



Faculty of Medicine
University of Dhaka

**Challenges with Daily Activities for patients with Prolapse Lumbar
Intervertebral Disc: An Explanatory Sequential Mixed Method
Study**

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We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for acceptance of this thesis entitled, "Challenges with Daily Activities for patients with Prolapse Lumber Intervertebral Disc: An Explanatory Sequential Mixed Method Study". Submitted by Rafayel Kayem Purna, for the partial fulfillment of the requirements for the degree of Bachelor of Science in Physiotherapy (B.Sc. in PT.).

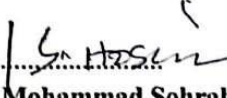


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Declaration

I hereby declare that the research work entitled "**Challenges with Daily Activities for patients with Prolapse Lumber Intervertebral Disc: An explanatory Sequential Mixed Method Study**" has been carried out by me as a part of my academic requirements. This study is original and has not been submitted in any form to any other university or institution for any degree or diploma. All sources of information and data have been duly acknowledged and referenced.

I also declare that ethical approval was obtained and all participants gave informed consent before taking part in the study.

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ACRONYM

CRP= Centre for the Rehabilitation of the Paralised

LBP = Low Back Pain

NCD= Non Communicable Disease

NPRS = Numerical Pain Rating Scale

ODI= Oswestry Disability Index

PLID= Prolapsed Lumber Intervertebral Disc

QOL= Quality of Life

SPSS= Statistical Package for the Social Science

TSK= Tampa Scale for Kinesiophobia

WHO= World Health Organization

ABSTRACT

Background: Prolapsed Lumbar Intervertebral Disc (PLID) is a prevalent musculoskeletal condition that significantly affects physical functioning and quality of life. It contributes to pain, disability, kinesiophobia, and impairs activities of daily living. This study aimed to assess the challenges faced by PLID patients in their everyday functioning through a mixed-methods approach. **Methods:** A mixed-method cross-sectional study was conducted at the Musculoskeletal Unit of CRP, Savar. A total of 68 participants diagnosed with PLID were selected through convenience sampling. Quantitative data were collected using standardized tools: the Visual Analogue Scale (VAS) for pain, the Oswestry Disability Index (ODI) for disability, the Tampa Scale of Kinesiophobia (TSK), and WHOQOL-BREF for quality of life. Qualitative data were obtained through in-depth interviews with 10 participants, focusing on personal care, mobility, lifting, social interaction, and travel difficulties. Data analysis was performed using SPSS v25 and thematic content analysis. **Results:** The majority of participants reported moderate to severe pain and disability, with 75% indicating high levels of kinesiophobia. Chi-square tests revealed significant associations between pain severity and variables such as age, sex, and marital status ($p < 0.05$). Thematic analysis identified six major challenges: limitations in personal care, weight lifting, standing/sitting/walking/sleeping, traveling, and reduced social participation. Fear of movement and re-injury further aggravated their conditions and restricted rehabilitation participation. **Conclusion:** PLID has a profound impact on patients' daily activities, physical mobility, emotional well-being, and social life. The combined quantitative and qualitative findings highlight the necessity of individualized rehabilitation strategies addressing pain, fear-avoidance beliefs, and functional limitations. Physiotherapists should integrate psychosocial support and patient education to enhance treatment adherence and improve overall quality of life.

Keywords: Prolapsed Lumbar Intervertebral Disc (PLID), Daily activities, Pain, Disability, Kinesiophobia Quality of life, Mixed-method study, Rehabilitation, Functional limitations, Psychosocial support.

1.1 Background

Prolapsed Lumbar Intervertebral Disc (PLID) is a medical condition affecting lumbar spine, in which a tear in the outer fibrous ring (annulus fibrosus) of an intervertebral disc that allows the soft, central portion (nucleus pulposus) to bulge out beyond the damaged outer rings Prolapsed Lumbar Intervertebral Disc (PLID).

Bangladesh is among the developing nations with the densest populations in the world (Sarkar & Rahman, 2007). 10% of Bangladesh's population, according to the World Health Organization, is disabled (Hossain, 2012). One of the most common causes of disability worldwide, prolapsed lumbar intervertebral disc disease, or PLID, is expensive for people, society, and the National Health Service (McKenzie, 1995). Prolapsed Lumbar Intervertebral Disc, or PLID, is the most common condition in developed Western nations (Doherty, 2012). Approximately 80% of persons will experience prolapsed lumbar intervertebral disc at some point in their lives (Fatima, 2016). PLID restricts activities and is the third most common cause to have surgery and the second most common reason to seek treatment (Apfel et al., 2010).

Low back pain ranked sixth overall in a recent study on the global burden of disease, ahead of 291 other conditions like depression, diabetes, and car accidents, and just behind stroke and HIV/AIDS (Shats, 2015). The World Health Organization (WHO) states that diseases that are not communicable (NCDs) represent a major health concern for global development, offering a risk for about 60% of deaths globally, with about 80% of those deaths happening nations that are developing economically. Furthermore, NCDs account for half of all of all yearly deaths (51%) and around half (41%) of all disease loads. (Bleich and others al. (2011)). Due to an increase in risk factors associated with lifestyle choices that are thought to be fundamental elements as a result of social and changes in the economy. The paper states that Bangladesh, like many other nations dealing with chronic issues or disabilities, has been experiencing a worldwide epidemiological shift. risk factors for illness (Bleich et al., 2011).

A disc that has prolapsed past the intervertebral disc gap is referred to as a "prolapsed lumbar disc". The most prevalent age range, with a 2:1 male to female ratio, is 30 to 50 years old. Not much evidence suggests that pharmacological treatments are

advantageous for herniated discs (Jordon et al., 2009). Prolapsed Lumbar Intervertebral Disc Disease affected 78.2 percent of the population, according to West et al. (2010). 56% of persons have disc bulging (Orthofracs, 2021). Among the most common in the population's musculoskeletal issues include prolapsed lumbar intervertebral discs (PLID) (Khruakhornet al., 2010). Musculoskeletal issues pose a serious threat to public health, a problem in our society. The prevalence of prolapsed lumbar intervertebral discs is lifelong, rate reaching as high as 85–90% (Taechasubamornet al., 2011), what causes lumbosacral discomfort lumbar intervertebral disc prolapse, a frequent musculoskeletal condition. It may present as an acute, subacute, or chronic clinical presentation. 80% are affected at some point in their lives of the population (Srivastava, 2013).

Concern should be expressed over the rising frequency of lumbar intervertebral disc prolapse cases in Bangladesh. Disc degeneration is an aberrant response to progressive structural breakdown that is mediated by cells. A disc that is degenerative has a structural collapse in addition to advanced or accelerated aging indications (Michael & Peter (2006)). PLID is the most common cause of lumbosacral radiculopathy (Hahne et al., 2010). A prolapsed lumbar disc is the etiology of lumbar radicular syndrome (Erdogmus, 2007). There could be PLID exposure to the lower leg. As a referred symptom, leg pain connected to lumbar intervertebral disc collapse or back discomfort has been estimated to be 35% prevalent, but the actual frequency of sciatica is 2–5% (Nachemson et al. 2009).

PLID has significant socioeconomic ramifications because it can result in short-term loss of production, high direct and indirect medical costs, or even permanent incapacity (Apfel et al., 2010). PLID is one of the most common medical diseases, is a major source of stress in people's lives, communities, and finances worldwide (Hoy et al., 2012). PLID is one among the most prevalent reasons of impairment in the working population. The musculoskeletal diseases or other musculoskeletal ailments were extremely common according to Miranda et al. (2010), connected to self-reported occupational impairment. Workers who suffer from back pain and are unable to work, spend a lot of time on sick days, which affects productivity at work (Johanning, 2008).

The occurrence of low back pain is highly frequent. About 90% of instances have mechanical problems as their primary cause, but the other cases (between 70% and 85%) have no recognized reason. Discomfort can arise from a lesion to a ligament,

joint, or intervertebral disc (disc tear, disc herniation) (Manusov, 2012). LBP can arise from multiple causes. Fatima (2016) states that the Prolapsed Lumbar Intervertebral Disc, the most frequent reason for occupational disability related to job. Unsatisfactory sitting posture exacerbates lumbar intervertebral disc prolapse in both sedentary and laborers by hand (McKenzie, 1995). While disk herniation and protrusion have being marketed as LBP causes, the most typical cause of lumbar prolapse Intervertebral disc disorders are degenerative or traumatic conditions affecting the spine (Wheeler, 2007). Meucci et al. (2015) believe that between 15% and 30% of people globally suffer from LBP, with estimates ranging from 50% to 85%. Last & Hulbert (2009) reported that the United Kingdom had a one-year prevalence of LBP of 49%, whereas it was 35% in the nations of the Nordic. Ferllands (2011) states that the prevalence rates of LBP is 30% and 40% in the Netherlands and Belgium, respectively; 60% of LBP is acknowledged as a work-related illness in Italy, and 40% of LBP cases are recorded in France. Additionally, a cross-sectional study of drivers found that 78% had back discomfort in the preceding year on at least one occasion (Nahar et al., 2012).

Prolapsed Lumbar Intervertebral Disc, one of the most common medical conditions, is a major source of stress on a personal, social, and economical level worldwide (Hoy et al., 2012). Due to the possibility of a brief loss of productivity, significant medical and indirect expenses, or possibly result in lifelong impairment, it has a big socioeconomic influence (Apfel et al. (2010)).

Low back pain (LBP) is the leading cause of long years incapacitated in 86 countries and the second or third leading cause in 67 countries (Vos et al., 2013). In 2010, Hoy et al. anticipated that the global age standardized point prevalence of LBP would be 9.4% (Hoy et al., 2014). Back pain that limits day-to-day activities is extremely prevalent, ranging from 17% to 70% (May & Takasaki, 2014). Incidence of lumbar radiculopathy per year is 83.2 per 100,000 in the overall population, with the incidence being higher in the fifth decade of existence. (Polston, 2007).

Self-reported pain severity was measured using a numerical rating scale (NRS) with the use of an 11 point scale, which goes from 0 (no pain) to 10 (worst pain imaginable), users can determine the typical level of pain in their lower body, looking back at the last three days. The NRS's psychometric characteristics for pain are thought to be quite good (Farrar et al., 2008).

According to the World Health Organization, quality of life (QOL) is a broad concept that includes a person's perception of their physical and mental health, level of

independence, social connections, personal values and beliefs, and interaction with the environment. (Chandra & Ozturk, 2005). A subset of overall QOL called HRQOL that includes those aspects of QOL that are directly connected to a person's health and perhaps the intention behind a treatment approach. It's received a lot of focus in the fields of medicine and related health. Some have proposed that employing a method for capturing the social and personal context of a good health (Bowling, 1995). When choosing how to treat a patient, health Professionals regularly assess each other's quality of life (Manara et al., 1998), and effective treatment for a life-threatening ailment is frequently decided upon based on the professional assessment of the predicted quality of life (Pellegrino et al. (2000). To describe the illness natural course and evaluate therapy. It is essential to consider efficacy and create a suitable health and disability policy to evaluate the QOL and disability status of individuals with LBP.

An evaluation of all aspects of a person's quality of life should be included because, chronic pain negatively affects quality of life (Breivik et al., 2006). Proper evaluation, proper pain management, and adequate pain assessment both clinical and research settings, necessitates understanding the pain features and effects on each chronic pain condition's quality of life.

1.2 Rationale

PLID, the most prevalent musculoskeletal condition is influenced by an individual's QOL, disability, and kinesiophobia. Many people visit CRP to receive treatment for LBP, but patient-related factors sometimes prevent treatment goals from being achieved life quality. As a physiotherapy final year student, my area of focus was asses the PLID patients' pain, disability, kinesiophobia, and quality of life. Because the patient's daily activities have a significant impact on their low back pain, the term "quality of life" needs to be defined in this context. LBP has an impact on a patient's daily activities, mobility, personal hygiene, and emotional state. For the most part, these things can positively alter the course of treatment. This study gives physiotherapists some ideas about the QOL, disability, and kinesiophobia level in PLID patients. This notion assist in creating a treatment plan based on the needs of the patient. We are able to offer superior therapy in addition to providing patients with crucial guidance. Being a medical professional, it enhances our understanding. Patients gained information regarding their illness and lifestyle that may or may not affect their mobility, personal hygiene, daily activities and mental health as a result of this study. Based on practical data gathered from patients visiting the hospital for the treatment based on my survey results. I had established the connection between this data and make some conclusions that we could apply later. Since this type of research has never been conducted in Bangladesh previously, it will be a valuable tool for physiotherapists and other medical practitioners to quickly analyze treatment efficacy and determine whether or not therapy is producing faster results. There isn't an alternative to conducting the research professionally to develop the profession. Nevertheless, in order to complete my fourth year B. Sc. in Physiotherapy, I must do a studies that fulfill the professional body of interest that I find interesting.

1.3 Research Question

What are the associations between pain, kinesiophobia, disability and quality of life among patients with Prolapsed Lumbar Intervertebral Disc (PLID)?

1.4 Aim

To find out the problems in daily activities among the patients with prolapsed lumbar intervertebral disc (PLID).

1.5 Objectives

1.5.1 General objective

To determine the pain, disability, kinesiophobia and quality of life among PLID patients in Bangladesh.

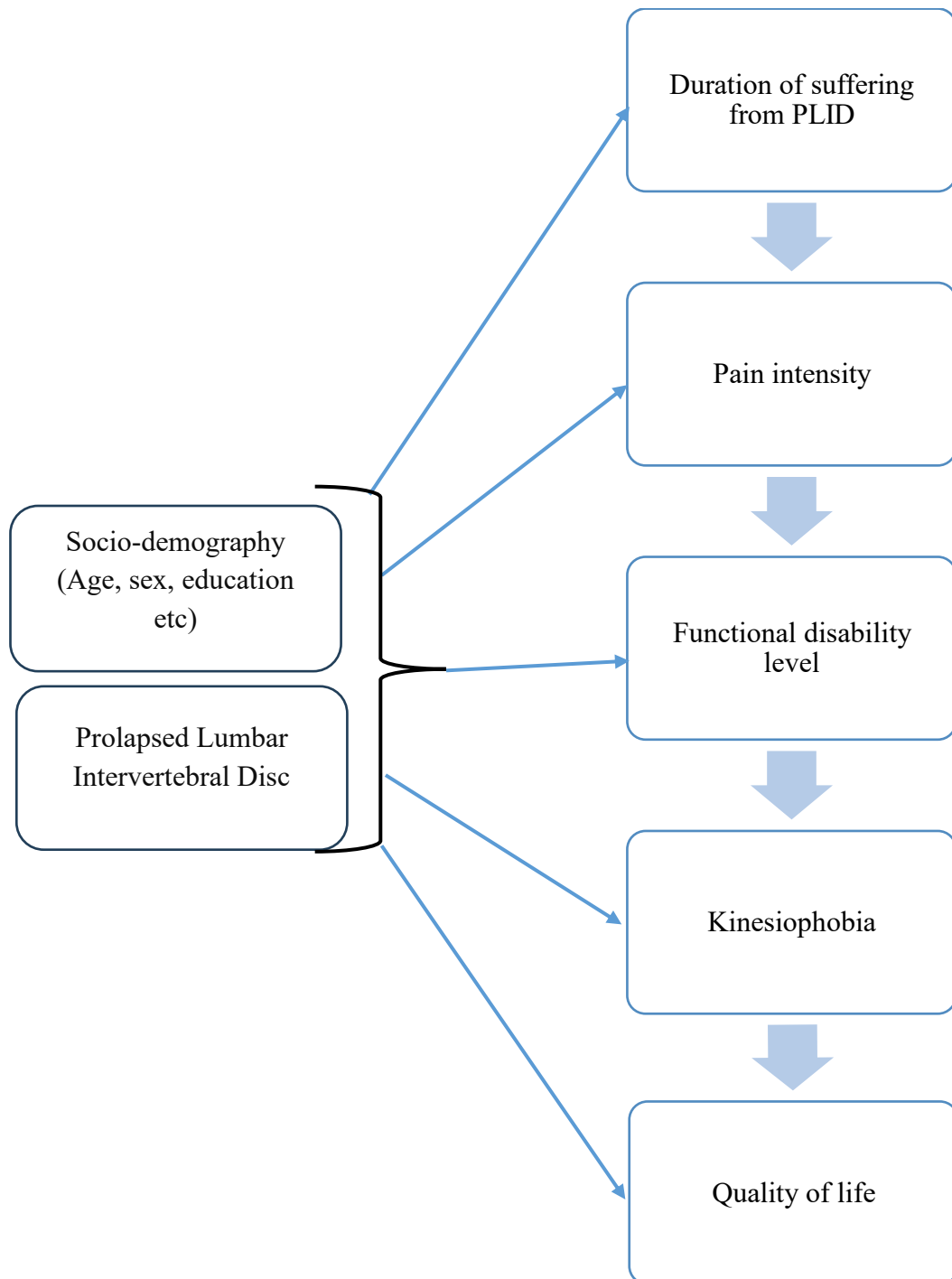
1.5.2 Specific objectives

- To find out the socio-demographic (age, gender, residential area and occupation) information.
- To understand the severity of current pain among the participants of prolapse lumbar intervertebral disc (PLID).
- To identify the level of disability of the PLID patients.
- To find out about the kinesiophobia of PLID patients.
- To explore the rate of functional limitations among the participants prolapse lumbar intervertebral disc (PLID).

