and psychological characteristics in patient with PTSD.

Research method

1. Sample

The sample group consists of 80 patients who are selected among 290 patients admitted (suffering from PTSD) to counseling clinics in Kerman and Bam (Welfare Counseling Centers – Kerman University of Medical Science - Education Counseling Center). This research is done 6 months after earthquake in 2006. The age of patients was 10 to 18 years old. This sample was selected using random sampling.

2. Research instruments

Questionnaires used in this study are as follows:

- A) Ways of coping checklist (Ways of coping Checklist-WCCL)
- B) Measurement questionnaires for scale of clinical anxiety and depression (Hospital Anxiety and Depression Scale-HADS)
- C) Mc Gill Pain questionnaire (McGill Pain Questionnaire-MPQ)

3. Findings

Schematic of the cross-sectional study is retrospective post-hoc done using descriptive – analytic method.

Indicators studied and compared in this research include: pain perception study based on McGill Pain Questionnaire and psychological characteristics study (anxiety and depression) according to Anxiety and Depression Scale Measurement Questionnaire and compatibility level study due to Ways of Compatibility Questionnaire.

In order to recognize the patients with PTSD, 80 patients admitted to welfare counseling centers, Kerman University of Medical Science and Bam Education Department were selected as sample. In this study, in order to analysis the data, the descriptive statistics is used to indicators of frequency, percentage, mean and standard deviation.

In inferential statistics, T-test is used to be meaningful of relationships between variables and hypothesis test.

Results were analyzed using SPSS software and $>P 0.05$ is considered for a significant level.

-Studying the relationship between compatibility and psychological status in patients with PTSD. Based on findings, the regression analysis and the amount of R^2 were obtained and hypothesis of existence a relationship between compatibility and psychological status in patients with PTSD were

rejected. The statistics of R^2 in this analysis was very close to zero and rejected the existing of cause and effect relationship between these two variables. In variance analyzing test and T-test, the hypothesis of unequal of mean of these two groups is rejected and there is no significant difference between pain perception and depression.

-Studying the relationship between pain perception and compatibility in patients with PTSD Based on findings, statistics of R^2 was approximately zero and rejected the existence of cause and effect relationship between these two variables. In correlation relationship table, coefficient correlations are insignificant. Therefore, the second hypothesis is rejected. In variance analysis test and T-test, the hypothesis of unequal of mean of these two groups is rejected and there is no significant difference between pain perception and depression. By comparison the amount of obtained P and A, we can achieve this result. $R^2 = 0.002$

-Studying the relationship between pain perception and depression in patients with PTSD Findings research, regression analysis and the amount of obtained R^2 rejected the hypothesis of existence of relationship between pain and depression. Statistics of R^2 was very close to zero and rejected the cause and effect relationship between these two variables. In correlation relationship table, the correlation coefficient is insignificant. Therefore, the third hypothesis is rejected. In variance analysis test and T-test, the hypothesis of unequal of mean of these two groups is rejected and there is no significant difference between pain perception and depression.

-Studying the relationship between pain perception and anxiety in patients with PTSD Based on findings, none of the correlation coefficient has shown the existence of a relationship between these two variables and the fourth hypothesis is rejected.

-Studying the relationship between compatibility and anxiety in patients with PTSD Based on findings, Pearson correlation coefficient, Spearman correlation coefficient and Kendall correlation coefficient equal to 0.123, -0.073 and -0.169 respectively. Examining each of them, we can understand that there is no relationship between compatibility and depression in patients with PTSD. Means of the two variables are not different from each other that shows the amount of P is higher than assumed A in this study.

Discussion and conclusions

All persons have affected by PTSD during the earthquake, but the persistence level of symptoms depends on patients' morale, tolerance

threshold, their attitudes and social-familial supports; it does not depend on the level of anxiety and depression of patients before the event. The results of second hypothesis show that there is no relationship between pain perception and compatibility of patients with PTSD. The pain perception of person doesn't effect on PTSD symptoms. However, the tolerance threshold of patients with PTSD is low because of psychological trauma they suffered. Therefore, pain perception is not related to PTSD. However, PTSD effects on pain perception and reduces the tolerance threshold of patients.

