



**Research Article**

**AN EPIDEMIOLOGICAL STUDY OF CHRONIC LOW BACKACHE IN YOUNG ADULT PATIENTS IN A TERTIARY CARE HOSPITAL IN SOUTH INDIA**

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**ABSTRACT**

**Introduction:** Low back pain is the most common orthopaedic problem affecting most individuals at some point in their lives. According to World Health Organization (WHO) low back pain is rated as the leading cause of disability and is the most common cause of outpatient department consultation(1). The aim of the present study is to evaluate the existence of potential risk factors related to low back pain in young adults and to describe their sociodemographic details.

**Methodology:** This study was done as a cross sectional study on all the patients presenting to the outpatient department of the Department of Orthopaedics, St. John's Hospital with chronic back pain between April 2016 and April 2018 who met the inclusion criteria.

**Results:** In our epidemiological study, Low back pain is predominant in males. Low back pain was observed to be prevalent in 58.2% males and 41.8% of females. Our study shows various risk factors like repetitive movements, vibrations, sitting in same posture for long time and lifting heavy weights, during work are significantly associated with Low back pain.

**Conclusion:** It was found that chronic low back ache in the young adult population of South India had multiple risk factors of which the predominant ones are their occupation and the mental status of them. Hence the low back pain among young adults can be considered aptly as a silent epidemic indeed and it is the need of the hour to take adequate measures against the same.

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**INTRODUCTION**

Low back pain is the most common orthopaedic problem affecting most individuals at some point in their lives. According to World Health Organization (WHO) low back pain is rated as the leading cause of disability and is the most common cause of outpatient department consultation (1). According to some estimates approximately 60-80% of the general population will suffer from low back pain at some point in their lifetime and 20-30% are suffering from low back pain at any given time(2).

Low back pain brings down the quality of life and reduces the individuals work performance with higher days of absence from work (1). Due to the limitation of activity and work absence, it also causes an economic burden on individuals, their families, industry and government. Hence there is a significant socioeconomic impact caused by low back pain (3). In addition to physical infirmity, the psychological impact of lower back pain is profound. There is a high prevalence of anxiety and depression in Indian patients with low back pain(4).

Low back pain affects all ranges of the population, but since it is not a life threatening illness it is often considered trivial and ignored.

Few cases of back pain are due to specific causes; most cases are non-specific. Low back pain can be due to a number of factors most common ones being individual characteristics, working conditions such as heavy physical work, awkward static and dynamic working postures, as well as manual handling and lifting, lifestyle factors and psychological factors(3). Most of these can be corrected with good work ergonomics. Understanding the risk factors for low back pain and having good work ergonomics for young individuals will bring down the incidence of low back pain and hence help improve the GDP.

Determining the various risk factors for LBP in general population as well as in different occupational groups through well designed epidemiological studies is the need of the hour to prevent and cater this "silent epidemic" which is one of the major causes of disability, high costs, activity limitation and psychosocial co morbidity in our country(5).

Hence the aim of the present study is to evaluate the existence of potential risk factors related to low back pain in young adults and to describe their sociodemographic details.

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**Aim**

This study aims to describe the sociodemographic characteristics of young patients presenting with chronic low backache and to study the factors associated with chronic low backache in these patients

**METHODOLOGY**

This study was done as a cross sectional study on all the patients presenting to the outpatient department of the Department of Orthopaedics, St. John's Hospital between April 2016 and April 2018 with chronic back pain.

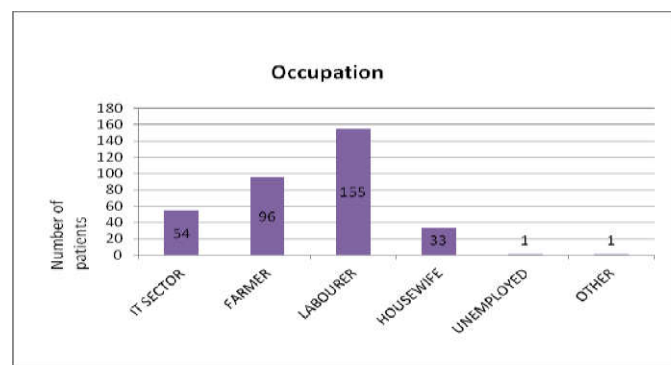
Chronic low back pain is defined as low back pain persisting for longer than 7-12 weeks, or after the period of healing or recurring back pain that intermittently affects an individual over a long period of time.

All patients presenting to the Outpatient Department and fulfilling the inclusion criteria were identified. Informed consent was taken from all the patients who fulfilled the eligibility criteria. A pretested structured interview schedule was administered to the study population. A detailed history including demographics, manifestations, past medical illness, drug history and personal history was taken. General physical examination was carried out. Clinical examination of spine was done. Functional disability score was recorded- Oswestry Disability scoring. Data regarding age, sex and occupation will also be obtained from the OPD records at the Orthopaedic department for the study duration.

