ASSOCIATIONS BETWEEN PAIN, KINESIOPHOBIA, DISABILITY AND QUALITY OF LIFE AMONG PATIENTS WITH PROLAPSED LUMBER INTERVERTEBRAL DISC (PLID)

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We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation entitled

ASSOCIATIONS BETWEEN PAIN, KINESIOPHOBIA, DISABILITY AND QUALITY OF LIFE AMONG PATIENTS WITH PROLAPSED LUMBER INTERVERTEBRAL DISC (PLID)

Submitted by**MdMahmudulHasanManik**, for the partial fulfilment of the requirement for the degree of Bachelor of Science in Physiotherapy (B.Sc. PT).

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CONTENTS

Abbreviation

BHPI   Bangladesh Health Professions Institute

CRP   Centre for the Rehabilitation of the Paralysed

NPRS   Numeric Pain Rating Scale

TSK   Tampa Scale of Kinesiophobia

RMDQ   Ronald Moris Disability Questionnaire

PLID   Prolapsed Lumbar Intervertibral Disc

SPSS   Statistical Package for Social Science

WHO   World Health Organization

PF   Physical Functioning

RP   Role Physical Health

RE   Role Emotional

VT   Vitality

MH   Mental Health

SF   Social Functioning.

BP   Bodily Pain

GH   General Health

NSID   Non steroidal anti-inflammatory drug

NCD   Non-communicable diseases

QOL   Quality of life

LBP   Low back pain

ICF   International classification of functioning Disability and Health

List of table

List of figures

ABSTRACT

Purpose: To determine the pain, disability, kinesiophobia and quality of life among PLID patients in Bangladesh. **Objective:** To find out the socio-demographic information, understand the nature of current pain, identify the level of disability, find out about the kinesiophobia and explore the rate of functional limitations among the participants PLID. **Methodology:** It was a cross sectional study. Total 300 participants were attended willingly and conveniently for this study. Data was collected NPRS, RMDQ, TSK, SF-36 with Socio-demographic questions. SPSS version 20was used for data analysis. **Result:** Among the 300 participants, the most attended age group 44-56 years, Most of the participants were male (61%),came from urban areas(42%) andhouse wife(30%). In NPRS, 86% participants had severe back pain, 66% patients had unilateral and 30% had bilateral radiating pain. In NPRS, it was found that gender & education were significantly associated with back pain. This study found an association in between marital status, Gender, education and NPRS in Below Knee region andeducation, Gender and NPRS in Above Knee region was significant. In RMDQ, minimum disability score was 7 and maximum disability score was 22.There was 96.3% (n=289) had severe kinesiophobia according to TSK.From SF-36 score, the participant's physical health of quality of life was poor and mental health, social, emotional quality of life was fair.**Conclusion:** From this study, it could be concluded that most of the participants had severe back pain; most of them had unilateral radiating pain. Maximum participants had disability and kinesiophobia along with poor physical health of quality of life and fair mental health, social, emotional quality of life. The major socio-demographic factors were associated with NPRS and MRI finding and RMDQ was significantly associated. The researcher also found that, gender and TSK was significantly associated and most of the socio-demographic factors were found significantly associated with different domains of SF-36 questionnaire.

Key word: PLID, Pain, Disability, Kinesiophobia, Quality of life.

CHAPTER – I	INTRODUCTION

1.1 Background

Bangladesh is one of the world's most densely inhabited developing countries (Sarkar&Rahman, 2007). According to the World Health Organization, 10% of Bangladesh's population is disabled (Hossain, 2012). Prolapsed Lumbar Intervertebral Disc, or PLID, is one of the most prevalent causes of disability and a financial burden on individuals, society, and the National Health Service around the world (McKenzie, 1995). The most frequent condition in developed Western countries is PLID, or Prolapsed Lumbar Intervertebral Disc (Doherty, 2012). Prolapsed Lumbar Intervertebral Disc affects about 80% of people at some point in their lives (Fatima, 2016). PLID limits activities and is the second most common reason for seeking treatment and the third most common reason for undergoing surgery (Apfel et al., 2010).

In a recent study on the global burden of disease, low back pain placed sixth in terms of the overall burden of disease, just behind stroke and HIV/AIDS and ahead of 291 other ailments such as road injury, depression, diabetes, and others (Shats, 2015). According to the World Health Organization (WHO), non-communicable diseases (NCDs) are one of the biggest health challenges to global development, posing a hazard to almost 60% of fatalities worldwide, with around 80% occurring economically developing countries. Not only that, but NCDs are responsible for half of all annual deaths (51%) and nearly half of all disease burdens (41%). (Bleich et al.,2011). Because of a rise in lifestyle-related risk factors, which are assumed to be underlying variables as a result of social and economic transformation. According to the study, Bangladesh, like many other countries in the field of chronic problems or impairments, has been undergoing an epidemiological transformation of global disease threats (Bleich et al., 2011).

 The term "prolapsed lumbar disc" refers to disc displacement beyond the intervertebral disc space. The most common age group is 30-50 years old, with a male to female ratio of 2:1. There is minimal data to show that pharmacological therapies

for herniated discs are beneficial (Jordonet al., 2009). According to West et al., 2010, 78.2 percent of people had Prolapsed Lumbar Intervertebral Disc Disease. Disc bulging affects 56% of people (Orthofracs, 2021). One of the most frequent musculoskeletal problems in the population is prolapsed lumbar intervertebral disc (PLID) (Khruakhornet al., 2010). Musculoskeletal problems are a major public health issue in our culture. Prolapsed Lumbar Intervertebral Disc has a lifetime prevalence rate of up to 85-90 percent (Taechasubamornet al., 2011). Lumbosacral pain is caused by a prolapsed lumbar intervertebral disc, which is a common musculoskeletal disease. Its clinical manifestation could be acute, subacute, or chronic. It affects 80% of the population at some point during their lives (Srivastava, 2013).

In Bangladesh, the number of people with the prolapsed lumbar intervertebral disc is increasing and is a matter of concern. Disc degeneration is a cellular-mediated abnormal reaction to gradual structural failure. A degenerative disc is one that has a structural breakdown as well as advanced or accelerated indicators of aging (Michael & Peter, 2006).

Lumbosacral radiculopathy is most commonly caused by PLID (Hahne et al., 2010). The lumbar radicular syndrome is caused by a prolapsed lumbar disc (Erdogmus, 2007). The lower limb may be exposed to PLID. Leg pain as a referred symptom associated with back pain or a prolapsed lumbar intervertebral disc has been estimated to be 35 percent common, while real sciatica frequency is 2-5 percent (Nachemson et al., 2009).

Because it causes temporary productivity loss, expensive medical and indirect expenditures, or perhaps permanent incapacity, PLID has important social implications (Apfel et al., 2010). As one of the most frequent health conditions, PLID is a global cause of personal, community, and financial stress (Hoy et al., 2012). One of the most common causes of impairment in the working population is PLID. The occurrence of musculoskeletal disorders or other musculoskeletal diseases was highly linked to self-reported occupational impairment (Miranda et al., 2010). Employees who are unable to work owing to back discomfort spend a large amount of time on sick absences, thus impacting workplace productivity (Johanning, 2008).

Low back pain is a very common occurrence. Mechanical issues are the most common cause (about 90%), while the rest of the cases (70% to 85%) have no known

cause. Any lesion to an intervertebral disc (disc tear, disc herniation), ligament, or joint results in discomfort (Manusov, 2012). LBP can be caused by a variety of reasons. According to Fatima (2016), the mechanical Prolapsed Lumbar Intervertebral Disc is the most common cause of work-related occupational impairment. Poor sitting position aggravates prolapsed Lumbar Intervertebral Disc in both sedentary and manual workers (McKenzie, 1995). Although disk protrusion and herniation have been promoted as causes of LBP, the most common cause of Prolapsed Lumbar Intervertebral Disc is traumatic or degenerative diseases of the spine (Wheeler, 2007).

According to MeucciI et al., 2015, the prevalence of LBP ranges from 15% to 30%, with worldwide estimates ranging from 50% to 85%. According to Last & Hulbert (2009), the one-year prevalence of LBP in the United Kingdom was 49%, while it was 35% in the Nordic countries. According to Ferllands (2011), LBP prevalence rates are 30% and 40% in the Netherlands and Belgium, respectively; 60% of LBP is recognized as an occupational condition in Italy, and 40% of LBP is reported in France. Furthermore, a cross-sectional survey of car drivers discovered that 78% had back pain on at least one day in the previous year (Nahar et al., 2012).

