Diagnosing Back Pain Using MRI Scans Patients At Prince Sultan Military Hospital In Riyadh

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ملخص الدراسة

خلفية:
يُعَدُّ ألم أسفل الظهر من بين الأسباب الأكثر شيوعًا لزيارات مراكز الرعاية الصحية. ينجم الألم عادةً عن وجود مشاكل في الجهاز العضلي الهيكلي - وخصوصا العمود الفقري، بما في ذلك (عظام العمود الفقري) عظام الظهر أو الفقرات والأقراص و العضلات و الأربطة التي تدعمها. ينجم ألم أسفل الظهر في بعض الأحيان عن اضطراب لا يشمل الجهاز العضلي الهيكلي.

يُصبح ألم أسفل الظهر أكثر شيوعًا مع تقدم الأشخاص في العمر، حيث يُصيب أكثر من نصف الذين تزيد أعمارهم على ٦٠ عاما . وهو من الحالات المرتفعة التكلفة من حيث مدفوعات الرعاية الصحية ومدفوعات العجز وإضاعة وقت العمل.

منهجية الدراسة : استخدمت الباحثة دراسة مقطعية وصفية، تمت في مستشفى الامير سلطان العسكري بالرياض

اهداف الدراسة : تهدف الدراسة الحالية الي للتعرف علي تشخيص ألم الظهر باستخدام الرنين المغنطيسي لدي عينة من المرضي بمستشفى الامير سلطان العسكري

الإجراءات: استخدمت الباحثة التقرير الطبية للحالات وتم تجميعها من المرضي عينة الدراسة ٥٠ مريض ومريضه ٢٣ من الرجال و ٢٧ من النساء

النتائج: اظهرت النتائج معدل الاصابة بالألم الظهر في النساء اكثر منها في الرجال ويرجع ذلك بان النساء يعانون في فترات الحمل لتعب في الظهر مما قد يجعلهم أكثر عرضة للإصابة من الرجال كما ان استخدام الرنين المغناطيسي في اكتشاف وتشخيص الم الظهر للمرضي فعال
ويظهر ويشخص المرض بسهولة

وقد خلصت الدراسة إلى أن أكثر من نصف المشاركين في الدراسة يعانون من ألم الظهر في وقت تطبيق الدراسة ونفس النسبة كانت تعاني من ألم الظهر قبل تطبيق الدراسة بثلاثة أشهر ونفس النسبة تعاني من ألم الظهر قبل ٦ أشهر من تطبيق الدراسة وانه لا يوجد علاقة واضحة بين كلا الجنسين والمستوى التعليمي ومكان العمل من جهة وانتشار الم الظهر من جهة أخرى، ولكن يوجد علاقة مباشرة بين عدد سنوات الخبرة وظهور الم الظهر
أي أن (كلما ازدادت سنوات العمل ازدادت نسبة ألم الظهر)
وأعتبر العمل بوضعية غير مريحة وزيادة عدد المرضى والوقوف لفترات طويلة وحركات ثني الظهر من أهم العوامل والأسباب لظهور ألم الظهر، مما يتطلب تعديلات ضرورية في مكان العمل، من أسرة مناسبة الارتفاع وكراسي خاصة بالمعالجين ورافعات خاصة بالمرضى ولبس حذاء مناسب أثناء العمل وممارسة الرياضة بشكل يومي وتجنب حمل المرضى ذو الأوزان الثقيلة لما له الأثر الكبير من الحد من ظهور ا ظهور الم الظهر

Abstract

Background

Low back pain is among the most frequent cases of back pain in healthcare visits. Occasionally descending pain due to a chest disorder, not involving the skeletal system.

Low back pain becomes more common as people age, affecting more than half of those over 60. It is a costly condition in terms of health care
.payments, disability payments and lost work time

Study methodology: The researcher used a descriptive cross-sectional study, which was conducted at Prince Sultan Military Hospital in Riyadh

Study objectives: The current study aims to identify the diagnosis of back pain using MRI among a sample of patients at
.Prince Sultan Military Hospital

Procedures: The researcher used the medical reports of the cases and was collected from the patients. The study sample consisted of 50 patients, 23 of whom were men and 27 were women.

