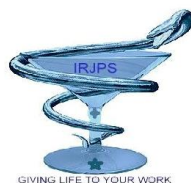


Survey-Analysis



## AN OVERVIEW ON LOWBACK PAIN AND ITS MANAGEMENT-A SURVEY BASED ANALYSIS

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### ABSTRACT

Pain is the main symptoms in low back pain. Pain itself does not meet the definition of impairment or abnormality, but if actively aggravates pain and the individual avoids or reduces his/her activities, then pain may leads to disability. Non- specific low back pain seems to be mainly a matter of disturbed function or painful musculoskeletal dysfunctions. The most comprehensive definition by the World Health Organization (WHO): A disability is any restriction or lack (resulting from an impairments) of ability to perform an activity in the manner or within the range consider normal for a human being (WHO 1980). Disability due to the back pain involves both physical dysfunctions an illness behavior. Behavior always involves motor and physiological activity and physiological processes always have behavioural expressions.In this study we have tried to find out the reasons and associated problems of low back pain by using survey based analysis.

**KEY WORDS-** LBP, rehabilitation, radicular pain, magnetic resonance imaging, Anthropometry

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## INTRODUCTION

Pain is the main symptoms in low back pain. Pain itself does not meet the definition of impairment or abnormality, but if actively aggravates pain and the individual avoids or reduces his/her activities, then pain may leads to disability. Non- specific low back pain seems to be mainly a matter of disturbed function or painful musculoskeletal dysfunctions. The most comprehensive definition by the World Health Organization (WHO): A disability is any restriction or lack (resulting from an impairments) of ability to perform an activity in the manner or within the range consider normal for a human being (WHO 1980). Disability due to the back pain involves both physical dysfunctions an illness behavior. Behavior always involves motor and physiological activity and physiological processes always have behavioural expressions.<sup>(1)</sup>McCaffery and Beebe defined pain as "whatever the experiencing person says it is, existing whenever he says it does". Merskey and Bugduck mentioned the consensus definition of pain developed by the International Association for the Study of Pain is ***"unpleasant sensory and emotional experience associated with***

***actual or potential tissue damage, or described in terms of such damage"***.<sup>(2)</sup> In many countries chronic low back pain is the most common cause of long term disability in middle age.<sup>(3)</sup>Chronic low back pain is resistant to treatment, and patients are often referred for multidisciplinary treatment.<sup>(4)</sup>Current multidisciplinary biopsychosocial rehabilitation regards disabling chronic pain as the result of multiple interrelating physical, psychological, and social or occupational factors.<sup>(5,6)</sup>Multidisciplinary treatments for chronic pain have been evaluated in many non randomized studies and non-systematic reviews; both are prone to bias.<sup>(7)</sup>

Pain can be classified as either :

1. Acute
2. Chronic

### Acute Pain

Acute pain is a direct biological response to disease, inflammation, or tissue damage, and usually lasts less than one month. It may be either continuous or recurrent (e.g., sickle cell disease). Acute pain serves the long-term well-being of humans and the higher animals by alerting them to an injury or condition that needs treatment. In

humans, acute pain is often accompanied by anxiety and emotional distress; however, its cause can usually be successfully diagnosed and treated. Some researchers use the term "eudynia" to refer to acute pain. Praveen K., in *Manual of Pain Management* mentioned acute pain is one of the basic adaptations that most species have to warn the organism of internal and external stimuli potentially harmful to the well-being of that organism. It usually increases as the severity of the injury or diseases increases, although the painful sensation may be present after the injury. Continued noxious stimulation also can lead to increased sensitivity, sensitization, and severe pain even to weak, painful stimuli. Acute pain promotes healing by telling the organism to seek shelter, and in the case humans, seek medical care. The sensitization process can take place in both the peripheral as well as the central nervous system. As the healing process take place, acute pain tends to subside.

### **Chronic Pain**

In contrast, chronic pain has no useful biological function. It can be defined broadly as pain that lasts

longer than a month following the healing of a tissue injury; pain that recurs or persists over a period of three months or longer; or pain related to a tissue injury that is expected to continue or get worse. Chronic pain may be either continuous or intermittent; in either case, however, it frequently leads to weight loss, sleep disturbances, fatigue, and other symptoms of depression. According to an article in the *New York Times*, chronic pain is the most common underlying cause of suicide. Unlike acute pain, chronic pain is resistant to most medical treatments. It is sometimes called "maldynia," and is considered a disorder in its own right. Chronic pain exists when pain symptoms are prolonged past the natural course of the disease process is protracted over the course of many months to years. In most instances, chronic pain serves no vital importance to the organism suffering from it, and in fact can become a detriment to the organism survival and well-being.

### **Chronic low back pain (clbp)**

Chronic low back pain is a topic that is often and profoundly investigated in countless scientific studies. Due to this fact this chapter

will concentrate on high quality papers and provides a brief summary of the current state of knowledge concerning CLBP.