As one of the most frequent health diseases, prolapsed Lumbar Intervertebral Disc is a global cause of personal, community, and financial strain (Hoy et al., 2012). Because LBP can result in a temporary loss of productivity, substantial medical and indirect costs, or even permanent disability, it has a significant socioeconomic impact (Apfel et al., 2010).

In 86 nations, low back pain (LBP) is the top cause of long years disabled, and in 67 countries, it is either the second or third major reason (Vos et al., 2013). LBP was projected to have a global age-standardized point prevalence of 9.4% in 2010 (Hoy et al., 2014). Back pain that interferes with daily activities is very common (17% to 70%). (Takasaki &May, 2014). Lumbar radiculopathy has an annual incidence of 83.2 per 100000 in the general population, with a higher frequency in the fifth decade of life (Polston, 2007).

A numeric rating scale for pain was used to assess self-reported pain intensity (NRS). This questionnaire has an 11-point scale ranging from 0 ("no pain") to 10 ("worst pain imaginable") on which users can identify the average pain intensity in their lower

back over the previous three days. The psychometric properties of the NRS for pain are regarded as excellent (Farrar et al., 2008).

QOL is a wide notion that encompasses a person's impression of his or her physical health, psychological state, amount of independence, social interactions, personal values and beliefs, and interaction with the environment, according to the World Health Organization (Chandra &Ozturk, 2005). HRQOL is a subset of total QOL that comprises those characteristics of QOL that are directly related to an individual's health and maybe the goal of therapeutic intervention. It has garnered a lot of attention in medicine and allied health disciplines. It has been suggested that using a QOL measure is one approach to capturing the personal and social context of wellbeing (Bowling, 1995). When making decisions about a patient's care, health professionals frequently make the quality of life judgments (Manara et al., 1998), and the professional view of the expected QOL is often the deciding factor in whether effective treatment for a life-threatening condition is given or withdrawn (Pellegrino et al., 2000). To characterize the natural history of the condition, assess treatment effectiveness, and design an appropriate health and disability policy, it is critical to assess disability status and QOL in people with LBP.

Because chronic pain has a detrimental impact on one's quality of life, an assessment of several areas of one's quality of life should be included (Breivik et al., 2006). Appropriate pain assessment, appropriate pain management, and accurate evaluation of treatment result in clinical and research contexts require knowledge of the pain characteristics and impact on the quality of life of each chronic pain condition.

1.2. Rational

PLID is a most common musculoskeletal disorder which is affected by the QOL, Disability, Kinesiophobia of an individual. In CRP a large number of people attend to get treatment of LBP but the aim of treatment does not succeed always due to patient quality of life. As a physiotherapy final year student my concentration centered to evaluate the Pain, Disability, Kinesiophobia and quality of life of PLID patients.

The word Quality of life need to be explained here because the low back pain largely depends on the patients day to day life activities. LBP affects patient's mobility, personal care, usual activities as well as mental status also. Mostly these things can change the course of treatment positively. After this study physiotherapist get a idea which level of QOL, Disability, Kinesiophobia for the patients withPLID. This idea help to set up treatment plan according to patients needs. We can provide better treatment as well as essential advice to the patients. As a health professional it improves our knowledge. By this study patients also benefited by gaining knowledge about his/her condition and gain some information about their life style which are responsible or not for their mobility, personal care, usual activities, and mental status. This research was based on the practical data collected from the patients coming to the hospital for the treatment according to my questionnaire. I had made the relation between this information and draw some conclusion which could be used in future. This kind of research was not done before in Bangladesh, so it will be a resource for physiotherapist and other medical professionals for the quick analysis to find out the efficiency of the treatment that why the therapy is working faster or not. There is no alternative to do research as a professional in order to develop the profession. However, for fulfillment the 4th year of B. Sc in Physiotherapy I have to carry out a research of my interest which accomplish the professional body of interest.

1.3 Research Question

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

1.4 Objectives

1.4.1 General objective

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

1.4.2 Specific objectives

- To find out the socio-demographic (age, gender, residential area and occupation) information
- To understand the nature 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 Conceptual framework:

