



# Depression: A Common Psychological Problem Associated With Chronic Lower Back Pain

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## Abstract

Chronic Lower back pain is most common chronic pain condition among people aged 18-60 years. Lower back pain is associated with physical as well as psychological symptoms and depression is the most common psychological problem in chronic pain conditions. This study was designed to assess prevalence and severity of depression in patients with chronic lower back pain.

Results:- Mild to Moderate grade of depression was commonly associated in patients with chronic lower back pain and a higher incidence found in females. Minimal depression was found in 9 males (Mean 10.88 SD 0.3504) and 4 females (mean 12.50 SD 0.2887) with P value 0.0136 which is statistically significant (<0.05) Mild depression in 25 males (Mean 16.80 SD 0.3317) and 30 females (Mean 16.17 SD 0.3036) with P Value 0.1649 Statistically not significant (>0.05), 15 males (Mean 22.13 ± 0.6752) and 17 females (22.76 ± 0.6835) with P value 0.5181 statistically not significant (>0.05) found moderate depression

Conclusion:- Chronic lower back pain has increased risk of developing mild to moderate depression which needs to be addressed during management of such patients.

**Keywords:** Depression, chronic lower Back pain.

## INTRODUCTION

Chronic lower back pain is the common condition, which is defined as “pain and discomfort in the lumbosacral region, i.e. ( lower costal margin to inferior gluteal fold) . Chronic lower back pain affects our physical as well as psychological components. (Airaksinen et al 2006).

Chronic lower back pain is a major burden on society, with the 2016 Global Burden of Disease Study labeling it as leading cause of year lived with disability (YLD) of the top 10 causes of YLD'S in 188 countries (Global Burden of disease study, 2013). Most people in India are engaged in physical demanding job that can increase the risk of lower back pain and disability. Most of the time Lower back pain affect quality of life (QOL) of patients and their families.. International surveys suggest that the prevalence of back pain in India is 19-43 % and point prevalence is 15-30% (ahdhi G S et al 2016).

Many Studies were conducted in which patients with chronic pain were found to suffer from depression ,anxiety, anger. Psychiatric disorder are more common in patients with chronic pain in the general population .Depression is one of the most common mental illness associated with chronic pain and depressive symptoms are present in a high incidence of patients with chronic pain in general population. Chronic pain itself is a strong risk factors for depression . The prevalence of depression of significantly higher than in general population. Patients were more likely to develop moderate to severe depression (Ho-jin Lee 2018). Approximately 9-33% of people experience chronic pain that lasts for 3 months or more. chronic pain leads to manifestations of depression like a sleep disturbances, restriction to physical activity, social isolation(Chaturvedi s k et al 2014). It is one of the most common musculoskeletal conditions worldwide , with a lifetime prevalence of 84%. (David Roberson et al 2017).

### **Need for the study**

The purpose of the present study is to assess association of chronic Lower back pain and depression.

### **Objective of the study**

- To study the association between depression and chronic lower back pain
- To find that severity of depression in chronic lower back pain patients .

### **Hypothesis**

- Depression would be moderate in chronic lower back pain patients.
- There was statistically significant increase in the severity of depression in back pain patients

### **Review of literature**

David Roberson et al 2017 in his study, examined the depression in patients of chronic lower back pain. Total 1013 patients were studied in which 781 were females and 205 were males. Researcher used modified zung depression index and pain severity scale. Lower back pain was directly associated with depression and somatization. Patients having lower back pain also had depressive episode like a feeling of sadness, irritation ,sleep disturbances.

Toshinaga et al (2016,oct) studied 30,000 patients suffering from chronic lower back pain. He divided patients into two group A) chronic lower back pain with depression and B) chronic lower back pain without depression . The objective of this study was to investigate the impact of depression on Health Related Quality of Life in chronic lower back pain and assess to the relationship with depression and work Impairment and health care use CLBP patients in Japan. Result of this study depressed Chronic Lower Back Pain patients experience significantly more severe pain compared with patients without depression ( $p<0.001$ ). Depression amongst CLBP patients was associated with higher pain scores and lower Health Related Quality Of Life scores as well as lower labor productivity and increased health care use.

## Research design

This study was focused to assess the relationship between Depression and chronic lower back pain and severity of depression associated with it.

## Sample

In the present study we have collected data from 100 patients aged 18-60 who are suffering from Chronic lower back pain visiting to out patient department in Aurangabad region. Patients less than 18 years of age and more than 60 years age were excluded from study also Patients with traumatic and cancer related back pain were excluded from the study.

## Variable

Independent variable –Chronic lower back pain , Gender .

Dependent variable –Depression .