### **Basic Epidemiology**

The lifetime prevalence of non-specific (common) low back pain is estimated at 60–70% in industrialized countries (1-year prevalence 15–45%, adult incidence 5% per year). The prevalence rate during school age approaches that seen in adults<sup>(8,9)</sup> it increases from childhood to adolescence<sup>(10)</sup> and peaks between ages 35 and 55.<sup>(11)</sup> Symptoms, pathology and radiological appearances are poorly correlated. Pain cannot be attributed to pathology or neurological encroachment in about 85% of people. Recent research has suggested a role for a genetic influence on liability to back pain.<sup>(12, 13)</sup> Acute low back pain is usually considered to be self-limiting but 2–7% of people develop chronic pain. Whereas the vast majority of episodes of back pain are associated with return to work in a timely fashion<sup>(14)</sup>, recurrent and chronic back pain is widely acknowledged to account for a substantial proportion of total workers' absenteeism. About half the days lost from work are accounted for by the 85% of people away from work for short periods (7 days); the

other half is accounted for by the 15% who are off work for 1 month. This is reflected in the social costs of back pain, where some 80% of the health care and social costs are for the 10% with chronic pain and disability.<sup>(15)</sup> These statistics, however, tend to be based on the clinically convenient classification of acute and chronic, which does not fully reflect the pattern of back pain among the population. Recent evidence shows that back pain manifests as an untidy pattern of symptomatic periods interspersed with less troublesome periods, although for some the symptoms (and associated disability) can become persistent. Around two-thirds of people are likely to experience relapses of pain over 12 months, and around one-third are likely to have relapses of work absence.<sup>(16)</sup> These issues present interpretative difficulties when considering the matter of prevention, where back pain and its consequences tend to occur in an episodic manner.<sup>(17)</sup> Importantly, back pain should be seen as an issue for all ages and all sectors of society. Furthermore, it is important to distinguish between the presence of symptoms, care seeking, work loss and disability; these have different prevalence rates and are influenced by a varying balance of biological,

psychological and social factors.<sup>(15,18)</sup>The issue of 'risk' for the development of low back pain is clearly highly relevant to the concept of prevention, but the subject is poorly understood and inconsistently documented. The most powerful risk indicator for a new episode of back pain is a previous history.<sup>(16)</sup>Beyond that, the most frequently reported risk indicators are heavy physical work, frequent bending, twisting, lifting, pulling and pushing, repetitive work, static postures and vibrations.<sup>(11)</sup>Psychosocial risk indicators include distress, depression, beliefs, job dissatisfaction and mental stress at work.<sup>(11, 19, 20)</sup>However, there is limited evidence for these (reported) risk factors and those that are well documented frequently have small effect sizes; logically this will compromise the magnitude of preventive interventions.

## Causes of Low Back Pain

General Factors

Life-style

Physical Activity

Work-Place

Socioeconomic Circumstances

Psychosocial Risk Factors.

## METHODOLOGY

We went through about sixty literatures from several sources mainly from tertiary sources to get knowledge and idea about primary care of low back pain. To get information about primary care of low back pain, we mainly went for survey of low back pain patients, the questionnaires were prepared on the basis of literature review.

The questionnaires for patients mainly focused on lifestyle causes low back pain, severity of low back pain and personal care for low back pain.

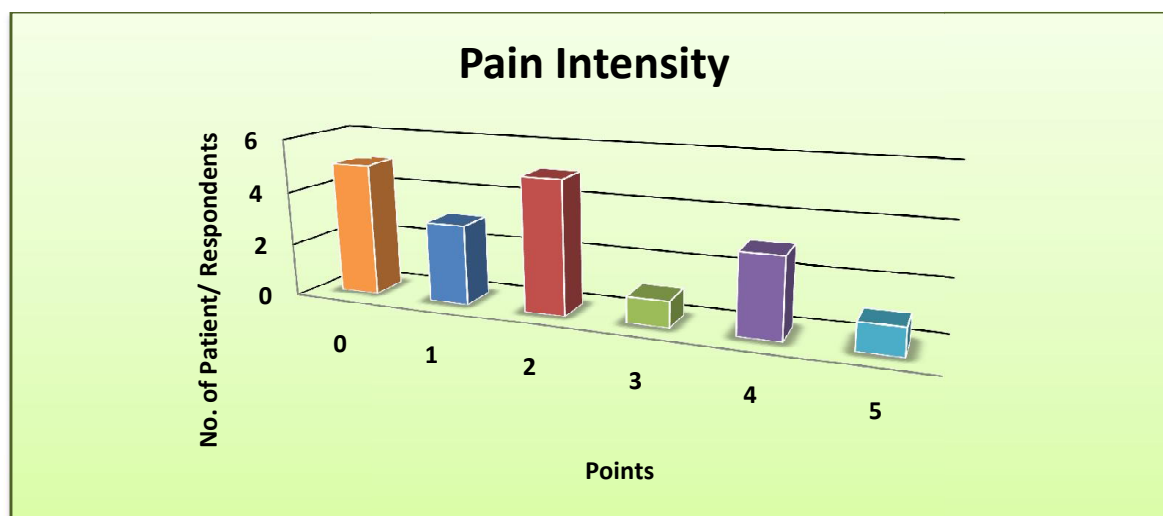
The formula for calculation was-

- **Total score= SUM (points for all 10 sections)**
- **Disability in percent= (total score) / 50 \*100**
- **Percentage of respondent= Number of respondent / total number of patient \* 100**

**Result & discussion**

**SAMPLE: PATIENTS: 1. Pain intensity**

Question No.	Points	No. of patient/ Respondents	Percentage (%)
<b>1</b>	(0) I can tolerate the pain I have without having to use pain killers.	5	27.77
	(1)The pain is bad but I manage without taking pain killers.	3	16.67
	(2) Pain killers give complete relief from pain.	5	27.77
	(3) Pain killers give moderate relief from pain.	1	5.56
	(4) Pain killers give very little relief from pain.	3	16.67
	(5) Pain killers have no effect on the pain and I do not use them.	1	5.56

