



Research Article

A STUDY OF PREVALENCE OF BACK PAIN AND ITS CLINICAL MANIFESTATION AMONG WOMEN

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ABSTRACT

Low back pain is the number one cause of disability worldwide that affects people of all ages. Despite advances in assessment and treatment methods, researchers and clinicians continue to face difficulties in managing low back pain. The large area should be considered to figure out the possible causes, precipitating factors, prognosis, and to evaluate consequences in terms of activity interference that affect the quality of life of the individuals. In this regard, the study was conducted to document the prevalence and the clinical manifestation of back pain in women admitted to different departments of a tertiary care hospital. According to this study, the prevalence of back pain was found to be very low in women population. Also, if the prevalence is more, then it will automatically push up to find new treatment methods.

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INTRODUCTION

Back pain is a typical issue. Low back pain is now a very common health problem worldwide and a major cause of disability affecting performance at work and general well-being that affects children to elderly [1]. It affects people of all ages, from children to the elderly, in high-income, middle-income, and low-income countries. Low back pain is becoming the biggest cause of disability worldwide. A unique reason for sensation of pain cannot be identified in nearly all patients suffering from low back pain. Only a small percentage of persons have a well-understood clinical etiology, such as a vertebral fracture, malignancy, or infection. People with physically demanding employment, physical and mental illnesses, smokers, and obese individuals are more likely to experience low back ache [2]. Almost everyone experiences, acute episode of low back pain at some point in their lives. Although many people recover from back pain within a year, some acquire a chronic illness with fluctuating or persistent pain of low or medium severity. When back pain lasts more than three months, it is (by consensus) no longer regarded as a symptom but as a disorder in and of itself, sustained by factors other than the beginning reasons [3].

A certain cause of low back pain may rarely be determined; the majority of low back pain is hence called non-specific. Low back pain's financial impact is transection since both healthcare systems and social support systems are increasing costs. [4] The purpose of this study is to find out the prevalence of back pain in women and also the risk factors, clinical manifestation among women.

Back pain is a symptom, not an illness, and it can be caused by a variety of known or unknown abnormalities or disorders. It is characterized by the site of discomfort, which is usually between the lower rib borders and the buttock creases. It is frequently accompanied by ache in one or both legs and some persons who have low back pain also have neurological symptoms in their lower limbs. [5] The effect on people with low back pain often goes beyond the effect of low back pain or complications by themselves. This results in more treatment, but usually a worse response to a variety of treatments. [6] As a natural consequence, a wide variety of problems are associated with several patients with low back pain, including behavioral, social and physiochemical factors and co-mechanisms and mechanisms that influence suffering and the associated disability.

Low back pain (LBP) is a major source of suffering for both patients and the public. In addition, under the Global Burden of Disease Study of 2016, the lead causes of YLD (years of low back pain) were studied in 188 countries and ranked among the top ten causes of YLD. In one comprehensive evaluation of 165 articles from 54 countries, the mean point prevalence of low back pain in the general population was 18%, and the 1-month prevalence was 30%. Lifetime prevalence was 40%, and it was especially high in people aged 40–80 years old and in women, who have a 20% higher risk of low back pain than men. [7]

In report 2016 described that 4.6% people DALYs in musculoskeletal disorder in India. Change of the rate of

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DALYs in case of lower back pain is almost double in 1990 (1.2%) and 2016 (2.3%). So report indicated that health issue on low back disorder increase day by day in India. And reports said that low back disorder rank in 20th in 1990 and reduce the rank came 12th in 2016 in respect of all diseases. LBP injuries caused 66.1% more DALYs in 2016 than they did in 1990. Hence also females are highly prone to DALYs in LBP (2.7%) than males (1.9%). [8]

MATERIALS AND METHODS

A Prospective observational study was conducted in the Department of orthopaedic, gynaecology, neurology, general medicine and physiotherapy at St James hospital, Thrissur, Kerala. The institute is a new and the referral 450 bedded tertiary care hospitals.

The study was carried out over a period of 6 months from January to June 2021. The study population comprised all women age above 18years who came to department of orthopaedic, gynaecology, neurology, general medicine and physiotherapy, St James Hospital on their first visit consented to be a part of the study. A total of 56 women participated in the study. Patient who are admitted in other departments, age less than 18 years and patients who are not willing to participate in the study were excluded from the study.