1.5.3 Conceptual framework:

Dependent Variable

Independent Variable



1.6 Operational definition

Pain: Pain is an uncomfortable feeling that can vary from slight, localized discomfort to intense suffering. It involves both physical and emotional aspects. Physically, pain arises from the stimulation of nerves. It can be limited to a specific spot, such as with an injury, or spread more widely, as seen in conditions like fibromyalgia.

Disability: A disability is a physical or mental condition (impairment) that makes it harder for a person to perform specific tasks (activity limitation) and engage with their surroundings (participation restrictions).

Kinesiophobia: It's quite common for individuals in pain to shy away from rehabilitation exercises to avoid the discomfort they cause, but when this avoidance becomes excessive and harmful, it is known as kinesiophobia.

Quality of life: Quality of life (QOL) refers to the overall well-being of individuals and communities. According to the World Health Organization (WHO), it is defined as a person's view of their position in life within the cultural and value systems they live in, considering their goals, expectations, standards, and concerns. Common measures of quality of life include factors like wealth, employment, environment, physical and mental health, education, leisure activities, social connections, religious beliefs, safety, security, and personal freedom. QOL is relevant across many areas, such as international development, healthcare, politics, and the workplace.

PLID: Prolapsed Lumbar Intervertebral Disc (PLID) is a medical condition of the lower spine where a tear in the outer fibrous layer (annulus fibrosus) of an intervertebral disc allows the soft inner core (nucleus pulposus) to protrude beyond the damaged outer layer.

Low back musculoskeletal pain disorders have become a major health concern among the global working population today (Hoy et al., 2012). Balague et al. (2012) reported that 84% of individuals will experience low back pain at some point in their lives, with 23% developing chronic low back pain and 11–12% becoming disabled by it. Research indicates that low back pain is the second leading cause of disability in the United States and a frequent reason for missed workdays. It has been found that low back musculoskeletal pain results in the loss of over 149 million workdays annually and imposes a significant financial burden on sufferers, with annual costs estimated between \$100 and \$200 billion in Western countries (Freburger et al., 2009).

The structure of the lower back includes the vertebral bodies (spinal bones), intervertebral discs (cushions between the bones), cartilage (which covers the ends of bones at joints), and supporting elements like muscles, tendons (which link muscle to bone), and ligaments (which connect bone to bone) (Integrative Pain Medicine, 2012). Patients suffering from persistent back pain and degenerative disc disease (DDD) have several treatment options available. Interbody fusion techniques take advantage of the disc space at the front of the spine, offering benefits such as a broad area for fusion, good blood supply, and compression of grafts (Truumees et al., 2008). Low back pain (LBP) has been linked to various MRI findings in the spine, with the most consistent associations being disc herniation (protrusion or worse), nerve root compression or displacement, disc degeneration, and high-intensity zones (HIZ). However, it is important to note that these abnormalities can also be present without symptoms, and many individuals experiencing back pain show no clear issues on MRI scans (Shambrook et al., 2011).

The most common causes of low back pain include injuries or overuse of muscles, ligaments, and joints; pressure on spinal nerve roots (often due to a herniated disc, repeated movements or vibrations from sports or machinery use, or improper lifting techniques); and osteoarthritis affecting the small spinal joints, particularly in older adults. Other contributing factors include spondylolisthesis, vertebral fractures, and spinal stenosis (Integrative Pain Medicine, 2012). Spinal abnormalities like severe scoliosis or kyphosis can also lead to low back pain.

Lumbar disc herniation poses medical, social, and financial challenges. It affects individuals across all age groups but is often diagnosed in young adults. Epidemiological studies show an incidence rate of about 30%, with cases increasing after age 30 and peaking between 55 and 64 years (Zhelev, 2012). Notably, CT scans have revealed that 50% of people over 40 without symptoms still show signs of ruptured discs, spinal stenosis, and other degenerative changes. By 2014, official data indicated that approximately 5% of men and 2.5% of women had been diagnosed with advanced herniated discs, with these rates continuing to rise (Kasnakova et al., 2018).

Lumbar spine disc herniation, also known as disc prolapse, is a common condition that leads to pain, physical limitations, and sometimes disability. It most frequently occurs in adults between the ages of 30 and 50, with a male-to-female ratio of 2:1 (Jordan et al., 2008). Although herniation is most often seen in individuals in their fourth and fifth decades of life (with an average age of 37 years), research shows it can affect people of any age, with a prevalence of 4.8% in men over 35 and 2.5% in women of the same age group (Islam, 2019). Various studies report that the prevalence of low back pain (LBP) in the general population ranges from 12% to 33% at any point, with lifetime prevalence reaching as high as 84% (Kashani et al., 2013). Additionally, one study found that the average age for a first episode of LBP is 37, and 76% of individuals had a prior history of low back pain within the past ten years (Carvalho et al., 2013).

PLID is one of the leading causes of impairment among working individuals. "Disability" is defined as restricted functioning, encompassing both "limitations in activity" and "restrictions in participation in daily life." PLID is often associated with varying degrees of disability, which may be either temporary or permanent (Waddell, 2013). The focus of the International Classification of Functioning, Disability, and Health has shifted toward activities and the limitations people experience when performing them. These limitations arise when there is either a qualitative or quantitative change in how activities are carried out. "Difficulty" includes all the factors that impact the completion of a task. Based on the duration of PLID, acute pain is classified as lasting up to 7 days, sub-acute pain lasts between 7 days and 7 weeks, and chronic pain persists beyond 7 weeks. In cases of adult back pain, which typically follows a fluctuating pattern over a lifetime, a diagnosis of acute low back pain (LBP) can be made if the patient experiences episodes of pain separated by at least three months without pain.

The lumbar spine consists of five vertebrae, with intervertebral discs positioned between each pair. These discs are crucial for the spine's overall function. Movements allowed between the vertebral bodies include: (1) translational motion along the spine's long axis, (2) rotational motion around a vertical axis, (3) forward and backward bending (antero-posterior), and (4) side-to-side bending (lateral bending). The orientation of the zygapophyseal joints from L1 to L4 serves to limit both lateral flexion and rotational movements (Srivastava et al., 2013).

Rotation range of motion in the lumbar spine is reduced when the spine is flexed compared to when it is in a neutral position. The orientation of the lumbar zygapophyseal joints supports movements of forward flexion and backward extension. Although flexion occurs throughout the lumbar vertebrae, it is most pronounced at the lumbosacral joint. Typically, the range of flexion is about 80 degrees at L1/L2, 90 degrees at L2/L3, and 120 degrees at both L3/L4 and L5/S1 levels (Srivastava et al., 2013).

The primary treatment for back pain typically involves medication, with non-steroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, and narcotic analgesics being the most commonly used. In a study involving primary care patients with Prolapsed Lumbar Intervertebral Disc (PLID), 69% received NSAIDs, 35% were prescribed muscle relaxants, 12% were given opioids, and 4% received acetaminophen, while 20% were not prescribed any medication. According to guidelines, paracetamol is recommended as the first-line treatment for acute PLID pain, with NSAIDs as the second option. If pain relief is inadequate with paracetamol or NSAIDs, a short course of muscle relaxants, either alone or combined with NSAIDs, may be considered (Tulder et al., 2011).

Exercise therapy for Prolapsed Lumbar Intervertebral Disc (PLID) is defined as any program requiring participants to perform repeated voluntary dynamic movements or static muscle contractions, either targeting the whole body or specific regions, with or without added resistance, during therapy sessions. These activities were expected to be supervised or formally prescribed (Koes et al., 2010). A recent analysis of systematic reviews provided strong evidence that exercise programs can effectively reduce pain and disability in individuals with non-specific PLID (Swinkels et al., 2009).

Prolapsed Lumbar Intervertebral Disc (PLID) refers to pain located in the lumbosacral region of the spine, extending from the first lumbar vertebra to the first sacral vertebra, an area characterized by the presence of the lordotic curve (Phansopkar & Kage, 2014).

It is recognized as one of the most widespread health complaints globally. According to Rhon and Fritz (2015), low back pain (LBP) ranks among the top ten diseases contributing to the global burden of disease. In Bangladesh, chronic back pain affects over 20% of individuals aged 30 to 60 each year, significantly impacting their health, work capacity, and daily activities. In the United Kingdom, back pain stands as the leading cause of disability and impairment in performing everyday tasks.

Throughout their lives, between 60% and 80% of the global population experiences at least one episode of Prolapsed Lumbar Intervertebral Disc (PLID). Each year, approximately 45% to 55% of adults develop PLID. Moreover, about 62% of individuals who have previously suffered from low back pain (LBP) continue to experience pain one year later. This condition can significantly lower quality of life and reduce physical activity levels, ranking among the four leading causes of disability. Functional impairment associated with LBP is a major concern, affecting people across all age groups—from young children to older adults—and remains a frequent reason for seeking medical care (Fatima, 2016).

Low back pain affects a large portion of the population, impacting not only physical and mental health but also overall well-being. It significantly influences work productivity and social responsibilities, including family life, and has become a major contributor to increasing healthcare costs. A global survey reported that the prevalence of low back pain among adults is approximately 12% at any given time, with a one-month prevalence of 23%, a one-year prevalence of 38%, and a lifetime prevalence nearing 40%. As the global population ages, the number of individuals suffering from low back pain is expected to rise substantially (Manchikanti et al., 2014). This comprehensive review was undertaken to evaluate the growing prevalence of low back pain, the influence of comorbid conditions, and the associated increase in healthcare costs. Based on 18 reviewed publications, it appears that both the occurrence of low back pain and the range of management strategies are steadily increasing. Risk factors linked to low back pain include mental health disorders, obesity, smoking, physical inactivity, advancing age, and certain lifestyle habits. Although it is generally believed that 80% to 90% of low back pain cases resolve within about six weeks—regardless of the treatment approach—this understanding has been challenged, as the condition often recurs, with many patients experiencing multiple episodes over the years (Manchikanti et al., 2014).

The impact of low back pain extends beyond workers, affecting both industry and society as a whole. Individuals with low back pain experience significantly lower quality of life in various domains compared to workers without the condition. In addition to a decline in physical quality of life, these workers report higher levels of mental health issues. A study of 451 blue-collar workers revealed that 44.2% experienced low back pain after one year. Low back pain (LBP) is one of the leading causes of disability worldwide, affecting an estimated 651 million people between 1990 and 2013. Chronic LBP can lead to depression, anxiety, sleep disturbances, and other psychological issues (Singh et al., 2018).

The focus of the International Classification of Functioning, Disability, and Health (ICF) has shifted toward activity and the limitations individuals face in performing tasks. This refers to challenges encountered when there is a qualitative or quantitative change in how activities are carried out. "Difficulty" encompasses all factors that can affect how an activity is completed (WHO, 2009).

While low back pain (LBP) has been widely studied in adults, its exact causes remain unclear. Evidence suggests that multiple factors contribute to the development of LBP. In a study examining workplace lifting, both the weight of the load (OR 1.41 [95% CI 1.05–1.18] per 10 kg lifted) and the frequency of lifts (OR 1.41 [1.03–1.15] per ten lifts per day) were identified as factors that increase pain. Other factors such as smoking (OR 1.41 [1.16–1.45]) (Coenen et al., 2016), obesity (OR 1.41 [1.22–1.92]) (Shiri et al., 2016), and depressive symptoms (OR 1.41 [1.26–2.01]) (Pinheiro et al., 2016) were also found to raise the risk of LBP.

Personal satisfaction is measured through various individual attributes, including confidence, coping style, sense of control (such as perceived rights, human rights, and conditions), and financial status. These factors are part of the broader framework of well-being, which includes physical, emotional, and intellectual health, as well as social well-being, which refers to people's perceptions of their relationships and social roles in life. The study of personal satisfaction focuses on how it influences life's quality and meaning, as well as individuals' overall happiness and sense of achievement (Soh et al., 2011).

The Tampa Scale of Kinesiophobia (TSK), designed to assess kinesiophobia, is a valuable tool for physiotherapists treating patients with persistent musculoskeletal pain (Lundberg et al., 2004). The Norwegian version of the TSK is considered a one-dimensional measure of kinesiophobia. Damsgrd et al. (2008) found that the scale was

consistent across different age groups and genders, with similar responses observed in patients with low back pain as well as those with widespread pain, including low back pain. As the first tool to assess fear of movement and potential injury, the TSK has been widely used and translated into various languages. Research has shown that the TSK is effective in detecting clinical changes in patients undergoing rehabilitation after lumbar fusion surgery and those with chronic low back pain (Monticone et al., 2016).

The original Tampa Scale of Kinesiophobia (TSK) consists of 17 items, four of which are reverse-scored (items 4, 8, 12, and 16). The total score is the sum of the patient's responses, with a range from 17 to 68. A higher score indicates a greater fear of movement and potential re-injury. A diagnosis of kinesiophobia is made if the score exceeds 37 (Liu et al., 2021).

The Oswestry Disability Index (ODI) is among the most widely used tools for assessing the functional status of patients with low back pain (LBP). The Oswestry Disability Index (ODI), also referred to as the Oswestry Low Back Pain Disability Questionnaire, is a crucial tool used by researchers and disability assessors to evaluate a patient's level of permanent functional impairment. It is widely regarded as the 'gold standard' among low back pain functional outcome measures (Fairbank JCT & Pynsent PB.,2000).