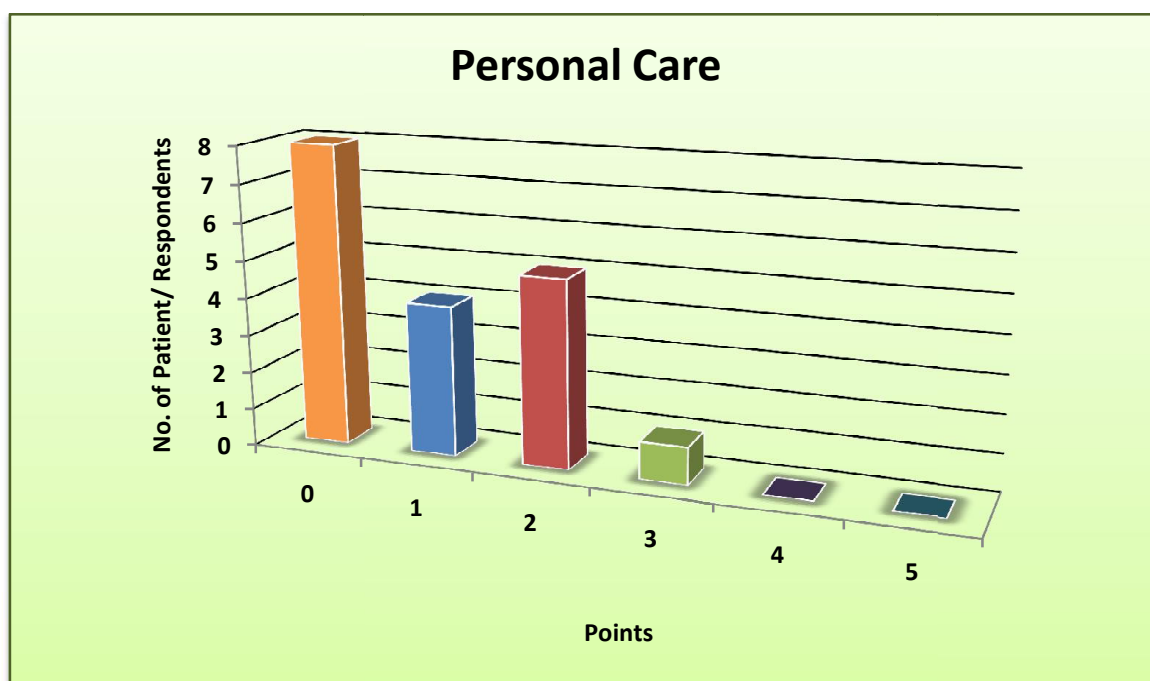


From the above graph, 27.22% were answered which they can tolerate the pain without using pain killers, 16.67% chose that pain is bad but they can manage without taking pain killers, 27.77% said that pain killers give complete relief from pain, 5.56% said pain killers give moderate relief from pain, 16.67% were answered

pain killers give very little relief from pain and 5.56% chose pain killers have no effect on the pain and they do not use them. Most of the respondents taking pain killers to relief their pain and according to literature survey also mostly people taking pain killers to relief pain.

## 2. Personal Care

Question No.	Points	No. of patient/ Respondents	Percentage (%)
2	(0) I can look after myself normally without causing extra pain.	8	44.44
	(1) I can look after myself normally but it causes extra pain.	4	22.22
	(2) It is painful to look after myself and I am slow and careful.	5	27.77
	(3) I need some help but manage most of my personal care.	1	5.56
	(4) I need help every day in most aspects of self care.	0	0
	(5) I do not get dressed wash with difficulty and stay in bed.	0	0

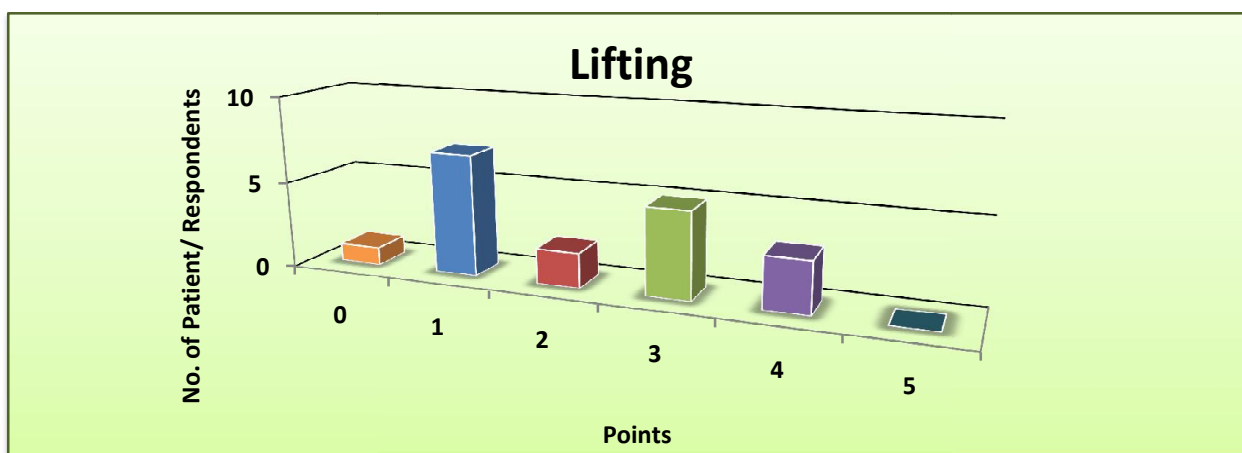


From the above graph, 44.44% respondents said that they can look after themselves normally without causing extra pain, 22.22% answered they can look after themselves normally but it causes extra pain, 27.77% said it is painful to look after themselves and they are slow and careful,

5.56% chose they need some help but manage most of their personal care and none of them answered for points (4) & (5). Based on the graph we concluded that most of respondents can do their daily activities without experiencing extra pain.