Data were obtained by collecting data from patient case sheets and by interacting with the patients after obtaining consent from the participants. Questions regarding patients demographic details, current complaints and past medical history involved were collected in the specially designed data. BPI questionnaire were used to find the intensity of pain.

Inclusion criteria: Women with age more than 18years of age. Patient admitted in orthopaedic, gynaecology, general medicine, and neurology and physiotherapy department.

Exclusion criteria: Patient who are admitted in other departments. Patients of less than 18 years of age and who are not willing to include in the study.

The study was approved by the hospital authority and Institutional Human Ethics Committee.

RESULTS

From among 453 of the women participants, 56 respondents declared that they had experienced Back pain over a period of 6 months (January to June 2021) from of orthopaedic, gynaecology, neurology, and general medicine and physiotherapy departments. Women from orthopaedic (26.7%) reported back pain when compared to other departments. (Table 1, Figure 1).

Table 1 Prevalence of back pain

Department	Total number of women population	Number of women with back pain	Prevalence %
Orthopaedic	112	30	26.7
General medicine	100	5	5.0
Gynaecology	80	15	18.7
Neurology	80	0	0
Physiotherapy	81	6	7.4

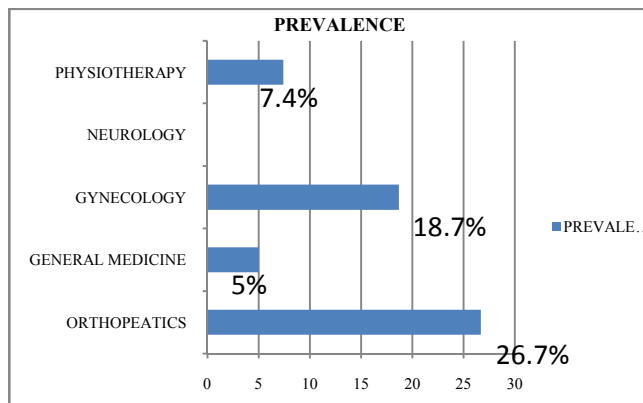


Figure 1 Percentage distribution of prevalence

Afterwards, the percentage of individuals reporting back pain increased with age of participants, both age groups between 30-40 and 40 -50 tend to have effected back pain than that of other age groups. (Table 2, Figure 2).

Table 2 Distribution based on age.

Age	Number of patients	Percentage %
18-30	11	19.6
30-40	12	21.4
40-50	12	21.4
50-60	8	14.2
60-70	8	14.2
70-80	5	8.9

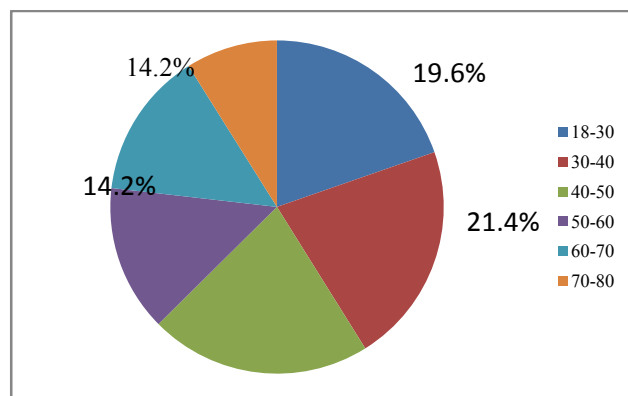


Figure 2 Percentage distribution based on age.

While analysing the frequency of occurrence of back pain, there were two category of patients one with medical history other without medical history (Table 3, Figure 3).