Results: The results showed that the incidence of back pain in women is higher than in men. This is due to the fact that women suffer from back fatigue during pregnancy, which may make them more vulnerable to infection than men. The use of magnetic resonance imaging in detecting and diagnosing back pain in patients is effective and shows and diagnoses the disease easily

The study concluded that more than half of the study participants suffered from back pain at the time the study was implemented, and the same percentage suffered from back pain three months before the study was implemented, and the same

percentage suffered from back pain 6 months before the study was implemented, and that there is no clear relationship between both. Gender, educational level, and place of work on the one hand, and the prevalence of back pain on the other hand, but there is a direct relationship between the number of years of experience and the occurrence of back pain, meaning that (the
)more years of work, the greater the incidence of back pain

I consider working in an uncomfortable position, increasing the number of patients, standing for long periods, and bending the back movements among the most important factors and causes of the appearance of back pain, which requires necessary modifications in the workplace, including beds of appropriate height, special chairs for therapists, special slings for patients, wearing suitable shoes during work, exercising on a daily basis, and avoiding Carrying patients with heavy weights has a significant impact on reducing the occurrence of back pain

1-1 Introduction

Low back pain (LBP) is pain, muscle tension, or stiffness localized below the costal margin and above the inferior gluteal folds, with or without leg pain; It may be acute or chronic; persisting for 12 weeks or more (Bigos et al, 1994)

LBP afflicts large sectors of the population and is the number one cause of lost time in industry, hospitals and schools. Most episodes of pain are self limited in nature, although it is common to find recurrences, in industrialized countries, up to 80% of the population will experience LBP at some stage in their life. During any one year, up to half of adult population (15%-49%) will have LBP (Palmer et al, 2000).

Virtually speaking, everyone will experience LBP at some time in their life. The number of people with LBP increases with advancing age, starting in school going children and peaking in adults of 35 to 55 years of age. LBP is just as common in adolescents as in adults (Burton et al, 2006).

Fortunately, LBP is typically a benign, self-limiting problem. Swezey (1998) reported that 90% of LBP patients recover over 3 to 4 weeks period and many recover in only a few days. For those reasons it seems unnecessary to make a specific diagnosis. Although the course of LBP for most patients is benign, it is important not to miss the few dangerous underlying conditions that present with LBP among its

symptoms. These important diagnoses are usually distinguished by signs and symptoms, therefore other tests are needed for some patient

Surprising, Investigator have shown that patients with chronic LBP tend to be dissatisfied with their vocation, viewing it as boring and repetitious, they also have an increased divorce rate, more problems with headaches and gastrointestinal ulcers and a higher rate ofalcoholism than the average population (Skinner, 1996).

Finally, most patients are visiting orthopedic clinics and orthopedic surgeon to solve LBP problems, but the patients often referred by orthopedic doctors for physical therapy treatment, to reduced pain, to strength weak muscles around back, to improve function and correct walking and these patients then return to his work and jobs (Thomson, 1991).

1-2 Problem statement

Back pain is one of the most common reasons people seek medical help or miss work. Back pain is a leading cause of disability worldwide.

Fortunately, measures can help prevent or relieve most back pain episodes, especially for people younger than age 60. If prevention fails, simple home treatment and using the body correctly often will heal the back within a few weeks. Surgery is rarely needed

1-3 Hypothesis:

Can back pain be diagnosed through a MRI scan?

How can I relieve lower back pain?

What are 3 causes of lower back pain? When should I worry about upper back pain? What is the most common cause of back pain?

1-4 Objectives of the study General Objectives of the study

Diagnosing back pain using MRI scans patients

To determine the prevalence and the risk factors the LBP

1-5 Specific objectives

To determine the risk factors related to the LBP To describe the type of pain at lower back

1-6 Operational definitions of terms:

Lower back pain is very common. It can result from a strain (injury) to muscles or tendons in the back. Other causes include arthritis, structural problems and disk injuries. Pain often gets better with rest, physical therapy and medication.per back pain can usually manage their symptoms at home

use a MRI of the spine to examine the vertebrae in the spine for

fractures, arthritis, or pinching of the nerves or spinal cord (spinal stenosis). Occasionally, doctors x-ray the pelvis to help diagnose the .cause of back pain

1-7 Context of the study
This study was conducted

This study was conducted at Prince Sultan Hospital in Riyadh

Chapter two literature review

Chapter two

. **2-1Lower Muscles of Back Anatomy and Low Back Pain**
The lumbar and sacrum region make up the bone of the lower back anatomy. The spinal cord is contained within the spine's vertebrae, running through the vertebral foramen and branching out to the peripheries through the intervertebral foramen. The muscles of the low back work together with the transverse abdominal muscles to increase intra-abdominal pressure.

What are the 4 Upper Back Muscles
The upper back muscles are: Latissimus dorsi, Rhomboid muscles, Levator scapulae and the Trapezius.

These upper back muscles work with most of the shoulder muscles to assist in shoulder movements.

To read more about a "catch" or locking sensation in your back, please read this informative ARTICLE.

To learn more how to strengthen your core muscles to prevent back pain, please read this ARTICLE on best core exercises.