### 3. Lifting

Question No.	Points	No. of patient/ Respondents	Percentage (%)
<b>3</b>	(0) I can lift heavy weights without extra pain.	1	5.56
	(1) I can lift heavy weights but it gives extra pain.	7	38.89
	(2) Pain prevents me from lifting heavy weights off the floor but I can manage if they are conveniently positioned for example on a table.	2	11.11
	(3) Pain prevents me from lifting heavy weights but I can manage light to medium weights if they are conveniently positioned.	5	27.77
	(4) I can lift only very light weights.	3	16.67
	(5) I cannot lift or carry anything at all.	0	0



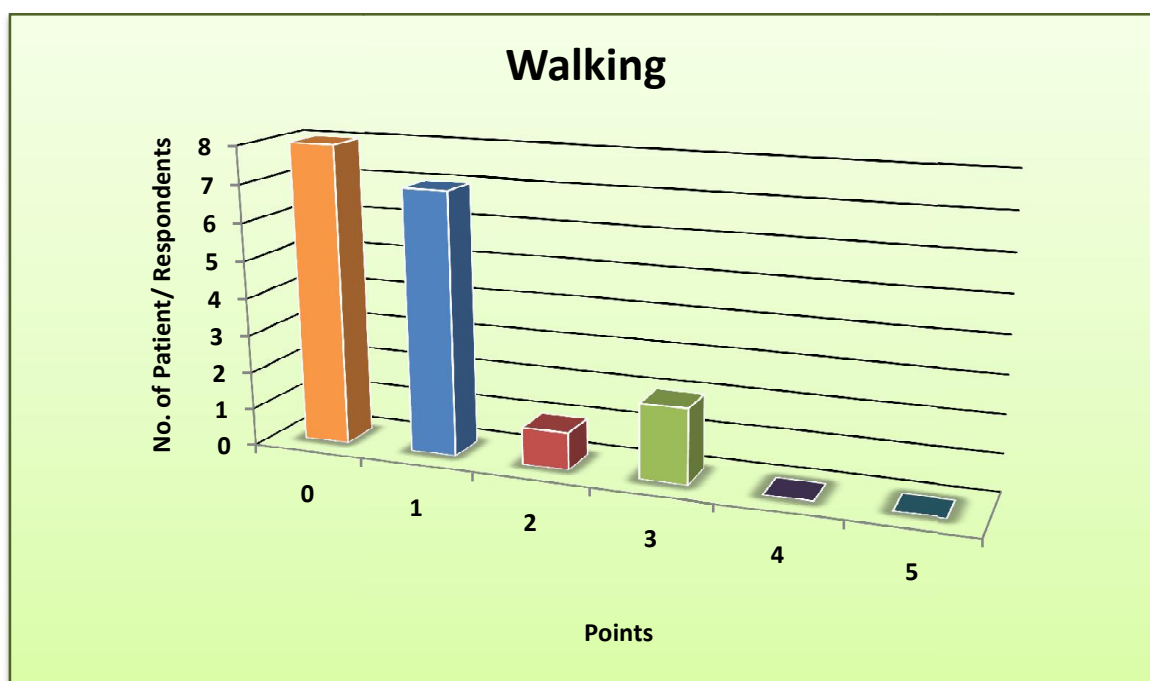
From the above graph, 5.56% respondents chose they can lift heavy weights without extra pain, 38.89% answered they can lift heavy weights but it gives extra pain, 11.11% said pain prevents them from lifting heavy weights off the floor but they can manage if it was conveniently positioned for example on a table, 27.77%

answered pain prevents them from lifting heavy weights but they can manage light to medium weights if it was conveniently positioned, 16.67% said they can lift only very light weights and none of them answered the points (5). The results showed that extra pain may occur if lift the heavy-weight.



#### 4. Walking

Question No.	Points	No. of patient/ Respondents	Percentage (%)
4	(0) Pain does not prevent me walking any distance.	8	44.44
	(1) Pain prevents me walking more than 1 mile.	7	38.89
	(2) Pain prevents me walking more than 0.5 miles.	1	5.56
	(3) Pain prevents me walking more than 0.25 miles.	2	11.11
	(4) I can only walk using a stick or crutches.	0	0
	(5) I am in bed most of the time and have to crawl to the toilet.	0	0