## Demographic detail of the sample

Group	Depressive symptoms	
Sample size	100 chronic lower back pain patients	
Gender	Male 49	Female 51
Geographical locale	Urban	

## Tools

### BDI –II (Beck depressive Inventory)

The BDI 2 was designed by Aaron T. Beck used diagnostic criteria in DSM4 to act as an indicator of depressive symptoms in patients over 13 years of age. The BDI was the original instrument developed in 1961, revisions began in 1971, and finally BDI-II, published in 1996, is a substantial revision of the original instrument. It measures cognitive, affective, physiological and vegetative symptoms of depression. There are 21 items. A 4-point scale indicates the degree of severity i.e. 0,1,2,3. It requires minimal training for people to administer and can be administered in 5 minutes. Scoring was divided into four groups 0–13 minimal depression, 14–19 mild depression, 20–28 moderate depression and severe (29–63).

## Result

In total of 100 patients of chronic lower back pain visiting out patients department There was no any statistically significant difference between gender among the patients of chronic lower back pain.( $p < 0.05$ )

BDI-II (beck depression inventory ) was solved from chronic lower back pain patients in Aurangabad city . We found that there was significant association between chronic lower back pain and depression. Depression was assessed using BDI-II scoring manual.

Minimal depression was found in 9 males(Mean 10.88 sd 0.3504) and 4 females (mean 12.50 SD 0.2887) with P value 0.0136 which is statistically significant( $< 0.05$ )

Mild depression was found in 25 males(Mean 16.80 SD 0.3317) and 30 females( Mean 16.17 SD 0.3036) with P Value 0.1649 Statistically not significant(>0.05),

15 males(Mean 22.13  $\pm$  0.6752 ) and 17 females(22.76  $\pm$  0.6835 ) found to have moderate depression with P value 0.5181 statistically not significant(>0.05).

No patient were shown severe depression in current sample.

Table 1

Age group

Gender	Study Population
Male	49
Female	51
Total	100

Table 2 Severity of Depression

Sr No		Male	MEAN & SD	Female	SD	P VALUE
1	Minimal depression (0-13)	09	10.88 $\pm$ 0.3504	04	12.50 $\pm$ 0.2887	0.0136(SIGNIF)
2	Mild depression(14-19)	25	16.80 $\pm$ 0.3317	30	16.17 $\pm$ 0.3036	0.1649(NS)
3	Moderate depression(20-28)	15	22.13 $\pm$ 0.6752	17	22.76 $\pm$ 0.6835	0.5181(NS)

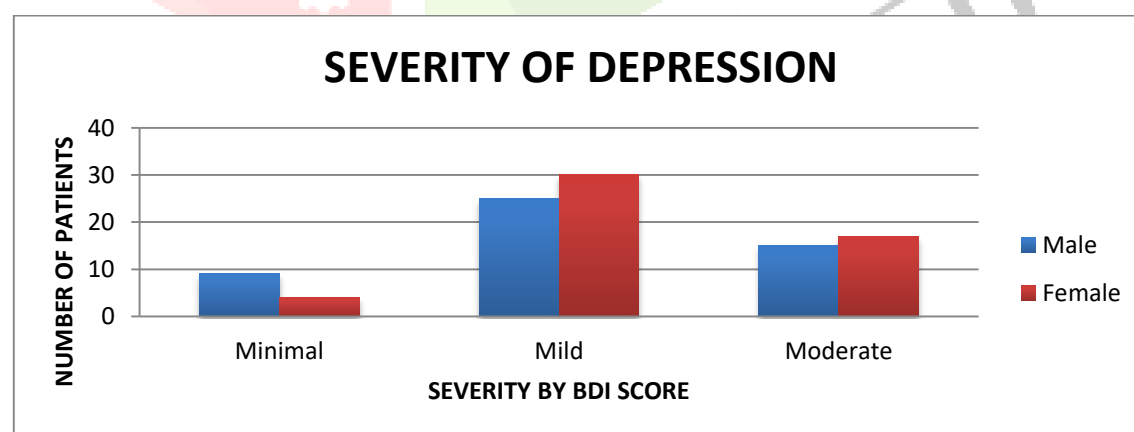
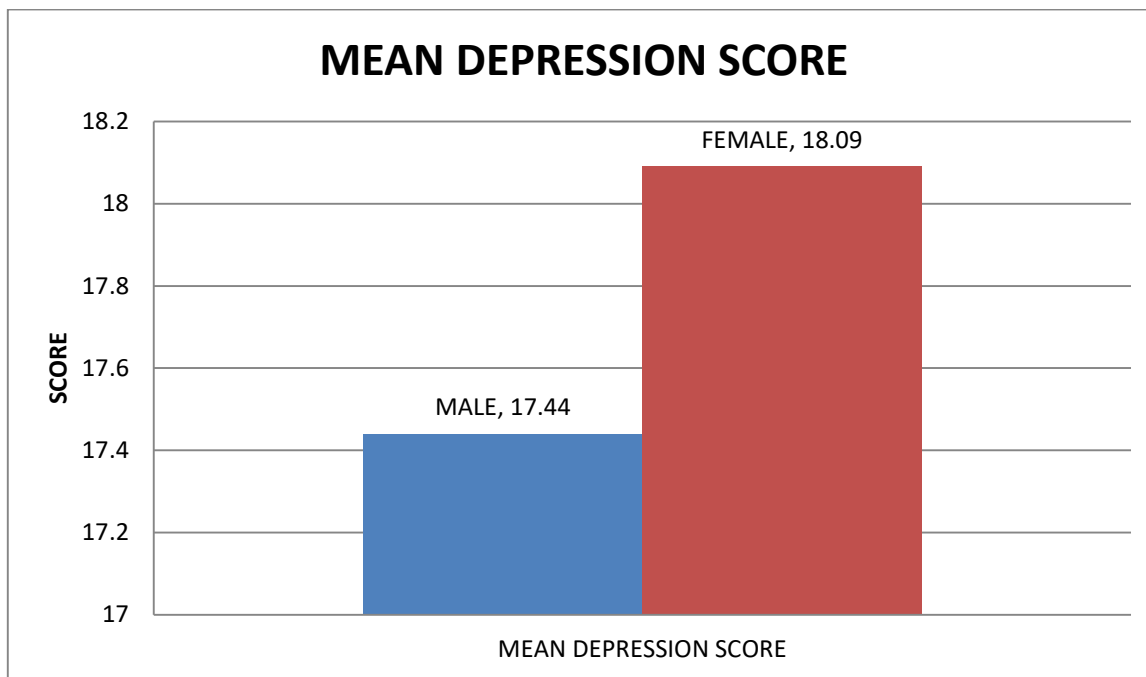


