

Research Article**Prevalence of Mood Variances in Patients with Osteoarthritis of Knee****K.S. Ramprasad¹, H.D. Veeranna², Adarsha H.M^{3*}**¹Assistant Professor, Department of Psychiatry, Shimoga Institute of Medical Sciences(SIMS), Shimoga, Karnataka, India²Associate Professor, Department of Orthopedics, Shimoga Institute of Medical Sciences(SIMS), Shimoga, Karnataka, India³Internist (House Surgeon), Shimoga Institute of Medical Sciences(SIMS), Shimoga, Karnataka, India***Corresponding author**

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Abstract: Chronic debilitating medical problems do have definite impact over the state of mind, physical activity and adjustment with the daily needs. Though all have good/favorable adaptability, the threshold varies in different individuals. Osteoarthritis, a chronic and common problem does have implications over the mind of the person's suffering from it. The psychological variables like anxiety, depression in patients with osteoarthritis (OA) were explored in patients attending Medical College Teaching Hospital. Patients attending the Orthopedics OPD over a period of 3 months suffering from Osteoarthritis Knee (single knee and both knee were included in the present study. All age group, both sexes are included. Socio-demographic data collected Beck's anxiety inventory and Beck's depression Inventory administered. Percentage of people with OA having anxiety and depression were determined. Majority of patients reported mild to moderate anxiety and depression which was related to severity of OA. In conclusion, anxiety is usually seen in the initial stages and gets prolonged for variable period depending on the severity of OA. Depression usually accompanies it depending on the socio-cultural and personal requirements.**Keywords:** Anxiety, Depression, Osteoarthritis

INTRODUCTION

Osteoarthritis is a disease characterized by degeneration of cartilage and its underlying bone within a joint as well as bony overgrowth. The breakdown of these tissues eventually leads to pain and joint stiffness. The joints most commonly affected are the knees, hips, and those in the hands and spine. Osteoarthritis is one of the leading causes of immobility due to pain and functional limitations. There is growing evidence suggesting psychological factors such as anxiety, fear, and depression may also relate to physical function in patients with knee OA [1,2,3].

Leeuw et al described a distinction between anxiety and fear[4]. Fear, the threatening stimulus or event is in the present tense. Anxiety is similar to fear in that it is also an emotional reaction associated with a heightened state of arousal, but the focus of the threat is unclear. In anxiety there is anticipation (future tense) of a threatening situation. This anxiety behaviour can have two outcomes – Well adaptive or coping with the OA problems and continuing the daily routine activity or maladaptive like avoidance and withdrawal from the activities.

Some investigators have also found anxiety to be associated with functional measures in subjects with knee OA while others have not found [1,2,3] this to be the case [5] In addition to fear and anxiety, depression may be associated with reduced function in people with knee OA.

According to the National Institute of Mental Health, depression is a mood disorder that can be characterized by persistent sadness; feelings of helplessness, hopelessness, or worthlessness; pessimism; and irritability. A person with depression may also lose interest in daily activities, hobbies, and recreation [5]. Therefore, it is understandable that depression could be associated with poor physical function. Where knee OA is concerned, there is conflicting evidence regarding the association of depression with measures of physical function, with some investigators reporting significant associations and others [1,2] finding no association[3,5], therefore it may be possible that they could interact to have a greater effect on physical function. To our knowledge, there have been no studies that have examined how anxiety and depression may interact to influence physical function in subjects with knee OA.

The current evidence suggests that fear, anxiety, and depression may play a role in determining the functional status of patients with knee OA. However, the results of studies examining the association of these variables in subjects with knee OA are not consistent and are sometimes limited by small sample size. In addition, the potential interactive effects of these variables on measures of physical function in subjects with knee OA have not yet been explored. Therefore, we believe that further examination of the role these psychological variables have in influencing measures of physical function are warranted.

The aim of this study was to explore anxiety and depression association with osteoarthritis knee at McGann Teaching and District Hospital attached to Shimoga Institute of Medical Sciences and compare with other studies published at other centres.

MATERIAL AND METHODS

The persons diagnosed to have osteoarthritis attending the Department of Orthopedics, McGann Teaching and District Hospital attached to SIMS Institute were included in the study and assessed for anxiety as per Beck Anxiety Inventory and depression levels using appropriate scales [Beck Depression Inventory]. Socio-demographic data was collected based on government sanctions {BPL (Below Poverty Line card)}

Persons suffering from OA were screened clinically and confirmed radiologically were included.