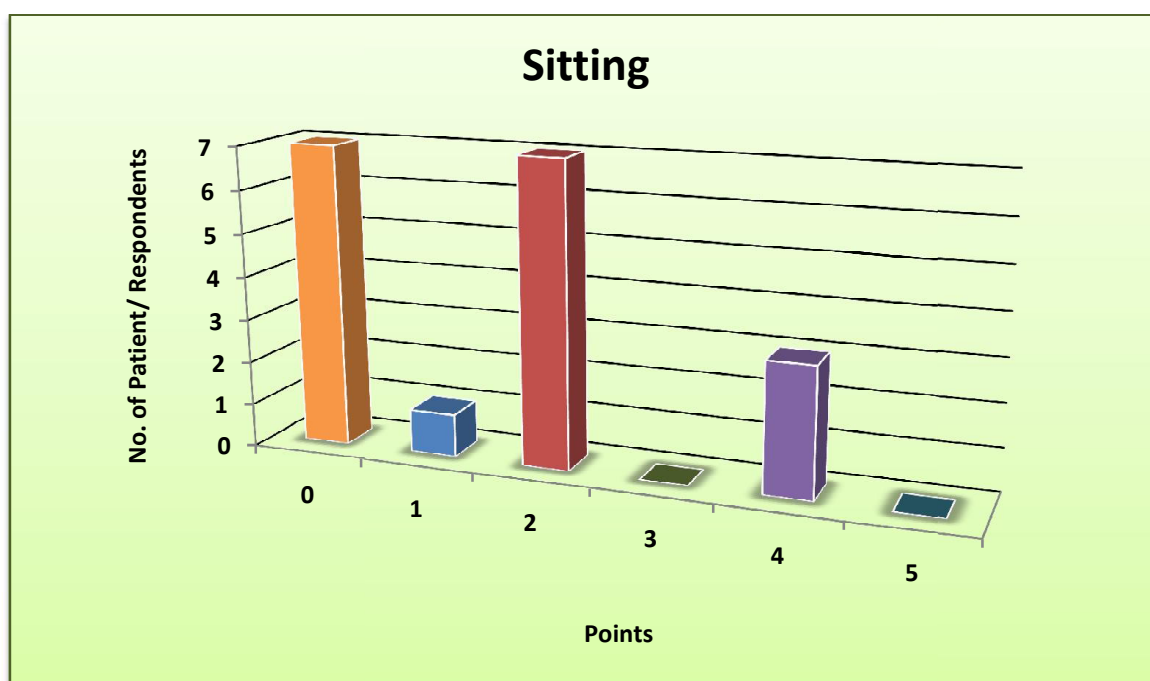


From the above graph, 44.44% of respondents chose pain does not prevent them walking any distance, 38.89% said pain prevents them walking more than 1 mile, 5.56% said pain prevents them walking more than 0.5 miles, 11.11%

answered pain prevents them walking more than 0.25 miles but none of them answered for points (4) & (5). These showed that walking any distance are not causes any pain for most of respondents.

### 5. Sitting

Question No.	Points	No. of patient/ Respondents	Percentage (%)
5	(0) I can sit in any chair as long as I like.	7	38.89
	(1) I can only sit in my favourite chair as long as I like.	1	5.56
	(2) Pain prevents me sitting more than 1 hour.	7	38.89
	(3) Pain prevents me from sitting more than 0.5 hours.	0	0
	(4) Pain prevents me from sitting more than 10 minutes.	3	16.67
	(5) Pain prevents me from sitting at all.	0	0

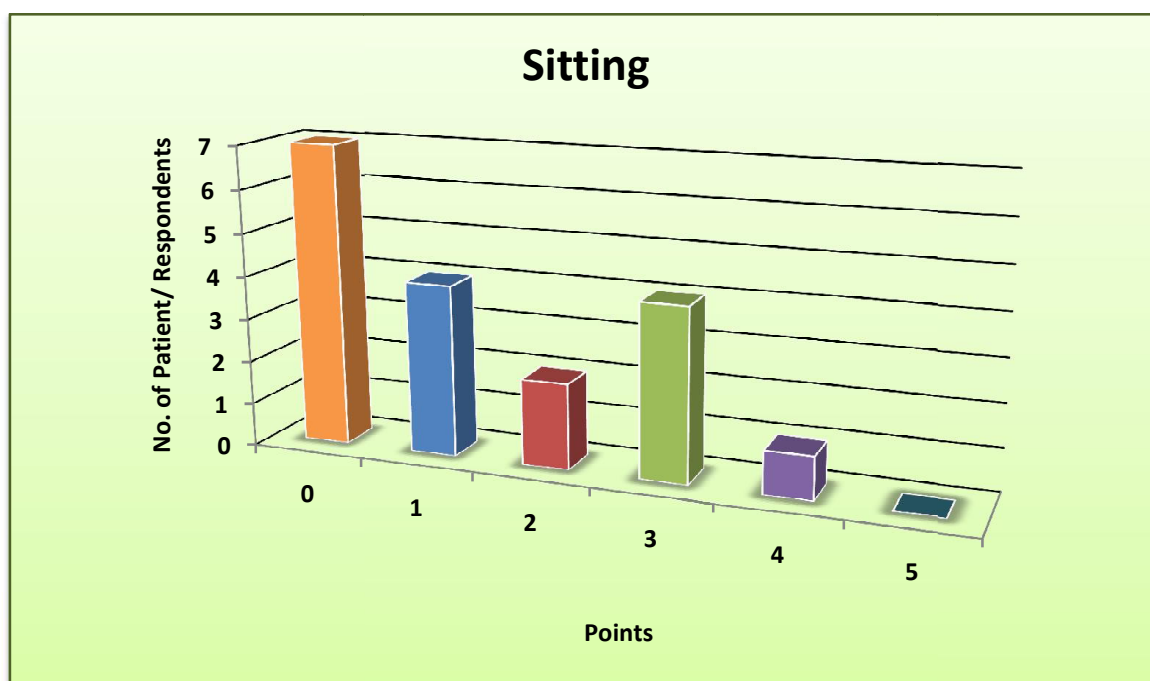


From the above graph, 38.89% respondents said that they can seat any chair as long as their like, 5.56% answered they can seat in their favourite chair as long as their like, 38.89% chose pain prevent them sitting more than 1 hour and

16.67% said pain prevent them for sitting more than 10 minute and none of them answered points (3) & (5). From the survey we identify that sitting is one of the factor that cause low back pain.