Independent Variables   **Dependent**

```
┌─────────────────────┐
│ Socio-demography    │
│ (Age, sex,          │
│ education etc)      │
└─────────────────────┘

┌─────────────────────┐
│ Duration of         │
│ suffering from      │
│ PLID               │
└─────────────────────┘

┌─────────────────────┐                    ┌──────────────────────┐
│                     │                    │  Prolaps Lumber      │
│ Pain intensity      │      ══════▶       │  Intervertibral Disc │
│                     │                    └──────────────────────┘
└─────────────────────┘

┌─────────────────────┐
│ Functional          │
│ disability level    │
└─────────────────────┘

┌─────────────────────┐
│ Kinesiophobia       │
└─────────────────────┘

┌─────────────────────┐
│ Quality of life     │
└─────────────────────┘
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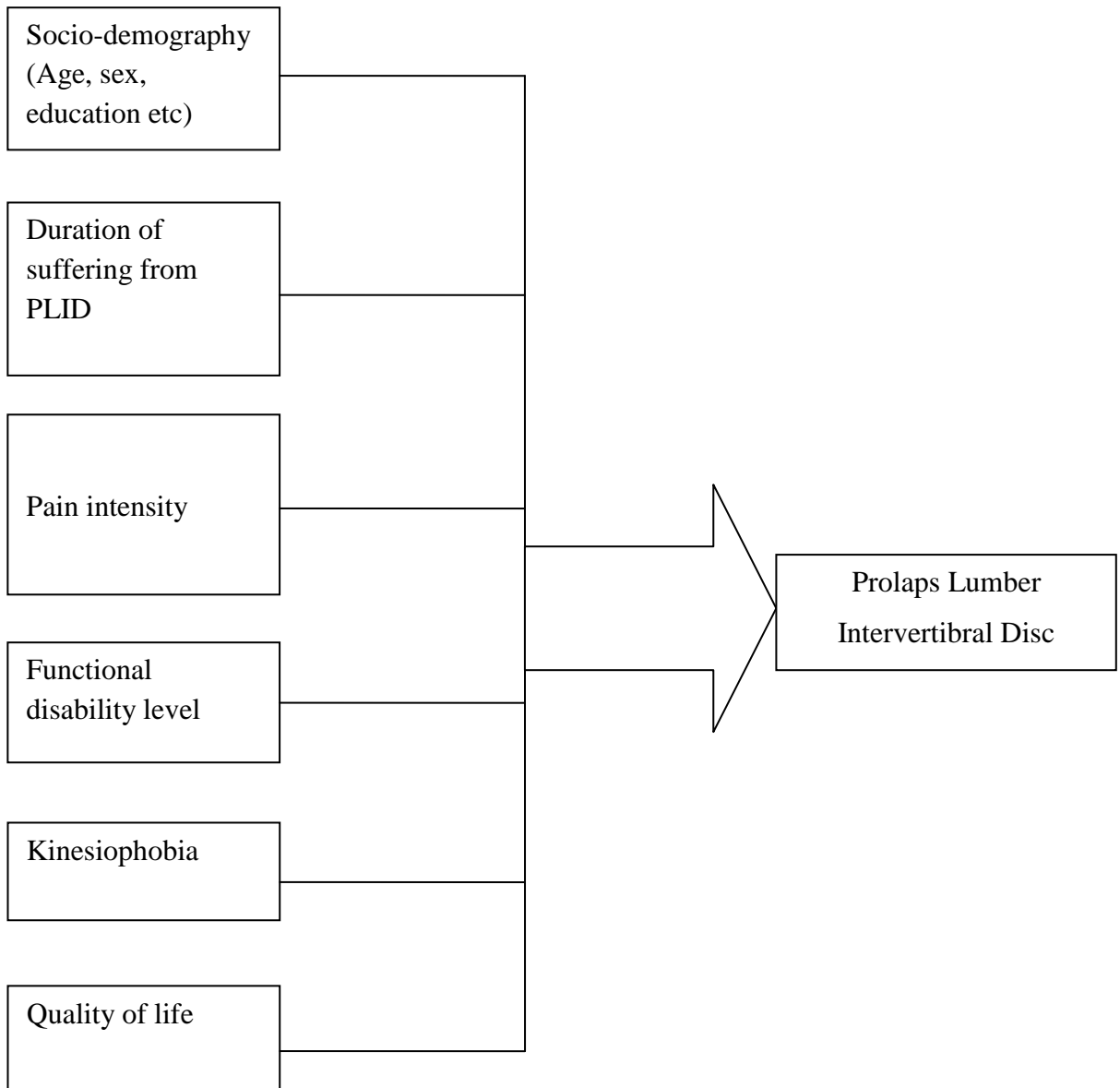
Figure -1: Conceptual framework:

1.6 Operational definition

Pain: An unpleasant sensation that can range from mild, localized discomfort to agony. Pain has both physical and emotional components. The physical part of pain results from nerve stimulation. Pain may be contained to a discrete area, as in an injury, or it can be more diffuse, as in disorders like fibromyalgia.

Disability: A disability is any condition of the body or mind (impairment) that makes it more difficult for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions).

Kinesiophobia: It is fairly common for people in pain to avoid rehabilitative exercises out of a reluctance to endure the discomfort that it entails, but when this avoidance becomes pathological, it is labeled as kinesiophobia.

Quality of life: The general well-being of population in individuals and societies. The World Health Organization (WHO) defines QOL as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". Standard indicators of the quality of life include wealth, employment, the environment, physical and mental health, education, recreation and leisure time, social belonging, religious beliefs, safety, security and freedom. QOL has a wide range of contexts, including the fields of international development, healthcare, politics and employment.

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).

Low back musculoskeletal pain disorders appear to be a substantial health problem among the working population worldwide these days (Hoy et al., 2012). According to Balague et al., 2012, 84% of persons would experience low back pain in their lifetime, with 23% of those experiencing chronic low back pain and 11 to 12% being incapacitated by low back pain. LBP is the second most prevalent cause of disability in people in the United States, according to several studies, and a common source of missed workdays. They discovered that over 149 million days of work are lost each year due to low back musculoskeletal discomfort and that the ailment costs the sufferers a large sum of money, with annual expenses estimated to be between $100 and $200 billion in the Western world (Freburger et al., 2009).

The vertebral bodies (bones of the spine), vertebral discs (cushions between the bones), cartilage (lines the bones that connect with other bones), and supporting structures surrounding the spine, such as muscles, tendons (connecting muscle to bone), and ligaments (connecting bone to bone) make up the low back architecture (Integrative pain medicine, 2012). Patients with intractable back pain and degenerative disc disease (DDD) have a variety of treatment choices. The mechanical benefits of the disc space anteriorly, such as a large fusion bed, excellent blood supply, and graft compression, are exploited by interbody fusion procedures (Truumees et al., 2008). LBP has been associated with a variety of MRI abnormalities in the spine, with the strongest evidence for disc herniation (protrusion or worse), nerve root deviation/compression, disc degeneration, and high-intensity zone (HIZ). However, each of these abnormalities can be discovered even when there are no symptoms, and many people with back pain have no visible pathology on MRI (Shambrook et al., 2011).

Injury or overuse of muscles, ligaments, and joints, pressure on nerve roots in the spinal canal (caused by a herniated disc, by repeated vibration or motion during sports activity or when using a machine or lifting in the wrong way), osteoarthritis in older age when it affects the small joints in the spine, and osteoarthritis in older age when it affects the small joints in the spine are the most common causes of low back pain. Spondylolisthesis, Fractures of the vertebrae, spinal stenosis (Integrative pain

medicine, 2012). Curvature issues such as severe scoliosis or kyphosis are examples of spinal abnormalities.

Lumbar disc herniation is a medical, societal, and financial issue. This disorder affects persons of all ages, and it is frequently diagnosed in young teenagers. According to epidemiological studies, the incidence is around 30%, increasing after the age of 30 to reach a high in patients aged 55-64 years (Zhelev, 2012). It should be noted that CT scans of people with no symptoms revealed ruptured discs, spinal stenosis, and other degenerative abnormalities in 50% of patients over the age of 40. According to official data by 2014, around 5% of the male and 2.5% of the female population had been diagnosed with an advanced stage herniated disc and their percentage has generally increased (Kasnakova et al., 2018).

Lumbar spine disc herniation or disc prolapse is a common occurrence that causes pain, physical impairment, and in some cases, disability. It is most common in adults aged 30 to 50, with a male to female ratio of 2:1. (Jordan et al., 2008). Aside from that, it has been discovered that disc herniation occurs primarily in the fourth and fifth decades of life (mean age of 37 years), but evidence suggests that it can affect people of any age group, with a prevalence of 4.8 percent among men over 35 years of age and 2.5 percent among women over this age (Islam, 2019). According to several studies, the prevalence of low back pain (LBP) in the general population ranges from 12% to 33% at any given time, with lifetime prevalence reaching 84% (Kashani et al., 2013). As a result, according to a study, the average age of the first attack is 37, and 76% of cases have a prior history of low back pain during the last ten years (Carvalho et al., 2013).