Table 3 Distribution based on past medical history

Past medical history	Number of patients	Percentage %
With history	26	46.4
Without history	30	53.5

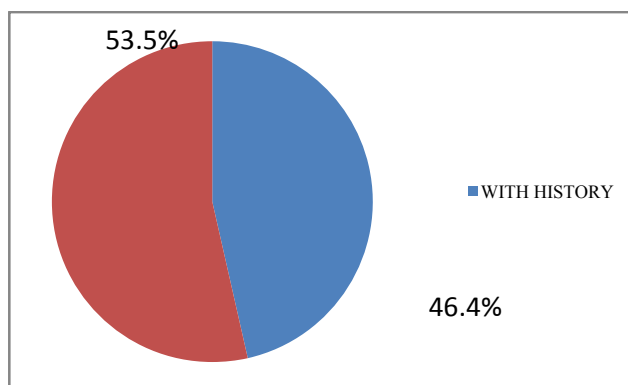


Figure 3 Percentage distribution based on past medical history

And with regards to this there was several past medical history that the participants had or still on through, among which hypertension (28.5%) is one of the medical history most of the patients have (Table 4, Figure 4)

Table 4 Distribution based on medical history.

Medical history of patient	Number of Patients	Percentage %
Urinary tract infection	4	8.1
Thyroid	5	10.2
Diabetes mellitus	10	20.4
Hypertension	14	28.5
Psychiatric problem	2	4.08
Back pain	6	12.2
Ivdp	3	6.1
Myomectomy	3	6.1
Palpitation	1	2.0
Appendectomy	1	2.0

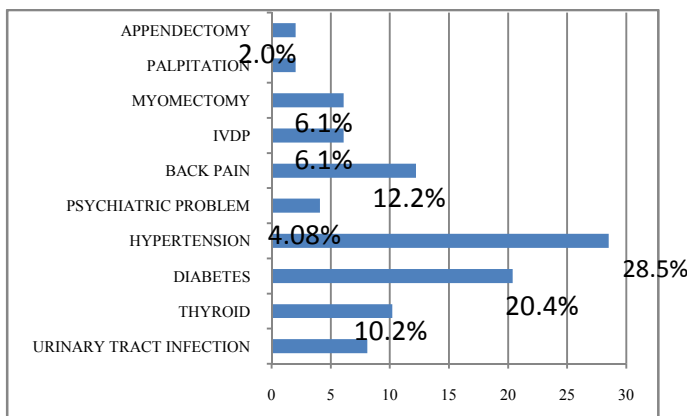


Figure 4 Percentage distribution based on medical history.

Most of the patients came with the chief complaint of lower back pain and the prevalence of which is about 58.9% (Table 5, Figure 5).

Table 5 Distribution based on chief complaints.

Chief complaint	Number of patinets	Percentage %
Lower back pain(lbp)	33	58.9
LBP, abdominal pain	6	10.7
LBP, knee pain	8	14.2
LBP, headache	6	10.7
LBP, shoulder pain	3	5.3

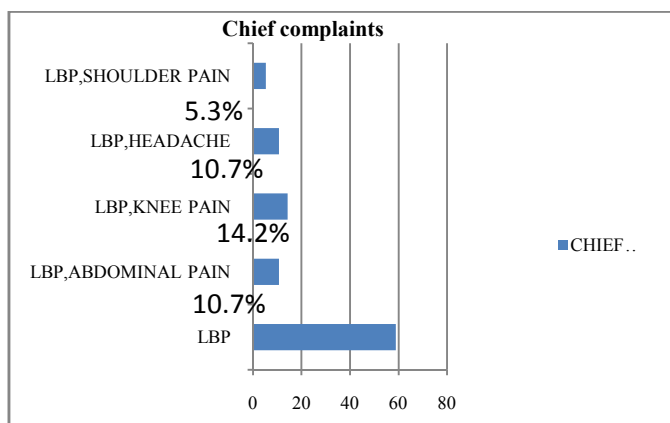


Figure 5 Percentage distribution based on chief complaints.

Next, the respondents were asked on the risk factors that they were facing and which is the contributing factors for back pain. There were several risk factors that's the patients facing such as pregnancy, over physical activity, lifestyle, old age and so on, among which back pain is more predominant in pregnancy (19.6%) and over physical activity patients (19.6%). (Table 6, Figure 6).