## 6. Standing

Question No.	Points	No. of patient/ Respondents	Percentage (%)
6	(0) I can stand as long as I want without extra pain.	7	38.89
	(1) I can stand as long as I want but it gives me extra pain.	4	22.22
	(2) Pain prevents me from standing for more than 1 hour.	2	11.11
	(3) Pain prevents me from standing for more than 30 minutes.	4	22.22
	(4) Pain prevents me from standing for more than 10 minutes.	1	5.56
	(5) Pain prevents me from standing at all.	0	0

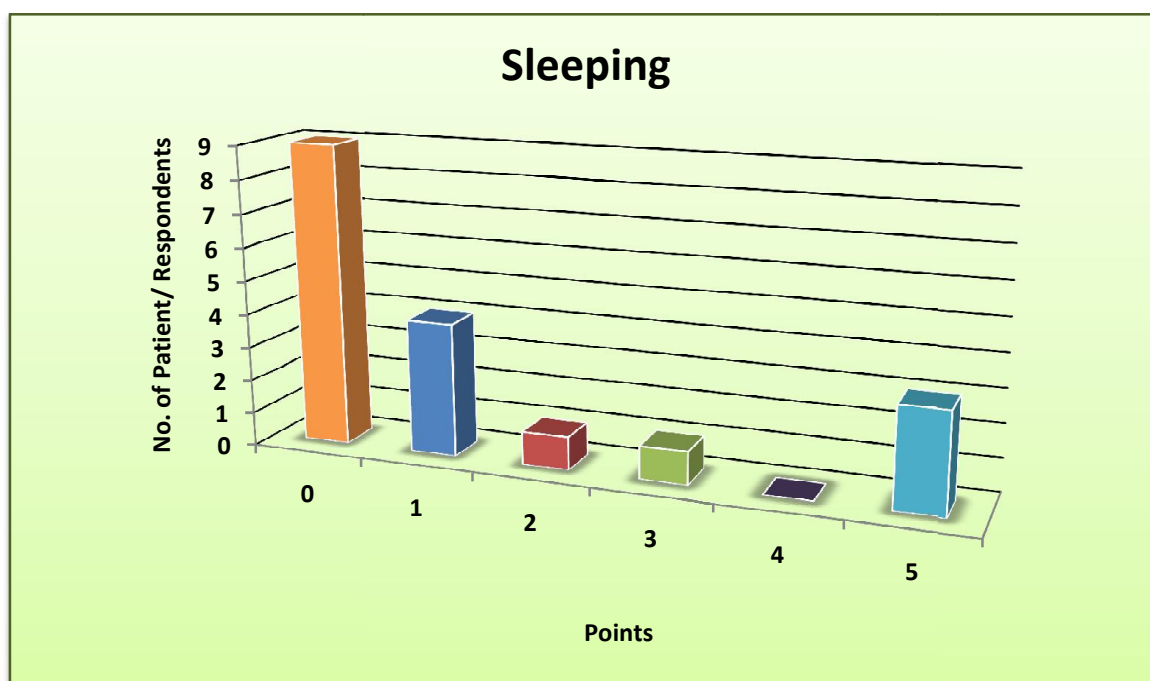


From the above graph, 38.89% of respondents said they can stand as long as they want without extra pain, 22.22% said they can stand as long as they want but it gives them extra pain, 11.11% answered pain prevent them for standing more than 1hour, 22.22% chose pain prevent them

from standing for more than 30 minute, only 5.56% said pain prevent them from standing for more than 10 minutes but no one answered the point (5). Based on the survey, standing is not major factor of low back-pain.

## 7. Sleeping

Question No.	Points	No. of patient/ Respondents	Percentage (%)
7	(0) Pain does not prevent me from sleeping well.	9	50
	(1) I can sleep well only by using tablets.	4	22.22
	(2) Even when I take tablets I have less than 6 hours sleep.	1	5.56
	(3) Even when I take tablets I have less than 4 hours sleep.	1	5.56
	(4) Even when I take tablets I have less than 2 hours of sleep.	0	0
	(5) Pain prevents me from sleeping at all.	3	16.67