**RESULTS**

In our epidemiological study, Low back pain is predominant in males. Low back pain was observed to be prevalent in 58.2% males and 41.8% of females. In our study, major distribution of Low back pain is seen in age group of 35-45 years. This was comparable with the study by Tiwari *et al*; Age  $\geq 35$  years was found to have 9 times more risk as compared to  $<35$  years (95% CI) (Tiwari *et al* 2003). Koley *et al* (2008) in their study found a gradual increase of pain score with the increase of age in both the sexes (5)

Our study shows various risk factors like repetitive movements, vibrations, sitting in same posture for long time and lifting heavy weights, during work are significantly associated with Low back pain. Sharma (1999) reported the maximum frequency (50%) of LBP in people involved in jobs requiring handling of heavy loads, followed by people with sitting jobs (19.09%), with standing jobs (16.36%) and with prolonged standing (14.54%) from the northern parts of India.(5)

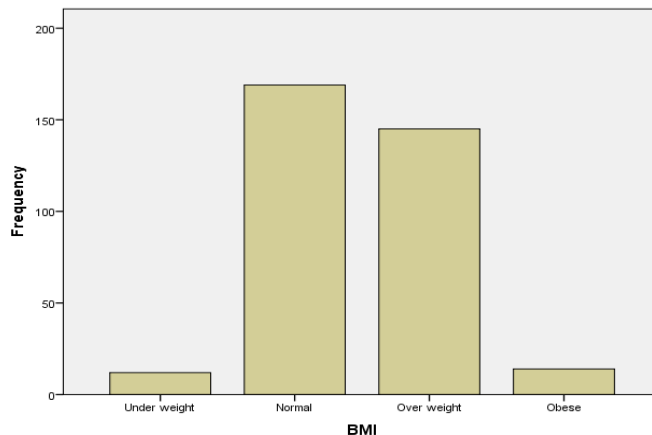


**Distribution in different occupational groups**

The individuals with good health status and habit of regular physical exercise are less prone to develop LBP as compared to those with poor health status and those not doing any regular physical exercise. In our study 4.7% patients were diabetic and 10.3% patients were hypertensives.

In our study it was found that 22% of patients were smokers which was comparable to the study by Shiri R, Karppinen J *et al* (24) 27% of patients were consuming alcohol.

It was noted that 42.6 percent of study population were overweight. Association between Low Back pain and overweight BMI was found to be statistically significant ( $p < 0.05$ )



**Distribution based on BMI**

Low back pain is the leading cause of activity limitation and work absence throughout much of the world, and it causes an enormous economic burden on individuals, families, communities, industry and governments(3)

On comparing it to previous study by Pande in Nagpur, India, there was a high prevalence of anxiety and depression in Indian low back pain patients. Abnormal levels of anxiety and depression were found in 71.7% and 64.8% respectively. (4) this correlates with our study wherein anxiety and depression play a statistically significant role in low back pain among young adult population. It was noted that 46.5 percent of study population suffered some form of anxiety /depression. Association between Low Back pain and anxiety /depression was found to be statistically significant ( $p < 0.05$ ).

**DISCUSSION**

To summarise the study it was found that chronic low back ache in the young adult population of South India had multiple risk factors of which the predominant ones are their occupation and the mental status of them.

Hard labour and poor ergonomics at the workplace did increase the propensity to develop low back pain among these young people.

Another factor glaring at us is the amount of stress at work and otherwise they are facing which could also act as a risk factor for the development of low back pain.

Anxiety and depression among the young adult population may be an important factor to keep in mind during the examination of them.

The other factor to keep in mind is the diet and exercise and physical upkeep of the body among the young adults of the

modern world. Propensity of developing back pain is significantly higher in people who have a higher than normal BMI.

Low back pain among young adults is a matter to be taken seriously because of the amount of days of leave taken due to the same and the economic impact of the same on the society on the bigger stage is huge.

Hence the low back pain among young adults can be considered aptly as a silent epidemic indeed and it is the need of the hour to take adequate measures against the same.

### **Recommendations**

Following are few of the recommendations advised after detailed observation from the study conducted by us on epidemiology of chronic Low back pain among young adult patients in a tertiary care hospital in south India·

As chronic Low back pain is predominant in labourers, they are advised against bending their back at work and lifting heavy weights as much as possible and inculcate habits to stay fit. In individuals working in IT sector are advised not to sit in same posture for long time.

Creating healthy working environment and good relation with supervisors and colleagues helps to reduce the psychosocial factors which are risk factor for chronic Low back pain in various ways.

Individuals with the co-morbidities like Vitamin D deficiency are at risk for chronic Low back pain. So it is recommended to keep a regular follow up for treatment with these medical conditions.

Individuals are advised to have sound sleep for at least 8 hours a day, failing to do so can worsen the Low back pathology. Strictly to stay away from smoking and consuming alcohol, which are known to deteriorate the pain.

Regular check has to be kept on individual's weight issues, as with overweight and obesity there higher risk to develop chronic Low back pain.

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