A study of the factors associated with anxiety and depression among the patients of arthritis

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Abstract

Background: Arthritis is one of the common chronic disease and leading cause of disability in India. Due to increasing number of older adults, the prevalence of arthritis is expected to rise dramatically. Depression and anxiety are generally more common among people with arthritis than in general population and interplay independently and synergistically with clinical outcomes such as pain and disability. **Aim:** To study the prevalence of depression, anxiety and the factors associated with them among Indian adults suffering from arthritis in a tertiary care centre. **Material and Methods:** The study sample comprised of adults age above 30 years with clinician diagnosed arthritis (n=370). Depression and anxiety were measured using separate and validated scales. Prevalence was estimated for the sample overall and stratified by subgroups. Associations between correlates and each condition were estimated with prevalence ratios. **Result:** Depression was more common than anxiety (24% and 11% respectively) overall; about 8% of patients have mixed depression and anxiety disorder. Among them only 2-3% of patients seek consultation for mental health condition. **Conclusion:** Despite of high prevalence of depression and anxiety among the patients of arthritis help seeking for the psychiatric disability appears to be minimal. Untreated anxiety and depression may negatively impact on pain, mobility and quality of life.

Keywords: Arthritis, Anxiety, Depression

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Introduction

Rheumatic and musculoskeletal conditions comprise over 150 diseases and syndromes which are usually progressive and associated with pain. They are the leading causes of morbidity and disability giving rise to enormous health care expenditure and loss of work. Estimated 350 million people worlds wide have arthritis [1]. These diseases which include such varied conditions as rheumatoid arthritis, osteoarthritis, gout, ankylosing spondylitis, psoriatic arthritis, systemic lupus erythymatosis and spondylo-arthropathies often cause severe pain and emotional suffering that may contribute to disability, interfere with physical mobility and declines in health related quality of life in many patients [2].

Rheumatoid arthritis is a chronic systemic disease that affects joints, muscles, tendons and connective tissue. Its prevalence ranges from 0.3 to 1% in adults, affects 21 million and accounts for about 5 million DALY worldwide [3]. Osteoarthritis is a degenerative joint disease which mainly affects the particular cartilage. 10% of people above 60 years of age have symptoms of osteoarthritis. It is the 10th leading cause of nonfatal burden in the world and accounts for 15 million DALYs globally [4].

Despite their slow development arthritis are progressive in nature and eventually lead to joint destruction, significant loss of function and reduced quality of life in many patients. Psychosocial factors are being suggested as mediators or moderators in the mediation of relation between arthritis and psychological functioning [5]. The

prevalence of anxiety and depression in arthritis is higher than that of general population. In recent times large scale interest has been generated in the study of psychiatric and medical comorbidity in health service research and psychiatric epidemiology [6]. In India 15% of people i.e. 180 million suffer from arthritis the prevalence is higher than many well known diseases such as hypertension, diabetes, AIDS and cancer [7]. Inspite of the challenging and serious implications of psychological morbidity in relation to arthritis the field did not seem to attract the attention of mental health professionals.

The present study is planned to ascertain some basic data about the psychological concomitants of arthritis and their relation to sociobiographical, physical and medical factors.

Materials and Methods

It was a cross-sectional observational study conducted in a tertiary care health center in central India. 370 consecutive patients who had arthritis were selected as per inclusion and exclusion criteria. Institutional research and ethical committee approval was obtained prior to the study. Informed consent was obtained from each patient to participate in the study was obtained. Inclusion criteria is subjects between ages of 18 and 70 years and subjects diagnosed as suffering from various types of arthritis by orthopaedicians, rheumatologists and physicians and Exclusion criteria is patients with presence of psychosis, substance use disorders, and mental retardation.

Procedure: Sociodemographic and clinical data were obtained and meticulously documented on a specially prepared proforma. The following psychological instruments were used to obtain information about depression, anxiety and quality of life and pain in every case. Severity was graded by Physicians. The Investigator was not involved in the management of the cases.

1. Zung self rating depression scale: This is a 20 item self rating anxiety scale measuring cognitive, autonomic, motor and central nervous symptoms on a Likert scale ranging from 1 to 4. It yields a maximum score of 80 and minimum 20. A cut off score of 45 used to identify anxiety [8].

2. Zung self rating anxiety scale: This is a self rating scale of depression having 20 items. Each item is measured on a scale 1 to 4. The scale yields a maximum score of 80. A cut off score of 45 is used to identify depression [9].

Statistical Analysis: Obtained data were subjected to statistical analysis using SPSS software version 20.0. Chi square test was used to compare qualitative data.

Results

In our study, out of total 370 cases of arthritis almost two thirds were females (64%) and (36%) were males. 78% were urban dwelling. 90% were married but a substantial number were widowed (8%), 65% were unemployed, 59% belonged to nuclear families. 55% belonged to low economic status. Three quarters of the patients (75%) had primary/secondary education. 60% of Rheumatoid Arthritis (RA) cases were below 50 years of age while 66.5% of Osteoarthritis cases were above 50 years of age. This difference in the age was statistically significant to a high degree. (X^2 value 36.5 and P value $\leq$ 0.000). Distribution of the subjects according to the type of arthritis is shown in table no.1.