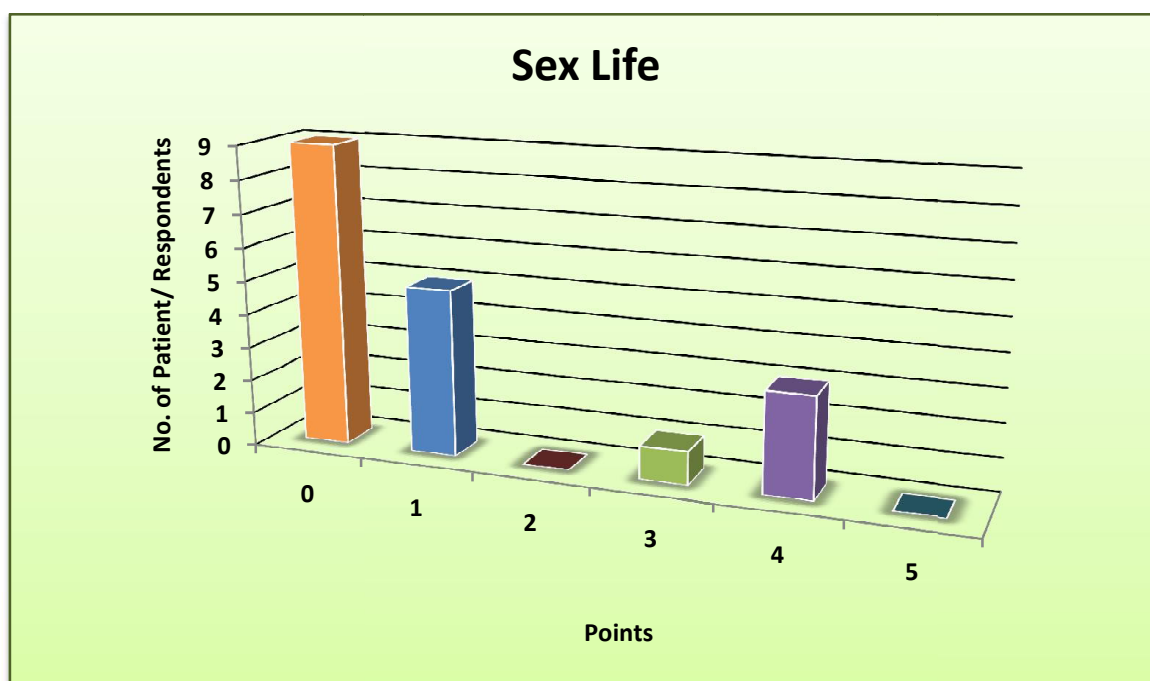


From the above graph, 50% of respondents answered pain does not prevent them from sleeping well, 22.22% said that they can sleep well only by using tablets, 5.56% chose even when they take tablets they have less than 6 hours sleep, 5.56% said

Even when I take tablets I have less than 4 hours sleep, none of them chose the points (4) and 16.67% said pain prevents them from sleeping at all. The statement showed that their pains were not prevent them from sleep well.

### 8. Sex Life

Question No.	Points	No. of patient/ Respondents	Percentage (%)
8	(0) My sex life is normal and causes no extra pain	9	50
	(1) My sex life is normal but causes some extra pain.	5	27.77
	(2) My sex life is nearly normal but is very painful.	0	0
	(3) My sex life is severely restricted by pain.	1	5.56
	(4) My sex life is nearly absent because of pain.	3	16.67
	(5) Pain prevents any sex life at all.	0	0

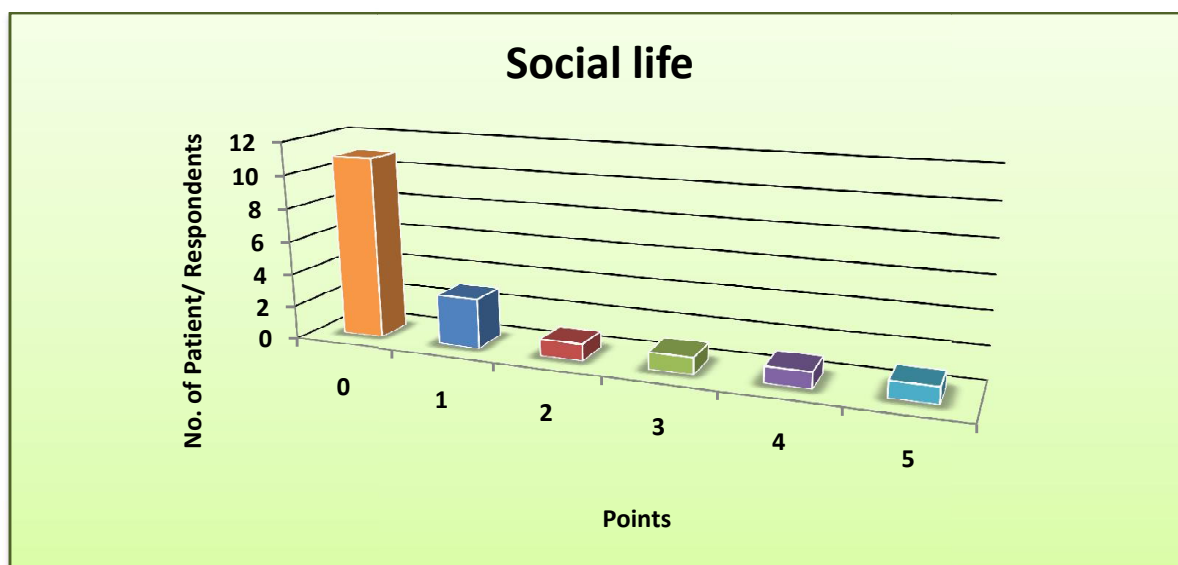


From the above graph, 50% respondents said their sex life is normal and causes no extra pain, 27.77% answered their sex life is normal but causes some extra pain, 5.56% said their sex life is severely

restricted by pain, 16.67% answered sex life is nearly absent because of pain and none of them chose points (2) & (5). Based on the graph we can clearly conclude that sex life also affected by low back pain.

