



Prevalence of Psychosomatic distress and its association with Quality of life among Patients of non-specific low back pain -in South Gujarat

1*.Dr. Neeti Mishra (PT) Associate Professor, Spb Physiotherapy College, Surat, Gujarat, India

2. Dr.Khusboo C. Valodwala(PT) Assistant Professor, Spb Physiotherapy College, Surat, Gujarat, India

ABSTRACT

Introduction-Psychological factors as depression and somatization are considered along with a high level of disability as risk factors for developing persistent low back pain (LBP). Furthermore, LBP and psychosocial distress are two of the most frequent reasons for seeking health care and sickness absence. However, it is not clear how these factors are inter-correlated. However, over the last two decades, there has been increasing evidence for psychosocial and psychological facets being crucial in the understanding of pain perception and subsequent disability (Chou & Shekelle, 2010¹). It is furthermore suggested that psychological factors, that is, emotions, beliefs and avoidant behaviors, are linked to poor outcome of the rehabilitation process in LBP patients (Pincus & McCracken, 2013). These LBP-related consequences may compromise their quality of life and increase their long-term health care expenses.²**Aim of the study**- To find the Prevalence of psychosomatic distress and its association with Quality of life among patients of nonspecific low back pain -in South Gujarat. **Methodology**- Patient with 25-55 yrs of age with non-specific low back pain were included in the study. (Observational study) The following socio-demographic variables were collected at intake: age, sex, marital status, highest level of educational attainment and annual household income .BMI .The quality of life was measured using Sf-12⁴. The Distress and Risk Assessment Method (DRAM)³ was used in this study to assess psychological distress related to depression and somatization. **Statistical analysis**- statistical software version 20 was used for statistical analysis. Descriptive statistics was used for demographic and clinical variables .Pearson correlation was used to evaluate the association between psychosomatic distress and Quality of life. The level of significance was $p \leq 0.05$. **Result and conclusion**-50.43 % were found to be at risk, 6.95% were found to be distressed (somatic) and 10.43% were found to be distressed (depressive). Significant correlation was found

between psychosomatic distress and quality of life among patients of non-specific low back pain in South Gujarat.

KEY WORDS-Prevalence, Psychosocial distress, Quality of life, Non-specific low-back pain

Introduction--Psychological factors as depression and somatization are considered along with a high level of disability as risk factors for developing persistent low back pain (LBP). Furthermore, LBP and psychosocial distress are two of the most frequent reasons for seeking health care and sickness absence. However, it is not clear how these factors are inter-correlated. However, over the last two decades, there has been increasing evidence for psychosocial and psychological facets being crucial in the understanding of pain perception and subsequent disability (Chou & Shekelle, 2010¹⁰). It is furthermore suggested that psychological factors, that is, emotions, beliefs and avoidant behaviors, are linked to poor outcome of the rehabilitation process in LBP patients (Pincus & McCracken, 2013). These LBP-related consequences may compromise their quality of life and increase their long-term health care expenses.¹¹

The LBP prevalence was 42.4% per year and 22.8% per week. Approximately one in five (20.6%) patients reported limitations of daily activities that resulted from LBP and 14.4% felt emotionally depressed because of LBP. In total, 52% subjects were satisfied with their current position compared with 48% who were not. Job monotony was reported by 31.9% of subjects and stress was reported by 24.2% of subjects.⁸ The occurrence of low back pain in India is also alarming with nearly 60% of the people in India have suffered from low back pain at some time during their lifespan.⁹

The psychological profiles of patients with low back pain have been considered the most important prognostic indicator for the therapy of spinal disorders. An awareness of the relationship of the disability to the pain intensity and to the patient's cognitive-behavioral profile may supply valuable information that may be used to predict the prognosis and the treatment and to help choose the best therapeutic approach.^{2,8} The manifestation of a patient's symptoms has often been considered a predictive tool for that patient's psychological profile. There are interest in the development of alternative methods to evaluate psychological distress without using specific psychological tools.⁷