In the study subjects 24.3% had depression 11.3% had anxiety 8.1% had both anxiety and depression. Females suffered significantly more anxiety and depression than males. (Chi square value 14.5 and p value< 0.002) Widows were represented significantly high (33% vs. 5-7%) in those who suffered anxiety and depression (Chi square value 40.6 and p value< 0.000)

Nuclear families were represented (86.7% vs. 52-58%) significantly high in those who suffered both anxiety and depression. (Chi square value 10.8 and p value< 0.013)

There is no significant depression between those who suffered anxiety and/or depression and those arthritis subjects who did not suffer from anxiety and depression in education (p value< 0.067) income (p value< 0.104) employment status (p value< 0.153) and place of living (p value< 0.141)

Table No.-1: Distribution of the subjects according to the type of arthritis.

Age	Rheumatoid arthritis	Osteoarthritis	Others
Less than 40yrs	9	14	1
40-50	9	94	2
50-60	10	114	4
More than 60yrs	2	110	1
Chi square value 36.5 and p value <0.0001			
Gender			
Male	4	128	2
Female	26	204	6
Chi square value 12.6 and p value <0.002			
Marital status			
Married	28	295	5
Bachelor	0	7	1
Widowed	1	15	2
Divorced	1	15	1
Chi square value 10.6 and p value <0 .102			
Family pattern			
Nuclear	12	132	2
Extended	18	200	6
Chi square value 716 and p value< 0.699			
Occupation			
Employed	8	112	1
Unemployed	22	270	7
Chi square value 2.14 and p value <0.343			

53% of arthritis subjects who suffered anxiety were below 50 years of age while only 26% of depressed patients were below 50 years of age. 74% of the depressed groups were above 50 years of age while only 47% of the anxious groups were above 50 years of age. 53% of mixed anxiety and depression group also were below 50 years of age. These differences in age were highly significant (Chi square value 28.3 and p value< 0.001). Distribution of the subjects according to the presence of anxiety and depression is shown in table no.2.

Table No.-2: Distribution of the subjects according to the presence of anxiety and depression.

Gender	Anxiety	Depression	Mixed anxiety and depression	Normal
Male	12	26	4	90
Female	30	64	26	118
Chi square value 14.5 and p value <0.002				
Marital Status				
Married	38	82	20	194
Bachelor	2	0	1	1
Widowed	2	6	8	12
Divorced	0	2	1	1
Chi square value 40.6 and p value <0.0000				
Family Pattern				
Nuclear	22	50	26	120
Extended	20	40	4	88
Chi square value 10.8 and p value <0.013				
Occupation				
Employed	18	28	6	78
Unemployed	24	62	24	130
Chi square value 5.26 and p value <0.153				
Age Group				
Less than 40	2	6	2	35
41 - 50yrs	20	17	14	50
51-60yrs	14	36	4	73
More than 60 yrs	6	31	10	50
Chi square value 28.3 and p value <0.001				

Discussion

In the present study 42.8% of the subjects were found to have anxiety and/or depression. 23.4% of the subjects had depression, 11.3% had anxiety and 8.1% had both anxiety and depression. Quite a substantial number of studies reported preponderance of anxiety, however the findings are in agreement with other studies [10,11,12].

In the present study 8.1% had mixed anxiety and depression which is different from (15.9%) which was reported by Isik et al [13], but similar to Murphy et al [14] who reported 8.4%. It is not possible to discribe any cause for the discrepant results as different workers used different instruments and there could be many psychosocial, comorbid and other biological factors that underlay the phenomenon.

In the contrast present study females are seen to suffering more depression and anxiety which is conformity with the general trend. Stress may be playing a part in the occurrence of mixed anxiety and depression as 87% of them are from nuclear families in marked to 52-58% in depression and anxiety respectively. Further 33% of the mixed categories are widowers whereas only 5 to 7% of Anxiety and depressive categories are widowers. Loneliness of a widower from nuclear family could be one important factor contributing to the occurrence of anxiety and depression together besides other disease related factors.

The present study shows that relatively younger arthritic patients are prone to anxiety whereas older people are more prone to depression. This is in conformity with the findings of Murphy et al [14].

The present study will have limitations of a hospital based investigation as it may not reflect the picture at the population level. Also, instead of screening instruments structured interviews would have been useful in establishing clinical diagnosis. But considering the fact that depression and anxiety symptoms have as much effect on health-related quality of life as syndromal diagnoses this study can be considered to be of some value.

Conclusion

The present study has shown that nearly behalf of patients suffering from arthritis have undiagnosed psychological morbidity which will have adverse effects on function and quality of life. Identification of anxiety and depression in subjects suffering from arthritis will have definite implications for comprehensive management of patients. Effective management of anxiety and depression by drugs and psychotherapy is likely to improve the clinical picture, suffering and quality of life. Screening for anxiety and depression should form an essential part of the clinical workup of patients suffering from arthritis.

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How to cite this article?

Siddiqui F, Kumar A. A study of the factors associated with anxiety and depression among the patients of arthritis. *Int J Med Res Rev* 2017;5(09):872-876.doi:10.17511/ijmrr. 2017.i09.07.
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