One of the most common causes of impairment in the working population is PLID. The term "disability" has been described as "limited functioning," which includes "activity limitation" and "participation in living circumstances." PLID is frequently accompanied by disability, which can range in severity and be temporary or permanent (Waddell, 2013). The emphasis of the International classification of functioning, disability, and health has shifted to activity and activity limitation, which refers to difficulties performing, accomplishing, or completing a task. When there is a qualitative or quantitative change in the way activities are carried out, difficulties in doing them arise. Difficulty refers to all of the factors that can influence how an

activity is completed. Acute pain lasts up to 7 days, sub-acute pain lasts more than 7 days but less than 7 weeks, and chronic pain lasts more than 7 weeks, according to the length of PLID. Because the essential aspect of adult back pain is that it has normal lifetime patterns of fluctuating symptoms of variable intensity, a patient who has recurrent periods of pain separated by at least 3 months of pain-free time meets the diagnosis of acute LBP.

There are intervertebral discs between two vertebrae in the lumbar vertebral column, which is made up of five vertebrae. The intervertebral discs play a vital role in the functioning of the spine. The motions permitted between vertebral bodies are (1) Translational motion in the long axis of the spine (2) Rotary motion about a vertical axis (3) Antero-posterior bending and (4) Lateral bending. The zygapophyseal facets orientation from L1 to L4 restricts lateral flexion and rotation (Srivastava et al., 2013).

The Range Of Motion in the rotation is shorter when the lumbar spine is flexed than when it is in the neutral position. Forward flexion and backward extension are favored by the lumbar zygapophyseal facets orientation. The degree of flexion varies between the interspaces of the lumbar vertebrae, although the lumbosacral joint is where the majority of the flexion occurs. The typical flexion range is 80 degrees at L1/L2, 90 degrees at L2/L3, and 120 degrees at L3/L4 and L5/S1 (Srivastava et al., 2013).

Medication, mainly non-steroidal anti-inflammatory medications (NSAIDs), muscle relaxants, and narcotic analgesics, is the most common treatment for back pain. In one study of primary care patients with Prolapsed Lumbar Intervertebral Disc, 69% were given non-steroidal anti-inflammatory drugs, 35% muscle relaxants, 12% opioids, and 4% acetaminophen, while 20% were given no medication. The guidelines indicated paracetamol as a first choice and NSAIDs as a second choice for pain management from acute PLID. If paracetamol or NSAIDs don't work, a brief course of muscle relaxants, either alone or in combination with NSAIDs, may be considered (Tulder et al., 2011).

Exercise therapy was defined as any program in which participants were required to perform repeated voluntary dynamic movements or static muscular contractions (in each case, either "whole-body" or "region-specific," and with or without external loading) during therapy sessions, to treat Prolapsed Lumbar Intervertebral Disc. The activity was supposed to be overseen or "prescribed" in some way (Koes et al.,2010).

A recent analysis of systematic reviews found good evidence that exercise regimens can help persons with non-specific Prolapsed Lumbar Intervertebral Disc pain and disability (Swinkels et al., 2009).

Prolapsed Lumbar Intervertebral Disc refers to pain in the lumbo-sacral portion of the spine, which spans the distance between the first lumbar vertebra and the first sacral vertebra, and is where the lordotic curve occurs (Phansopkar&Kage, 2014). It is well-known as one of the most prevalent symptoms felt by people all around the world. According to Rhon& Fritz (2015), LBP is one of the top ten worldwide burden diseases on society. Chronic back pain is a complex disease that affects over 20% of the population in Bangladesh each year between the ages of 30 and 60 and has a significant negative impact on individual health, work, and everyday activities. Back pain is the most common cause of disability and inability to perform daily tasks in the United Kingdom (UK).

In their lives, 60% to 80% of the world's population has had at least one episode of Prolapsed Lumbar Intervertebral Disc. Within a year, 45% to 55% of adults will develop Prolapsed Lumbar Intervertebral Disc. Furthermore, after a year, about 62% of patients who had previously experienced LBP would still be in pain. This disorder can lead to a decrease in people's quality of life as well as a decline in their physical activity, and it's one of four key causes of disability. LBP-related functional impairment is a significant issue. It affects people of all ages, from infants to the elderly, and is a common cause of medical visits (Fatima, 2016).

Many people are affected by low back discomfort. It has an impact on prosperity and is frequently the source of significant physical and mental health issues. Low back discomfort also has an impact on work performance and social responsibilities, such as family life, and is becoming a more prominent factor in rising healthcare expenditures. A global survey of the prevalence of low back pain in the adult population found it to be around 12%, with a one-month prevalence of 23%, a one-year prevalence of 38%, and a lifetime prevalence of nearly 40%. Furthermore, as the population ages in the next decades, the number of persons suffering from low back pain is expected to rise dramatically (Manchikanti et al., 2014). This comprehensive audit is being conducted to assess the rising prevalence of low back pain and the impact of comorbid conditions, as well as rising costs. Based on the available 18