The DRAM is a simple method of classifying patients into those showing no psychological distress, those at risk and those who are clearly distressed either due to primarily somatic or depressive symptoms.¹² Main and colleagues suggest that people who are "distressed" according to the DRAM may need more than just physical treatment and should be referred on for further psychological assessment. The DRAM has been shown to predict outcomes in primary care patients with back pain and to predict the responses to a pain management program.¹³

The sf-12 is a multipurpose short form generic measures of health status. The items in sf-12 are a subset of those in the sf-36. It includes one or two items from each of the eight health concepts. SF-12 forms for self-administration and personal interviews can be administered to most people in less than 2 minutes time and have been used with high degree of acceptability and data quality. The sf-12 scale can be self-administered, administered by face to face personal interview, telephone personal interview or by computer.⁴

Need and significance of study-

With the increasing incidence of LBP in the western world and the high percentage of these LBP symptoms becoming chronic despite of new rehabilitation regimes (Pincus et al., 2013), there is a need for supplementary studies to explore the potential relationship between the psychosocial and psychological factors, pain and their influence on disability. But little is known about the relationship between the variables (pain, anxiety, and depression) and quality of life in patients with chronic low back pain. Previous studies investigating the correlations between psychological factors and degree of pain and disability have not been very clarifying and could not draw convincing conclusions. to contribute to this research field by finding prevalence of psychosomatic distress and its association with quality of life in non-specific low back pain patients.

Aims and objectives-

1. To find Prevalence of Psychosomatic distress among Patients of non-specific low back pain -in South Gujarat.
2. To find association of psychosomatic distress with Quality of life among Patients of non-specific low back pain in South Gujarat

Methodology- Study design used was cross-sectional study. Population included Patients with 25-55 yrs of age with chronic non-specific low back pain .Sampling technique was purposive sampling. The Study duration was 6 months .The Sample size was calculated to be 230 .Study setting was from different clinical orthopaedic and physiotherapy O.P.D. s of South Gujarat.

INCLUSION CRITERIA-Patients referred with primarily non-specific low back related complaints of Age group 25 -55 years, Willingness to participate were included .chronic low back pain patients i.e. patients who were suffering from pain for 3 months and above were included. **EXCLUSION CRITERIA**-following were excluded, Patients receiving third party payer funding (i.e. Worker's Compensation Board (WCB), or other) for their back related complaints, Patients with primarily neck (cervical spine) or mid back (thoracic spine) complaints and People with language, reading or comprehension barriers that would limit adequate completion of the study paperwork. Patients were also excluded due to other reasons such as scheduling conflicts or other medical issues.

Procedure- Patients were initially screened for inclusion and exclusion criteria as well as for their potential willingness to participate in the study by a screening form. Potentially eligible patients were selected and were given detailed description about the study. Participants with non -specific low back pain who gave their consent completed a battery of questionnaires covering a range of socio demographic, clinical, and psychosocial features along with DRMS questionnaire³ & SF 12 questionnaires.⁴

Statistical analysis- Statistical software version 22 was used .Descriptive statistics for sociodemographic variables, DRMS score and SF 12 were carried out. Prevalence was calculated using percentage. Pearson Correlation was done to find the Association between Psychosocial distress and Quality of life in non -specific low back pain patients.

Result- of total 230 patients 32.17% were normal i.e did not had any psychosomatic distress. whereas 50.43% were at risk, 6.95% were distressed somatic and 10.43% were distressed depressive.so overall the percentage prevalence of psychosomatic distress in non -specific low back pain is 17.38%.in age group if 25-55 years in South Gujarat.

| Variables | Min. | Max. | mean |
|-------------------------------------|-------|-------|--------|
| Age(yrs) | 21 | 75 | 52.70 |
| LBP Total duration (months) | 1.6 | 460 | 136.82 |
| Current episode duration (months) | 1.0 | 320 | 38.56 |
| Body Mass Index(kg/m ²) | 18.65 | 58.40 | 28.84 |