What Are the Muscles of the Lower Back
Some of the muscles of the low back include:

- Multifidus
- Erector Spinae
- Spinalis
- Latissimus Dorsi Bones

Vertebral column: 7 cervical, 12 thoracic, 5 lumbar, 5 sacral (sacrum), 3- 5 coccygeal (coccyx) vertebrae

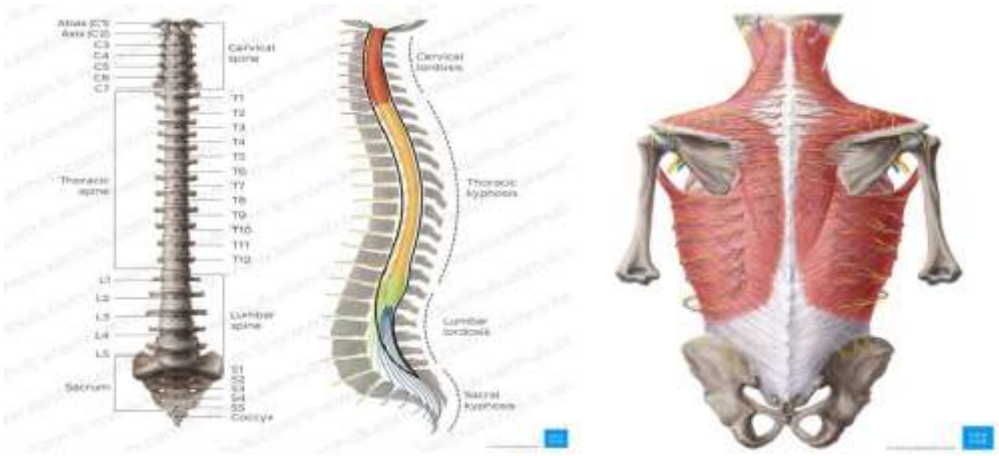
Joints
Intervertebral discs, zygapophyseal joints Muscles

Extrinsic (Superficial) muscles Intrinsic (Deep) muscles Nerves
Posterior rami of the spinal nerves, intercostal nerves, cervical plexus,)brachial plexus, accessory nerve (CN XI Arteries and veins
Vertebral, ascending cervical, occipital, posterior intercostal,

subcostal, lumbar, lateral sacral, deep cervical arteries and veins

Function

Protection of the spinal cord, absorption of mechanical force, maintains the posture of the body and head, coordination of limbs movements, assists respiration



Pathophysiology

The pathophysiology of back pain depends on the etiology. Most often, it may be a part of an acute inflammatory process. Oncologic: This is caused by lytic lesions to the spine, cancers of the marrow, or compressive nerve phenomena from adjacent space-occupying lesions.

Often presenting as a pathological fracture

2-2 Symptoms

Back pain can range from a muscle aching to a shooting, burning or stabbing sensation. Also, the pain can radiate down a leg. Bending, twisting, lifting, standing or walking can make it worse.

Most back pain gradually improves with home treatment and self-care, usually within a few weeks. Contact your health care provider for back pain that:

- Lasts longer than a few weeks.
- Is severe and doesn't improve with rest.
- Spreads down one or both legs, especially if the pain goes below the knee.
- Causes weakness, numbness, or tingling in one or both legs.
- Is paired with unexplained weight loss.

In rare cases, back pain can signal a serious medical problem. Seek immediate care for back pain that:

- Causes new bowel or bladder problems.
- Is accompanied by a fever.
- Follows a fall, blow to the back or other injury.

Symptoms

- Pain in the upper back
- Muscle spasms
- Pain when you take a deep breath
- Pain when you move your spine or it is touched
- Pain when you move your neck and shoulders forward

As described, upper back pain can be caused by non–muscle, ligament and joint problems. If you have any additional symptoms or the pain started without an obvious cause it would be advisable to seek a medical assessment to rule out another cause

2-3 Causes

Upper back pain may be caused by many different medical conditions and injuries. Conditions that may cause upper back pain include Strains and sprains: Back strains and sprains are the most common cause of upper back pain. You can injure muscles, tendons or ligaments

.by lifting something too heavy or not lifting safely

Poor posture: Many people with upper back pain find it hard to stand up straight. You may stand ―crooked‖ or bent, with your torso off to .the side rather than aligned with your spine

Disk problems: Disks can slip or ―bulge‖ from their position in the .)spine and press on a nerve. They can also tear (herniated disk

Fractures: The bones in the spine can break during an accident, like .a car crash or a fall

Arthritis: Osteoarthritis is the most common type of arthritis that causes upper back pain.