Table 6 Distribution based on risk factors

Risk factors	Number of Patients	Percentage %
Pregnancy	11	19.6
Lifestyle	10	17.8
Old age	10	17.8
Occupational	7	12.5
Over physical activity	11	19.6
Obesity	3	5.3
Poor physical activity	4	7.1

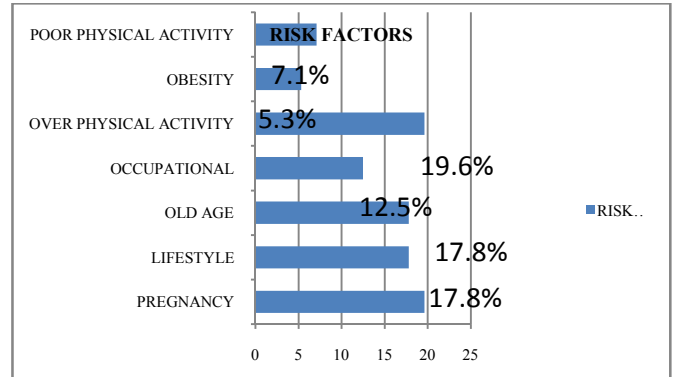


Figure 6 Percentage distribution based on risk factors

During the study, the intensity of pain that patients suffer from was found out using a Brief Pain Inventory scale. Of which 18 patients suffered from moderate to severe pain (Table 7, Figure 7).

Table 7 Distribution based on intensity of pain.

Total number of patients	Number of patient with no pain	Number of patients with mild pain (1-3)	Number of patients with moderate to severe pain(4-6)	Number of patients with severe pain (7-9)	Number of patients with worst pain(10)
56	4	19	18	7	8

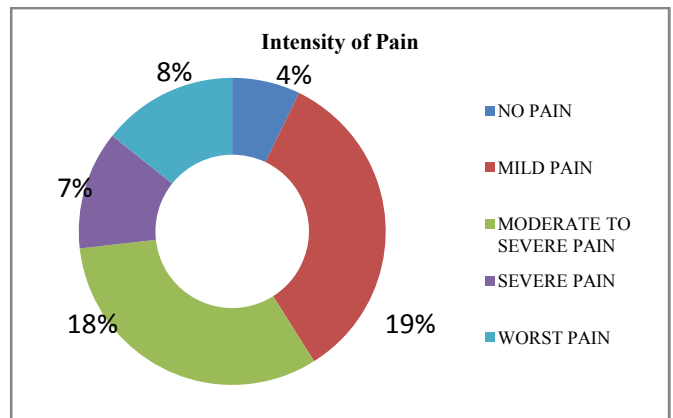


Figure 7 Percentage distribution based on the intensity of pain.

The analysis revealed that NSAIDs was the most common treatment pattern of dealing with pain (51.7%), while bed rest and the physiotherapy were the other most common way (Table 8, Figure 8).

Table 8 Distribution based on the treatment pattern

Management	Number of Patients	Percentage %
NSAIDs	29	51.7
Opioid analgesics	6	10.7
Bed rest	9	16
Physiotherapy	5	8.9
Others	7	12.5

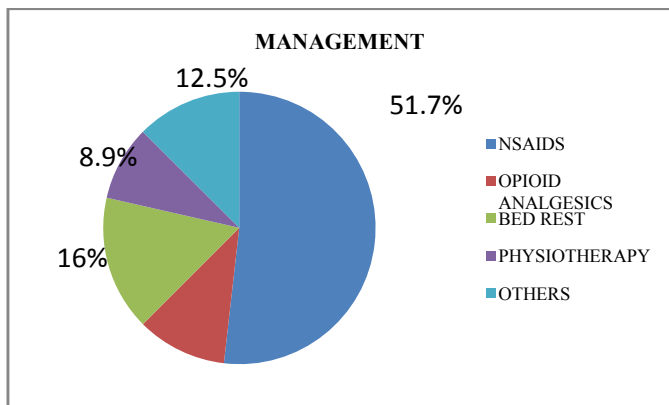


Figure 8 Percentage of distribution based on treatment pattern.

In our study, almost all patients were prescribed with NSAIDs, among that lornoxicam (21.7%) were widely used while mephenamic acid (10.8%) other than paracetamol (19.5%) were the second most common way (Table 9, Figure 9).

Table 9 Distribution based on NSAIDs prescribed.