publications, it appears that the prevalence of low back pain, as well as numerous modalities and their use in managing low back pain, is continuing to grow. Comorbid mental disorders and a variety of restorative difficulties, such as obesity, smoking, lack of activity, advancing age, and way of life variables, are all considered risk factors for low back pain. Even though it has been established that low back pain settles in around 80% to 90% of patients in around a month and a half, regardless of the organization or type of treatment, with only 5% to 10% of patients experiencing persistent back pain, this idea has been frequently addressed as the condition tends to backslide and most patients encounter different scenes years after the underlying assault, this idea has been frequently addressed as the condition tends to backslide and most patients encounter different scenes years after the underlying assault (Manchikanti et al., 2014).

Burdens of low back pain, in addition to workers, had ramifications on industry and society as a whole. Patients with low back pain had significantly poorer quality of life sub-domains than employees without low back pain, and with a decline in quality of life, workers with low back pain also had significantly higher mental health sub-domains than other workers. The frequency of low back pain among 451 blue employees was 44.2% after a year. Workers with low back pain scored considerably lower on the SF36 (63.90 17.39 vs. 79.42 15.01; P 0.001) and General health sub-domains (58.29 19.63 vs. 69.84 18.63; P0.001) than other workers (Bahrami et al., 2016). Low back pain (LBP) is one of the leading causes of disability globally, with an estimated 651 million individuals suffering from it between 1990 and 2013. Chronic low back pain can result in despair, anxiety, sleeplessness, and other psychological problems (Singh et al., 2018).

The emphasis in the international classification of functioning, disability, and health (ICF) has shifted to activity and activity limitation, which refers to difficulties performing, accomplishing, or completing a task. When there is a qualitative or quantitative change in the way activities are carried out, difficulties in doing them arise. Difficulty refers to all of the factors that can influence how an activity is completed (WHO, 2009).

Although LBP has been extensively investigated in adults, its specific causes remain unknown. Various factors appear to play a role in the development of LBP, according

to the evidence. Both the weight of the load (OR 141.11 [95% CI 1.05–1.18] per 10 kg lifted) and the number of lifts (OR 141.09 [1.03–1.15] per ten lifts per day) were found to be factors that enhanced pain in a study of workplace lifting. Smoking (OR 14.130 [1.16–1.45] (Coenen et al., 2016), obesity (OR 14.153 [1.22–1.92]) (Shiri et al., 2016), and depressive symptoms (OR 141.59 [1.26–2.01]) (Pinheiro et al., 2016) also elevated the incidence of LBP.

Individual attributes (confidence, copping style, feeling of control (potential right, human right, condition) and financial status are included in the personal satisfaction measurement: well-being (physical, passionate, intellectual), social (people's impression of relational connections and social part in their lives), individual attributes (confidence, copping style, feeling of control (potential right, human right, condition) and financial status (Soh et al., 2011). The study of personal satisfaction looks at how it affects the decency and importance of life, as well as people's happiness and success. The From-36 wellbeing overview (SF-36) is a 36-question multifunctional wellbeing survey. The SF-36 is a non-exclusive measure of well-being that focuses on a certain age, disease, or treatment group. Its goal is to provide a global assessment of well-being-related personal satisfaction. There are eight scales in total (Caliborne et al., 2002). Physical working, part confinements, significant agony, general wellbeing, essentialness (vitality/weakness), social working, part enthusiastic, and psychological well-being are the eight enter associated wellbeing measurements (Carrone et al., 2010).

Because the Tampa Scale of Kinesiophobia (TSK) is designed to assess kinesiophobia, it could be useful for physiotherapists treating patients with persistent musculoskeletal discomfort (Lundberg et al., 2004). The Norwegian version of the Tampa Scale of Kinesiophobia appears to be a one-dimensional kinesiophobia construct. Damsgrd et al. (2008) found that the scale was robust across age and gender, and that reaction patterns to the items were similar in patients with low back pain and patients with widespread pain distribution including low back pain. The TSK was the first instrument to measure fear of movement/(re)injury and it has a wide range of uses and language variations. The TSK was found to be sensitive in detecting clinical changes in patients undertaking rehabilitation following lumbar fusion and chronic low back pain in research (Monticone et al., 2016).

The original TSK contains 17 components, four of which are reverse-scored (items 4, 8, 12, and 16). The overall score of the test is the sum of the patient's scores, which range from 17 to 68. The higher the score, the greater the patient's fear of movement/(re)injury. The patient is diagnosed with kinesiophobia if the score is greater than 37 (Liu et al., 2021).

One of the most common instruments used to measure the functional state of patients with LBP is the Roland–Morris Disability Questionnaire (RMDQ) (Roland & Morris, 1983). The RMDQ is a self-administered disability questionnaire that was created by selecting statements from the Sickness Impact Profile (Bergner et al., 1976). The RMDQ is a reliable, one-dimensional ordinal measure that performs well in population studies (Nambi, 2013).

The SF 36 is made up of eight scaled scores that are the sums of each section's questions. They are Physical functioning, Role Physical, Bodily Pain, General Health Vitality, Social Functioning, Role Emotional, Mental Health (ware et al.,1993).

The physical segment summary measure of the SF-36 four measurements is: physical working, part limitation physical, body discomfort, and general wellbeing. These four people's spaces reflect their physical strength and wealth. A low score indicates poor overall health, severe physical pain, and constant delicacy, as well as an impediment to self-mind, physical versatility, social connection, and part workouts. A high score indicates that overall health is excellent, with no physical limitations, inabilities, or reductions in part-time activities (Sohey et al., 2011).