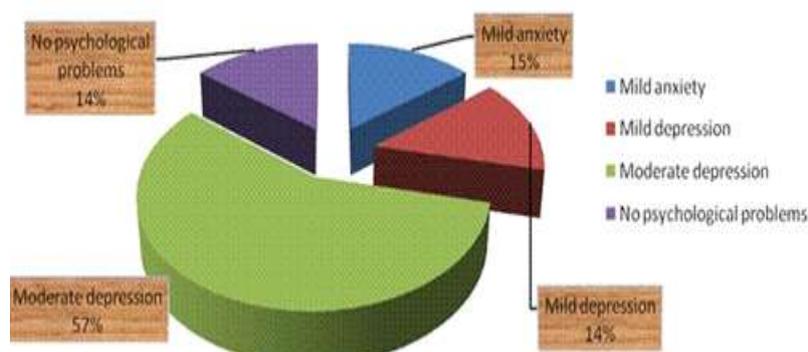


Fig. 1: Percentage distribution of Anxiety and Depression in patients with OA

DISCUSSION

Osteoarthritis is due to loss of cartilage in the joint. The association of mild levels of anxiety with pain in OA is also evident [2, 6, 8]. Obesity and helplessness (sign of depression) are also chief determinant and outcome factors in OA respectively [3, 7, 8], which is also seen in our study. There was no difference between sexes in this study.

CONCLUSIONS

In the present study we have seen the association of psychological problems such as anxiety and depression

No distinction was made between sex, age, socio-economic status, and other physical illnesses. The weights of the subjects were taken into account. The data is compared between severity of arthritis and weight. The relation between anxiety and depression is also been examined with the severity of arthritis. 21 patients suffering from OA knee were recruited for the study with their consent. They were administered Beck's depression scale and Beck's anxiety scale to measure the same. The clinical symptomatology along with radiological parameters were used to define the severity of OA. Pain being the subjective symptom was not given much of importance during the study. Only the mood symptoms anxiety and depression were evaluated using the appropriate scales and graded as mild, moderate and severe.

RESULTS

Most of the people in our study were more than 45 years of age. There were 11 Female and 10 Male patients with OA knee in the study. 10 patients were of low socio-economic status. 19 people (90%) with OA were overweight for their height (>70 Kg). 3 patients (14%) had trauma years before the onset of OA. 11 patients (52%) had obvious deformities of the knee joint. 1 had mild restriction of joint movements while the other one had severe restriction of joint movements. 6 patients had moderately restricted movements; totally 38.09% persons had restriction of movement ranging from mild to severe. The joint movements were painful in all.

in persons suffering from osteoarthritis. The association is been established with variance in one or the other parameters but anxiety and depression are truly associated with persons suffering from osteoarthritis. Further studies are needed.

REFERENCES

1. Summers MN, Haley WE, Reveille JD, Alarcon GS; Radiographic outcomes to anti-rheumatic drug therapy in patients with functional impairment in

- osteoarthritis of the knee or hip. *J Rheumatol.*,1988;15:1833-1840.
2. Salaffi F, Cavalieri F, Nolli M, Ferraccioli G; Analysis of disability in knee osteoarthritis: relationship with age and psychological variables but not with radiographic score. *J Rheumatol.*, 1991;18(10):1581-1586.
 3. Creamer P, Lethbridge-Cejku M, Hochberg MC; Factors associated with functional impairment in symptomatic knee osteoarthritis. *Rheumatology (Oxford)*, 2000;39(5):490-496.
 4. Leeuw M, Goossens ME, Linton SJ, Crombez G, Boersma K, Vlaeyen JW; The fear-avoidance model of musculoskeletal pain: osteoarthritis. Current state of scientific evidence. *J Behav Med.*, 2007;30(1):77-94.
 5. Depression. National Institute of Mental Health. 2009. Available from <http://www.nimh.nih.gov/health/topics/depression/index.shtml>.
 6. Beck AT, Steer RA, Ball R, Ciervo CA, Kabat M; Use of the BeckAnxiety and Depression Inventories for primary care with medical outpatients. *Assessment*, 1997;4:211-219..
 7. Hochberg MC. The relationship of anxiety and depression with knee osteoarthritis. *PhysTher* 2005;85:1318-28.
 8. Creamer P, Lethbridge-Cejku M, Hochberg MC. Determinants of and mechanical variables to physical performance measures in pain severity in knee osteoarthritis: effect of demographic and psychosocial variables using 3 pain measures. *J Rheumatol* 1999;26:1785-92.