The Oswestry Disability Index consists of 10 sections: Pain Intensity, Personal Care, Lifting, Walking, Sitting, Standing, Sleeping, Sex Life, Social Life, and Traveling. Each section has 6 statements scored from 0 (no disability) to 5 (maximum disability). Total possible score = 50 (10 sections × 5 maximum points each). The raw score is then doubled to give a percentage. The interpretation of the ODI Questionnaire is 0–20% Minimal disability, 21–40% Moderate disability, 41–60% Severe disability, 61–80% Crippling back pain and 81–100% Either bed-bound or exaggerating symptoms (Davidson M & Keating J.,2001).

A socio-demographic questionnaire is a set of structured items designed to capture key background characteristics of your study participants—things like age, education, occupation, income, living situation, etc. These variables allow you to describe your sample, explore subgroup differences, and control for potential confounders in your analyses (Fowler, F. J. Jr.,2014).

3.1 Study design

An Explanatory Sequential Mixed Method study was conducted using cross sectional survey along with a qualitative design study. An Explanatory Sequential Mixed Method is a mixed-methods research design where a researcher first collects and analyzes quantitative data, and then follows it up with qualitative data collection and analysis. This is Explanatory Sequential Mixed Method research because the researcher first collected quantitative data here. (Creswell & Creswell, 2018).

3.2 Study Settings

Outpatient Musculoskeletal Unit of the Centre for the Rehabilitation of the Paralyzed (CRP), Savar.

3.3 Study population

Peoples who were suffering from Prolapsed lumbar intervertebral disc (PLID) was collected using convenience sampling from Tertiary level rehabilitation hospitals like Centre for the Rehabilitation of the Paralyzed (CRP) Savar.

3.4 Method of sampling

In the study here used convenience sampling technique, considering the inclusion and exclusion criteria.

Convenience Sampling is a non-probability sampling technique where participants are selected based on their easy availability and willingness to take part in a study. Researchers use this method when time, resources, or accessibility are limited. This approach does not involve random selection, so it may not represent the entire population, potentially limiting the generalizability of the findings (Etikan, Musa and Alkassim, 2016).

Key Features:

- Participants are selected because they are easy to access (e.g., students in a classroom, patients in a clinic).
- It is quick, inexpensive, and straightforward.

- It is often used in exploratory research, pilot studies, or early stages of research.

Example:

A researcher standing outside a mall and asking the first 50 people to fill out a survey is using convenience sampling.

Limitations:

- High risk of bias.
- Results may not be generalizable to the broader population.

3.5 Sampling Technique

Finding the appropriate number and type of people taking part in the study is called “sampling” (Hicks, 2009). The study was conducted by using the convenience sampling methods due to the time limitation and as it was the one of the easiest, cheapest and quicker method of sample selection. The researcher used this procedure, because, getting of those samples whose criteria were concerned with the study purpose.

3.6 Sample size

Sample was a group of subjects were selected from population, who were used in a piece of research (Hicks, 2009). A sample was a smaller group taken from the population. Sometimes the sample size might be big and sometimes it may be small, depending on the population and the characteristics of the study.

When the sample frame is finite, The equation of finite population correction in case of cross-sectional study is:

$$n = \frac{z^2 pq}{d^2}$$

$$= \frac{(1.96)^2 \times 0.15 \times 0.85}{(0.05)^2} = 195.92 = 196$$

Here,

Z (confidence interval) = 1.96

P (prevalence) = 15% = 0.15

And, q= (1-p)

= (1-0.15)

= 0.85

The actual sample size was, n= 196.

The actual sample size for this study is calculated as 196. Because this study is part of an academic research effort, and there are time constraints, obtaining a larger number of samples is difficult. Researchers tested 100 patients for this study. 14 patients were eliminated because they did not consent to the recording of their information. Then, 86 participants were evaluated for eligibility. 15 of them were excluded because they did not allow adequate time for data collection. The eventually enrolled 71 participants, with 3 being eliminated due to missing or invalid data. Finally, 68 participants were studied for this study.

3.7 Inclusion criteria of the study

- Patient is being diagnosed PLID by MDT team.
- Age limitation in between 18-56 years.
- Male and female both are included.
- Voluntary participation.
- Patients having or done MRI in lumbar region for back problem.
- First conducting patients.

3.8 Exclusion criteria of the study

- Patient's having fracture of lumbar spine or spondylolisthesis.
- Physically and psychologically unstable patient.
- Patient's having spinal tumor or malignancy or TB in their spine.
- Patients who are not-interested.

3.9 Data collection tools

The tools that needed for the study are-

- Consent paper
- Questionnaire
- Pain related questionnaire
- Disability related questionnaire
- Kinesiophobia related questionnaire (Tampa Scale for Kinesiophobia)
- Quality of life scale
- Paper

- Pen
- File
- Calculator
- Computer
- Printer

3.10 Measurement tools

Pain related questionnaire (Numeric Pain Rating Scale):

The Numeric Pain Rating Scale (NPRS) is one of the most commonly employed tools in health-care research for quantifying pain intensity across different functional postures. Its most familiar variant—the Numeric Pain Rating Scale (NPRS), often simply called the Pain Rating Scale—takes the form of a 10 cm horizontal line anchored at each end by descriptors representing the extremes of pain (e.g., “no pain” = 0 and “worst imaginable pain” = 10). Patients indicate their current pain by marking a point along this line, producing a score from 0 to 10, where higher scores reflect greater pain severity (Bowling, 2007).

Disability related questionnaire (Oswestry Disability Index):

The Oswestry Disability Index consists of 10 sections: Pain Intensity, Personal Care, Lifting, Walking, Sitting, Standing, Sleeping, Sex Life, Social Life, and Traveling. Each section has 6 statements scored from 0 (no disability) to 5 (maximum disability). Total possible score = 50 (10 sections × 5 maximum points each). The raw score is then doubled to give a percentage. The interpretation of the ODI Questionnaire is 0–20% Minimal disability, 21–40% Moderate disability, 41–60% Severe disability, 61–80% Crippling back pain and 81–100% Either bed-bound or exaggerating symptoms (Davidson M & Keating J.,2001).

Kinesiophobia related questionnaire (Tampa scale for kinesiophobia):

The Tampa Scale for Kinesiophobia (TSK) is a 17-item, self-administered questionnaire that employs a 4-point Likert format to assess an individual’s fear of movement or re-injury. Its developers define kinesiophobia as “an irrational and debilitating fear of physical movement and activity resulting from a feeling of vulnerability to painful injury or re-injury” (Kori et al., 1990). Drawing on the fear-

avoidance model, the TSK evaluates worries about work-related activities, general movement, and the possibility of re-injury (Vlaeyen et al., 1995), and it has also been associated with catastrophic pain-related thoughts (Burwinkle et al., 2005). Clinicians and researchers often use it to identify unhelpful beliefs and attitudes toward pain in individuals suffering from chronic pain conditions such as fibromyalgia.

Socio-demographic questionnaire:

A socio-demographic questionnaire is a set of structured items designed to capture key background characteristics of your study participants—things like age, education, occupation, income, living situation, etc. These variables allow you to describe your sample, explore subgroup differences, and control for potential confounders in your analyses (Fowler, F. J. Jr.,2014).

3.11 Data collection procedure

At the very beginning researcher clarified that, the participant had the right to refuse to answer of any question during completing questionnaire. They could withdraw from the study at any time. Researcher also clarified to all participants about the aim of the study. Participants had ensured that any personal information would not be published anywhere. Researcher took permission from each volunteer participant by using a written consent form. After getting consent from the participants, standard questionnaire was used to identify the complain and collect demographic information. Questions were asked according to the Bangla format. For conducting the interview, the researcher conducted a face-to-face interview and asked questions. Physical environment was considered strictly. Stimuli that could distract interviewee were removed to ensure adequate attention of interview. Interviewee was asked questions alone as much as possible with consent as sometimes close relatives can guide answer for them. The researcher built a rapport and clarified questions during the interview. Face to face interviews were the most effective way to get full cooperation of the participant in a survey. Face to face interviews were also effective to describe characteristics of a population. Face to face interviews was used to find specific data which describes the population descriptively during discussion. According to the participants' understanding level, sometimes the questions were described in the native

language so that the patients can understand the questions perfectly and answer accurately. All the data were collected by the researcher own to avoid the errors.

3.12 Data Analysis

Descriptive statistics were used to analyze data. Descriptive statistics encompass the techniques used to summarize and present a dataset by emphasizing its most salient features (Hicks, 2009). Data were analyzed with the software named Statistical Package for the Social Science (SPSS) version 25.0. The variables were labeled in a list and the researcher established a computer-based data definition record file that consist of a list of variables in order. The researcher put the name of the variables in the variable view of SPSS and defined the types, values, decimal, label alignment and measurement level of data. The next step was cleaning new data files to check the inputted data set to ensure that all data has been accurately transcribed from the questionnaire sheet to the SPSS data view. Then the raw data were ready for analysis in SPSS. Data were collected on frequency and contingency tables. Measurements of central tendency were carried out using the mean plus standard deviation (SD) for variables. For the study of the association of numeric variables chi squared test were used.

Data were analyzed by descriptive statistics and calculated as percentages and presented by using table, bar graph, pie charts etc. Microsoft Office Excel 2025 was used to decorating the bar graph and pie charts. The results of this study were consisted of quantitative data. By this study a lot of information was collected.

3.13 Inform consent

Verbal and written inform consent will take from every patient. And ensure every patient that they can leave any time during data collection, & it was ensured that participants were not influence by data collector. The researcher strictly maintained the confidentiality regarding participant's condition and treatments. The study was conducted in a clean and systematic way. Every subject had the opportunity to discuss their problem with the senior authority or administration of CRP and have any questioned answer to their satisfaction.

3.14 Ethical consideration

The ethical guideline of WHO (World Health Organization), IRB (Institutional Review Board) & BMRC (Bangladesh Medical Research Council) was strictly followed. The research proposal was submitted to the ethical review committee of Bangladesh Health Professions Institute (BHPI) for approval and to CRP's ethical committee for getting permission for data collection. After the proposal was approved to carry on with the study, the researcher had moved the study. Researcher takes concern of participants prior to collect interview who are interested to participate in the study. Before starting the interview, signatures obtained from each participant on a Bangla consent form. It is clearly explained to the participants that their information may be publishing, but their name and address not be connecting with the research study. It informed that the participant has the right to withdraw the study any time if he or she would want to. In that consent form, the researcher committed to the participant about confidentiality, participant's right and potential benefits of the study that is all informed to the participant during interview. All the participants gave their consent to participate in the interview. Before participating in the study, the researcher had provided them a written consent form to sign. The researcher had also signed in the consent form. Only the investigator had access of that information. The raw data destroyed after the completion of the research & all the data on computer file were deleted. Considering all those ethical norms & values no ethical problems arises as there were some personal & sensitive questions. The participants were informed that they have the right to withdraw consent & discontinue participation at any time without any prejudice.

4.1 Socio-Demographics percentage of the Participants:

4.1.1 Occupation of the participants

The bar graph illustrates the professions of Prolapsed Lumbar Intervertebral Disc (PLID) patients. Among them 7.40% were farmer, 2.90% were day laborer, 8.80% were garment worker, 14.70% were businessman, 5.90% were teacher, 13.20% were Students, 1.50% were driver, 13.20% were employed, 26.50% were housewife and 5.90% were other occupations.

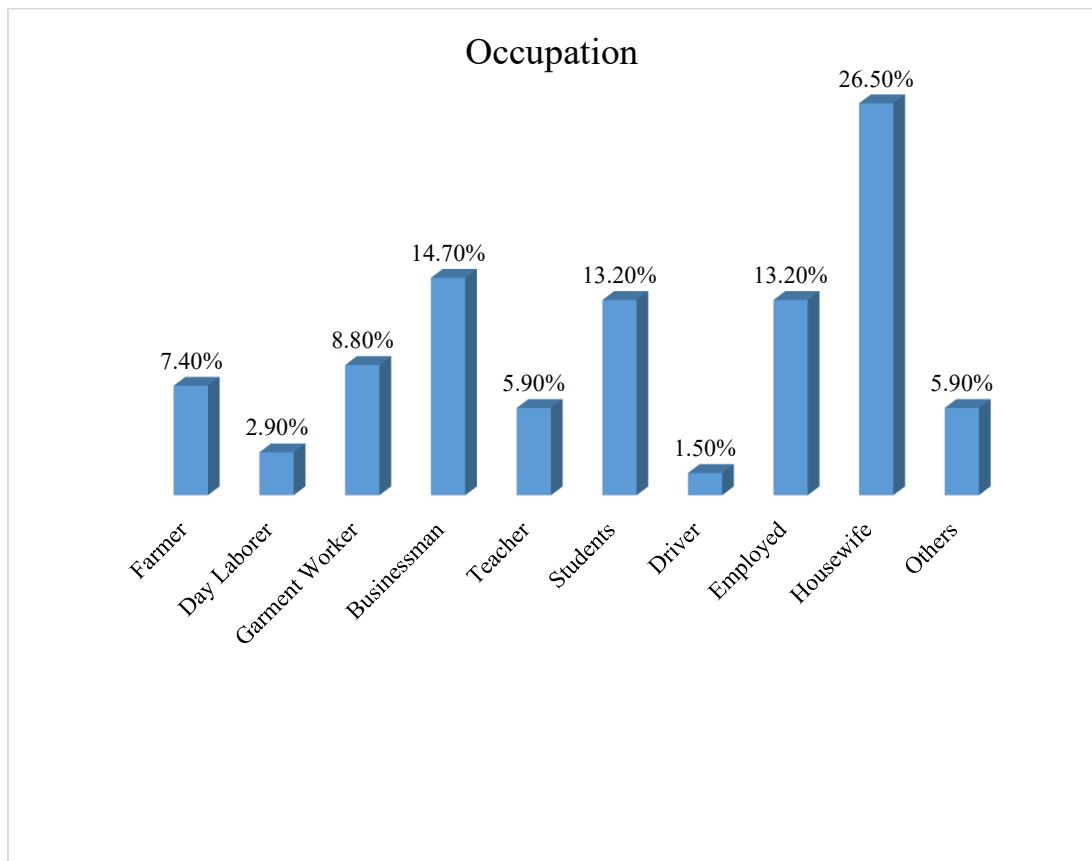


Figure 1: Occupation of the participants

4.1.2 Sex of the participants

The pie chart displays the gender distribution of study participants, highlighting a significant male predominance. 61.80% of the participants are male, illustrated by the bigger blue portion, whilst females account for 38.20%, indicated by the smaller orange portion. This signifies a markedly greater representation of males in the study relative to females.