## 9. Social Life

Question No.	Points	No. of patient/ Respondents	Percentage (%)
9	(0) My social life is normal and gives me no extra pain.	11	61.11
	(1) My social life is normal but increases the degree of pain.	3	16.67
	(2) Pain has no significant effect on my social life apart from limiting my more energetic interests such as dancing.	1	5.56
	(3) Pain has restricted my social life and I do not go out as often.	1	5.56
	(4) Pain has restricted my social life to my home.	1	5.56
	(5) I have no social life because of pain.	1	5.56

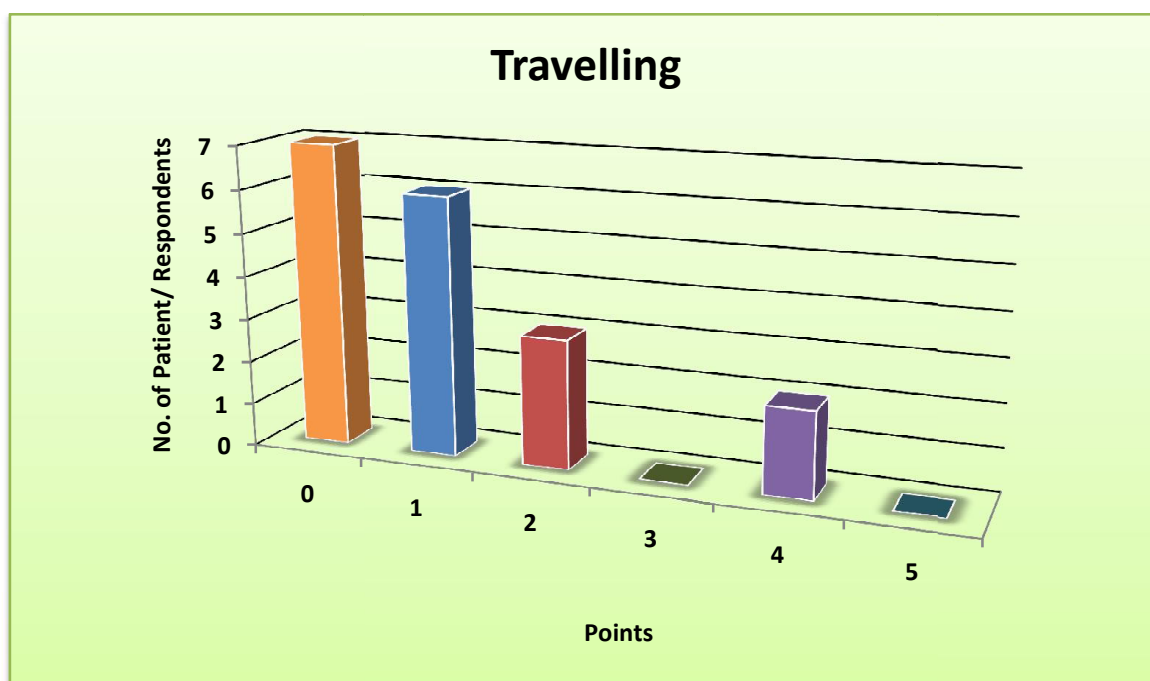


From the above graph, 61.11% respondents answered their social life is normal and gives me no extra pain, 16.67% chose their social life is normal but increases the degree of pain, 5.56% said pain has no significant effect on their social life apart from limiting their more energetic interests such as dancing, 5.56%

said pain has restricted their social life and they do not go out as often, 5.56% answered pain has restricted their social life to their home and 5.56% said have no social life because of pain. It showed that low back pain were affected most of the respondent's social life.

### 10. Travelling

Question No.	Points	No. of patient/ Respondents	Percentage (%)
10	(0) I can travel anywhere without extra pain.	7	38.89
	(1) I can travel anywhere but it gives me extra pain.	6	33.33
	(2) Pain is bad but I manage journeys over 2 hours.	3	16.67
	(3) Pain restricts me to journeys of less than 1 hour.	0	0
	(4) Pain restricts me to short necessary journeys under 30 minutes.	2	11.11
	(5) Pain prevents me from travelling except to the doctor or hospital.	0	0



From the above graph, 38.89% respondent answered they can travel anywhere without extra pain, 33.33% said they can travel anywhere but it gives me extra pain, 16.67% chose pain is bad but they manage journeys over 2 hours, 11.11% said pain

restricts them to short necessary journeys under 30 minutes and none of them chose points (3) & (5). According to the survey, travelling may be a major cause for low back pain.

## Conclusion

The main objective of our project is to find out the sign, symptoms, causes, and treatment of low back pain. We went through the literature review as well as survey, and accordingly we compare the results with literatures and we found that almost all the answers given by patients were similar to literatures.

We concluded again that, it is important to maintain a good lifestyle in order to prevent from low back pain among the adults because lifestyle is one of the main reason of low back pain. One

should practice primary care of low back pain when they experience it. On the other hand, government also can organize campaign on the primary care of low back pain. Government/private sectors also can promote aerobic exercise among the adults in order to prevent from low back pain. In school/colleges the management can organize health campaign /seminar/ workshops, since mostly the patient from the same belongs to these sectors as this disease is common in adults. Hence, these methods all can bring benefits to adults to prevent from low back pain.

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