

Research Article

Frequency and severity of mental disorders in patients with non-organic chest pain and factors contributing to it, 2013

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ABSTRACT

Background: One of the most frequent causes of patients' visiting cardiovascular clinics is chest pain either with cardiac or non-cardiac reason. The cause of non-cardiac chest pain can be corporeal (such as esophageal, respiratory, or musculoskeletal) or mental. Mental factors that are mostly treated negligently can cause or worsen vascular diseases. This study was conducted with the purpose of determining the frequency and severity of mental disorders in patients with non-organic chest pain and its contributors.

Methods: This descriptive cross sectional study was carried out over 195 patients with chest pain visiting Ardabil Imam Hospital. Data were collected by SCL-90-R questionnaire and then analysed by statistical methods using SPSS.19.

Results: 41% of patients were men and 59% were women. The most frequent type of mental disorder in this study was somatization with 21.53% and the least frequent one was psychosis with 2%. Somatization intensity was mild in 64.34% of patients, moderate in 19% and severe in 16.6%. The highest level of frequency for mental disorders was seen among women and those aged between 30 -40.

Conclusions: In this study, mild somatization and anxiety were respectively the most common mental disorders in patients with non-organic chest pain. It was recommended that patients with non-cardiac chest pain, women in particular, be clinically examined by psychiatrists.

Keywords: Non organic chest pain, Somatization, Mental disorders, Anxiety

INTRODUCTION

One of the most common causes of visiting cardiovascular clinics is chest pain.¹⁻⁴ In 2000, one percent of the 8.9 million patients visiting doctors had complained of chest pain and 5.4 percent of the 8.5 million people had visited the emergency department due to chest pain.⁴ Chest pain can be due to cardiac problem (coronary or non-coronary) or non-cardiac problem.^{5,6} Studies have shown that chest pain in 50% of patients has non-cardiac origin.^{2,4} Various factors can result in chest pain, non-cardiac reasons like pulmonary or digestive disorders, neck arthritis pain and psychological factors are the most common ones. However, among them,

mental disorders have attracted less attention, thus they need to be adequately addressed.⁶⁻⁸ 10% of patients with acute chest pain visiting the emergency department suffer from panic disorder or other mental disorders.⁶ Patients with chest pain and no evidence of heart disease prognosis have higher rate of survival and their reported risk of death from heart disease is similar to ordinary people.⁹ According to studies, only 23% of patients complaining of chest pain had coronary disease, and chest pain in 41% of patients is due to psychological problems.¹⁰ In the previous undertaken studies, anxiety and depression have been identified as the most common mental disorders in patients. About 75 percent of cardiologists don't examine psychological disorders like

anxiety, depression, obsessive compulsive disorder and somatization in patients before and after a heart attack, which is most probably because of their lack of knowledge about these disorders or their non-access to valid screening tools.^{7,11} Most doctors are reluctant to examine psychiatric symptoms in patients, because it is thought that patients become defensive about their mental disorders.¹² Non study mental and psychological problems in patients with chest pain make them visit clinics repeatedly, and cause them to exposure with the major problems.^{13,14} The purpose of this study was to evaluate the prevalence and severity of mental disorders in patients with non-organic chest pain and determine factors contributing to it.

METHODS

This cross-sectional study was conducted over 195 patients with non-organic chest pain admitted to Imam Khomeini cardiovascular clinic. After exploring their history and performing clinical examination, chemical tests (biomarkers of heart failure), and para-clinical examinations (ECG, chest x-ray, echocardiogram, exercise test), the patients were included in the study according to following criteria: the absence of organic problem for justifying chest pain, standardness of all examinations and tests and para-clinical findings, not having history of mental disorders, willingness to participate in the study, and being over 13 years old. All patients were given a SCL90-R questionnaire. SCL90-R consists 90 items based on Likert scale anchoring at 5 points (0 –at all, 1-slightly, 2-to some extent, 3-a lot, 4-severely). The test has 10 subscales including somatization (12 items), obsessive-compulsive disorder (10 items), interpersonal sensitivity (9 items), depression (13 item), anxiety (10 items), hostility (6 items), phobic anxiety, (7 items), paranoid ideation (6 items), psychoticism (10 items) and additional items pertaining to eating disorders, sleep disorders, thoughts about death and feeling guilty. This measure evaluates the individuals' states one week before the date of completing the questionnaire and inspects all the above mentioned disorders simultaneously. It is probable that mental disorders in a scale or several scales to be present in the same person. Scoring of this test and its interpretation are based on three indices of symptom index (SI), positive symptom distress index (PSDI) and positive symptom total (PST). To determine the prevalence of psychiatric symptoms, 2.5 was considered as the cut-off point and scores of 2.5 and higher in each dimension were taken as symptom index. Many studies have confirmed the reliability and validity of this test. The data after being collected were analysed by descriptive and analytical statistics using SPSS version 19.