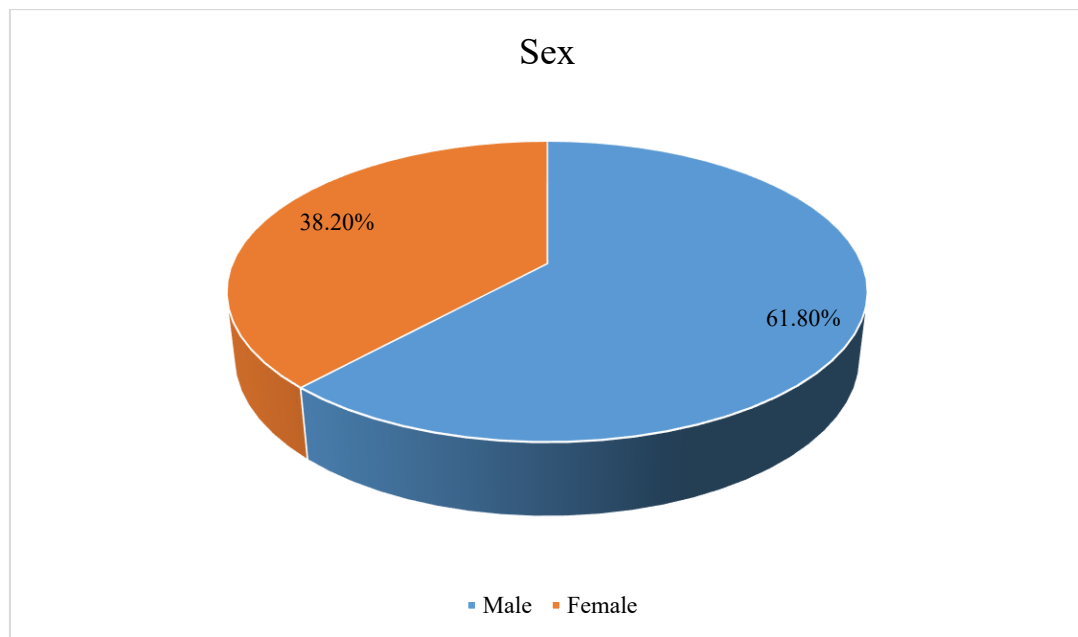


Figure 2: Sex of the participants

4.1.3 Marital Status of the participants

The pie chart illustrates the distribution of marital status across PLID patients. A majority of patients (82.40%) are married, whilst a minority (17.60%) are unmarried. The figure clearly illustrates the preponderance of married individuals in this patient group, indicating potential implications for social support systems and caregiver dynamics pertinent to their rehabilitation or long-term care.

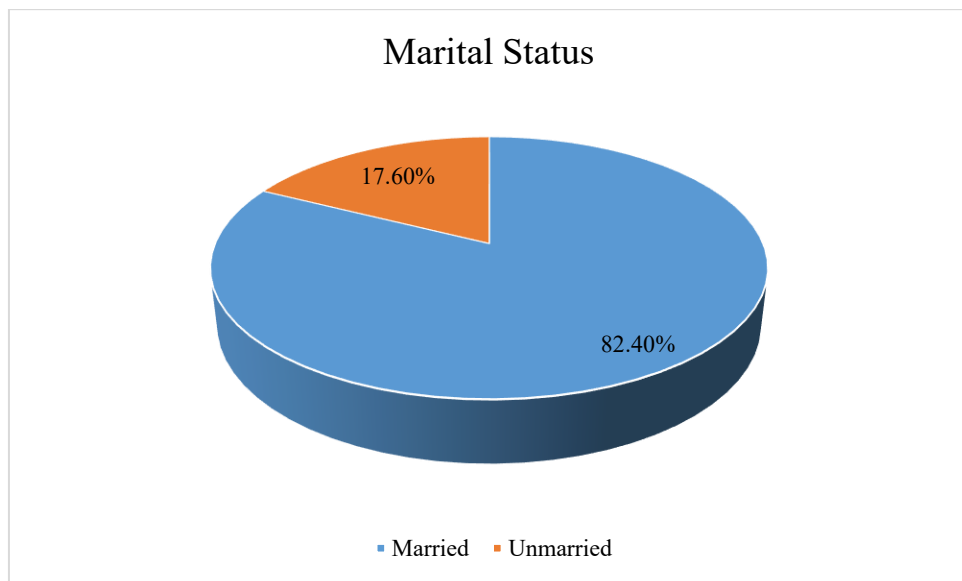


Figure 3; Marital Status of the participants

4.1.4 Religion of the participants

The pie chart displays the religion of study participants, highlighting a significant Muslim predominance. 94.10% of the participants are Muslim, illustrated by the bigger blue portion, whilst Hindu account for 5.90%%, indicated by the smaller orange portion. This signifies a markedly greater representation of Muslim in the study relative to Hindu.

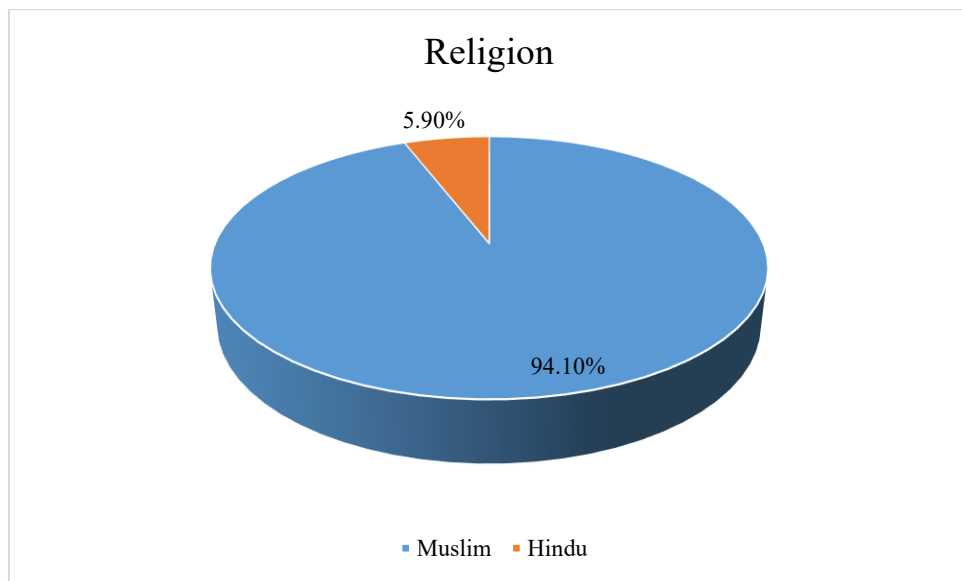


Figure 4: Religion of the participants

4.1.5 Education of the participants

The bar graph illustrates the education of Prolapsed Lumbar Intervertebral Disc (PLID) patients. Among them, 13.20% were illiterate, 11.80% were primary, 20.60% were Middle School completion, 8.80% were high school certificate, 2.9% were intermediate, 26.5% were graduate and 16.2% were professional degree.

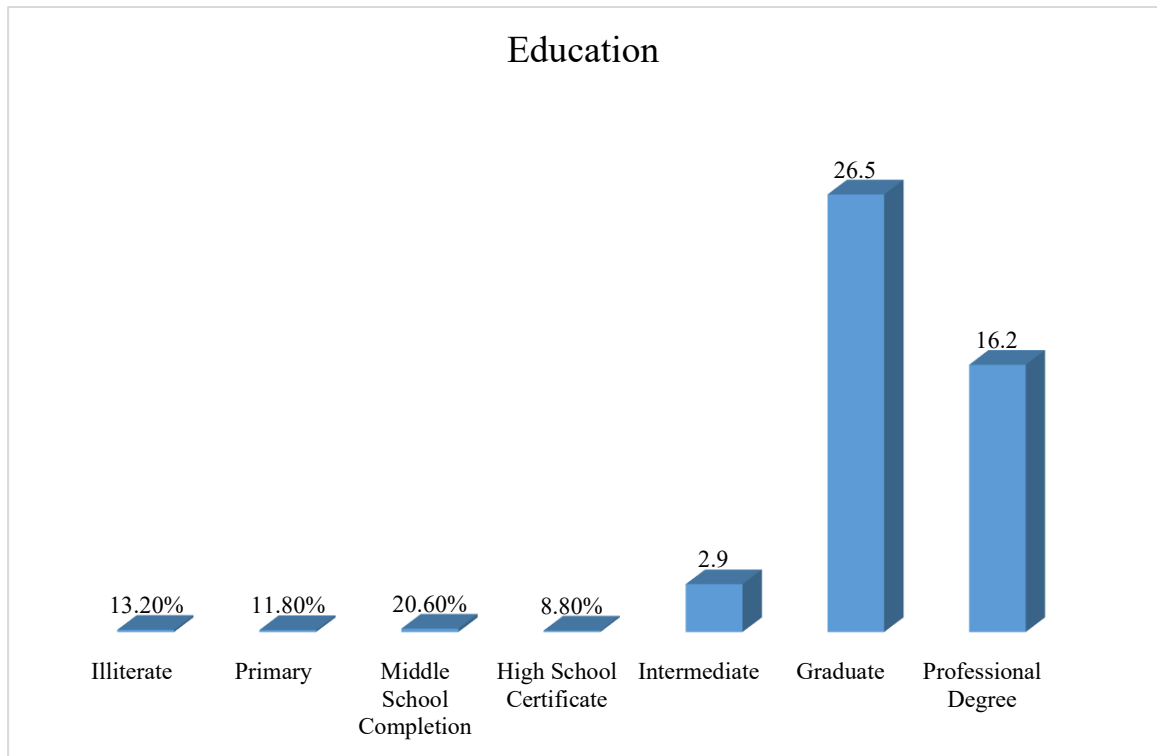


Figure 5: Education of the participants

4.1.6 Residential Area of the participants

The pie chart displays the residential area of study participants. Among them, 51.50% were urban, 4.40% were semi-urban and 44.10% were rural participants. That means the urban participants are suffering from PLID more than the semi-urban and rural area.

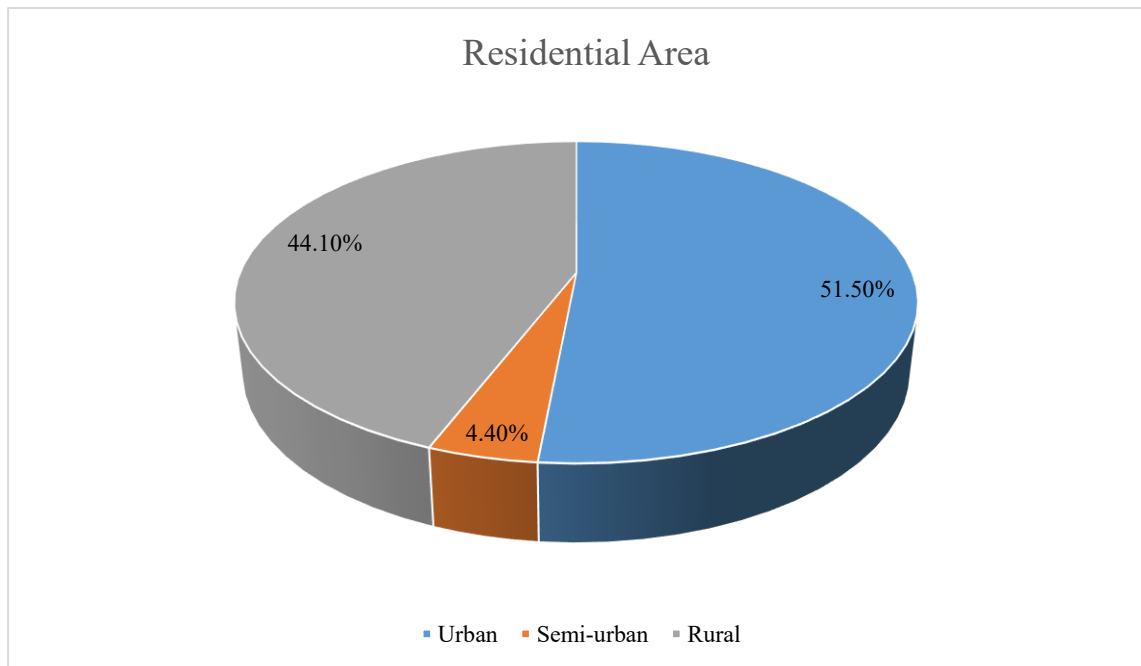


Figure 6: Residential Area of the participants

4.2 Socio demographic information:

Table 1: Socio demographic information of the participants-

Serial No.	Variables	Frequency	Percentage(%)
Sex	Male	42	61.8%
	Female	26	38.2%
Occupation	Farmer	5	7.4%
	Day Laborer	2	2.9%
	Garment Worker	6	8.8%
	Businessman	10	14.7%
	Teacher	4	5.9%
	Students	9	13.2%
	Driver	1	1.5%
	Employed	9	13.2%
	Housewife	18	26.5%
	Others	4	5.9%
Marital Status	Married	56	82.4%
	Unmarried	12	17.6%
Religion	Muslim	64	94.1%
	Hindu	4	5.9%
Education	Illiterate	9	13.2%
	Primary	8	11.8%
	Middle School		
	Completion	14	20.6%
	High School		
	Certificate	6	8.8%
	Intermediate	2	2.9%
	Graduate	18	26.5%
	Professional Degree	11	16.2%
Residential Area	Urban	35	51.5%
	Semi-urban	3	4.4%
	Rural	30	44.1%

In Table- 1: Among the 196 participants, 61.80% was male and 38.20% was female participants. In Table- 1: Among the 246 participants, 7.4% were Farmer, 8.8% were Garments worker, 2.9% were Day laborer, 1.5% were Driver, 14.7% were Businessmen 3.3% (n=10) were Retired, 13.2% were Students, 5.9% were Teacher, 26.5% were House wife, 13.2% were employed and 5.9% were others occupation. In Table- 1: Among the 246 participants, 82.4% were married, 17.6% were unmarried. In Table- 1: Among the 246 participants, 94.1% were Muslim and 5.9% were Hindu. In Table- 1: Among the 246 participants, 13.2% were Illiterate, 11.8% were Primary, 20.6% were Middle School Completion, 8.8% were High School Certificate, 26.5% were Graduate, 2.9% were intermediate and 16.2% were professional degree participants. In Table- 1: Among the 246 participants, 44.1% were in Rural area, 4.4% were in Semiurban area and 51.5% were in Urban area.

