

ANXIETY, DEPRESSION AND PSYCHOLOGICAL DISTRESS IN PATIENTS WITH OSTEO-ARTHRITIS

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Date Received:

November 02, 2016

Date Revised:

October 20, 2017

Date Accepted:

October 29, 2017

ABSTRACT

Objectives: To explore depression and anxiety among patients with osteoarthritis and to find out the gender differences in these patients.

Methodology: The data was collected from private clinics and orthopedic ward of Khyber Teaching Hospital, Peshawar using convenient sampling technique in 2014. The sample comprised of 200 subjects. Among these (n=100) were suffering from osteoarthritis, while contro group (n=100) was also taken from patients visited to OPD with complaints of bodyaches. Men and women equally participated in the study.

Results: In the the present research age range of the sample was 30-60 years (mean 47.05, ± 8.906). Osteoarthritis sufferers were more anxious and depressed as compared to control group (p value 0.000). Gender differences for study variables were also significant (p value 0.000).

Conclusions: Depression, anxiety and psychological distress were high in osteoarthritis patients as compared to control group. Women had more anxiety and depression as compared to men.

Key Words: Osteoarthritis, Anxiety, Depression, Psychological distress

This article may be cited as: Khan S, Kalsoom U, Hanifa B, Begum R. Anxiety, depression and psychological distress in patients with osteo-arthritis. *J Postgrad Med Inst* 2017; 31(4): 410-3.

INTRODUCTION

Osteoarthritis (OA) is the most prevalent rheumatic disorder, causing considerable disability in aging population world wide¹⁻³. It was previously thought to be a normal consequence of aging, leading to the term "degenerative joint disease." Researchers and doctors are attempting to discover the correct portrayal of the osteoarthritis in recent years. It results from the interplay of multiple factors, including genetics, mechanical forces, and cellular and biochemical processes. It does not affect all joints equally but a tendency for involvement of the joints of fingers, knee, hip, and spine. , Rarely the elbow, wrist, and ankle joints are involved¹. Usually the disease is most common in older women compared to young adults.

Physicians and rheumatologists give considerable importance on how to improve functions and alleviating symptoms of osteoarthritis. However, disease pathology alone is not sufficient to explain the misery of osteoarthritis sufferers. Other factors may also contribute in symptoms perception and aggravation and poor functioning. A research study showed an association between arthritis and major depression⁴. The conditions may exacerbate each other. Patients suffering from any chronic painful condition mostly reported anxiety and

depression as comorbidities⁵.

According to DSM V diagnostic criteria for depression, the presence of five or more symptoms of the following for two weeks, such as depressed mood most of the day, evidently reduced pleasure in all activities, weight loss or weight gain and decrease or increase in appetite, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or excessive or inappropriate guilt, diminished ability to think or concentrate, or indecisiveness and recurrent thoughts of death. These symptoms disturb all the important areas of the individuals life (social & occupational) and are not due to physiological effects of drug or any other medical condition⁶.

Severe pain is a strong predictor of depression in this population. Anxiety is frequently linked with depression^{4,7,8}. Anxiety was reported as comorbidity in 25% of OA sufferers^{8,9}. The result of Axford et al study also suggested that among OA sufferers 47.7% were reported anxiety and depression.¹⁰ Anxiety and depression lead to somatic and cognitive alteration which in return can drastically affect an individual's ability to perform ^{2,9}. Another study showed that anxiety and depression may change the pain threshold levels ¹¹. Psychological distress is the usual name for unpleasing sentiments that

affect the person’s activities. It can be also defined as emotional disturbance that interrupt the routine life of a person.

Although substantial work has been done regarding the frequency of anxiety and depression in osteoarthritis patients in rest of the world but this has not been searched with particular reference to Pakistan. As OA is a chronic disease and requires long term treatment, psychological factors may accompany to increase the intensity of the disease. Keeping in view the importance of the problem, we decided to conduct a study to determine the frequency of anxiety, depression and psychological distress in patients with osteoarthritis.

METHODOLOGY

Two hundred patients participated in the study; 100 were suffering from osteoarthritis while 100 patients visiting the OPD with complaints of bodyaches served as the control group. Age range of the sample was 30-60 years (mean 47.05, ±8.906). Both men and women with equal number (n=100) participated (table 1). The data was collected from private clinics and orthopedic ward of Khyber Teaching Hospital, Peshawar. Convenient sampling technique was used to collect the data. The proposal was approved from the ethical committee of the institute (Shaheed Benazir Bhutto Women University, Peshawar) before the commencement of research. Those who were willing to participate were briefed about the study objectives and informed consent was obtained. They were also assured that the data will be kept confidential and information will be used only for the research purpose. All participants were given 02 scales: 1) hospital anxiety depression scale (HADS) which was developed by Zigmond & Snaith¹², and 2)Kessler psychological distress scale by Kessler¹³. The alpha reliability of both scales on the present sam-

ple was 0.93 (KS10) and 0.91 (HADS) respectively. Those patients who were diagnosed by the doctors as osteoarthritis (one year illness and x-ray findings) served as experimental group while those who complaints of body aches and were not diagnosed as osteoarthritis sufferers served as control group. Patients less than 30 years were excluded. similarly patients with rheumatoid arthritis, Psoriatic arthritis, fibromyalgia and osteoporosis were excluded.

