

TO STUDY RELATIONSHIP BETWEEN ANXIETY AND DEPRESSION WITH KNEE DISABILITY IN SUBJECTS WITH OSTEOARTHRITIS KNEE – A CORRELATIONAL STUDY

Authors :Dr Alpa Purohit¹ (PhD scholar, Guj. University), Dr.Sweety Shah²(PhD guide)

ABSTRACT

A substantial body of literature has established that chronic pain, a common feature with osteoarthritis, is associated with depressive and anxiety symptoms. Psychological conditions, such as anxiety, are highly prevalent among adults in general, as well as adults with a variety of health conditions. Although frequently found among one third of individual's with various forms of painful disabling arthritis, especially those with depression, the condition rarely receives the same attention as the physical correlates of the disease, even though these are inextricably linked. Chronic pain in itself can cause or aggravate anxiety and depression. A vicious cycle begins, which can significantly impact the course and management of these chronic disease.

100' number of subject will be voluntarily selected for study base on criteria from villages in Ahmedabad.

HAM-D, HAM-A, Modified WOMAC Index were given to fulfill & accordingly data were analysed.

Spearman's rank correlation test was used as the data was not normally distributed. The correlation coefficient is $r = 0.170$ and $p = 0.091$ for between anxiety and womac, The correlation coefficient is $r = 0.116$ and $p = 0.251$ between depression and womac. Our result provides the comprehensive summary of the psychological ailments mainly anxiety and depression to plays vital role in increasing the pain and other limitations which leads to overall deterioration of quality of life. Which can be suspected to be resolves with the integrated approach. This study conclude that, there is an influence of depression and anxiety on amount of knee disability in subject with OA knee.

Key words: Hamilton Depression Rating Scale (HAM-D)⁹, Hamilton Anxiety Rating Scale (HAM-A)¹⁰, Modified WOMAC Index¹¹, OA.

INTRODUCTION:

Osteoarthritis (OA) is the most common musculoskeletal disease worldwide.¹ It is characterized by degeneration of the articular cartilage, osteophyte formation, and asymmetric joint space narrowing.²

Osteoarthritis often has a profound impact on an individual's health and well-being since it is associated with increased pain, decreased function and elevated disability, with the concomitant difficulties experienced in maintaining activities of daily living and subsequent reductions in quality of life.³

A substantial body of literature has established that chronic pain, a common feature with osteoarthritis, is associated with depressive and anxiety symptoms.³

Psychological conditions, such as anxiety, are highly prevalent among adults in general, as well as adults with a variety of health conditions.⁴

Pain experience adversely in people with osteoarthritis is the presence of depression that may arise as a reactive condition in response to their disabling physical and social wellbeing, or as a prevailing comorbid condition.⁵

Anxiety, a state of apprehension and distress occurring in different forms, including pre-existing trait anxiety, generalized anxiety disorder, and state anxiety is widespread among adults in general, as well as adults with a variety of health conditions (ray marks).commonly affecting the individual's physical,functional,and social wellbeing, as well as their overall health status and life quality significantly and adversely.⁶

Depression is defined as the presence of sad, empty, or irritable mood. Both anxiety and depression are accompanied by somatic and cognitive changes that can significantly affect an individual's capacity to function.⁷

Although frequently found among one third of individual's with various forms of painful disabling arthritis, especially those with depression ,the condition rarely receives the same attention as the physical correlates of the disease, even though these are inextricably linked.⁴

Chronic pain in itself can cause or aggravate anxiety and depression. A vicious cycle begins, which can significantly impact the course and management of these chronic disease.⁷

NEED OF THE STUDY:

As we know osteoarthritis has been very commonly affected disease now a days. There is excess personal and social burden associated with osteoarthritis in the context of older populations, this review focuses specifically on examining evidence the association between anxiety and depression and the disability experienced by subjects with OA knee.

We are more concern to treat physical dysfunction, but physical disability is also playing major role in psychological state of person.

there are very less evidences which shows the relationship between physical function and depression & anxiety in OA knee patients; so the need arises to find out the inter relationship between functional disability and level of depression and anxiety in subjects with OA knee.