.Low back pain caused by spinal degeneration and injury

Muscle or ligament strain. Repeated heavy lifting or a sudden

- ... .awkward movement can strain back muscles and spinal ligaments
- ... .Bulging or ruptured disks
- ... .Arthritis
- ... .Osteoporosis

Ankylosing spondylitis, also called axial spondyloarthritis

Back pain often develops without a cause that shows up in a test or :imaging study. Conditions commonly linked to back pain include

Muscle or ligament strain. Repeated heavy lifting or a suddenawkward movement can strain back muscles and spinal ligaments. For people in poor physical condition, constant strain on the back can cause .painful muscle spasms

Bulging or ruptured disks. Disks act as cushions between the bonez in the spine. The soft material inside a disk can bulge or rupture and press on a nerve. However, a bulging or ruptured disk might not cause back pain. Disk disease is often found on spine X-rays, CT scans or MRIs done.for another reason

Arthritis. Osteoarthritis can affect the lower back. In some cases, arthritis in the spine can lead to a narrowing of the space around the .spinal cord, a condition called spinal stenosis

Osteoporosis. The spine's vertebrae can develop painful breaks if .the bones become porous and brittle

Ankylosing spondylitis, also called axial spondyloarthritis. This inflammatory disease can cause some of the bones in the spine to fuse. This makes the spine less flexible Risk factors

Anyone can develop back pain, even children and teens. These factors :can increase the risk of developing back pain Age. Back pain is more common with age, starting around age 30 .or 40 Lack of exercise. Weak, unused muscles in the back and abdomen .might lead to back pain .Excess weight. Excess body weight puts extra stress on the back Diseases. Some types of arthritis and cancer can contribute to back .pain

Improper lifting. Using the back instead of the legs can lead to .back pain

Psychological conditions. People prone to depression and anxiety appear to have a greater risk of back pain. Stress can cause muscle . tension, which can contribute to back pain

Smoking. Smokers have increased rates of back pain. This may occur because smoking causes coughing, which can lead to herniated disks. Smoking also can decrease blood flow to the spine and increase the risk of osteoporosis

2-4 Diagnosis

Your health care provider will examine your back and assess your ability to sit, stand, walk and lift your legs. Your provider might also ask you to rate your pain on a scale of zero to 10 and talk to you about

how your pain affects your daily activities.

These assessments help determine where the pain comes from, how much you can move before pain forces you to stop and whether you have muscle spasms. They also can help rule out more-serious causes of back pain.

One or more of these tests might help pinpoint the cause of the back pain:

- **X-ray.** These images show arthritis or broken bones. These images alone won't show problems with the spinal cord, muscles, nerves or disks.
- **MRI or CT scans.** These scans generate images that can reveal herniated disks or problems with bones, muscles, tissue, tendons, nerves, ligaments and blood vessels.
- **Blood tests.** These can help determine whether an infection or other condition might be causing pain.
- **Nerve studies.** Electromyography (EMG) measures the electrical impulses produced by the nerves and how the muscles respond to them. This test can confirm pressure on the nerves caused by herniated disks or narrowing of the spinal canal (spinal stenosis).

2-5 Medications

Your treatment will depend on the causes and symptoms of your pain. People with mild to moderate upper back pain can usually manage their

:symptoms at home. You can try managing your symptoms with

Over-the-

counter pain medications such as acetaminophen (Tylenol®) and nonsteroidal anti-inflammatory drugs (NSAIDs).

Heating pad to reduce pain and stiffness.

Ice pack to reduce pain and swelling.

.Medical massage

Getting plenty of rest

:Medications depend on the type of back pain. They might include Pain relievers. Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil, Motrin IB, others) or naproxen sodium (Aleve), might help. Take these medications only as directed. Overuse can cause serious side effects. If pain relievers you can buy without a prescription don't .help, your health care provider might suggest prescription NSAIDs

Muscle

relaxants. If mild to moderate back pain doesn't improve with pain

relievers, a muscle relaxant might help. Muscle relaxants can cause.dizziness and sleepiness

Topical

pain relievers. These products, including creams, salves, ointments and .patches, deliver pain-relieving substances through the skin

Narcotics.

Drugs containing opioids, such as oxycodone or hydrocodone, may be .used for a short time with close medical supervision

Antidepressants. Some types of antidepressants — particularly duloxetine (Cymbalta) and tricyclic antidepressants, such as amitriptyline — have

.been shown to relieve chronic back pain

2-6 physical therapy

A physical therapist can teach exercises to increase flexibility, strengthen back and abdominal muscles, and improve posture. Regular use of these techniques can help keep pain from returning. Physical therapists also will provide education about how to modify movements during an episode of back pain to avoid flaring pain symptoms while continuing to

.be active

-Surgical and other procedures

:Procedures used to treat back pain may include

Cortisone

injections. If other measures don't relieve pain that radiates down the leg, an injection of cortisone plus a numbing medication into the space around the spinal cord and nerve roots might help. A cortisone injection helps decrease inflammation around the nerve roots, but the pain relief usually.lasts only a month or two

Radiofrequency ablation. In this procedure, a fine needle is inserted through skin near the area causing the pain. Radio waves are passed through the needle to damage the nearby nerves. Damaging the nerves

.interferes with pain signals to the brain

Implanted

nerve stimulators. Devices implanted under the skin can deliver electrical.impulses to certain nerves to block pain signals

2- 7Srgery.