TABLE 1. Illustrates Mean Of Age , BMI, And LBP Duration

| Variables | No. | frequencies |
|------------------------------|---------|-------------|
| BMI(kg/m ²) | | |
| Normal(18.5-24.9) | 60/230 | 26.08% |
| Overweight(25-29.9) | 88/230 | 38.26% |
| Grade 1 obesity(30-34.9) | 52/230 | 22.60% |
| Grade 2 obesity(35-39.9) | 16/230 | 6.95% |
| Grade 3 obesity(≥ 40) | 14/230 | 6.08% |
| Smoking status | | |
| Never smoked | 88/230 | 38.26% |
| Used to smoke | 90/230 | 39.13% |
| Current smoker | 42/230 | 18.26% |
| Associated health conditions | | |
| Other bone or joint problems | 144/230 | 62.60% |
| Headaches | 84/230 | 36.52% |
| Gastric problems | 58/230 | 25.21% |
| Respiratory problems | 32/230 | 13.91% |
| Cardiac problems | 28/230 | 12.17% |
| Diabetic | 18/230 | 7.82% |
| Others | 36/230 | 15.65% |

TABLE 2. Illustrates Description Of Demographic Variables

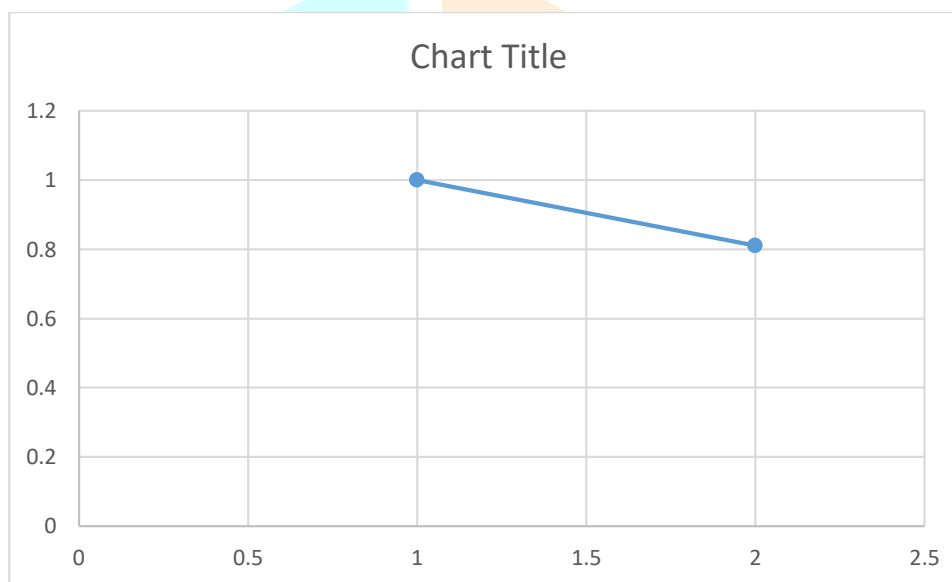
| VARIABLES | | PERCENTAGE |
|-----------------------|---------|------------|
| DRAM | | |
| NORMAL | 74/230 | 32.17% |
| AT RISK | 116/230 | 50.43% |
| DISTRESSED,SOMATIC | 16/230 | 6.95% |
| DISTRESSED,DEPRESSIVE | 24/230 | 10.43% |