AIM:

To Study Realationship Between Anxiety And Depression With Knee Disability In Subjects With Knee Osteoarthritis.

OBJECTIVES:

- 1.To correlate depression with knee disability in subjects with osteoarthritis knee
- 2.To correlate anxiety with knee disability in subjects with osteoarthritis knee

MATERIALS AND METHODOLOGY:

METHOD OF COLLECTION OF DATA:-‘100’ number of subjects will be voluntarily selected for study base on inclusion and exclusion criteria from villages in Ahmedabad.

- **Study design-** A correlation study
- **Sample size:-**100 subjects
- **Sampling:-**convenient sampling
- **Study population:-** knee osteoarthritis

MATERIALS:

- Pen
- Paper
- Pencil
- Paper
- Data collection sheet
- Consent form
- Assessment form

INCLUSION CRITERIA:

- (i) Age \geq 50 years;
- (ii) As per the ACR guidelines in both knee8
- (iii) Gender-male and female
- (iv) Willingness of subject to participate in the study

EXCLUSION CRITERIA:

- (i) A history of knee surgery before 1 year
- (ii) Moderate to significant knee synovitis
- (iii) Inflammation

OUTCOME MEASURE:

In this 3 scales were taken as per the reliability of the scale.

1. Hamilton Depression Rating Scale (HAM-D)⁹
2. Hamilton Anxiety Rating Scale (HAM-A)¹⁰
3. Modified WOMAC Index¹¹

STATISTICAL ANALYSIS:

Sample size in the study was 100. All these scales had been administered in all patients by interview method. The questions were translated by the therapists and then data has been collected.

The statistical analysis was done by SPSS version 20 software to find out the correlation between physical function and depression & anxiety.

Tables and Graphs were plotted in Microsoft Excel 2007.

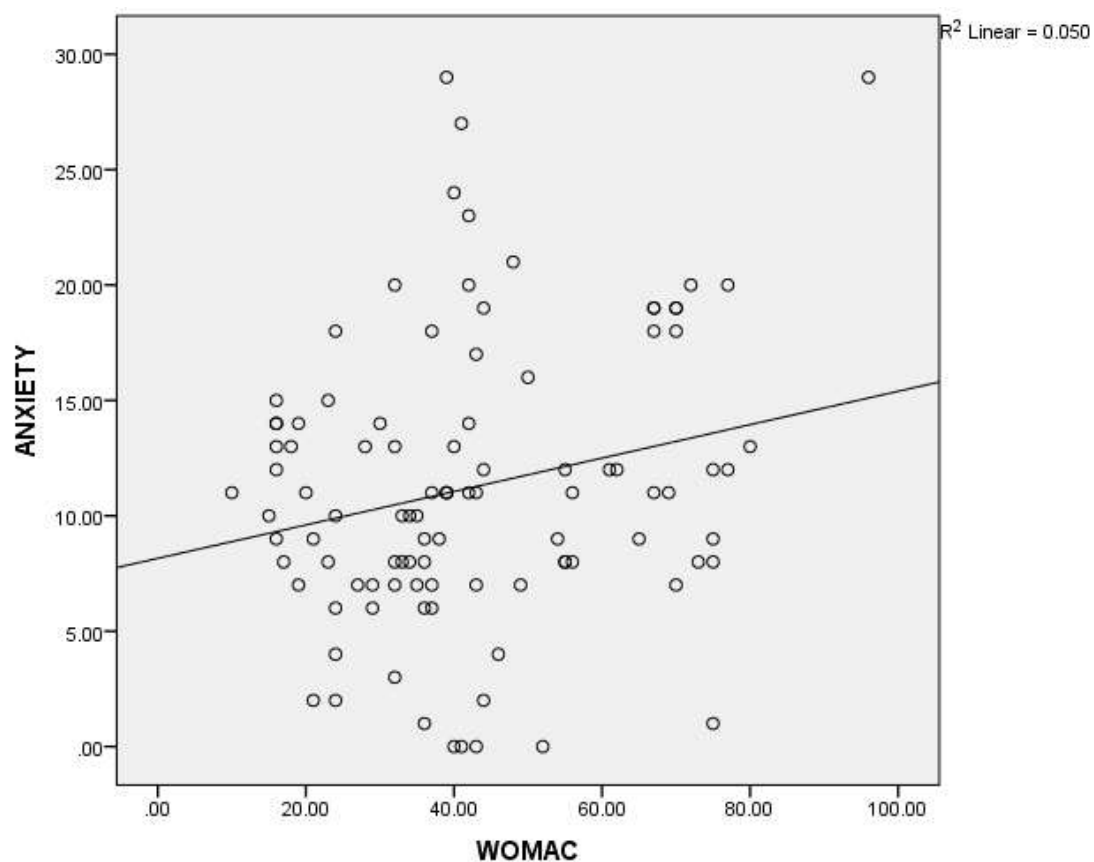
RESULT:

100 subjects participated in the study.

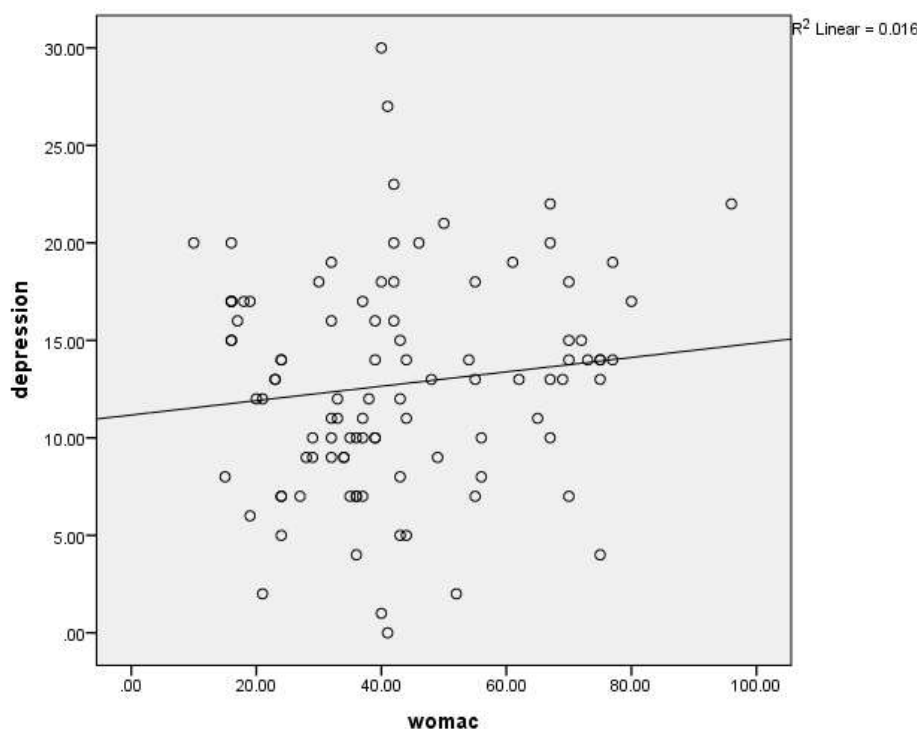
Spearman's rank correlation test was used as the data was not normally distributed. The correlation coefficient is $r = 0.170$ and $p=0.091$. The graph shows weak positive correlation between anxiety and WOMAC score. It suggests with increase in the knee disability there is increase in anxiety score.

Spearman's rank correlation test was used as the data was not normally distributed. The correlation coefficient is $r = 0.116$ and $p=0.251$. The graph shows weak positive correlation between depression and WOMAC score. It suggests with increase in the knee disability there is increase in depression score.

GRAPH:1:CORRELATION BETWEEN ANXIETY & WOMAC



GRAPH:2:CORRELATION BETWEEN DEPRESSION&WOMAC



DISCUSSION:

State of Psychological Wellbeing in this era of Human existence is hindering the Physical Wellbeing . This Altered psychological status indirectly gets associated with increased pain and other functional limitation .