3.1 Study design

This study was conducted using cross sectional survey under a quantitative study design. Survey methodology was chosen to meet the study aim as an effective way to collect data.

3.2 Study area

Data wascollect from the-

- Musculoskeletal Unit of CRP, Savar.
- Enam medical college& Hospital, Savar.

3.3 Study population

Peoples who were suffering from Prolapsed lumber 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.

3.5 Sampling Technique

Findings 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:

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

$= \frac{(1.96)^2 x\ 0.025\ x\ 0.975}{(0.05)^2} = 38$

Here,

Z (confidence interval) = 1.96

P (prevalence) = 5%

And, q= (1-p)

$\qquad$ = (1-0.025)

$\qquad$ = 0.975

The actual sample size was, n= 38.

The actual sample size for this study is calculated as 38, but as the study performed as a part of academic research project. So that 300 PLID patients was taken as the sample of 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 tumour 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
- Quality of life scale
- Paper
- Pen
- File
- Calculator
- Computer
- Printer

3.10 Measurement tools:

Pain related questionnaire (Numeric Pain Rating Scale):

For measuring pain intensity in several function positions. Visual analogue scale is one of the most frequently used measurement scales in health care research. The Numeric pain rating scale is most commonly known and used for measurement of pain. Numeric Pain Rating Scale is a line of a defined length (10 cm), usually horizontal, anchored at each end by a descriptive word or phrase representing the extremes (e.g. worse, best). Numeric Pain Rating Scale to rate the pain status experienced by patients. It is known as Pain Rating Scale. The scale is a 10cm long scale ranging from 0-10. Here a zero (0) means no pain, ten (10) is severe pain feeling experienced by patients (Bowling, 2007).

Disability related questionnaire (Ronald Morris Disability questionnaire):

The Ronald Morris Disability questionnaire(RMDQ) is a self-administered disability measure, in which greater level of disability are reflected by higher numbers on a 24-point scale. The RMDQ has been shown to yield reliable measurements, which are valid for inferring the level of disability and to be sensitive to change over time for groups of patients with low back pain. Little is known about the usefulness of this instrument in aiding decision making regarding individual patients. This questionnaire has been adapted to limit confusion by the patient with nerve root pain, who may have little back pain (Statford et al., 1997).

Kinesiophobia related questionnaire (Tampa scale for kinesiophobia):

The TSK is a 17-item self report checklist using a 4-point Likert scale that was developed as a measure of fear of movement or (re)injury. Kinesiophobia is defined by the developers 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). The scale is based on the model of fear avoidance, fear of work related activities, fear of movement and fear of re-injury (Vlaeyan et al., 1995). The TSK has also been linked to elements of catastrophic thinking (Burwinkle et al., 2005). The scale can be useful in measuring unhelpful thoughts and beliefs about pain in people with chronic pain or fibromyalgia.

Quality of life related scale (SF-36):

The Short Form-36 (SF-36) is a 36 item questionnaire which measures Quality of Life (QOL) across eight domains, which are both physically and emotionally based and it is a structured, self-report questionnaire (Jenkinson et al., 2014).The eight domains that the SF36 measures are as follows: physical functioning; role limitations due to physical health; role limitations due to emotional problems; energy/fatigue; emotional well-being; social functioning; pain; general health. It is the most widely used measures to predict health-related quality of life and it also help in showing the difference between subjects with variety of chronic conditions and between subjects with different level of severity of the same disease. The Test-retest reliability of sf-36 Bangla version has been tasted and the value of Test- retest reliability (.94-1.0) (Walton et al., 2012).

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 thecomplain 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 refers methods of describing a set of results in terms of their most interesting characteristics (Hicks, 2009). Data were analyzed with the software named Statistical Package for the Social Science (SPSS) version 20.0. 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 2007 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.

3.14Ethical considerations

The proposal of the dissertation including methodology was presented to the Institutional Review Board (IRB) of Bangladesh Health Professions Institute (BHPI). Again before the beginning of the data collection, Ethical permission was taken from IRB to conduct the study. The whole process of this research project was done by following the Bangladesh Medical Research Council (BMRC) guidelines and World Health Organization (WHO) Research guidelines.

4.1 Socio demographic information:

Table 1: Socio demographic information of the participants-

Variables		Frequency	Percent (%)
Age	18-30	63	21%
	31-43	112	37.3%
	44-56	125	41.7%
Gender	Male	182	60.70%
	Female	118	39.30%
Marital Status	Married	271	90.3%
	Unmarried	25	8.3%
	Widow	4	1.3%
Living area	Rural	79	26.3%
	Semirural	96	32%
	Urban	125	41.7%
Education Qualification	Illiterate	11	3.7%
	Primary	77	25.7%
	Secondary	86	28.7%
	Higher secondary	70	23.3%
	Graduation	33	11%
	Post-graduate	23	7.7%
Occupation	Farmer	21	7%
	Garments worker	20	6.7%
	Day laborer	11	3.7%
	Service holder	59	19.7%
	Businessmen	48	16%
	Retired	10	3.3%
	Students	19	6.3%
	Teacher	21	7%
	Housewife	91	30.3%
Tobacco Intake	Cigarette	70	23.3%
	betel leaf	54	18%
	Jorda	4	1.3%
	Gull	1	0.3%
	Null	171	57%

4.1.1 Age of the Participants

In Table- 1: Among the 300 participants, the age group 18-30 has 21% (n=63), 31-43 has 37.3% (n=112), 44-56 has 41.7% (n=125) participants. In which Mean 40.56 and Std. Deviation 10.94.