TABLE 3. Illustrates Percentage Of DRMS Variables

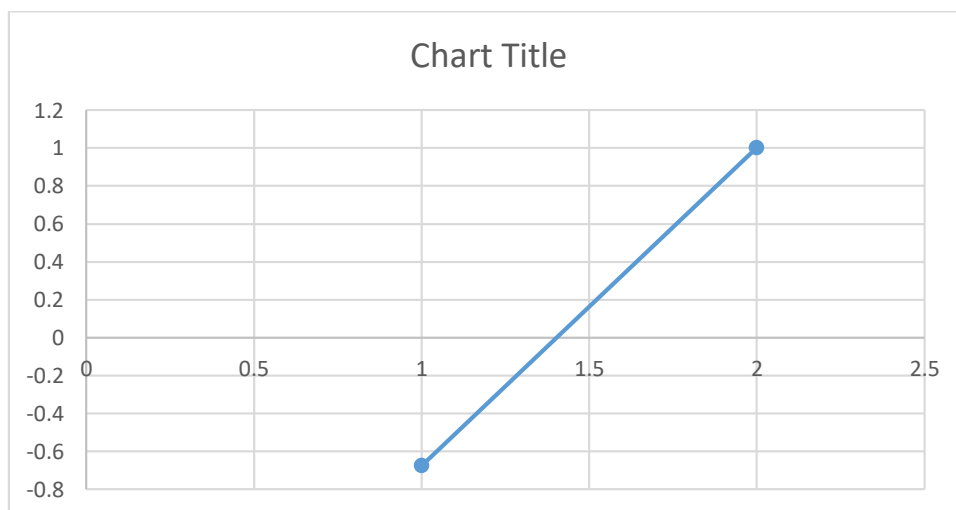
| SF12(QUALITY OF LIFE) | MEAN | S.D |
|-----------------------|-------|------|
| SF12 PCS | 44.47 | 1.23 |
| SF12 MCS | 44.76 | 3.85 |

TABLE 4. Illustrates Correlation Between DRMS And Quality Of Life

| VARIABLES | PEARSON CORELATION | P VALUE |
|-----------|--------------------|---------|
| DRMS | 1 | 0.001 |
| SF12 PCS | 0.81 | |
| SF12 MCS | -.676 | |



Graph 1 Illustrates correlation between psychosomatic distress and quality of life sf12 (PCS)



Graph 2 .Illustrates correlation between psychosomatic distress and quality of life sf12 (MCS)

DISCUSSION- Clinical and psychological research tends to give greater self-expression to patients about the level of their health in many domains, where many researchers have studied the quality of life for patients suffering from chronic diseases and pain, including chronic low back pain. Many studies have indicated that there is a decline in the quality of life in people with chronic low back pain. There are several studies that confirm the quality of the correlation between depression and disability in patients with low back pain. But little is known about the relationship between the variables (pain, anxiety, and depression) and quality of life in patients with chronic low back pain. In present study, there was significant correlation between psychosomatic distress and quality of life in non-specific low back pain patients. This study reinforces the data that patients with lumbar spine signs and symptoms have a high prevalence of anxiety and depression and, any professional who treats those patients should take it in considerations.⁷ The World Health Organization (WHO, 2003) considers low back pain to be the leading cause of quality of life (QOL), low performance, and leads to disability. Lower back pain is the most common¹. The majority of the cases are due to non-specific causes. Back pain is the most common and usually disappears automatically. It does not last more than 3 months. Psychological problems arise in the chronic stage⁵ Hong et al. (2014) conducted a study in Korea recently published to assess anxiety, depression, sleep problems and healthy quality of life in patients with low back pain, The study concluded that patients with chronic lower back pain exhibit a marked functional disability, and a significant decline in mental state, and a marked decline in the quality of healthy life. The study recommended that patients be evaluated in order to provide appropriate psychological care⁶

Limitation of the study-This study has some limitations; information bias might have influenced the data collection, where all information about mental health was collected as self-administered questionnaires. Although the participants were instructed thoroughly before filling in the questionnaires, there is a tendency to give socially acceptable answers to questions concerning behavior and mental health (King & Social Desirability, 2000). This influence might have led to an underreporting of the impact of the psychosocial variables.

Future recommendations-Further research should focus on how to address the impact of psychosocial strain in treatment strategies for this group of patients. Conducting studies on integrated psychological therapy programs with doctors and physiotherapists in order to achieve the desired priority in the treatment of patients with chronic low back pain and related psychological symptoms, especially anxiety.

Conclusion- the study concludes that there was significant correlation between psychosomatic distress and quality of life in non-specific low back pain patients. The percentage prevalence of psychosomatic distress in non-specific low back pain is 17.38%.in age group if 25-55 years in South Gujarat.

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