Third hypothesis analysis shows that there is no relationship between pain perception and depression of patients with PTSD. Feeling pain and complaining about physical pains are not included the diagnostic symptoms of depression. Patients who complain about physical pain either actual pain or psychological pain is not necessarily depressed. Data analysis indicates that there is no relationship between pain perception and anxiety of patients with PTSD. David Son et al (1986) and Fu et al (1987) stated that PTSD relates to depression, but it is not related to pain perception because one's perception of pain is neither an effective factor in the field of etiology nor a diagnostic factor in the field of anxiety diagnosis.

In the present study, the rate of PTSD in females under 15 was higher than males in the same age. In patients over 15, although the rate of PTSD was higher in males, the difference was not significant. Yasami et al (2005), six months after Bam earthquake, reported that PTSD rate in male was 26 % less than females. The different tests for measuring PTSD which were used in two age groups may be involved in causing this difference. The findings of this study are aligned with the findings of Yasami et al based on PTSD prevalent by the amount 87.9% in children and 55.3 % in adults; they also were consistent with reports of Fukuda, Morimoto, Moreau and Mareuyama (1999), Wang, Gao, Shin Foko and Jang that reported 9 month after earthquake in Japan and showed that the incidence of PTSD in an area which had more support was less than an area which had less support (19.8% in comparison with 33%).

In children under 15, destruction of homes was followed by incident of PTSD in 67.3 % of cases. Chen et al (2001), more than the others, reported the effects of home destruction in incident of PTSD in teenager over 15 whose houses were completely destroyed. In this study, the existence of physical injury in children under 15 and teenagers over 15 was statistically significant in incident of PTSD that was consistent with finding of Yasami et al. Three months after earthquake, 226 survivors who referred to health centers were invited to fill in a questionnaire including

demographic data, risk factors and impulsive advanced stress test. Results showed that 201 patients (98/2%) of respondents had symptoms of impulsive advanced stress disease, 62% of them had physical injuries, 7/67% of them had lost one of their close family members, 42/8% of them had mental problems in their family records and 34% of them had intensive impulsive advanced stress disease and 30% of them had moderate level and 28% of them had low level. Based on this study, we have concluded that prevalence of advanced impulsive stress disease is existed in survivors of Bam earthquake who have lost one of their family members.

The results of several studies have shown that the existence of PTSD can be predicted nearly three months after trauma. Although, in most cases the symptoms of PTSD are disappeared during this time, but in a small group of survivors the symptoms are remained or changed or even become worse. (Blanck, 1993 quoted from Bruenn et al, 1966), PTSD prevalence during the lifetime is estimated up to 8% of general population among high-risk groups who had experienced traumatic events. Disorder prevalence rate during lifetime was from 5% to 75% (Sadock and Sadock 2003). Studies conducted on psychological effects of the earthquake have obtained different results. For example, some studies have suggested that psychological effects of earthquake are mild and transitory (Poya Vik, Petrovik 1964, Takala 1978, Timi 1985), while some other studies have shown that psychological effects of earthquake are so severe and long-term (Kar 1991, Gante 1991, Foa 1986, Lima and others 1989, Maj and others 1989 and Barko and others 1991).

Recommendations:

1. Patients with PTSD due to losing their city and loved ones suffer from inferiority complex and vanity and lose their confidence. It is recommended that in addition to drug therapy and remedy of PTSD symptoms, someone helps them with their confidence.
2. It is recommended to pay special attention to children's psychological treatment because they are supporting the next generation. Parents are more challenged with their economic and personal problems in a great disaster and don't pay much attention to children's psychological status and children are not able to go to counseling centers to solve their problem by themselves.
3. It is recommended to teach public how to deal with crisis and stress, how to solve problems and how to control anger in order to have a suitable behavior in critical conditions.

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