4.2.1 Information of kinesiophobia:

Table 2: Tampa scale for kinesiophobia:

Serial no.	Variable	Frequency	Percentage% (n)
1. I'm afraid that I might injure myself if I exercise	strongly disagree	4	5.9% (n=4)
	disagree	15	22.1% (n=15)
	agree	13	19.1% (n=13)
	strongly agree	36	52.9% (n=36)
2. If I were to try to overcome it, my pain would increase	strongly disagree	2	2.9% (n=2)
	disagree	23	33.8% (n=23)
	agree	34	50.0% (n=34)
	strongly agree	9	13.2% (n=9)
3. My body is telling me I have something dangerously wrong	strongly disagree	12	17.6% (n=12)
	disagree	30	44.1% (n=30)
	agree	20	29.4% (n=20)
	strongly agree	6	8.8% (n=6)
4. My pain would probably be relieved if I were to exercise	strongly disagree	3	4.4% (n=3)
	disagree	8	11.8% (n=8)
	agree	36	52.9% (n=36)
	strongly agree	21	30.9% (n=21)
5. People aren't taking my medical condition seriously enough	strongly disagree	42	61.8% (n=42)
	disagree	13	19.1% (n=13)
	agree	6	8.8% (n=6)
	strongly agree	7	10.3% (n=7)
6. My accident has put my body at risk for the rest of my life	strongly disagree	1	1.5% (n=1)
	disagree	2	2.9% (n=2)
	agree	17	25.0% (n=17)
	strongly agree	48	70.6% (n=48)

7. Pain always means I have injured my body	strongly disagree	8	11.8% (n=8)
	disagree	32	47.1% (n=32)
	agree	23	33.8% (n=23)
	strongly agree	5	7.4% (n=5)
8. Just because something aggravates my pain does not mean it is dangerous	strongly disagree	12	17.6% (n=12)
	disagree	25	36.8% (n=25)
	agree	26	38.2% (n=26)
	strongly agree	5	7.4% (n=5)
9. I am afraid that I might injure myself accidentally	strongly disagree	2	2.9% (n=2)
	disagree	3	4.4% (n=3)
	agree	16	23.5% (n=16)
	strongly agree	47	69.1% (n=47)
10. Simply being careful that I do not make any unnecessary movements is the safest thing I can do to prevent my pain from worsening	strongly disagree	1	1.5% (n=1)
	disagree	2	2.9% (n=2)
	agree	14	20.6% n=14)
	strongly agree	51	75.0% (n=51)
11. I wouldn't have this much pain if there weren't something potentially dangerous	strongly disagree	6	8.8% (n=6)
	agree	12	17.6% (n=12)
	strongly agree	50	73.5% (n=50)

going on in my body				
12. Although my condition is painful, I would be better off if I were physically active	strongly disagree	2	2.9% (n=2)	
	agree	16	23.5% (n=16)	
	strongly agree	50	73.5% (n=50)	
13. Pain lets me know when to stop exercising so that I don't injure myself	strongly disagree	11	16.2% (n=11)	
	agree	39	57.4% (n=39)	
	strongly agree	18	26.5% (n=18)	
14. It's really not safe for a person with a condition like mine to be physically active	strongly disagree	3	4.4% (n=3)	
	disagree	11	16.2% (n=11)	
	agree	6	8.8% (n=6)	
	strongly agree	48	70.6% (n=48)	
15. I can't do all the things normal people do because it's too easy for me to get injured	strongly disagree	2	2.9% (n=2)	
	disagree	1	1.5% (n=1)	
	agree	17	25.0% (n=17)	
	strongly agree	48	70.6% (n=48)	
16. Even though something is causing me a lot of pain, I	strongly disagree	4	5.9% (n=4)	
	disagree	24	35.3% (n=24)	
	agree	29	42.6% (n=29)	
	strongly agree	11	16.2% (n=11)	

**don't think it's
actually
dangerous**

17. No one should	strongly disagree	6	8.8% (n=6)
have to	disagree	14	20.6% (n=14)
exercise when	agree	11	16.2% (n=11)
he/she is in	strongly agree	37	54.4% (n=37)
pain			

4.3 Association between severity of low back pain along with the Socio-demographic variables:

Table 3: Association between severity of low back pain along with the Socio-demographic variables

	Variable	Chi-Square	df	P-Value
NPRS	Age	0.17	1	0.018*
	Sex	9.21	1	0.002*
	Marital Status	0.042	1	0.024*
	Level of Education	1.97	1	0.160
	Living environment	3.54	1	0.060

This study found significant relationship between age and the Numeric Pain Rating Scale in the back region among participants. The Chi-Square statistic for this association was 0.17, with a P-value of 0.018*, $P < 0.05$ was significant.

This study found significant relationship between sex and the Numeric Pain Rating Scale in the back region among participants. The Chi-Square statistic for this association was 9.21, with a P-value of 0.002*, $P < 0.05$ was significant.

This study found significant relationship between Marital Status and the Numeric Pain Rating Scale in the back region among participants. The Chi-Square statistic for this association was 0.042, with a P-value of 0.024*, $P < 0.05$ was significant.

This study found no significant relationship between Level of Education and the Numeric Pain Rating Scale in the back region among participants. The Chi-Square statistic for this association was 1.97, with a P-value of 0.160. This was not significant. Significant value was $P < 0.05$.

4.4 Theme that emerged from data analysis are given below:

The table describes the interview findings, under different categories. The Yes mark was given only for those columns where the participants spoke about those particular issue and No mark was given where the participants don't spoke about those particular issue. Here P was used to present the participants.

Table 4: Description among the interview findings, under different categories

Participant	Personal Care (washing Clothes, Wearing Cloths)	Weight Lifting	Standing, Sitting, Walking & Sleeping	Sexual Life	Social Life	Travelling
P1	Yes	Yes	Yes	No	No	Yes
P2	No	Yes	Yes	No	No	Yes
P3	No	Yes	Yes	No	No	Yes
P4	Yes	Yes	Yes	No	No	Yes
P5	Yes	Yes	Yes	No	No	No
P6	Yes	Yes	Yes	No	No	Yes
P7	Yes	Yes	Yes	No	Yes	Yes
P8	Yes	Yes	Yes	No	No	Yes
P9	Yes	Yes	Yes	No	No	Yes
P10	Yes	Yes	Yes	No	Yes	Yes
Total: 10	8	10	10	0	2	9

Theme 1: Patients with low back pain faced challenges to do their personal care:

Most of the participants shared their personal care about how they faced challenges to do their personal care like washing, clothing etc. It's not just about the physical challenges; it's also about mental challenges. Personal care refers to the activities and practices that individuals perform to maintain their hygiene, grooming and appearance and to promote their overall health and well-being. This includes tasks like bathing, dressing, grooming such as brushing teeth and hair, using the toilet, skincare and other activities aimed at keeping the body clean and comfortable. Personal care may be self-administrated or provided by caregivers, especially for individuals who may need assistance due to age, illness or disability.

Patients with low back pain need assistance to maintain their personal care. Not all patients but most of the patients need assistance to maintain their personal care. That means they were suffering from acute low back pain.

Among 10 participants, 8 participants were suffering from personal care., these are majority of patients (P1, P4, P5, P6, P7, P8, P9, P10) expressed that they need help during their personal care. Without help they can't do anything. This made them dependent by others. They can't do any activities related with personal care due to their limitations. For this, they became depressed day by day and don't participate any social program.

Low back pain (LBP) significantly affects the ability of individuals to perform personal care tasks, such as washing, wearing clothes and maintaining hygiene. According to the data, 8 out of 10 participants reported difficulties in this area, highlighting the widespread impact of LBP on daily self-care routines. Personal care activities often involve bending, twisting or maintaining certain postures, which can exacerbate pain and limit mobility in individuals with LBP. "During personal care I feel acute pain and pulling sensation in my lower back." (P1). For instance, tasks like putting on socks or wearing lower body parts may require bending forward, a movement that is often painful for those with this condition.

Participants such as P1, P5, P6, P7, P8, P9 and P10 all indicated challenges in personal care, suggesting that the majority struggle with these essential activities. "During personal care I feel acute pain from my lower back to my left leg and tingling sensation in my lower back." (P4). This could be due to the pain and stiffness associated with LBP, which may restrict spinal flexibility and make even simple movements uncomfortable. For example, reaching down to the shoelaces or standing for extended periods while grooming can trigger discomfort, forcing individuals to modify their routines or seek assistance. "During personal care I feel pain, tingling sensation and burning sensation in my lower back and I can't put my leg up for wearing or removing a pant." (P5). The two participants (P2 and P3) who did not report issues might have milder symptoms or have developed adaptive strategies, such as using long-handled tools to avoid bending. "There was no effect on my personal care. I can do my personal care very smoothly and comfortably." (P2). "I don't feel any problem in my personal care. I can do my personal care very effectively and fluently." (P3).

The impact of these challenges extends beyond physical limitations, often affecting emotional well-being and independence. Individuals may feel frustrated or embarrassed about their inability to perform basic tasks, leading to a diminished sense of self-efficacy. Over time, reliance on other for help with personal care can strain relationships and contribute to feelings of dependency. Furthermore, the inability to maintain

personal hygiene independently may lead to social withdrawal as individuals might avoid social interactions due to concerns about their appearance or odor. Addressing the challenges requires a multifaceted approach, including pain management, physical therapy to improve mobility and the use of assistive devices to promote independence in personal care tasks.

It became hard to accept their sudden changed circumstances or associated events with it. Even moral virtues like kindness and sympathy are considered disrespectful to them.

Theme 2: Patients with low pain faced difficulties in weight lifting:

Every participant shared their weight lifting experience about how they faced problem during weight lifting. It's not just about the physical challenges; it's also about mental challenges. Weight lifting refers to a form of physical exercise in which a person lifts weight typically using dumbbells, barbells or weight machines to build strength, endurance and muscle mass.

Patients with low back pain face problem in weight lifting. They can't lift heavy weight because of their pain in lower back. So, this limitation hampers their daily activities very badly.

Among 10 participants, all of the participants were suffering from weight lifting., these are majority of patients (P1, P2, P3, P4, P5, P6, P7, P8, P9, P10) expressed that they face problem during weight lifting. "During weight lifting I feel pain and pulling sensation in my lower back." (P1). They can't lift heavy weight because of pain in their lower back. "During weight lifting I feel acute pain in my chest and my lower back. For this, I can't lift heavy weight easily." (P3). This made them immobile. They can't do any weight lifting activities due to their limitations. For this, they became depressed day by day and don't participate any social program.

Weight lifting, whether it involves carrying groceries, lifting children, or handling objects at work, poses a significant challenge for individuals with low back pain. The data reveals that all 10 participants reported difficulties in this area, indicating that weight lifting is universally problematic for those with LBP. This is not surprising, as lifting objects places considerable strain on the lower back, particularly when improper techniques are used or when the spine is already compromised by pain or injury. "During weight lifting I fell pain, pulling sensation, burning sensation and tingling sensation in my lower back and the pain is radiating from lower back to the leg." (P2). The unanimous reporting of difficulties among participants P1 to P10 underscores the biomechanical stress that weight lifting imposes on the lumbar region. When lifting, the lower back muscles and spinal structures must stabilize the body while supporting the additional load, which can exacerbate existing pain or lead to further injury. For individuals with LBP, even light objects may feel unbearable if their condition has weakened core muscles or caused inflammation in the spinal area. Additionally, the fear of worsening their pain might lead participants to avoid lifting altogether, further limiting their functionality. "I can't lift weight because I'm afraid of increasing my pain

in lower back and it limits my normal movements and hampers my daily activities.” (P4).

The inability to lift weights can have profound effects on daily life, from restricting participation in household chores to impacting occupational duties. For example, a parent with LBP might struggle to lift their child, leading to emotional distress and a sense of inadequacy. At work, employees may face challenges in roles that require manual handling, potentially affecting their productivity and job security. “I’m afraid of lifting weight because it seems to me that, if I try to lift any weight my pain became more increase and it hamper my sleep.” (P5). Rehabilitation strategies for this issue should focus on strengthening core muscles, teaching proper lifting techniques, and using supportive braces to reduce strain on the lower back during such activities.

It became hard to accept their sudden changed circumstances or associated events with it. Even moral virtues like kindness and sympathy are considered disrespectful to them.

Theme 3: Patients with low back pain faced difficulties in mobility such as standing, sitting, walking and sleeping:

Every participant shared their experience about how they faced problem during standing, sitting, walking and sleeping. It's not just about the physical challenges; it's also about mental challenges. Mobility refers to the ability of a joint or series of joints to move freely and efficiently through a full range of motion without restriction or pain. It involves flexibility, strength and control allowing for smooth and coordinated movements.

In a broader context, mobility can also mean the ability to move or be moved from one place or position to another, but in fitness and health, it specifically focuses on joint function and movement quality.

Among 10 participants, all of the participants were suffering from standing, sitting, walking and sleeping, these are majority of patients (P1, P2, P3, P4, P5, P6, P7, P8, P9, P10) expressed that they face problem during standing, sitting, walking and sleeping. They stand, seat or walk for a long time and face problem in sleeping because of pain in their lower back. This made them immobile. They can't go anywhere specially any long distance due to their limitations. "I can't walk and stand for a long time due to pain in my lower back. If I walk or stand for a long time I feel numb and tingling sensation on my leg." (P1). For this, they became depressed day by day and don't participate any social program.

Mobility challenges, including standing, sitting, walking, and sleeping, are a common struggle for individuals with low back pain, as evidenced by the data. All 10 participants reported difficulties in this category, highlighting the pervasive impact of LBP on fundamental movements and rest. "I can't sleep at night due to pain in my lower back. Due to pain I walk up 3-4 times at night daily." (P2). These activities are essential for daily functioning, and disruptions in mobility can significantly diminish quality of life. "I can't seat for more than 1 minute because of pain in my lower back. If I seat for more than 1 minute I feel burning sensation and numb sensation in my lower back." (P3).

Standing, sitting, and walking all require the spine to support the body's weight and maintain balance, which can be painful for those with LBP. Prolonged standing, for instance, may lead to increased pressure on the lower back, while sitting for long periods can cause stiffness and discomfort, especially if posture is poor. "I can't stand for more than 1 minute due to pain in my lower back. If I stand for more than 1 minute

I feel pain in my lower back and tingling sensation in my leg.” (P5). Walking, which involves repetitive spinal motion, may also aggravate pain, particularly if the individual’s gait has been altered by their condition. “I can’t walk for more than 2 minutes due to pain in my lower back. If I walk for more than 2 minutes I feel burning sensation in my lower back and tingling sensation in my leg.” (P4). Sleeping difficulties, reported by all participants, are likely due to the challenge of finding a comfortable position that does not strain the lower back, as well as pain that disrupts sleep cycles.

The universal reporting of mobility issues among participants P1 to P10 suggests that LBP affects a wide range of movements, making it difficult for individuals to engage in both active and restful states. This can lead to a sedentary lifestyle, which may worsen the condition over time, as well as contribute to secondary health issues like weight gain or muscle atrophy. Sleep disturbances, in particular, can exacerbate pain by preventing the body from recovering during rest, creating a vicious cycle of discomfort and fatigue. Addressing these mobility challenges requires targeted interventions, such as physical therapy to improve posture and movement mechanics, ergonomic adjustments for sitting and standing, and strategies to enhance sleep quality, such as using supportive mattresses or pillows.

It became hard to accept their sudden changed circumstances or associated events with it. Even moral virtues like kindness and sympathy are considered disrespectful to them.

Theme 4: Low back pain and its severity has an impact on the sexual life:

None shared their sexual experience which they faced due to pain in their lower back. It's not just about the physical challenges; it's also about mental challenges. Sexual life refers to the way a person experiences in sexual relationships and activities. It encompasses aspects such as sexual orientation, desires, behaviours, relationship, practices and feelings of sexual satisfaction.

A person's sexual life can include intimate physical and emotional interactions with others, as well as their own personal sexual identity and preferences. It can be influenced by biological, psychological, social, cultural and spiritual factors.

Among 10 participants, no one are talking about their sexual life, because this information is very confidential and they don't want to share this information with anyone.

Low back pain can profoundly affect an individual's sexual life, as indicated by the data, where none of the 10 participants reported difficulties in this area. This unexpected finding suggests that, for this particular group, LBP does not significantly impact sexual activity, which is contrary to common expectations given the physical demands of sexual intercourse. Sexual activity often involves movements such as bending, twisting, or maintaining certain positions, which can be challenging for those with LBP.

The absence of reported difficulties among participants P1 to P10 could be attributed to several factors. It's possible that these individuals have mild LBP that does not interfere with sexual activity, or they may have adapted by choosing positions that minimize strain on the lower back. Additionally, the participants might prioritize intimacy and find ways to manage their pain during sexual activity, such as using pillows for support or taking breaks as needed. However, this result may also reflect underreporting due to the sensitive nature of the topic, as some individuals might feel uncomfortable discussing sexual challenges.

While the data suggests that sexual life is unaffected for these participants, it's worth noting that LBP can still have indirect effects in this area. For instance, chronic pain can lead to fatigue, reduced libido, or emotional strain, all of which can impact intimacy even if physical difficulties are not reported. For individuals who do experience challenges, strategies to mitigate the impact of LBP on sexual life include open communication with partners, exploring pain-friendly positions, and seeking medical

advice for pain management. Further research with a larger sample might reveal a more nuanced picture of how LBP affects sexual relationships.