Surgery to create more space within the spine is sometimes helpful for people who have increasing muscle weakness or back pain that goes down a leg. These problems can be related to herniated disks or other conditions that narrow the openings within the spine

2-8 Prevention

Improving one's physical condition and learning and practicing how to.use the body might help prevent back pain:To keep the back healthy and strong Exercise.Regular low-impact aerobic activities — those that don't strain or jolt the back — can increase strength and endurance in the back and allow the muscles to work better. Walking, bicycling and swimming are good.choices. Talk with your health care provider about which activities to try

Build

muscle strength and flexibility. Abdominal and back muscle exercises, which strengthen the core, help condition these muscles so that they work.together to support the back

Maintain a.healthy weight. Being overweight strains back muscles

Quit smoking. Smoking increases the risk of low back pain. The risk increases with the number of cigarettes smoked per day, so quitting should help .reduce this risk :Avoid movements that twist or strain the back. To use the body properly

Stand

smart. Don't slouch. Maintain a neutral pelvic position. When standing for long periods, place one foot on a low footstool to take some of the load off the lower back. Alternate feet. Good posture can reduce the stress .on back muscles

Sit smart.

Choose a seat with good lower back support, armrests and a swivel base. Placing a pillow or rolled towel in the small of the back can maintain its normal curve. Keep knees and hips level. Change position frequently, at .least every half-hour

Lift smart.

Avoid heavy lifting, if possible. If you must lift something heavy, let your legs do the work. Keep your back straight — no twisting — and bend only at the knees. Hold the load close to your body. Find a lifting partner if the object is heavy or awkward

2-9 revious studies

In 2001, the Lee study the various factors associated with LBP in an industrial setting. A cross sectional study was carried out among 1,562 employees of a large utilities corporation in Ontario. A self-administered questionnaire used. Abdominal muscle strength was measured using a modified sphygmomanometer. Statistical analysis was carried out with Student's t test, chi-square test, and logistic regression analysis. He showed that 1,302 male employees the lifetime and point prevalence of LBP were 60% and 11% respectively. LBP was significantly more prevalent among married employees, with more physically demanding jobs, regular lifting, poor general health,

and past major illness.
Abdominal muscle weakness was associated with current LBP. The mean time lost from work due to LBP over 5 years was 17 days. Sedentary workers developing LBP were more likely to require hospital admission (Lee, 2001)

Omokhodion (2000) used a cross-sectional study in a rural hospital in southwestern Nigeria that determine the prevalence of LBP among it's staff. The questionnaire administered to staff. Seventy four out of a total of 80 workers participated in the study. The prevalence of LBP among staff was 46%; the highest prevalence of back pain (69%) was recorded among nursing staff, followed by

secretaries/administrative staff (55%) and cleaners/aides (47%). Heavily physical work (45%), poor posture (20%) and prolonged standing or sitting (20%) were the most frequent activities reported to be associated with LBP among these workers. Health education on posture and correct lifting techniques can be introduced to reduce the burden ofLBP among these workers

Cromie (2000) study the relationship between prevalence and work-related muscular skeletal disorders among physical therapists. Younger therapists reported a higher prevalence of musculoskeletal disorders in most body areas. Using of mobilization and manipulation techniques was related to increased prevalence of thumb symptoms. Risk factors pertaining to workload were related to a higher prevalence of neck and upper-limb symptoms and postural risk factors were related to a higher prevalence ofspinal symptoms.

Latza et al (2000) showed in his study that he was identified work related risk factors of future LBP in a cohort of construction workers free of LBP at the start of follow up. The Hamburg construction worker study comprises 571 male construction workers who have undergone two comprehensive interview and physical examination surveys. A cohort of 285 subjects without LBP at baseline was identified. After following up for 3 years, the 1 year prevalence of self reported LBP was determined in
the 230 men followed up (80.7%). Prevalence ratios (PR) with 95% of LBP at follow up according to self reported work tasks of construction workers measured at baseline were estimated from Cox's regression models which were adjusted for age, and anthropometric measures. At follow up 71 out of 230 workers (30.9%) reported LBP during the preceding 12 months. Four work tasks (scaffolding, erecting roof structures, sawing wood, and laying large sandstones) with an increased risk of 1 year prevalence of LBP at follow up were further evaluated.
After further adjustment for occupation the relative risk was increased for workers who had reported 2 hour/shifts laying large sandstones. Work load of bricklayers was additionally estimated by an index on stone load high exposure: (PR=4.0), and an index for laying huge bricks/blocks (yes/no: PR= (1.7)