NSAIDs	Number of Patients	Percentage
Mephenamic acid	5	10.8
Lornoxicam	10	21.7
Indomethacin	4	8.6
Diclofenac	3	6.5
Etoricoxib	3	6.5
Paracetamol	9	19.5
Ketorolac	6	13
Ibuprofen	6	13
Aspirin	3	6.5

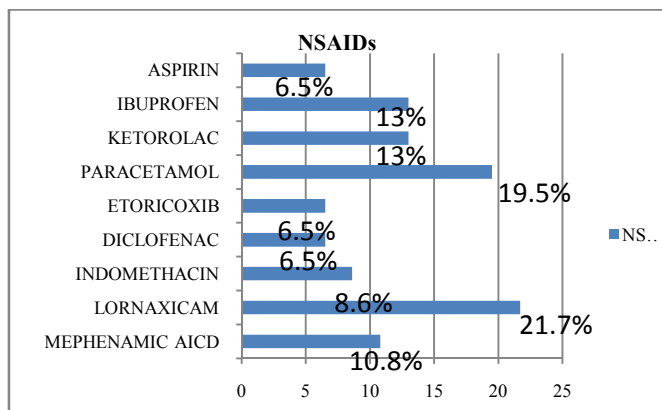


Figure 9 Percentage of distribution based on NSAIDs prescribed.

Opioid analgesics were used in some patients who were suffering from worst pain. Tramadol was mainly prescribed about 50% while fentanyl 16.6% and methadone 33.3% (Table 10, Figure 10)

Table 10 Distribution based on opioid analgesics.

Opioid Analgesics	Number of Patients	Percentage
Tramadol	3	50
Fentanyl	1	16.6
Methadone	2	33.3

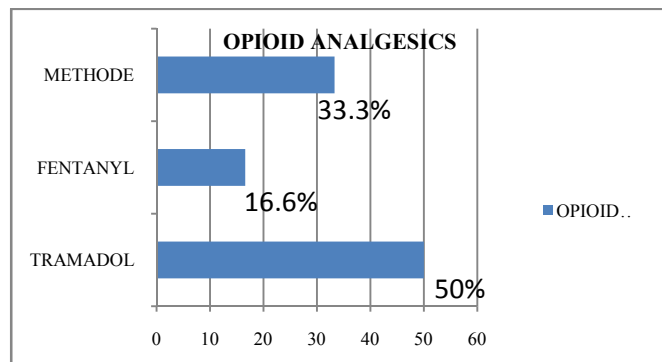


Figure 10 Percentage distribution based on opioid analgesic

DISCUSSION

A prospective observational study was carried out for a period of 6 months in the orthopaedic, gynaecology, neurology, general medicine and physiotherapy departments of a 450 bedded tertiary care hospital to find out the prevalence of back pain above 18 years and to evaluate the risk factors causing back pain. The patients were satisfied with the inclusion criteria enrolled in the study. The study included 56 patients. The data obtained by medication chart review were organized, analysed and tabulated.

Distribution Based on the Prevalence

The study depicted in Table 1 and Figure 1, prevalence of back pain is more in orthopaedic departments i.e. 26.7% compared to other departments.

Distribution Based on the Age

This study reveals in Table 2 and Figure 2 that female patients of age group between 30-40 and 40-50 have high incidence rate of back pain with 21.4%. Hoy D et al conducted a similar study in 2012 on “systematic review of the global prevalence of low back pain. Arthritis Rheum” and was found that prevalence of low back pain was high in female individuals of aged 40-80 years.[9]

Distribution Based on Risk Factors

This study in Table 6 and Figure 6 also focused on the major risk factors for developing back pain. In that over physical activity (19.6%), pregnancy (19.6%), old age (17.8%) and lifestyle (17.8%) have greater influence in the development of back pain. Other common risk factors we found were obesity, lifestyle and poor physical activities. In the other study conducted by Jella Ramdas et al in 2018 on “prevalence and risk of low back pain among the young adults”, physical exercise, stress and anxiety, obesity, sitting for long period was found as common risk factors.[10]

Distribution Based on Use of Nsaid

In the study in Table 8 and Figure 8 it was found that NSAIDs were commonly prescribed in this study i.e. 82.8% for back pain. Wendy TM et al conducted a systematic review in 2016 on “NSAIDs for chronic low back pain” and was found that NSAIDs are widely used to treat lower back pain, especially people with acute back pain.[11]

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