Theme 5: Low back pain has a negative impact on the social life of the people with low back pain:

Least of the participants shared their social experience about how people treated them and how they felt. It's not just about the physical challenges; it's also about how society sees and treats them. Low back pain has significant social consequences and experiences, which frequently overlap with socioeconomic and existing customs of society. For those who under gone through this life-altering procedure, the effects are not limited to the body; they penetrate every aspect of day-to-day living. Physical impairments, making it more difficult for them to integrate into society and escalating their feelings of discrimination and loneliness.

Among 10 participants, 2 participants were suffering from social life impact, these are minority of patients (P7 and P10) expressed that they faced social barriers. Nobody can feel their problem and neglect them all time. "Nobody can feel my problem and neglect me always." (P7). This made them depressed. For this, they don't participate any social program.

Low back pain can significantly disrupt social life, as demonstrated by the data, where 2 out of 10 participants reported difficulties in this area. Social life encompasses activities such as attending events, spending time with friends and family, and participating in community engagements, all of which can be hindered by the physical and emotional toll of LBP.

The two participants who reported challenges (P7 and P10) likely face barriers to social engagement due to pain, fatigue, or mobility limitations caused by LBP. For example, attending a social gathering might involve prolonged sitting or standing, both of which are difficult for all participants as per the mobility data. Pain can also lead to irritability or mood changes, making social interactions less enjoyable and causing individuals to withdraw from such activities. "During low back pain I can't go to work and maintain my family. For this my family don't care me properly." (P10). The remaining 8 participants who did not report difficulties might have stronger social support systems or less severe symptoms that allow them to maintain their social live.

The impact of LBP on social life can lead to isolation and loneliness, as individuals may decline invitations or avoid activities they once enjoyed. Over time, this withdrawal can strain relationships and reduce overall well-being, as social connections are crucial for mental health. For those affected, strategies to improve social engagement include

acing activities to manage pain, seeking support from loved ones, and exploring low-impact social activities, such as virtual meetups or seated hobbies. Addressing the physical symptoms of LBP through medical treatment and lifestyle changes can also help individuals regain the confidence and ability to participate in social events.

It became hard to accept their sudden changed circumstances or associated events with it. Even moral virtues like kindness and sympathy are considered disrespectful to them.

Theme 6: Low back pain causes difficulties in travelling:

Most of the participants shared their experiences about how they faced challenges during travelling. It's not just about the physical challenges; it's also about mental challenges. Travelling refers to the activity of moving from one place to another, typically over a distance, for purposes such as exploration, leisure, business or personal reasons. It involves the journey itself, which can be done by various means of transportation like walking, driving, flying or taking a train or ship.

In a border sense, travelling often includes the experience of visiting new locations, learning about different cultures and engaging in new activities away from one's usual environment.

Among 10 participants, 9 participants were suffering from travelling, these are majority of patients (P1, P2, P3 P4, P6, P7, P8, P9, P10) expressed that they faced problem during travelling. "I can't travel for a long time because I feel pain in my lower back while sitting for a long time during travelling." (P1). This made them very uncomfortable. They can't travel for a long distance due to their limitations. For this, they became depressed day by day.

Traveling, whether for leisure or necessity, presents significant challenges for individuals with low back pain, as shown by the data, where 9 out of 10 participants reported difficulties. Traveling often involves prolonged sitting, carrying luggage, and navigating unfamiliar environments, all of which can exacerbate LBP and make the experience uncomfortable or even debilitating. "I feel jerking when I travel with a rickshaw and for that I feel pain in my lower back." (P3).

Participants P1, P2, P3, P4, P6, P7, P8, P9, and P10 all indicated challenges in traveling, likely due to the physical demands of such activities. For instance, sitting for long periods in a car or airplane can cause stiffness and pain in the lower back, while carrying heavy luggage aligns with the universal difficulty in weight lifting reported by all participants. "I can't seat for a long time during travelling because I feel tingling and pulling sensation in my lower back." (P2). Walking through airports or tourist destinations can also be taxing, given the mobility issues faced by all participants. "I feel pulling sensation in my lower back during travelling for a long time." (P4). The one participant (P5) who did not report difficulties might have access to accommodations, such as frequent breaks or assistive devices, that mitigate these challenges.

The difficulties in traveling can limit individuals' ability to visit loved ones, explore new places, or fulfill work-related obligations, leading to a reduced quality of life. The stress of managing pain during travel can also detract from the enjoyment of the experience, causing individuals to avoid such activities altogether. To address these challenges, individuals with LBP can plan trips with frequent rest breaks, use ergonomic seating options, and travel with lightweight luggage. "I can't travel in a long distance because I can't seat for more then 5 minutes." (P6). Medical interventions, such as pain relief or physical therapy, can also help improve their capacity to travel comfortably.

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4.5 Association Between the Severity of Pain along with the Kinesiophobia of the movement:

Table 5: Association Between the Severity of Pain along with the Kinesiophobia of the movement

Variable	Kinesio phobia Scale variables	Chi-square value	df	Level of significance
NPRS (Pain severity)	“I am afraid that I might injure myself if I do exercise”	42.11	1	0.03*
	“If I were to try to overcome it, my pain would increase”	32.01	27	0.23
	“My body is telling me I have something dangerously wrong”	42.37	27	0.03*
	“My pain would probably be relieved if I were to exercise”	79.43	27	0.00*
	“People aren’t taking my medical condition seriously enough”	32.86	27	0.20
	“My accident has put my body at risk for the rest of my life”	86.71	27	0.00*
	“Pain always means I have injured my body”	3.12	1	0.07
	“Just because something aggravates my pain does not mean it is dangerous”	3.30	1	0.06
	“I am afraid that I might injure myself accidentally”	27.69	27	0.42

“Simply being careful that I do not make any unnecessary movements is the safest thing I can do to prevent my pain from worsening”	63.19	27	0.00*
“I wouldn’t have this much pain if there weren’t something potentially dangerous going on in my body”	47.14	18	0.00*
“Although my condition is painful, I would be better off if I were physically active”	5.01	1	0.02*
“Pain lets me know when to stop exercising so that I don’t injure myself”	36.64	18	0.01*
“It’s really not safe for a person with a condition like mine to be physically active”	54.54	27	0.00*
“I can’t do all the things normal people do because it’s too easy for me to get injured”	42.99	27	0.02*
“Even though something is causing me a lot of pain, I don’t think it’s actually dangerous”	41.15	27	0.04*
“No one should have to exercise when he/she is in pain”	31.54	27	0.25

The table titled “**Association Between the Severity of Pain along with the Kinesiophobia of the Movement**” presents an analysis of the relationship between pain severity—measured by the Numeric Pain Rating Scale (NPRS)—and various fear-based beliefs from a kinesiophobia scale. This analysis utilizes Chi-square statistical tests to determine whether significant associations exist between the level of pain and different psychological perceptions related to movement and exercise.

Several items in the kinesiophobia scale showed **statistically significant associations** ($p < 0.05$) with pain severity. These include statements such as “I am afraid that I might injure myself if I do exercise” ($p = 0.03$), “My body is telling me I have something dangerously wrong” ($p = 0.03$), and “My pain would probably be relieved if I were to exercise” ($p = 0.00$). Others, such as “My accident has put my body at risk for the rest of my life” ($p = 0.00$) and “Simply being careful that I do not make any unnecessary movements is the safest thing I can do...” ($p = 0.00$), also demonstrated strong correlations. These results indicate that individuals with more intense pain are more likely to hold beliefs that emphasize fear, risk, or danger related to physical activity.

On the other hand, some beliefs did **not show significant associations** with pain severity. These include statements like “If I were to try to overcome it, my pain would increase” ($p = 0.23$), “People aren’t taking my medical condition seriously enough” ($p = 0.20$), and “I am afraid that I might injure myself accidentally” ($p = 0.42$). These findings suggest that not all fear-based beliefs are influenced by the severity of pain, indicating a complex interplay between psychological and physical factors.

In summary, the table provides evidence that **pain severity is significantly linked to several aspects of kinesiophobia**, particularly those that reflect exaggerated or catastrophic beliefs about injury and movement. This highlights the importance of addressing psychological components—such as fear of movement—when managing pain and developing rehabilitation strategies for patients

This mixed-method study investigated the multifaceted challenges associated with daily activities among patients diagnosed with Prolapse Lumbar Intervertebral Disc (PLID), combining both quantitative and qualitative analyses. The findings provide compelling insights into the socio-demographic profile, the psychological burden of kinesiophobia, and the lived experiences related to functional impairments such as mobility, self-care, and social participation. These observations are crucial for clinicians, rehabilitation professionals, and policymakers who aim to develop patient-centered interventions for PLID populations.

Prolapsed Lumbar Intervertebral Disc is among the most common causes of chronic low back pain and is strongly linked with disability in physical functioning, especially in adults of working age (Deyo and Weinstein, 2001). Previous studies have indicated that both biomechanical and psychosocial factors interact to produce a complex picture of disability in such patients (Balagué et al., 2012; Balagué et al., 2021). In this study, the prevalence of functional limitations—particularly in mobility, lifting, and personal care—was pronounced, highlighting the urgent need for multidimensional approaches to care.

Importantly, this study also documented significant associations between pain severity and psychosocial variables such as fear of movement (kinesiophobia), with qualitative findings adding depth to the physical and emotional consequences of PLID. While prior research has focused on pain outcomes or surgical interventions, few have examined how these conditions affect patients' social and emotional lives using both statistical and narrative lenses. Hence, this study provides a richer, more nuanced understanding of PLID's real-world impact.

The socio-demographic findings in this study reveal a broad spectrum of participants, the majority of whom were female (61.8%) and married (82.4%), with a notable portion residing in urban areas (51.5%). These characteristics mirror trends observed in earlier research on low back pain and PLID. For instance, in a large-scale European study by Airaksinen et al. (2006), it was found that women tend to report musculoskeletal pain, including low back pain, more frequently than men, potentially due to both biological and psychosocial differences in pain perception and health-seeking behavior. This gender disparity was further confirmed by the current study, which showed a statistically significant relationship between sex and pain severity ($\chi^2 = 9.21, p = 0.002$).

Regarding educational status, this study found that 13.2% of the participants were illiterate, while 26.5% had attained graduate-level education. Interestingly, no significant association was found between education and pain severity ($p = 0.160$), a finding partially supported by a Brazilian study (Silva et al., 2008), which also reported minimal correlation between education level and low back pain intensity, though they acknowledged its impact on health literacy and care accessibility.

The occupational distribution in this study identified housewives (26.5%) and employed individuals (13.2%) as the most affected groups. This aligns with findings from Palmer et al. (2014), who demonstrated that work-related postures and household chores significantly contribute to lumbar spine strain, especially in women. Repetitive lifting, prolonged standing, and inadequate ergonomic environments were found to aggravate disc prolapse conditions in domestic settings.

Furthermore, marital status was significantly associated with pain severity ($p = 0.024$). This may reflect the compounded emotional and psychological burdens borne by married individuals who are often primary caregivers or breadwinners. In contrast, no significant correlation was found between living area and pain ($p = 0.060$), although urban participants might have better access to care. These socio-demographic factors underscore the complexity of PLID and its interaction with daily living contexts.

A critical dimension explored in this study was the prevalence and implications of kinesiophobia, defined as the fear of movement stemming from the belief that physical activity will exacerbate pain or cause injury. The Tampa Scale for Kinesiophobia (TSK) responses revealed a high degree of fear-avoidance behavior among participants. For example, 52.9% agreed and 19.1% strongly agreed with the statement: "I'm afraid that I might injure myself if I exercise." Furthermore, 70.6% strongly agreed with "My accident has put my body at risk for the rest of my life," reflecting deeply rooted anxieties about physical vulnerability.

The statistical analysis confirmed a significant association between multiple kinesiophobia items and pain severity, measured using the Numeric Pain Rating Scale (NPRS). Notably, statements such as "My pain would probably be relieved if I were to exercise" ($\chi^2 = 79.43, p = 0.00$) and "Although my condition is painful, I would be better off if I were physically active" ($\chi^2 = 5.01, p = 0.02$) demonstrated that while participants cognitively understood the potential benefits of movement, emotional and psychological barriers limited their engagement in physical activity.

These findings align with the fear-avoidance model described by Vlaeyen and Linton (2000), which posits that individuals with high pain-related fear are more likely to avoid activity, leading to disuse, disability, and even depression. This model has been supported in multiple global studies. For instance, a large-scale population-based study by Hoy et al. (2010) also highlighted the cyclical nature of pain, fear, and inactivity in chronic low back pain populations, reinforcing the importance of addressing psychological components in treatment planning.

Kinesiophobia can be both a consequence and a cause of persistent disability in PLID patients. Patients who experience pain during movement may generalize that all movements are harmful, thereby entering a self-reinforcing cycle of fear, deconditioning, and worsening symptoms. This was evident in the qualitative findings of the present study, where participants reported fear of worsening their pain while lifting or traveling.

The integration of psychological assessments into standard rehabilitation programs is thus essential. Cognitive behavioral therapy (CBT), graded exposure, and pain neuroscience education have all been demonstrated to reduce kinesiophobia and improve outcomes, especially when paired with physiotherapy (Main and George, 2011).

The qualitative data in this study offered rich insight into how prolapsed lumbar intervertebral disc (PLID) affects core aspects of daily functioning—particularly mobility, personal care, and weight lifting. All ten interviewed participants reported experiencing pain or limitations during basic mobility tasks such as standing, sitting, walking, and even sleeping. These findings echo the broader body of evidence emphasizing how PLID compromises the performance of fundamental movements required for independent living (Balagué et al., 2012).

Mobility impairments, as reported in this study, are not merely a reflection of mechanical instability but also of neurogenic pain and fear of exacerbating symptoms. Statements such as “I can’t walk for more than 2 minutes” and “I feel numbness and tingling in my leg while standing” highlight the debilitating nature of PLID-related sciatica. Research from van Tulder et al. (2006) confirmed that over 70% of patients with lumbar disc pathology report limitations in walking and prolonged sitting due to nerve compression and muscular weakness.

Similarly, weight lifting was universally problematic for all participants, even when lifting relatively light objects. Participants described the fear of pain, pulling sensations,

and the complete avoidance of such tasks—especially in domestic and occupational settings. These findings are corroborated by Palmer et al. (2014), who emphasized the direct relationship between occupational lifting and exacerbation of lumbar disc pathology, especially among women and older adults.

Personal care, such as dressing and washing, was also significantly impacted, with 8 out of 10 participants requiring assistance. This dependency can result in psychological distress and social withdrawal. Tasks like putting on socks or lower-body clothing—which involve lumbar flexion—become nearly impossible during flare-ups. This reflects a broader trend noted in rehabilitation research: self-care activities are often underestimated but are among the earliest indicators of declining functional independence (Silva et al., 2008).

Collectively, the findings indicate that PLID leads to a cascade of impairments in both high-level and low-level daily activities, reducing patient autonomy and increasing caregiver burden. These limitations are not only physically disabling but also emotionally taxing, fostering feelings of frustration, dependency, and helplessness—elements that are seldom measured in purely quantitative studies but were prominent in this mixed-method approach.