Similar study was carried out in a rural hospital in south-western

Nigeria by Omokhodion (2000) that determined the prevalence of LBP among it's staff. The highest prevalence of BP (69%) was recorded among nursing staff, followed by secretaries/administrative staff (55%) and cleaners/aides (47%), heavy physical work (45%), poor posture (20%) and prolonged standing or sitting (20%) were the most frequent activities reported to be associated with LBP among these workers

Chapter Three Material and methodology

Chapter Three

3-1 Introduction:

This chapter addresses issue related to methodologies used to answer the research questions. The chapter commences with study design, study population, study setting, period of the study, sample size, sampling method and method of the study. It presents construction of the questionnaire, piloting, ethical consideration and procedures, (data collection and data analysis). Furthermore it illustrates the validity and reliability of the study instrument and eligibility criteria of the study.

3-2 Study design:

A Cross-Sectional study design used in this research. This type of design would be useful for describing the study construct. It's fit and enables the researcher to meet the study objectives. It's suitable in term of time, people, money, resources and it is relatively practical and managed.

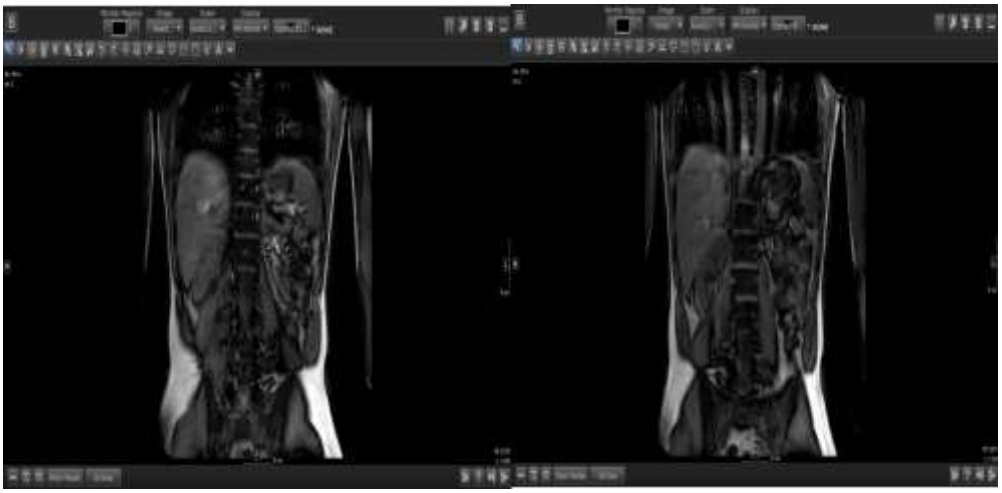
3-3 tudy population:

The study population consists of all back pain patients within the city of Riyadh

3-4 The study sample:

The sample of the current study consists of 50 back pain patients at Prince Sultan Military Hospital

3-5 Data collection:



3-6 Limitation of the study:

1- Objectivity border

Diagnosing back pain using MRI scans patients at Prince Sultan Military Hospital in Riyadh

2- Spatial boundaries:

The current study was conducted at Prince Sultan Military Hospital in Riyadh

3- Temporal boundaries:

The current study was implemented in 2023

Chapter four Results

Chapter four

4-1 Introduction:

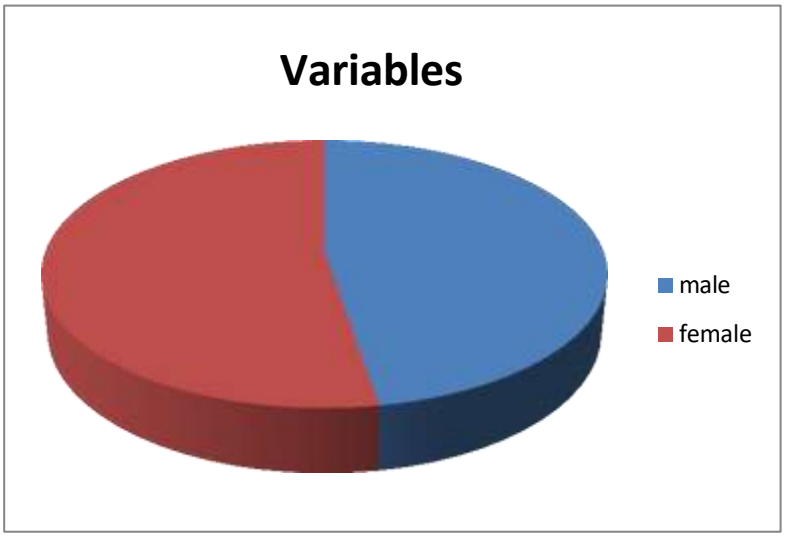
This chapter illustrates the results of statistical analysis of the data, including descriptive analysis that presents the demographic characteristics, socio-demographic characteristics, distribution of the study sample according to physical variables, prevalence of LBP, severity of the pain, causes and risk factors of LBP, types of treatments of LBP, and the physical therapy suggestions and recommendation to reduce LBP. In addition, it shows the relationships and differences between study variables and overall socio-demographic characteristic by using the suitable statistical methods to answer the study questions. Lastly, the researcher interprets the result in the light of previous literature