4.1.2 Gender of the Participants:

In Table- 1: Among the 300 participants, 60.70% (n=182) was male and 39.30% (n=118) was female participants. In which Mean 1.39 and Std. Deviation 0.49.

4.1.3 Marital Status of the Participants:

In Table- 1: Among the 300 participants, 90.3% (n=271) were married, 8.3% (n=25) were unmarried, and 1.3% (n=4) were Widow.

4.1.4 Living area of the participants:

In Table- 1: Among the 300 participants, 26.3% (n=79) were in Rural area, 32% (n=96) were in Semirural area, and 41.7% (n=125) were in Urban area.

4.1.5 Education Qualification of the participants:

In Table- 1: Among the 300 participants, 3.7% (n=11) were Illiterate, 25.7% (n=77) were Primary, 28.7% (n=86) were Secondary, 23.3% (n=70) were Higher secondary, 11% (n=33) were Graduation and 7.7% (n=23) were Post-graduate participants.

4.1.6 Occupation of the participants:

In Table- 1: Among the 300 participants, 7% (n=21) were Farmer, 6.7% (n=20) were Garments worker, 3.7% (n=11) were Day laborer, 19.7% (n=59) were Service holder, 16% (n=48) were Businessmen 3.3% (n=10) were Retired, 6.3% (n=19) were Students, 7% (n=21) were Teacher and 30.3% (n=91) were House wife.

4.1.7 Tobacco Intake of the participants:

In Table- 1: Among the 300 participants, 23.3% (n=70) were take cigarette, 18% (n=54) were take betel leaf, 1.3% (n=4) were take jorda, 0.3% (n=1) were take gull and 57% (n=171) participants were didn't take anything.

4.2 Clinical information:

4.2.1 MRI Report Finding of the Participants:

Among the 300 participants, 32.7% (n=100) had Disc Protrusion, 30.4% (n=93) had Disc Harniation, 32% (n=98) had Disk Bulging, and 4.9% (n=15) had Disc Sequestration.
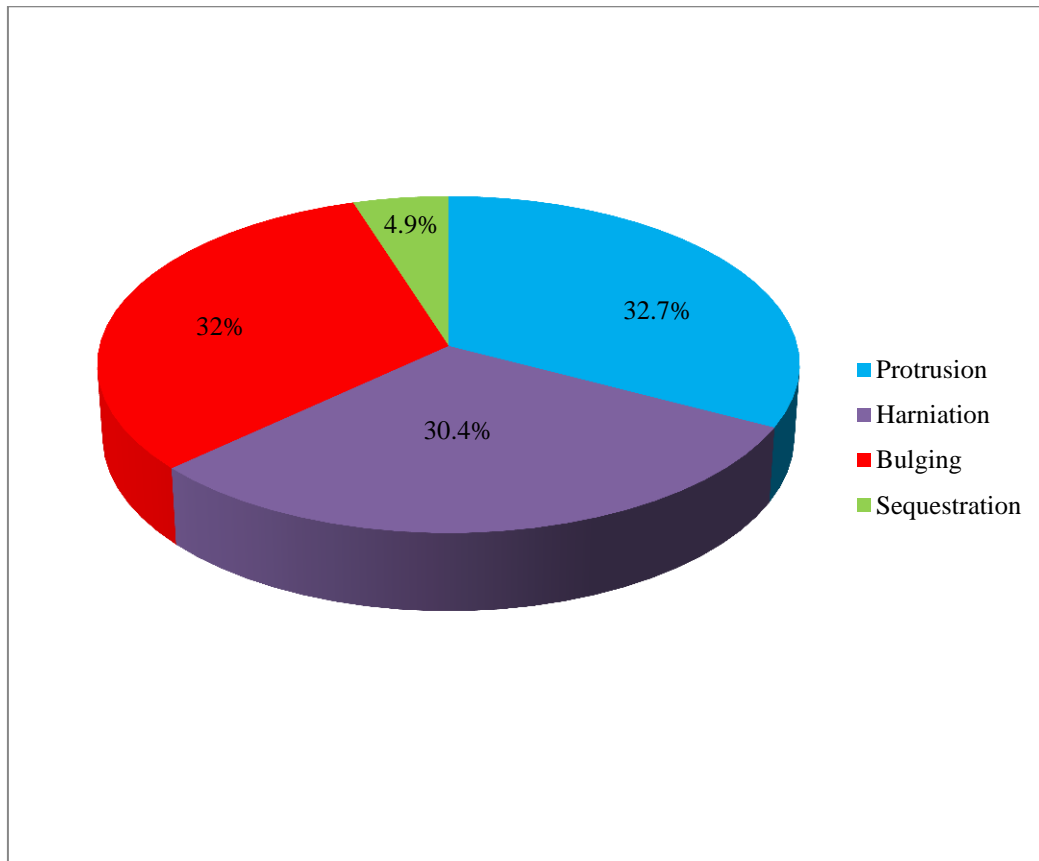
Figure 2: MRI Report Finding of the Participants

4.2.2 X-Ray Report finding of the participants:

Among the 300 participants, 7.6% (n=44) had increase lumbar lordosis, 41.3% (n=239) had decrease lumbar lordosis, 4.7% (n=27) had flat lumbar spine, 17.5% (n=101) had disc space reduce, 27.9% (n=161) had disc degenerative change and 1% (n=6) had normal study in X-ray report findings.
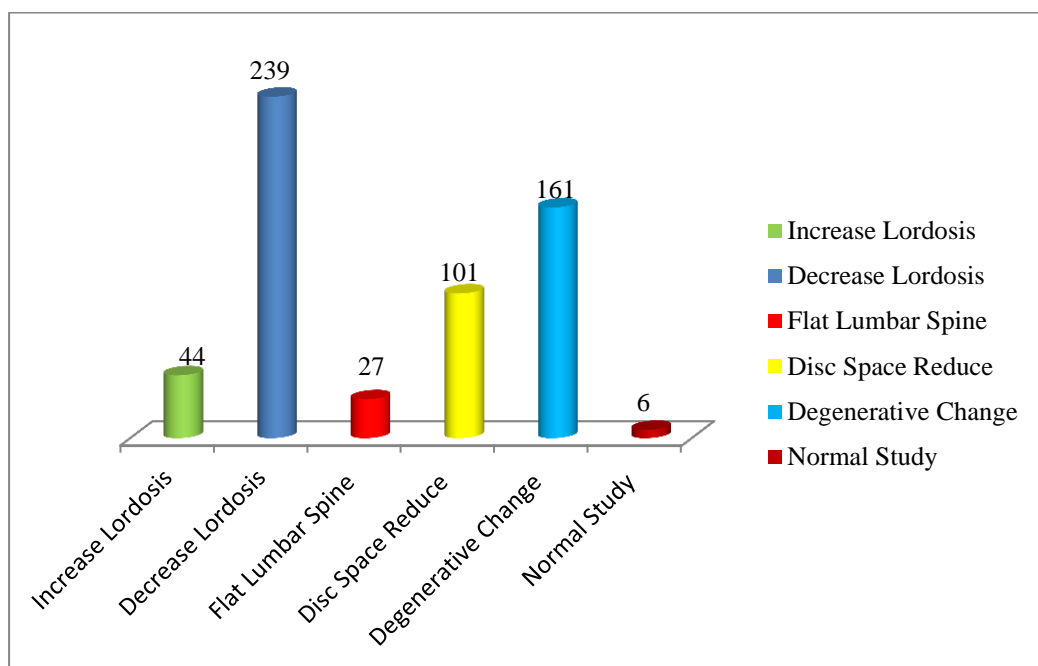
Figure 3: X-Ray Report finding of the participants

4.2.3 Duration of suffering from PLID:

Table 2: Duration of suffering from PLID of the participants-

Mean	Std. Deviation
16.0883	18.42429

In Table- 2: Among the 300 participants suffering from PLID minimum duration is 1 month and maximum duration is 60 month. In which Mean 16.09 and Std. Deviation 18.42.

4.2.4 Type of Pain:

Among the 300 participants, 16% (n=48) had acute pain, 35.7% (n=107) had sub-acute pain and 48.3% (n=145) had chronic pain.
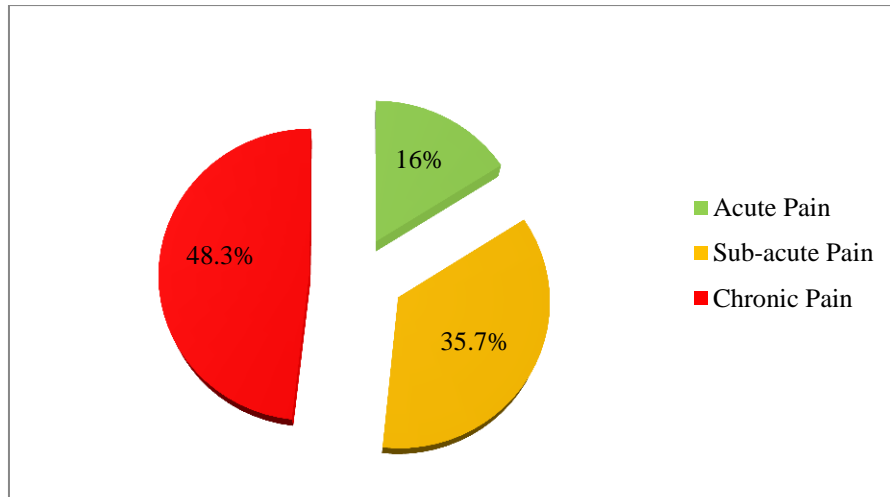
Figure 4: Type of Pain

4.2.5 Radiating Pain:

Among the 300 participants, 4.3% (n=13) had no radiating pain, 66% (n=198) had radiating unilateral pain and 29.7% (n=89) had radiating bilateral pain.
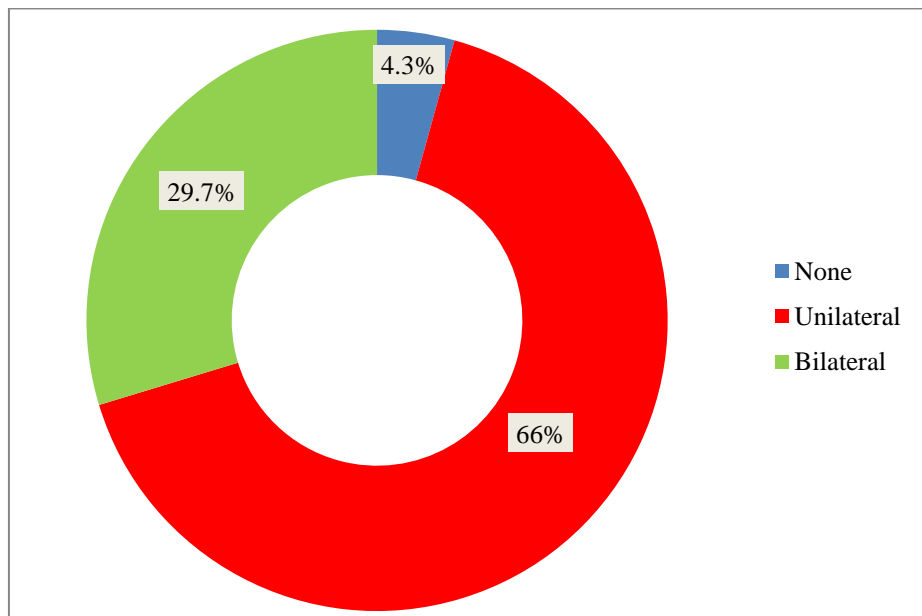
Figure 5: Radiating Pain

4.2.6 Radiating Pain above knee/Thigh Region:

Among the 300 participants, 5.7% (n=17) had no radiating pain above knee region, 65.3% (n=196) had radiating unilateral pain above knee region and 29% (n=87) had radiating bilateral pain above knee region.
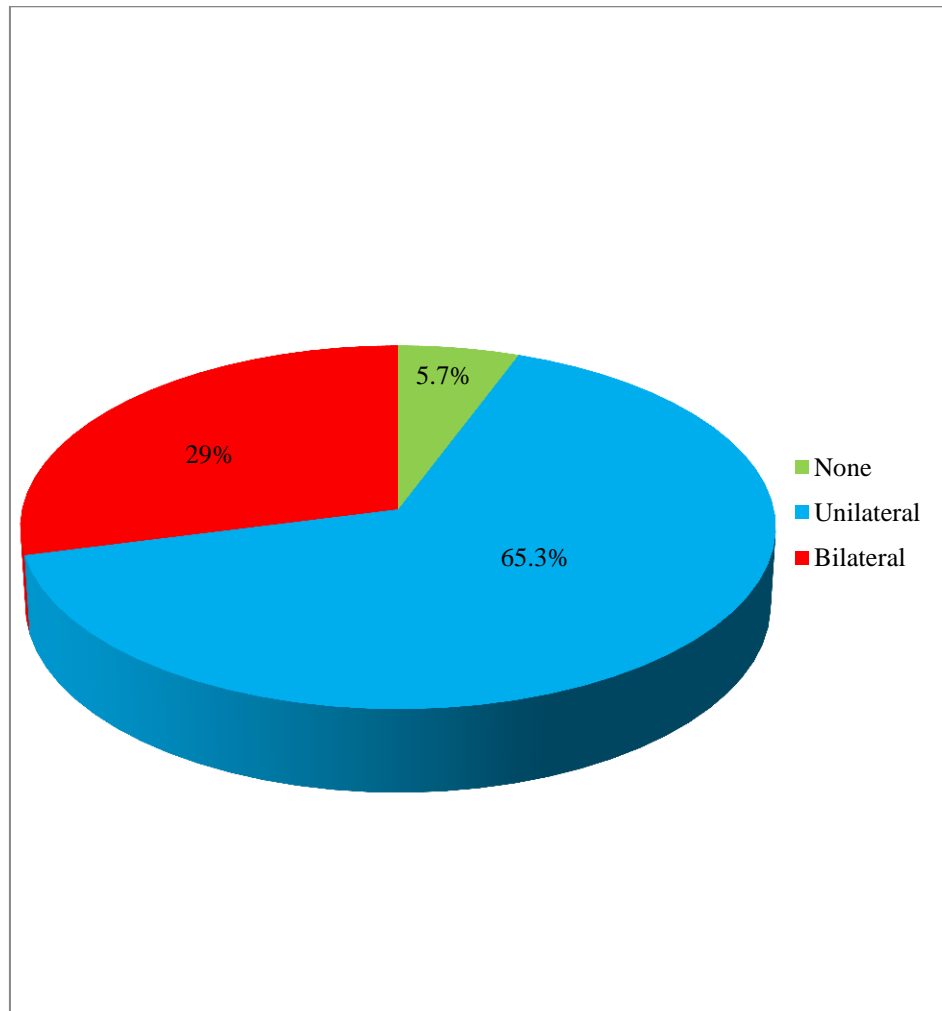
Figure 6: Radiating Pain Above knee/Thigh Region

4.2.7 Radiating Pain below knee/Thigh Region:

Among the 300 participants, 6.3% (n=19) had no radiating pain below knee region, 63% (n=189) had radiating unilateral pain below knee region and 30.7% (n=92) had radiating bilateral pain below knee region.
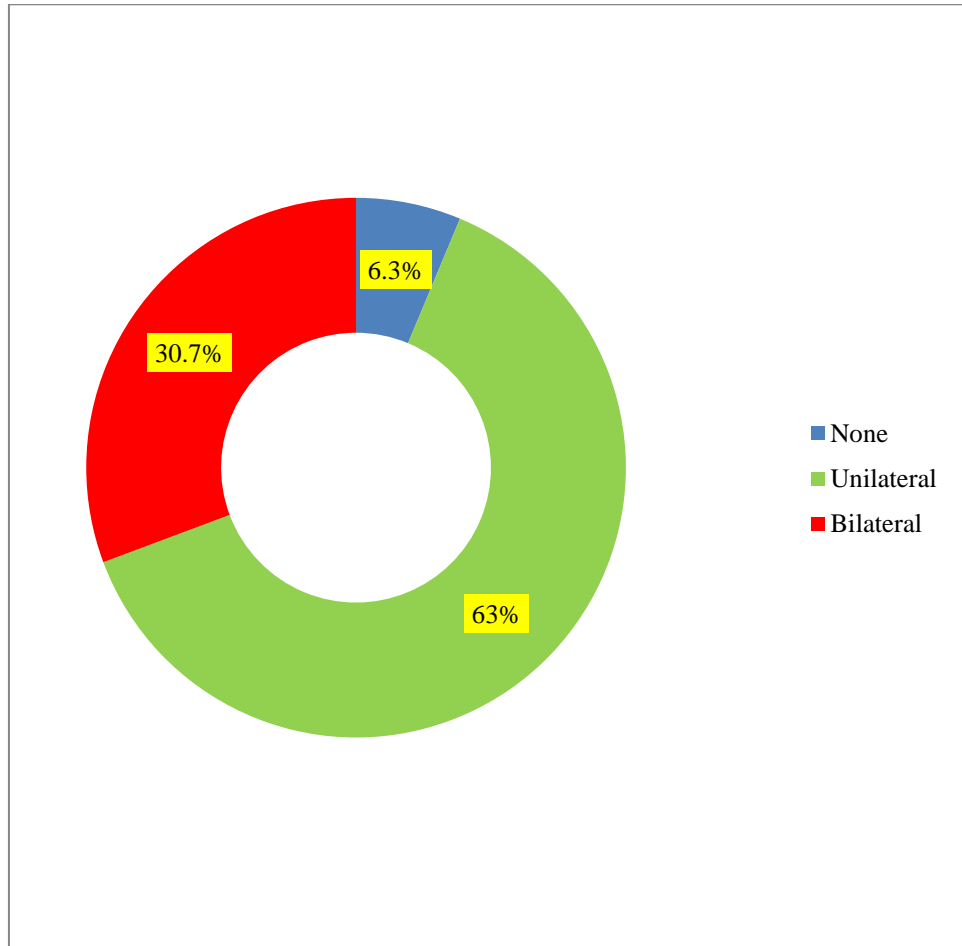
Figure 7: Radiating Pain below knee Region

4.3 Descriptive characteristics of the responds:

Table 3: Numeric pain rating scale, Ronald- Morris disability, Tampa scale for kinesiophobia& SF-36-

Variable		Percent% (Frequency) Mean ± SD
Numeric pain rating scale in back region	None	0.3% (n=1)
	Mild	3.3% (n=10)
	Moderate	10.3% (n=31)
	Severe	86% (n=258)
Numeric pain rating scale in above knee/thigh region	None	4% (n=12)
	Mild	5.3% (n=16)
	Moderate	26.7% (n=80)
	Severe	64% (n=192)
Numeric pain rating scale in below knee/thigh	None	5% (n=15)
	Mild	3.3% (n=10)
	Moderate	23% (n=69)
	Severe	68.7% (n=206)
Tampa scale forkinesiophobia	No kinesiophobia	3.7% (n=11)
	Severe kinesiophobia	96.3% (n=289)
Roland – morris low back pain and disability questionnaire	Mean ± SD	16.50±3.50
SF-36 questionnaire (Mean ± SD)	Physical Functioning	41.75±14.11
	Role Physical	12.67±20.80
	Bodily Pain	55.80±16.99
	General Health	53.98±12.15
	Vitality	43.20±17.87
	Social Functioning	47.58±15.55
	Role Emotional	43.44±50.25
	Mental Health	48.03±16.48

4.3.1 Numeric Pain Rating Scale in Back:

In Table- 3: Among the 300 participants, 0.3% (n=1) had no pain in back region, 3.3% (n=10) had mild pain in back region, 10.3% (n=31) had moderate pain in back region and 86% (n=258) had severe pain in back region.

4.3.2 Numeric Pain Rating Scale in Above Knee/Thigh Region:

In Table- 3: Among the 300 participants, 4% (n=12) had no pain above knee region, 5.3% (n=16) had mild pain above knee region, 26.7% (n=80) had moderate pain above knee region and 64% (n=192) had severe pain above knee region.

4.3.3 Numeric Pain Rating Scale in Below Knee/Thigh:

In Table- 3: Among the 300 participants, 5% (n=15) had no pain below knee region, 3.3% (n=10) had mild pain below knee region, 23% (n=69) had moderate pain below knee region and 68.7% (n=206) had severe pain below knee region.

4.3.4 The Roland – Morris Low Back Pain and Disability Questionnaire:

In Table- 3: Among the 300 participants suffering from PLID minimum disability score is 7 and maximum disability score is 22. In which Mean 16.50 and Std. Deviation 3.50.

4.3.5 Tampa Scale for Kinesiophobia:

In Table- 3: Among the 300 participants, 3.7% (n=11) had no kinesiophobia and 96.3% (n=289) had severe kinesiophobia.

4.3.6 SF-36 scoring among the participants

The SF 36 consists of eight scaled scores, which are the sums of the questions in their section. This data was also analyzed by using SPSS version 20. In Table- 3: From 300 participants the mean score of physical functioning was 41.75, Role physical was 12.67, Bodily Pain was 55.80, General Health was 53.98, Vitality was 43.20, Social Functioning was 47.58, Role Emotional was 43.44, Mental Health was 48.03 And standard deviation of PF was 14.11, RP was 20.80, BP was 16.99, GH was 12.15, VT was 17.87, SF was 15.55, RE was 50.25, MH was 16.48.

