



Relationship between depression and chronic low back pain in rural patients.

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ABSTRACT **Introduction:** Depression is by far the most common emotion associated with chronic back pain. Chronic pain and depression are two of the most common health problems that health professionals encounter, yet only a handful of studies have investigated the relationship between these conditions in the general population. **Material & Methods:** Patients more than 30yrs of age with low back pain of ≥ 3 months of duration were included in the study and depression in these patients was assessed by Depression Questionnaire (Montgomery-Åsberg Depression Rating Scale). **Result and Analysis:** Out of 228 patients included in the study, 132 patients had depression. The incidence rate of depression was 57.9%. **Conclusion:** There is a definitive positive co-relation between low back pain and depression. Also, there is more disability in patients of low back pain associated with depression.

KEYWORDS : Depression, Chronic low back pain.

Introduction & Background:

Depression is by far the most common emotion associated with chronic back pain. The type of depression that often accompanies chronic pain is referred to as major depression or clinical depression. This type of depression goes beyond what would be considered normal sadness or feeling "down for a few days". Chronic pain and depression are two of the most common health problems that health professionals encounter, yet only a handful of studies have investigated the relationship between these conditions in the general population.¹

Major depression is thought to be four times greater in people with chronic back pain than in the general population.² Research studies on depression in chronic low back pain patients seeking treatment at pain clinics, prevalence rates are higher. Thirty two to 82 percent of patients show some type of depression or depressive problem, with an average of 62%.³

Currie and Wang found that the rate of major depression increased in a linear fashion with greater pain severity. It was also found that the combination of chronic back pain and depression was associated with greater disability than either depression or chronic back pain alone.¹ Depression is more commonly seen in patients with chronic back pain problems than in patients with pain that is of an acute, short-term nature.

Strunin and Boden (2004) investigated the family consequences of chronic back pain. Patients reported a wide range of limitations on family and social roles which led to depression and anger among the back pain patients and to stress and strain in family relationships.⁴

Chronic back pain can lead to a diminished ability to engage in a variety of activities such as work, recreational pursuits, and interaction with family members and friends. This situation leads to a downward physical and emotional spiral that has been termed "physical and mental deconditioning". As the spiral continues, the person with chronic back pain feels more and more loss of control over his or her life. *The individual ultimately feels totally controlled by the pain, leading to major depression.* Once in this depressed state, the person is generally unable to change the situation even if possible solutions exist.⁵

One of the biggest problems in treating major depression for the patient with chronic back pain is missing the diagnosis. This occurs for two reasons: the chronic back pain patients often do not realize they are also suffering from a major depression, and the doctor is not looking for depression. Treatments strictly directed at the pain are much more likely to fail. Chronic back pain patients will often define their problem as strictly medical and related to the pain and this is supported by a study done by Bao, Sturm, & Croghan.⁶ The presence of a chronic pain physical condition increases the duration of depressive mood, and

chronic pain patients seeking medical consultation should be routinely screened for a major depression.⁷

Treatment of depression associated with chronic back pain requires a specialized approach. It is generally accepted that the pain and the depression should be treated simultaneously in a multidisciplinary fashion. Such treatment will give the patient more of a sense of control over the pain and start a "positive spiral" toward physical and mental re-conditioning.⁸

In this backdrop, present study is aimed at finding a co-relation between chronic back pain and depression.

Material & Methods:

Study was conducted in the Department of Orthopaedics, JLN MCH Bhagalpur from August 2016 to March 2017. All patients included in this study were counselled regarding the implications and outcome of our protocol and their consent was taken.

Inclusion Criteria-

- Minimum 3 months duration of chronic back pain
- Age 30 years and above (This excludes the early onset depression patients)

Exclusion Criteria-

- Severely ill and bed ridden patients of back pain
- Pregnant and lactating females
- History of depression before onset of low back pain
- Patients who are not able to understand Hindi language.