Beyond physical limitations, this study uncovered significant psychosocial consequences of Prolapse Lumbar Intervertebral Disc (PLID), particularly in relation to social interaction, intimacy, and travel. Although musculoskeletal conditions are often treated within a biomedical framework, the qualitative themes emerging from participants' narratives revealed deeper disruptions to identity, autonomy, and quality of life—elements supported by psychosocial models of disability (Main and George, 2011).

Only 2 out of 10 participants reported openly that their social life was negatively affected, which may reflect underreporting due to cultural restraint or normalization of social withdrawal. Those who did speak up reported isolation, being misunderstood by others, and being treated with indifference by their families. “Nobody can feel my problem and neglect me always,” one participant expressed. This mirrors findings from the Occupational and Environmental Medicine study (Palmer et al., 2014), where patients with chronic low back pain were found to experience higher levels of social exclusion and emotional detachment, often worsening mental health outcomes.

Interestingly, none of the participants reported any impact on their sexual life, which deviates from the findings of many global studies. For example, Balagué et al. (2012) emphasized sexual dysfunction as a frequent, yet underreported, outcome of chronic

low back conditions. The silence around this topic in the current study may not indicate an absence of problems, but rather reflect cultural sensitivity and reluctance to discuss sexual health, particularly in conservative societies. Moreover, given the high rates of reported pain during movement and sleep disturbances, it is plausible that sexual function is indeed compromised but remained unspoken.

Travelling emerged as a major area of concern, with 9 out of 10 participants reporting discomfort, pain, or complete avoidance due to their condition. Complaints included pain from prolonged sitting, pulling sensations, and fear of further injury. These findings support the assertion by Hoy et al. (2010) that musculoskeletal conditions severely reduce community participation, especially in lower-income and infrastructure-challenged regions.

These psychosocial restrictions compound the burden of PLID, creating a cycle of disengagement, emotional withdrawal, and reduced self-worth. The mixed-method approach of this study helped to surface these nuanced consequences that may not emerge through survey tools alone. Therefore, effective management of PLID must not only focus on physical rehabilitation but also integrate psychosocial support, community engagement strategies, and culturally sensitive counseling.

One of the core strengths of this study lies in its mixed-methods design, which allowed for a comprehensive understanding of both the measurable patterns of pain and disability, and the subjective experiences of patients living with Prolapse Lumbar Intervertebral Disc (PLID). This methodological integration brought forward a multi-dimensional picture—where statistical trends were reinforced and enriched by the voices of those directly affected.

Quantitatively, the study identified strong associations between pain severity and variables such as sex, age, marital status, and various kinesiophobic beliefs. These were statistically significant and aligned with global findings in the field (Hoy et al., 2010). For example, fear of movement and the belief that pain signifies serious bodily harm were significantly associated with higher Numeric Pain Rating Scale (NPRS) scores. However, numbers alone could not explain how such beliefs evolved or how they manifested in daily life.

This is where qualitative findings added indispensable value. Patients spoke about real-world situations—fear of lifting a child, the inability to stand at a family function, or discomfort while traveling on a rickshaw. Such rich narratives not only validated the quantitative results but revealed emotional and social dimensions often overlooked in

purely numerical studies. This form of triangulation—where two different types of data converge on the same conclusion—greatly enhances the validity and depth of the research.

Furthermore, qualitative data helped explain potential anomalies. For instance, while education level did not show a statistically significant relationship with pain severity ($p = 0.160$), interviews suggested that even those with higher education struggled to manage their condition effectively, possibly due to lack of awareness about rehabilitation or fear of re-injury.

By adopting a mixed-method approach, this study moves beyond generalizability and delves into meaningful applicability. It addresses not only the “how many” and “how much,” but also the “how” and “why,” making the findings especially relevant for patient-centered care planning, rehabilitation programming, and policy formulation in resource-limited settings.

While this study provides valuable insights into the functional and psychosocial challenges faced by individuals with Prolapse Lumbar Intervertebral Disc (PLID), several limitations must be acknowledged to appropriately contextualize the findings.

Firstly, the sample size for the qualitative component was limited to ten participants, which may restrict the generalizability of the narrative themes. Although thematic saturation was approached, a larger and more diverse sample might have revealed additional dimensions, especially concerning sensitive topics like sexual health, where no participant voluntarily disclosed any concern. This absence likely reflects cultural taboos and social discomfort, rather than the absence of actual dysfunction—a limitation well-documented in low- and middle-income countries (LMICs) (Silva et al., 2008).

Secondly, the cross-sectional nature of the quantitative analysis restricts causal inference. While significant associations were found between pain severity and socio-demographic variables like age, sex, and marital status, the direction of these relationships remains unclear. For instance, whether fear of injury increases pain, or pain fosters fear, cannot be definitively determined from this data alone. A longitudinal study design would provide greater clarity on the dynamics of pain progression and behavioral responses.

Thirdly, the study relied on self-reported data through the Tampa Scale for Kinesiophobia (TSK) and Numeric Pain Rating Scale (NPRS). Although these are validated tools, self-reporting may be influenced by recall bias, emotional state, or

social desirability, especially in cultures where expressing psychological distress may be stigmatized (Deyo and Weinstein, 2001).

Additionally, the study was conducted in a specific institutional and cultural setting, which may limit its applicability to broader contexts. Patients at the Center for the Rehabilitation of the Paralyzed (CRP) may have unique access to care, community support, and rehabilitation education that others in rural or underserved areas may lack. This makes the findings most applicable to similar tertiary care or urban rehabilitation settings.

Despite these limitations, the study's mixed-method approach, integration of validated measures, and thematic analysis provide a robust foundation for understanding PLID's complex impact on daily functioning. These findings remain highly relevant for developing culturally sensitive interventions, particularly in South Asian and other LMIC contexts where similar challenges exist.

This study revealed a comprehensive picture of the challenges faced by individuals with Prolapse Lumbar Intervertebral Disc (PLID) by integrating both statistical analysis and patient narratives. Quantitative data highlighted that sex, age, and marital status had significant associations with the severity of low back pain, while qualitative findings provided deep insights into daily life disruptions that included personal care, mobility, weight lifting, and participation in social or travel-related activities.

A key finding was the prevalence of kinesiophobia, with over 70% of participants expressing fear of movement or re-injury. This was statistically linked to greater pain severity and supported by qualitative accounts describing avoidance of essential activities such as lifting or traveling. This strongly supports prior global research (Hoy et al., 2010; Balagué et al., 2012) and reiterates the need to address psychological barriers in rehabilitation planning.

Functionally, PLID was shown to reduce independence in personal hygiene, restrict occupational and domestic roles, and in some cases, lead to emotional withdrawal. The data also suggested that despite educational diversity, awareness and adaptive behavior were inconsistent, pointing to a gap in patient education and empowerment. Meanwhile, the silence on sexual dysfunction underscores the importance of culturally sensitive communication in clinical interviews.

From a policy and clinical standpoint, these findings emphasize the necessity for holistic rehabilitation programs that integrate physical therapy, psychological counseling, and patient education. Interventions must not only aim to reduce pain, but

also restore function, promote self-efficacy, and address social reintegration, especially in LMICs where stigma and access barriers are prevalent.

These outcomes can inform future protocols, help build culturally appropriate education tools, and inspire further longitudinal studies to track outcomes over time.

In conclusion, this mixed-method study illuminated the multifaceted challenges experienced by patients with Prolapse Lumbar Intervertebral Disc (PLID), encompassing both physical disabilities and psychosocial burdens. The integration of quantitative data—demonstrating significant associations between pain, kinesiophobia, and socio-demographic factors—with rich qualitative narratives—depicting disruptions in mobility, self-care, social life, and emotional well-being—offers a holistic view of PLID’s real-life impact.

Findings underscore the need to move beyond pain-focused treatment paradigms, advocating instead for patient-centered, multi-disciplinary rehabilitation strategies that address both functional restoration and psychological resilience. Furthermore, the study reveals gaps in communication about intimate and emotional aspects of health, urging healthcare providers to foster more empathetic and culturally sensitive environments for open dialogue.

This research contributes valuable knowledge to the global discourse on musculoskeletal disorders, especially within low- and middle-income contexts, where the burden of spinal disorders remains under-addressed. It serves as a foundation for future longitudinal studies and intervention models aiming to improve quality of life, enhance independence, and promote societal participation among PLID patients.

6.1 Conclusion

This mixed-method research study titled “Challenges with Daily Activities for Patients with Prolapse Lumbar Intervertebral Disc: An Explanatory Sequential Mixed Method Study” sought to explore and document both the quantifiable and experiential challenges faced by individuals living with Prolapse Lumbar Intervertebral Disc (PLID). By incorporating both quantitative survey data and qualitative interview responses, the study aimed to provide a holistic view of how PLID impacts day-to-day functioning across physical, psychological, and social dimensions.

The study was conducted on a total of 196 participants for the quantitative portion and 10 participants for in-depth qualitative interviews. Quantitative data were collected using structured questionnaires and standardized assessment tools such as the Numeric Pain Rating Scale (NPRS) and Tampa Scale for Kinesiophobia (TSK). This was followed by semi-structured interviews to capture patients lived experiences around activities of daily living.

The results of the quantitative analysis showed statistically significant associations between pain severity and variables such as sex, age, and marital status. Interestingly, education level and living area did not show significant correlations, suggesting that PLID-related functional impairments may affect individuals broadly, regardless of educational background or urban–rural divide. A particularly striking finding was the high prevalence of kinesiophobia among participants—many believed that physical activity would worsen their condition, which further limited their functional independence.

The qualitative component of the study revealed profound impairments in personal care, mobility (standing, walking, sitting, sleeping), weight lifting, travelling, and social engagement. Most participants reported an inability to carry out basic tasks without assistance, a sense of social withdrawal, and emotional distress due to their limitations. Although no participants openly discussed impacts on sexual life, this absence likely reflects social stigma rather than a lack of effect. Collectively, these findings confirm that PLID not only results in physical pain and mechanical dysfunction, but also leads to emotional, social, and psychological hardship.

By merging statistical associations with personal testimonies, this study contributes a nuanced understanding of PLID and calls attention to the need for multidimensional management strategies. It also affirms the value of a mixed-method approach in health research, particularly when investigating complex and sensitive health conditions.

6.2 Recommendations

1. Recommendations for Future Research

While this study provides important insights into the lived experience of PLID patients, there remains significant scope for further research to enhance understanding and improve care strategies. Firstly, future studies should aim to include larger and more diverse qualitative samples. The inclusion of patients across multiple geographic regions and different cultural or socioeconomic backgrounds could shed light on how contextual factors shape experience and coping strategies.

Secondly, the cross-sectional nature of the current study limits the ability to draw causal conclusions. Therefore, longitudinal research designs are recommended to observe how patients' functional capabilities, pain levels, and psychological responses evolve over time, particularly in response to therapeutic interventions. Longitudinal data would also allow for better tracking of rehabilitation outcomes and relapses.

Thirdly, given the silence around sexual health observed in this study, future research should explore this area more directly using anonymous surveys or culturally sensitive qualitative methods. Sexual function is often deeply impacted by chronic pain and deserves greater empirical attention, especially within conservative societies.

Additionally, studies comparing non-surgical versus surgical management outcomes for PLID in terms of quality of life, kinesiophobia, and long-term independence would be highly valuable. The integration of psychological profiling, such as anxiety and depression screening, alongside kinesiophobia assessment may also enhance patient categorization and personalized treatment planning.

2. Recommendations for Clinical Practice and Policy

The findings from this study hold important implications for clinical practice and rehabilitation service planning. First and foremost, there is a need to adopt a biopsychosocial approach in the management of PLID. Interventions should not only aim at alleviating pain through physiotherapy or medication, but also include psychological counseling, patient education, and functional retraining.

Healthcare professionals should routinely assess for kinesiophobia and fear-avoidance behaviors, and incorporate pain education and graded exposure techniques into

rehabilitation plans. Training physiotherapists in these cognitive-behavioral techniques could significantly improve patient compliance and outcomes.

Moreover, clinicians should recognize the invisible burden of PLID—such as the emotional strain, family role disruption, and social withdrawal—which are not always captured in traditional assessments. Incorporating standardized quality-of-life instruments and functional independence measures during evaluations can ensure a more comprehensive patient profile.

At the policy level, rehabilitation services must be made more accessible in rural and under-resourced areas. Community-based rehabilitation (CBR) models could be adopted to address the needs of PLID patients who cannot afford or access tertiary care centers. Health education campaigns can help raise awareness around safe movement practices, the importance of early intervention, and de-stigmatization of musculoskeletal conditions.

Finally, the development of multidisciplinary care teams involving physiotherapists, psychologists, occupational therapists, and social workers should be promoted for chronic back pain management. This integrated model is likely to offer the best results for improving not just the physical but also the emotional and social functioning of patients with PLID.

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Appendix – A**Consent form**

This research is part of a Physiotherapy course and the researcher's name is Rafayel Kayem Purna. He is a student at Bangladesh Health Professions Institute (BHPI), studying for a B.Sc. in Physiotherapy in 4th year. The study was entitled-

Challenges with Daily Activities for patients with Prolapse Lumbar Intervertebral Disc: A mixed method Study

In this study, I am a participant and I have been informed about the purpose and aim of the study. I will have the right to refuse to take part at any time at any stage of the study. I will not be bound to answer to anybody. I as a participant have no problem with giving the researcher my data twice as the researcher's study requires.

I am also informed that all the information collected from the interview that will be used in the study will be kept safe and maintain confidentiality. Your name and address will not be published anywhere. Only the researcher and supervisor will be eligible to access the information for the publication of the research result.

If you have any questions, please contact the researcher Rafayel Kayem Purna or his supervisor, **Dr. Shamima Islam Nipa**, Associate Professor, Department of Physiotherapy, Savar, Dhaka-1343.