RESULTS

A Of patients 59% were female and 41% were male with an average age of 33.8 years, ranging from 13 to 67 years. The mean age of women was 31.5 years and of

men was 37.1 years. Most patients (41%) belonged to the age group of (31-40). 91.4% of the respondents were living in the city, 47.4 were high school graduates and 55.9% were housewives (Table 1). The most common mental disorder among patients was somatization with 21.5 percent (Figure 1). Among patients suspected of somatization, 64.3%, 19%, and 16.7% had mild, moderate, and severe disorder, respectively (Figure 2). Mental disorders among women and men had similar prevalence; it means that somatization, anxiety, and obsessive-compulsive disorder were the most common disorders, respectively, among female and male patients. In every mental disorder, the majority of patients had mild disorder. Most of the patients with mental disorders were in the (31-40) age group (48.4%) and they were mostly high school graduates (49 percent). Patients with bachelor's degree or higher level of education had lower mental disorders than others. The interpretation of SCL-90-R questionnaire according to GSI showed presence of disorder in 53.8% of patients. The frequency of mental disorders among housewives with %59.6 was more than others. All types of mental disorders were more common among women than men.

Table 1: Demographic data of patients.

Variables	%
Age	
<30	37.9
30-40	43.2
>40	18.9
Sex	
Male	41
Female	59
Education	
Under graduate	26.3
College	47.4
Residence place	
Urban	91.4
Rural	8.6
Job	
Housewife	55.9
Non-employee	20.6
Employee	23.5

In all mental disorders other than violence and anxiety, a significant relationship was discovered between gender and type of disorder. Except for obsessive-compulsive disorder, there was a statistically significant relationship between all mental disorders and the patients' living place. There was also a statistically significant relationship between sensitivity in interpersonal relations and the level of education. Furthermore, a significant relationship was found between all mental disorders other than anxiety and psychosis with job.

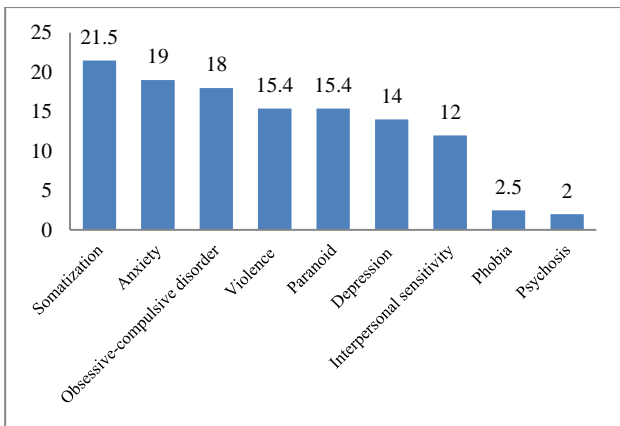


Figure 1: The rate of mental disorders in patients.

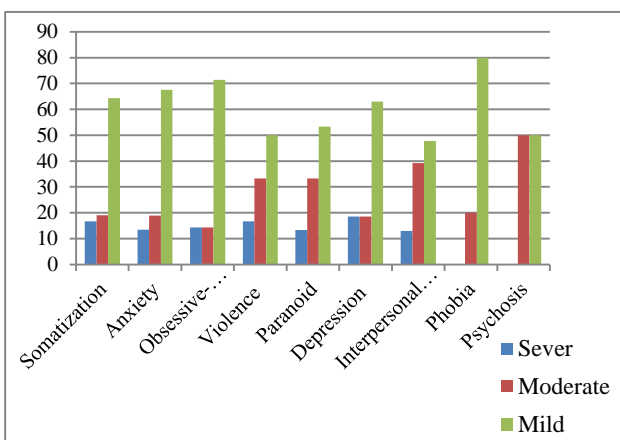


Figure 2: The rate of mental disorders in patients by severity.