The increased symptoms has ultimately increased the use of alternative treatment protocols like Conservative treatment, surgical treatment, Pharmacotherapy and other ways of health care utilization. The recent advancement and research shows that the prior treatment methods designed to treat Osteoarthritis lack the amalgamation with other self care management techniques.³

As seen in our result the correlation between the psychological ailments and physical status shows weak positive correlation which abides the fact that if the psychological ailments are present it will indirectly correlate with physical and functional block.

Hence these ailments forces the patients to opt for surgical procedures . OA is a progressive disorder and a large quota of patients with OA will, at some point for surgery.

Patients awaiting surgery can experience anxiety and opting for surgery experience the depression at point of time involving limitations of movement.³

However, educating patients about the procedure with detailed behaviors while surgery does improve patient's quality of life , patients with OA with hazardous anxiety and depression may not experience favorable clinic outcome and relief following joint replacement surgery as compared in patients with OA without these psychological ailments, even after a structured rehabilitation program . thus ,surgical assessed as not all patients are equally benefited .³

As seen in various article , OA management includes self care management, collaborative approach ,pharmacotherapy, music, educational videos about OA procedures and yoga.⁷

These approach compromising the amalgamation of various procedures gives cumulative improvement in psychological state of patient as well as pain and functional limitations .Additionally, the integrated approach is the only equivalent to fight with physical ailment.⁷

Hence, our result provides the comprehensive summary of the psychological ailments mainly anxiety and depression to plays vital role in increasing the pain and other limitations which leads to overall deterioration of quality of life. Which can be suspected to be resolves with the integrated approach.

CONCLUSION:

There is a weak positive correlation between anxiety and depression with knee disability .

This study conclude that, there is an influence of depression and anxiety on amount of knee disability in subject with OA knee .

REFERENCES:

1. Johnson VL, Hunter DJ. The epidemiology of osteoarthritis. *Best Pract Res Clin Rheumatol*. 2014;28(1):5-15.
2. Lories RJ, Luyten FP. The bone-cartilage unit in osteoarthritis. *Nat Rev Rheumatol*. 2011;7(1):43-49.
3. Stubbs B, Aluko Y, Myint PK, Smith TO. Prevalence of depressive symptoms and anxiety in osteoarthritis: a systematic review and meta-analysis. *Age and ageing*. 2016 Mar 1;45(2):228-35.
4. Marks R. Anxiety and its impact on osteoarthritis pain: an update. *J Rheum Dis Treat*. 2015;1:015.
5. Marks R. Depression and osteoarthritis: impact on disability. *Journal of Aging Science*. 2014 Aug 13:1-7.
6. Marks R. Prevalence of Anxiety Symptoms and its Impact in People with Osteoarthritis: An Update. *J OstArth*. 2016;1(110):2.
7. Sharma A, Kudesia P, Shi Q, Gandhi R. Anxiety and depression in patients with osteoarthritis: impact and management challenges. *Open access rheumatology: research and reviews*. 2016;8:103.
8. Schnitzer TJ. Update of ACR guidelines for osteoarthritis: role of the coxibs. *Journal of pain and symptom management*. 2002 Apr 1;23(4):S24-30.
9. Reynolds WM, Kobak KA. Reliability and validity of the Hamilton Depression Inventory: A paper-and-pencil version of the Hamilton Depression Rating Scale Clinical Interview. *Psychological Assessment*. 1995 Dec;7(4):472.
10. Thompson E. Hamilton rating scale for anxiety (HAM-A). *Occupational Medicine*. 2015 Oct 1;65(7):601.
11. Faucher M, Poiraudreau S, Lefevre-Colau MM, Rannou F, Fermanian J, Revel M. Assessment of the test-retest reliability and construct validity of a modified WOMAC index in knee osteoarthritis. *Joint Bone Spine*. 2004 Apr 1;71(2):121-7.