Patients included in the study were assessed for their low back pain and a study Proforma was filled. Depression in these patients was assessed by Depression Questionnaire (Montgomery-Åsberg Depression Rating Scale). Other parameters like Pain grading (Visual Analog Scale) and disability scaling (Modified Oswestry Low Back Pain Disability Questionnaire) was also done for these patients.

Result and Analysis:

A total of 228 patients were included in the study based on inclusion criteria. These patients were assessed for low back pain and depression. Out of these, 120 patients were female and 108 were male. The age distribution of the patients is shown in the Table 1.

Age Group	No. of Patients	Male	Female
30-40 yrs	88	42	46
41-50 yrs	84	42	42
51-60 yrs	40	14	26
61-70 yrs	14	8	6
71-80 yrs	2	2	0
Total	228	108	120

In 132 patients, low back pain was associated with depression. Out of 228 patients, 96 patients had no depression, 56 had mild, 62 had moderate and 14 patients had severe form of depression. Incidence rate of depression was 42.1%, 24.5%, 27.2% and 6.1% respectively.

Incidence rate of depression among various age groups is shown in Table2.

	Depressed	Non-Depressed	Total	Incidence Rate (%)
30-40 yrs	50	38	88	56.8
41-50 yrs	50	34	84	59.5
51-60 yrs	30	10	40	75
61-70 yrs	2	12	14	14.3
71-80 yrs	0	2	02	0
Total	132	96	228	57.9

Table.2: Age groups wise incidence of Depression

Among 132 depressed patients, 56 were male and 76 were female. Hence, incidence rate of depression was 51.8% and 63.3% respectively.

In patients with low back pain not associated with depression, 92 patients had minimal disability and 14 patients had moderate disability. While in patients low back pain associated with depression, 36 patients had minimal disability, 78 patients had moderate disability and 18 patients had severe disability. Hence, depressed low back pain patients have more disability compared to non-depressed low back pain patients. Fig. 1

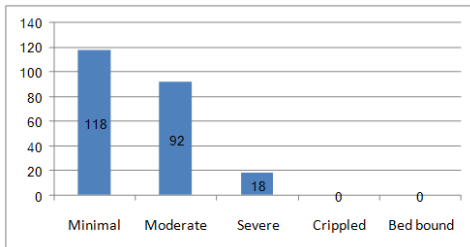


Fig.1. Disability scaling in low back pain patients

To summarize the results, the primary rate of incidence of depression in chronic low back pain was found to be 57.9% including those with confounding factors.

Discussion:

Pain is a subjective awareness of peripheral nociceptive stimulation, projected from the thalamus to the cerebral cortex with each individual's pain experience being mediated by his or her psychological state. Thus a psychological component will often be associated with any painful experience. Overall good health of an individual depends on two major components: the Mind and the Body. Both these components need to be in harmony with each other in order to achieve a healthy state. Disturbance in any one of the two components would lead to loss of harmony between the two and would have a negative impact on the other component. The incidence rate of depression in chronic low back pain was found to be 57.9%. It depicts the extent of co-morbidity of depression with chronic low back pain. Somatic symptoms appear only at a stage when the depressed state starts affecting the biochemical processes of the body which is a sign of severity of depression. However, the incidence rate found by this study is higher than the average incidence rates reported in the literature. The reason for a higher incidence rate could be attributed to a number of factors. The first one is patient population which was majority rural, had less exposure to medical facilities, and had a low literacy level and also majority of population being from lower and upper lower class. These population characteristics itself appear to be vulnerable to depression. Another factor contributing to a high incidence rate is the presence of confounding factors such as coexisting chronic diseases (like, hypertension, diabetes or other painful conditions), long term disability, social and family issues and recent trauma or surgery.

Conclusion:

In this study it was found that there was a definitive positive co-relation between low back pain and depression. Also in patients of low back pain associated with depression there is more disability compared to patients of low back pain without depression. While a strong

correlation between depression and chronic low back pain can be demonstrated, an apparent paucity of literature that specifically addresses the patient response to chiropractic treatment and concurrent psychotherapy identifies the need for prospective studies of this nature to be undertaken.

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