4-2 Socio-demographic results:

Distribution of the study sample according to socio-demographic variables(Table 1)

Variables		**Number (No.)**	**Percentage (%)**
Age (Years)	60	35	65%
	40	15	35%
Sex	male	23	47%
	female	27	53%
Marital status	single	10	25%
	married	40	75%

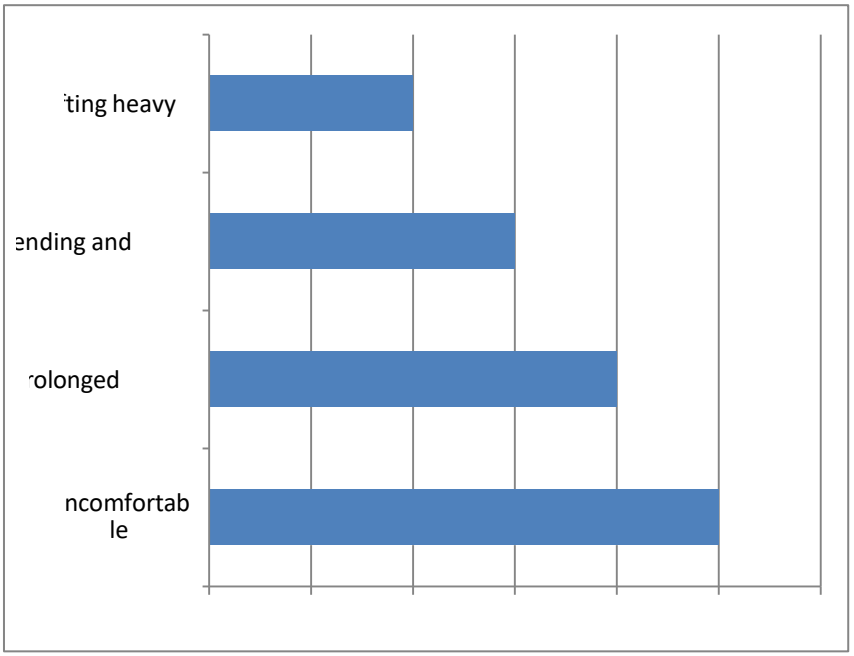
Level of education	university	25	50%
	Post graduate	25	50%



Figure(1) Distribution of the study sample according to physical variables(Table2)

Variables		Number	Percentage %
Body mass index	less than 25	16	31
	25 – 29.9	24	49
	more than 30	10	20
	Total	50	100%

4-3 Distribution of the causes



Figure(2) Distribution of the Seek medical help for LBP(Table3)

Items	Number (.No)	Percentage (%)
Seek medical help	50	100

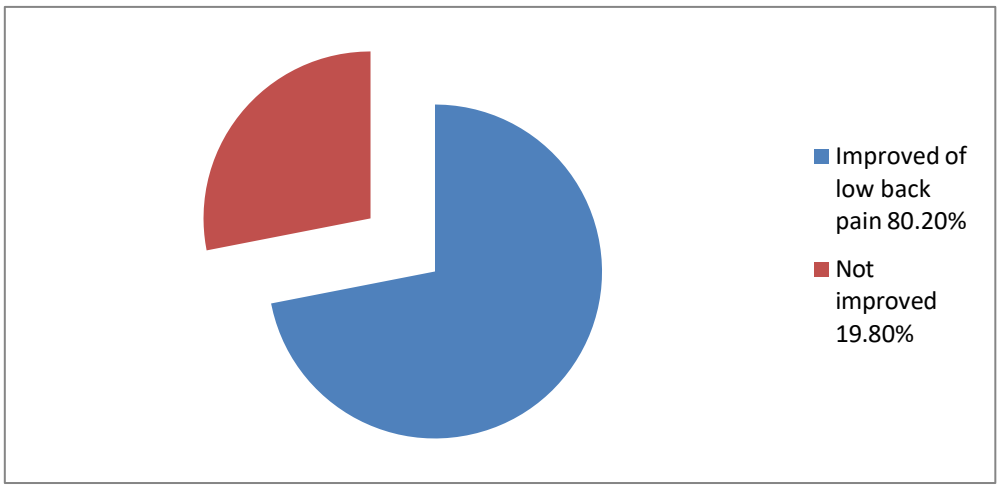
Distribution of the types of treatments of LBP(Table 4)