SPSS version 20 was used and t-test and pearson product coorelation was calculated for study variables.

RESULTS

This study reported a significant correlation (.243**) between the age and psychological distress indicating the relationship between growing age and osteoarthritis as shown in table 2.

Table 3 indicated high depression, anxiety and psychological distress among osteoarthritis patients as compared to control group (p value .000).

Females were found to be more distressed, depressed and anxious as compared to males. Further more women with OA were more prone to develop depression and anxiety as compared to men, p value .000, (Table 4).

DISCUSSION

Depression and anxiety were higher amongst patients with osteoarthritis. The results are in line with previous research conducted by Axford et al¹⁴, which reported a positive relationship between osteoarthritis and depression and anxiety. He further showed the connection between body aches, knee problems and mental health. Fifty-four patients were inspected with age

Table 1: Sample characteristics (n=200)

Demographics	Frequency	Percentage
Age		
30-39	47	23.5%
40-49	62	31.0%
50-60	91	45.5%
Gender		
Men	100	50%
Women	100	50%
Education		
10-12	170	85%
13-14	24	12%
15-16	6	03%

Table 2: Correlation matrix of the variables (n=200)

Variables	1	2	3	4	5
Age	-	-.044	-.387**	.243**	.313**
Gender	-	-	-.086	-.304**	.193**
Education	-	-	-	-.233**	-.247**
Kessler	-	-	-	-	.850**
HADS	-	-	-	-	-

Table 3: Comparison between osteoarthritis and control group on the Kessler psychological distress scale (KS10) and hospital anxiety and depression scale (HADS)

Variables	OA Mean (SD)	Control Mean (SD)	t(df)	P value	C-I UL - UU	Cohen' d
Kessler	22.99 (6.67)	16.14 (3.82)	8.903 (198)	.000	5.332-8.367	.578
HADS	19.85 (7.60)	6.812 (181.944)	6.812 (181.944)	.000	4.568-8.291	.450

Table 4: Gender differences of osteoarthritis and control group on Kessler psychological distress scale and hospital anxiety and depression scale (HADS)

Variables	Male M(SD)	Female M(SD)	t(df)	P value	C-I UL - UU	Cohen' d
Kessler	17.62(5.550)	21.51(6.667)	.43 (198)	.000	-2.179--5.601	0.0305
HADS	15.21(6.998)	18.06(7.544)	-2.77(198)	.000	-0.821--4.879	0.193

range of 32-83 years, it was observed that there was a robust relationship between anxiety, depression, and osteoarthritis. Similarly, another study showed that the degree of depression was higher among osteoarthritis patients and has impact on the day-to-day existence of patients¹⁰.

This may be explained in term of poor nutrition, low socioeconomic status and lack of health education. Due to lack of education and low socioeconomic status people don't give much importance to their health In our country. They avoid taking those ingredients/supplements in their diet which are necessary for preventing those kinds of disabilities or diseases in future. Consequently, physical disability encounter with severe pain which ultimately develops different psychological problems e.g. depression, anxiety, and sleep disturbance^{15, 16}.

The present study showed that psychological distress was higher among osteoarthritis patients. A scholarly review displayed that arthritis patients have greater level of severe mental ailment than people with no arthritis problem. Numerous factors were linked to severe mental sicknesses in arthritis patients, which includes early aging, separated or troubled marriages and chronic aching. Individuals that belongs to the age range of 18 to 44 years have advanced level of severe mental com-

plaint as compared to more elderly. Persistent agony with serious mental disorders was 3 times greater than those with solitary agony¹⁷. In this study, patients with osteoarthritis were found to be having more depression, anxiety and psychological distress as compared to the control group. Brown et al¹⁸ reported a relationship between tender point counts and psychological distress.

Our study reported a significant correlation (.243**) between the age and psychological distress indicating the relationship between growing age and osteoarthritis. Hip and knee osteoarthritis are positively associated with high level of distress¹⁹. It was shown that treatment focused on self-efficacy and psychological distress may result in improved quality of wellbeing²⁰. A study conducted in Northern India described that elder subjects with high number of morbidity had increased disability and psychological distress. An important determinant of morbidity were age, sex and occupation²¹.

In the current study, increased pain intensity in osteoarthritis patients was more common among females as compared to males. A study conducted in 2014, included 2,712 men and women with osteoarthritis of knee concluded that women narrate more knee pain as compared to men while x-ray findings were equal in both genders. Same findings were reported by another

research in 2016, in which 288 men and women having osteoarthritis with knee used pain assessment test batteries to measure their responses to cold, heat, mechanical pressure and pin pricks. The finding suggested that women showed more sensitivity to pain stimuli. Both researches concluded that it could be due to increased central sensitization in women. Another possible reason could be due to difference in hormones and nervous system between men and women²².

CONCLUSION

Depression, anxiety and psychological distress were high in osteoarthritis patients as compared to control group. Women had more anxiety and depression as compared to men. A significant and positive correlation between the age and psychological distress was found.

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CONTRIBUTORS

SK conceived the idea, planned the study and drafted the manuscript. BH and RB helped acquisition of data and did statistical analysis. UK critically revised the manuscript and supervised the study. All authors contributed significantly to the submitted manuscript.