Name of participant: _____

Signature & date of participant: _____

Signature & date of data collector: _____

Appendix – B

সম্মতিপত্র

আসসালামুয়ালাইকুম,

আমি রাফায়েল কায়ম পূর্ণ, বাংলাশ হেলথ প্রফেশন্স ইন্সটিটিউট এর বি.এস.সি ইন ফিজিওথেরাপি কোর্সের ৪র্থ বর্ষের একজন শিক্ষার্থী। অধ্যয়নের অংশ হিসেবে আমাকে একটি গবেষণা সম্পান করতে হবে এবং এটা আমার প্রাতিষ্ঠানিক কাজের একটা অংশ। নিম্নোক্ত তথ্য পাঠ করার পর অংশগ্রহণকারীও গবেষণায় অংশগ্রহনের জন্য অনুরোধ করা হলো।

আমার গবেষণার বিষয় হলো “চ্যালেঞ্জেস উইথ ডেইলি একটিভিটিস ফর পেশেন্টস উইথ প্রোল্যাপসড লাম্বার ইন্টারভার্টিব্রাল ডিস্ক (পিএলআইডি)।” এই পরীক্ষামূলক গবেষণার মাধ্যমে আমি পিএলআইডিতে আক্রান্ডব্যক্তিদের পেইন, কাইনেসিওফোবিয়া, ডিজেবিলিটি এবং কোয়ালিটি অফ লাইফ এর মধ্যে সম্পর্ক নিরূপণের চেষ্টা করবো। আমি যদি আমার গবেষণাটি সার্থকভাবে সম্পূর্ণ করতে পারি তবে যেসব ব্যক্তির পিএলআইডিতে ভুগছেন তারা উপকৃত হবেন এবং এটি হবে একটি পরীক্ষামূলক প্রমাণ। গবেষণাটি সম্পাদনের জন্য, আমার তথ্য সংগ্রহ করা প্রয়োজন হবে। গবেষণার ক্ষেত্র বিবেচনা কওে আপনার মাঝে আমার গবেষণায় অংশগ্রহণ করার জন্য প্রয়োজনীয় বৈশিষ্ট লক্ষ্য করা গেছে। এজন্য, আপনি আমার গবেষণার একজন সম্মানিত অংশগ্রহণকারী হতে পারেন এবং আমি আপনাকে আমার গবেষণায় অংশগ্রহন করতে অনুরোধ জানাচ্ছি। আমি প্রতিজ্ঞা করছি যে, এই গবেষণা আপনার জন্য ঝুঁকিপূর্ণ হবেনা অথবা আপনার কোন ক্ষতি করবেনা। গবেষণা চলাকালীন সময়ে কোন রকম দ্বিধা বা ঝুঁকি ছাড়াই যেকোন সময়ে আপনি এটাকে বাদ দিতে পারবেন। এই গবেষণার প্রাপ্ত তথ্য সম্পূর্ণভাবে গোপনীয় থাকবে এবং অংশগ্রহণকারীর ব্যক্তিগত তথ্য অন্য কোথাও প্রকাশ করা হবেনা।

যদি আপনার গবেষণা সম্পর্কে কোনো জিজ্ঞাসা থাকে তবে আপনি অনুগ্রহপূর্বক যোগাযোগ করতে পারেন গবেষক রাফায়েল কায়ম পূর্ণ অথবা আমার সুপারভাইজার সহযোগী অধ্যাপক ড. শামীমা ইসলাম নিপা, ফিজিওথেরাপি বিভাগ, বিএইচপিআই, সিআরপি, সাভার, ঢাকা- ১৩৪৩।

শুরু করার আগে আপনার কি কোন প্রশ্ন আছে? হ্যাঁ না

আমি কি শুরু করতে পারি? হ্যাঁ না

অংশগ্রহণকারীর স্বাক্ষর তারিখ

সাক্ষীর স্বাক্ষর তারিখ

তথ্য সংগ্রহকারীর স্বাক্ষর তারিখ

Appendix -C

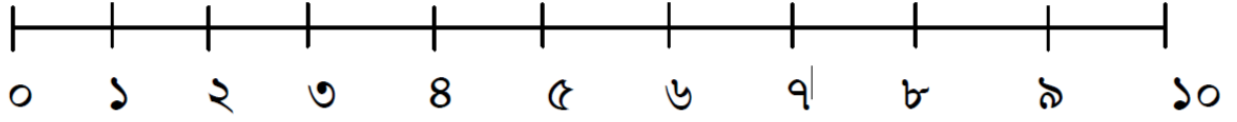
সামাজিক-জনসংখ্যাগত প্রশ্নাবলী

- রোগীর আইডি নংঃ
- নামঃ
- বয়সঃ
- ঠিকানাঃ
- পেশাঃ
 - কৃষক=১
 - দিনমজুর=২
 - সেবা ধারক=৩
 - পোশাক শ্রমিক=৪
 - ব্যবসায়ী=৫
 - শিক্ষক=৬
 - ছাত্র-ছাত্রী=৭
 - গাড়িচালক=৮
 - চাকরীজীবী=৯
 - বেকার=১০
 - গৃহীণী=১১
 - অন্যান্য=১২
- লিংগঃ
 - পৃথকীকৃত=৪
 - বিধবা=৫
- বৈবাহিক অবস্থাঃ
 - বিবাহিত=১
 - অবিবাহিত=২
 - তালাকপ্রাপ্ত=৩
- ধর্মঃ
 - মুসলমান=১
 - হিন্দু=২
 - খ্রিস্টান=৩
 - বৌদ্ধ=৪
 - অন্যান্য=৫
- শিক্ষাগত যোগ্যতাঃ
 - অশিক্ষিত=১
 - প্রাথমিক=২
 - মাধ্যমিক=৩
 - উচ্চমাধ্যমিক=৪
 - অন্তর্বর্তী=৫
 - স্নাতক=৬
 - পেশাধারী ডিগ্রী=৭
- পরিবারের দৈর্ঘঃ
- ছেলেমেয়ের সংখ্যাঃ
- আবাসস্থলঃ
 - শহর=১
 - উপশহর=২
 - গ্রাম=৩
- ধূমপানের ইতিহাসঃ
 - হ্যা=১
 - না=২

যদি হ্যাঁ হয় তাহলে ধূমপানের সময়কালঃ

আধা-গঠিত প্রশ্নাবলি

১। আপনার ব্যাথার তীব্রতা এখন কেমন?



২। এই অবস্থায় আপনার ব্যক্তিগত যত্নের ক্ষেত্রে, যেমন (কাপড় ধোঁয়া, জামাকাপড় পড়া) ইত্যাদিতে কোনো প্রভাব পড়ে কিনা? (ছেলেদের ক্ষেত্রে প্রযোজ্য নয়)

হ্যাঁ

না

৩। যদি হ্যাঁ হয়, তাহলে কি ধরনের প্রভাব পড়ে?

৪। এই অবস্থায় ভার উত্তোলনের ক্ষেত্রে কোনো প্রভাব পড়ে কিনা?

হ্যাঁ

না

৫। যদি হ্যাঁ হয়, তাহলে কি ধরনের প্রভাব পড়ে?

৬। এই অবস্থায় আপনার হাঁটা, বসা, দাঁড়ানো এবং ঘুমানোর সময় কোনো প্রভাব পড়ে কিনা?

হ্যাঁ

না

৭। যদি হ্যাঁ হয়, তাহলে কি ধরনের প্রভাব পড়ে?

৮। এই অবস্থায় আপনার যৌন জীবনে কোনো ধরনের প্রভাব পড়ে কিনা?

হ্যাঁ

না

৯। যদি হ্যাঁ হয় তাহলে কি ধরনের প্রভাব পড়ে?

১০। এই অবস্থায় আপনার সামাজিক জীবনে কোনো ধরনের প্রভাব পড়ে কিনা?

হ্যাঁ

না

১১। যদি হ্যাঁ হয় তাহলে কি ধরনের প্রভাব পড়ে?

১২। এই অবস্থায় আপনার ভ্রমণের ক্ষেত্রে কোনো ধরনের প্রভাব পড়ে কিনা?

হ্যাঁ

না

১৩। যদি হ্যাঁ হয় তাহলে কি ধরনের প্রভাব পড়ে?

টেম্পা স্কেল ফর কাইনেশিওফোবিয়া

১= সর্বোচ্চ অসম্মতি, ২= অসম্মতি, ৩= সম্মতি, ৪= সর্বোচ্চ সম্মতি

	প্রশ্ন	1	2	3	4
1	আমি ব্যায়াম করতে ভয় পাই কারণ আমি আঘাত পেতে পারি	1	2	3	4
2	আমি যদি এটি কাটিয়ে উঠতে চেষ্টা করি তবে আমার ব্যাথা বাড়বে	1	2	3	4
3	আমার শরীর বলছে যে, আমার হয়ত কোনো বড় সমস্যা আছে	1	2	3	4
4	যদি আমি ব্যায়াম করি তাহলে হয়ত আমার ব্যাথা কমবে	1	2	3	4
5	মানুষজন আমার শারীরিক অবস্থা বর্ণগোচর করে না	1	2	3	4
6	একটি দৃষ্টিনা আমার জীবনকে হুমকির মুখে ফেলতে পারে	1	2	3	4
7	ব্যাথা মানেই আমার ভিতরে ক্ষত আছে	1	2	3	4
8	ব্যাথা বাড়বে মানে এই নয় যে সমস্যাটি বিপদজনক	1	2	3	4
9	আমি দৃষ্টিনাবশত নিজেকে আঘাত করতে পারি	1	2	3	4
10	সাবধানতা অবলম্বন করা বা অপ্রয়োজনীয় চলাচল আমাকে নিরাপদ এবং ব্যাথামুক্ত রাখবে	1	2	3	4
11	আমার শারীরিক সমস্যা না থাকলে আমার ব্যাথা হতেনা	1	2	3	4

12	যদিও আমার সমস্যাটির জন্য ব্যাথা হচ্ছে কিন্তু শারীরিকভাবে সক্ষম হলে ব্যাথা কম হতো	1	2	3	4
13	ব্যাথার কারণে আমি বুঝতে পারি কখন ব্যায়াম বন্ধ করতে হবে	1	2	3	4
14	আমার সমস্যা নিয়ে কারও পক্ষে শারীরিকভাবে সক্ষম হওয়া সম্ভব নয়	1	2	3	4
15	আমি অন্যান্য মানুষের মতো কাজ করতে পারি না কারণ আমার জন্য আঘাতপ্রাপ্ত হওয়া খুবই সহজ	1	2	3	4
16	যদিও আমার অনেক ব্যাথা হচ্ছে তবুও আমি মনে করি এটা বিপদজনক নয়	1	2	3	4
17	ব্যাথা থাকলে কারও ব্যায়াম করা উচিত নয়	1	2	3	4

Appendix – D

Socio-Demographic Questionnaire

- Patient's Id:
- Name:
- Age:
- Sex
- Address:
- **Occupation:**
 - Farmer=1
 - Day Laborer=2
 - Service Holder=3
 - Garment Worker=4
 - Businessman=5
 - Teacher=6
 - Students=7
 - Driver=8
 - Employed=9
 - Unemployed=10
 - Housewife=11
 - Others=12
- **Marital Status:**
 - Married=1
 - Unmarried=2
 - Divorced=3
 - Separated=4
 - Widow=5
- **Religion:**
 - Muslim=1
 - Hindu=2
 - Christian=3
 - Buddhist=4
 - Others=5
- **Educational Status:**
 - Illiterate=1
 - Primary=2
 - Middle School Completion=3
 - High School Certificate=4
 - Intermediate=5
 - Graduate=6
 - Professional Degree=7

6. Does this condition affect your walking, sitting, standing and sleeping?

Yes

No

7. If yes, then what kind of effect you are facing?

8. Does this condition affect your sexual life?

Yes

No

9. If yes, then what kind of effect you are facing?

10. Does this condition affect your social life?

Yes

No

11. If yes, then what kind of effect you are facing?

12. Does this condition affect your travelling?

Yes

No

13. If yes, then what kind of effect you are facing?

Tampa Scale for Kinesiophobia

1= strongly disagree; 2= disagree; 3= agree; 4= strongly agree

1. I'm afraid that I might injury myself if I exercise	1	2	3	4
2. If I were to try to overcome it, my pain would increase	1	2	3	4
3. My body is telling me I have something dangerously wrong	1	2	3	4
4. My pain would probably be relieved if I were to exercise	1	2	3	4
5. People aren't taking my medical condition seriously enough	1	2	3	4
6. My accident has put my body at risk for the rest of my life	1	2	3	4
7. Pain always means I have injured my body	1	2	3	4
8. Just because something aggravates my pain does not mean it is dangerous	1	2	3	4
9. I am afraid that I might injure myself accidentally	1	2	3	4
10. Simply being careful that I do not make any unnecessary movements is the safest thing I can do to prevent my pain from worsening	1	2	3	4
11. I wouldn't have this much pain if there weren't something potentially dangerous going on in my body	1	2	3	4
12. Although my condition is painful, I would be better off if I were physically active	1	2	3	4
13. Pain lets me know when to stop exercising so that I don't injure myself	1	2	3	4
14. It's really not safe for a person with a condition like mine to be physically active	1	2	3	4
15. I can't do all the things normal people do because it's too easy for me to get injured	1	2	3	4
16. Even though something is causing me a lot of pain, I don't think it's actually dangerous	1	2	3	4
17. No one should have to exercise when he/she is in pain	1	2	3	4

Appendix – E

Permission Letter

16 January, 2025

Head

Department of Physiotherapy

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka-1343

Through: Head, Department of Physiotherapy, BHPI.

Subject: Prayer for seeking permission to collect data for conducting research project.

Sir,

With due respect and humble submission to state that I am Rafayel Kayem Purna, a student of 4th year B.Sc. in physiotherapy at Bangladesh Health Professions Institute (BHPI). The Ethical committee has approved my research project entitled: "Challenges with Daily Activities for patients with Prolapsed Lumber Intervertebral Disc: A mixed method Study" under the supervision of Dr. Shamima Islam Nipa, Assistant Professor, Department of Physiotherapy, BHPI. I want to collect data for my research project from the Department of Physiotherapy at CRP. So, I need permission for data collection from the Musculoskeletal Unit of Physiotherapy Department at CRP-Savar, Dhaka-1343. I would like to assure that anything of the study will not be harmful for the participants and the Department itself.

I, therefore pray and hope that you would be kind enough to grant my application and give me permission for data collection and oblige thereby.

Yours faithfully,

Purna
Rafayel Kayem Purna

4th Year B.Sc. in Physiotherapy

Class Roll: 40; Session: 2019-20

Bangladesh Health Professions Institute (BHPI)

(An academic Institution of CRP)

CRP-Chapain, Savar, Dhaka-1343.

Forwarded
scdb

Forwarded -

[Signature]
Dr. Shamima Islam Nipa
Ph.D. (Chiang Mai University)
Assistant Professor
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343, Bangladesh

Approved

[Signature]
25/1/25

Prof. Dr. Mohammad Anwar Hossain, Ph.D.
Professor Physiotherapy Department BHPI
Senior Consultant & Head
Physiotherapy Department
CRP, Chapain, Savar, Dhaka-1343

Appendix – F

IRB Approval Letter



বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref: CRP-BHPI/IRB/12/2024/1047

Date: 15/12/2024

To
Rafayel Kayem Purna
4th Year B.Sc. in Physiotherapy
Session: 2019-2020, Student ID: 112190529
BHPI, CRP, Savar, Dhaka-1343, Bangladesh.

Subject: Approval of the thesis proposal “Challenges with Daily Activities for patient’s with Prolapsed Lumber Intervertebral Disc: A mixed method study.”

Dear Rafayel Kayem Purna,
Congratulations.

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above-mentioned dissertation, with you, as the principal investigator and Dr. Shamima Islam Nipa, Associate Professor, Department of Physiotherapy, BHPI as thesis supervisor. The following documents have been reviewed and approved:

Sl. No.	Name of the Documents
1	Research Proposal
2	Questionnaire (English version)
3	Information sheet & consent form.

The purpose of the study is to find out the challenges with Daily Activities for patient’s with Prolapsed Lumber Intervertebral Disc. The study involves the use of Visual Analogue Scale (VAS), Oswestry Disability Index (ODI) and Semi-structured questionnaire to explore challenges in daily activities that may take 30 to 40 minutes to fill in the questionnaire any instruction or precaution for collection of specimen. There is no likelihood of any harm to the participants and participation in the study may benefit the participants or other stakeholders by knowing the booklet for the treatment of Prolapsed Lumber Intervertebral Disc as this study helps to develop an effective rehabilitation program and create awareness among patients about physiotherapy treatment. The members of the Ethics Committee have approved the study to be conducted in the presented form at the meeting held at 9 AM on 15 July 2024 at BHPI (44th IRB Meeting).

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol, and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working in accordance with the Nuremberg Code 1947, the World Medical Association Declaration of Helsinki, 1964 - 2013, and other applicable regulations.

Best regards,

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