Variable	**N**	**%**
Physiotherapy	10	15%
Rest	5	7,5%
Medical	15	35%
Lumber support	5	7,5%
Surgical	15	35%

4-4 Distribution of the improvement of LBP

4-5

Improvement of pain



Figure(3) Distribution of the types of treatments of LBP(Table 5)

Variable	N	%
Physiotherapy	26	51
Rest	14	29
Medical	4	8
Lumber support	3	6
Surgical	3	6

More than half of the study sample 51. % were reported that physiotherapy is the type of treatment of LBP, 50.0%, reported the rest and 38.4% reported medical treatment was the types of treatments, as shown in the following table;

4-6 the most important risk factors in LBP:

Most of the study sample 46 were reported that occupational factors like lifting, pushing, twisting, and sitting or standing or walking long time is the most important risk factors in LBP among physical therapy professionals (93.8%) followed by 33 of the study sample reported, wearing high shoes during work increase the risk of low back pain (56.1%), 31 of the study sample reported that increase weight (Obesity) will increase the risk of low back pain (55.4%), 19 ofthe study sample reported that postural factors (kyphosis, lordosis and discrepancy in the length of the lower limbs also increase the risk of low back pain (43.1%), 22 of the physiotherapy professionals reported that Lack of sport (34.6%) will increase the risk of low back pain and 13 of all subjects reported that Psychosocial factors (depression, anxiety, hysteria, divorce, chronic headache (20.7%) will increase the risk of low back pain, as shown in the table (5.8) below.(table6)

Variables	N	%

Occupational factors like lifting, pushing, twisting, and sitting, standing and walking long distance	46	93.8
Wearing high shoes during work	33	56.1
Increase weight (Obesity)	31	55.4
Postural factors (kyphosis, lordosis and discrepancy in the length ofthe lower limbs	19	43.1
Lack ofsport	22	34.6
Psychosocial factors (depression, anxiety, hysteria, divorce, chronic headache)	13	20.7
Heavy Smoking	10	17.7
Lack ofspinal mobility	8	10.7
Improper nutrition	6	10.0
Personal-related factors (age and gender)	5	7.6

Chapterfive Discussion

Chapter five

5-1 Introduction:

This chapter discusses the relevant inferential statistical results to explore and identify the relationship between different study variables and to discuss the findings of the study in comparison with related literature and its implications that might help physiotherapy professionals in order to know the prevalence and risk factors of LBP

5-2 Prevalence of LBP:

In this study, the researcher found that more than 50% of the study sample had LBP at the time of completing the questionnaire and similar percentage were suffering from LBP since three months and more than six months (56.9%).

The results agreed with the earlier studies (Michel et al 2008 and Shehab 2003) which found that prevalence of LBP ranged from 50% to 75%.
Also agreed with the study done by Normadiah (2005) which showed that 74.6% complained of LBP, Rugelj (2003) reported in his research that 73.7% ofthe study sample complained of LBP. This could be due to the fact that, all these studies were conducted among doctors and other professionals in different locations, similar to the research participants in this study

The prevalence of LBP as reported in the literature varies considerably from one author to another and according to previous studies that showed higher prevalence than the result in this study.

In the researcher study, the LBP prevalence was lower than reported in earlier studies done by, Sun (2007) found that 87% of his research

group complained of LBP; Fujimura (1995) which found that 77% of his study sample had LBP and Chiou (1994) reported that 77.9 % of the study sample had LBP. Also the study results disagreed with the finding ofearlier studies (Feng 2007; Dündar 2006; Latza et al 2000; Frymoyer 1985 This study results agreed with the finding of the earlier studies which was done by, (Nagasu 2007; Folletti 2005; Skinner 1996; Biering 1982; Knibbe et al 1996 and Smedley, 1995) that reported that both sexes were equal in having LBP. Our present study disagree with the finding from another study which was done by Shehab (2003) that reported about 74.2% from females were suffering from LBP.

5-3 Professionals' suggestions and recommendations to reduce LBP:

According to study results; most of professionals suggested that using comfortable beds with appropriate heights, stools and lifters, ability to perform regular prayers and wearing comfortable shoes during work, could help in reducing the occurrence of LBP. Finally, their advices included avoiding heavy lifting and practicing sport daily.

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