Table 3 Mean Depression Score

MEAN SCORE	BDI-II	Male		Female		't' Value
		Mean	SD	Mean	SD	
		17.44	<b>1.46</b>	18.09	<b>1.58</b>	



### Discussion-

Chronic lower back pain is affects psychological factors include sleep disturbances ,irritability, anxiety, behavioral disturbances, behavioral disturbances ,depressive symptoms its very common in society. Also chronic lower back pain is reduce quality of life. “WHO’s definition of health ,refer to overall condition of the quality of life of ill or healthy individuals in accordance with following eight factors (a) Limitation in physical activity because of health problem ,(b) Limitation in social activity because of physical or emotional problems ,(c) Limitation in role activity because of physical health problem ,(d) bodily pain ,(e) general mental health ,(f) Limitation in role activity because of emotional problem ,(g) vitality and (h) general health perception of an individual or a group measured in terms of feelings of satisfaction or dissatisfactions”. (Ware and Sherbourne 1992)

These include sadness pessimism , past failure ,loss of pleasure , feeling of guilt , self-dislike , self criticism ,suicidal thoughts ,crying, loss of interest ,worthlessness ,loss of energy, irritability ,concentration difficulty , fatigue . Depressive symptoms such as loss of appetite were observed.

Data suggest that most chronic lower back pain patients experience mild depressive symptoms . The Global burden of diseases study 2013 found that globally back pain is the leading causes of years of disability . In Japan, chronic lower back pain is a leading causes of psychological distress such as depression and several studies have examined the co-occurrence of pain and depression . .Depression increase the risk of developing chronic back pain .(Tsuji et al 2016 ) .

A recent studied have demonstrated that psychological risk factors for Chronic Lower Back Pain among Japanese workers. Found that chronic lower back pain commonly associated with depression and they had significantly more severe pain compared with patients without depression .(Matsudaira K et al)

In this study we found that Depression is commonly associated psychological symptom in patients with chronic lower back pain. Majority of patients were suffered from mild depression Women are more commonly affected with minimal depression than men, there could be various possible reasons like social, familial, men

dominant society, ignorance of health problems in women etc. But consideration of these factors is beyond the scope of this study.

Mild to Moderate depression is commonly associated with patients with chronic lower back pain which is many times ignored while treating it. So, multidisciplinary approach should be implemented while assessing and managing patients with chronic lower back pain.

### Conclusion

We conclude that chronic lower back pain has increased risk of developing mild to moderate depressive symptoms which needs to be addressed during management of such patients.

### Limitation of the study

- This study was limited to specific geographical area
- Other factors contributing to depression and psychological distress were not considered in this study which opens various channels to study those factors .

### Implication of the study .

- Multi-disciplinary assessment & Management of chronic pain states

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