DISCUSSION

In this study, the most common disorders, respectively, were somatization (21.53%), anxiety (19%) and obsessive-compulsive disorder (17.9%). The results were not consistent with other studies undertaken on this field of study. Beheshti et al. in their study reported depression and anxiety as the most common disorders. The lowest prevalence was also related to the phobic anxiety and psychosis that corresponded to the results of the present study. Discrepancy in the prevalence of mental disorders in different studies can be ascribed to the diversity in economic, social, cultural and geographical conditions of the studied populations or the different periods of conducting studies.¹³ The studies performed in this area have identified depression and anxiety as the most common reason for the visits of patients with chest pain.¹⁵⁻¹⁹

In the study done by Katonw et al anxiety in the first place and depression in the second place were noted as the most frequent type of disorders which were in line with the results of this study. It is likely that the variety of traditions and culture among communities contribute to

this nonconformity. As it was mentioned earlier, the most common mental disorder in patients was somatization

In this study, all mental disorders were more prevalent among women than men, which may suggest the social or economic deprivation of women, or may be attributed to their biological factors or their being under environmental stress. All patients had mental disorders that varied from mild to moderate level. Somatization and anxiety were the most frequent and phobic anxiety and psychosis were the least frequent ones. The reason is the fact that patients with mild degrees of obsessive-compulsive disorder or other mental disorders are not attentive that their problems may arise from psychological disorders. Consequently, with minimal chest pain, they think about corporeal disorders. But patients with phobic anxiety and psychosis due to the nature of their disease, even with mild degrees of disorder, can recognize type of their problem and head toward psychological and psychiatric centers. According to the results of this study, the average age of men with non-organic chest pain was 37.1 years and of women was 31.5 years which were lower compared to the average ages for women and men reported by Beheshti, et al (47.2 vs. 47.8).¹³ Most of patients visiting cardiovascular clinic were in the age group of 31-40. Taking this result, it can be concluded that this age group are involved in production and earning income and take the responsibility for their life in both genders. Therefore, they are more vulnerable to distress. Beside, since this age range is the onset of debilitating diseases such as hypertension, coronary heart disease and arthritis, normally they become more concerned about corporeal problems such as coronary heart disease like heart attack. To deal with this issue, it is important that that people be given instructions on how to cope with life's problems. Moreover, the difference between organic and non-organic chest pain is better to be explained through mass media. The result of examining the relationship between education and prevalent mental disorders revealed indirect relationship between the level of education and suffering from disorder. The risk of having mental disorders reduced as the level of education increased. According to the study conducted by Williams et al, people with higher education are better able to comply with social and environmental changes; therefore, less psychiatric disorders can be seen in this population.²¹

The socio-cultural limitations and inability to use appropriate procedures for dealing with stress in people with lower level of education compared to literate people can be noted as some reasons for the high prevalence of mental disorders in people with lower level of education. Regarding the employment status, the prevalence of mental disorders was higher among housewives, which is more probably due to lack of income, restrictions in social relations, and the monotony of life that increase the prevalence of mental disorders in housewives.

CONCLUSION

Somatization disorder is the most common mental disorder in patients with non-organic chest pain which was seen especially among the housewives in age 30-40 years old with lower levels of education. It is recommended that they be provided with necessary training to cope with difficulties in their lives. It is also suggested that the differences between chest pain caused by coronary and other disorders especially chest pain due to mental disorders should be taught for people through mass media. Gender, occupation and education level were identified as the factors affecting the incidence of mental disorders in patients with non-organic chest pain. The high prevalence of psychological symptoms in patients with non-organic chest pain indicates that in most cases these symptoms can be attributed to physical illness not mental illness and often due to inaccurate drug administration or using expensive diagnostic procedures which to avoid such wrong treatments, it is essential that doctors be trained more on these issues.

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