When the score is near about 100, like 70,80,90, it means the quality of life of Survivors is good & when the score is poor like 30,40, it means the quality of life of Survivors is poor. Among the participants the mean of physical functioning was 41.75, Bodily pain 55.80, General health 53.98, Vitality was 43.20, Social functioning was 47.58, Role emotional 43.44 and Mental health was 48.03. According to SF-36 this range was moderate score and the Role physical mean was 12.67, according to SF-36 this range was poor. So among the participants their physical health quality of life was poor and mental health, social, emotional quality of life was fair.

4.4 Association between Numeric pain rating scalein back&Socio-demographic variables:

Table 4: Association between Numeric pain rating scale in back & Demographic variables-

Variable	Numeric pain rating scale in back				Chi-Square	P-Value
	None	Mild	Moderate	Severe		
Age						
18-30	0.0% (n=0)	1.3% (n=4)	2.3% (n=7)	17.3%(n=52)		
31-43	0.3% (n=1)	0.7% (n=2)	4.7% (n=14)	31.7%(n=95)	5.63	0.466
44-56	0.0% (n=0)	1.3% (n=4)	3.3% (n=10)	37.0%(n=111)		
Gender						
Male	0.3% (n=1)	2.7% (n=8)	9.0% (n=27)	48.7%(n=146)	13.08	**0.004***
Female	0% (n=0)	0.7% (n=2)	1.3% (n=4)	37.3%(n=112)		
Marital Status						
Married	0.3% (n=1)	2.7% (n=8)	8.7%(n=26)	78.7%(n=236)		
Unmarried	0% (n=0)	0.7% (n=2)	1.3% (n=4)	6.3% (n=19)	4.13	0.659
Widow	0% (n=0)	0% (n=0)	0.3% (n=1)	1.0% (n=3)		
Education						
Illiterate	0% (n=0)	0% (n=0)	0.7% (n=2)	3.0% (n=9)		
Primary	0% (n=0)	0.3% (n=1)	2.3% (n=7)	23.0% (n=69)		
Secondary	0% (n=0)	0% (n=0)	2.7% (n=8)	26.0% (n=78)	44.63	**0.000***
Higher secondary	0% (n=0)	1.0% (n=3)	2.0% (n=6)	20.3% (n=61)		
Graduation	0% (n=0)	0.3% (n=1)	2.0% (n=6)	8.7% (n=26)		
Post-graduation	0.3% (n=1)	1.7% (n=5)	0.7% (n=2)	5.0% (n=15)		
Living Area						
Rural	0% (n=0)	0.3% (n=1)	3.3%(n=10)	22.7% (n=68)		
Semirural	0% (n=0)	1.3% (n=4)	2.7% (n=8)	28.0% (n=84)	3.61	0.73
Urban	0.3% (n=1)	1.7% (n=5)	4.3%(n=13)	35.3%(n=106)		
Occupation						
Farmers	0%(n=0)	0.3%(n=1)	0.3%(n=1)	6.3%(n=19)		
Garments workers	0% (n=0)	0% (n=0)	0% (n=0)	6.7% (n=20)		
Day Laborer	0% (n=0)	0% (n=0)	0% (n=0)	3.7% (n=11)		
Service Holder	0.3% (n=1)	0.7% (n=2)	3.0% (n=9)	15.7% (n=47)		
Businessman	0% (n=0)	0.7% (n=2)	2.7% (n=8)	12.7% (n=38)		
Retired	0% (n=0)	0% (n=0)	1.3% (n=4)	2.0% (n=6)	29.39	0.21
Student	0% (n=0)	0.7% (n=2)	0.7% (n=2)	5.0% (n=15)		
Teacher	0% (n=0)	0.3% (n=1)	0.7% (n=2)	6.0% (n=18)		
Housewife	0% (n=0)	0.7% (n=2)	1.7% (n=5)	28.0%(n=84)		
Tobacco Intake						
Cigarette	0.3% (n=1)	1.3% (n=4)	2.3% (n=7)	19.3% (n=58)		
Betel leaf	0% (n=0)	0% (n=0)	1.0% (n=3)	17.0% (n=51)		
Jorda	0% (n=0)	0% (n=0)	0% (n=0)	1.3% (n=4)	9.51	0.66
Gull	0% (n=0)	0% (n=0)	0% (n=0)	0.3% (n=1)		
Null	0% (n=0)	2.0% (n=6)	7.0% n=21)	48.0%(n=144)		

*Chi-Square test

4.4.1: Association between Age and Numeric pain rating scale in back region-
In Table- 4: this study found no association in between Age and Numeric Pain Rating Scale in Back region among the participants. The Chi-Square value of this association was 5.63 and P value was 0.47. This was not significant. Significant value was $P<0.05$.

4.4.2: Association between Gender and Numeric pain rating scale in back region-
In Table- 4: this study found an association in between Gender and Numeric Pain Rating Scale in Back region among the participants. The Chi-Square value of this association was 13.08 and P value was 0.004*. $P<0.05$ was significant.

4.4.3 Association between Marital Status and Numeric pain rating scale in back region-
In Table- 4: this study found no association in between Marital Status and Numeric Pain Rating Scale in Back region among the participants. The Chi-Square value of this association was 4.13 and P value was 0.66. This wasnot significant. Significant value wasP<0.05.

4.4.4 Association between Educational Qualification and Numeric pain rating scale in back region-
In Table- 4: this study found an association in between Educational Qualification and Numeric Pain Rating Scale in Back region among the participants. The Chi-Square value of this association was 44.63 and P value was 0.000*. $P<0.05$ wassignificant.

4.4.5 Association between Living Area and Numeric pain rating scale in back region-
In Table- 4: this study found no association in between Living area and Numeric Pain Rating Scale in Back region among the participants. The Chi-Square value of this association was 3.61 and P value was 0.73. This wasnot significant. Significant value wasP<0.05.

4.4.6 Association between Occupation and Numeric pain rating scale in back region-
In Table- 4: this study found no association in between Educational Qualification and Numeric Pain Rating Scale in Back region among the participants. The Chi-Square value of this association was 29.39 and P value was 0.21. This wasnot significant. Significant value wasP<0.05.

4.4.7 Association between Tobacco Intake and Numeric pain rating scale in back region-
In Table- 4: this study found no association in between Tobacco Intake and Numeric Pain Rating Scale in Back region among the participants. The Chi-Square value of this association was 9.51 and P value was 0.66.This wasnot significant. Significant value wasP<0.05.

4.5 Association between Numeric pain rating scale in above knee & Socio-demographic variables:

Table 5: Association between Numeric pain rating scale in above knee & Socio-demographic variables-

Variable	Numeric pain rating scale in above knee				Chi-Square	P-Value
	None	Mild	Moderate	Severe		
Age						
18-30	0.3% (n=1)	2.0% (n=6)	5.7% (n=17)	13.0% (n=39)		
31-43	1.7% (n=5)	2.0% (n=6)	9.7% (n=29)	24.0% (n=72)	4.42	0.62
44-56	2.0% (n=6)	1.3% (n=4)	11.3% (n=34)	27.0% (n=81)		
Gender						
Male	3.7%(n=11)	4.3%(n=13)	16.7%(n=50)	36.0%(n=108)	9.36	**0.03***
Female	0.3% (n=1)	1.0% (n=3)	10.0%(n=30)	28.0% (n=84)		
Marital Status						
Married	4.0%(n=12)	4.3%(n=13)	23.0%(n=69)	59.0%(n=177)		
Unmarried	0% (n=0)	1.0% (n=3)	3.0% (n=9)	4.3% (n=13)	6.23	0.39
Widow	0% (n=0)	0% (n=0)	0.7% (n=2)	0.7% (n=2)		
Education						
Illiterate	0.3% (n=1)	0% (n=0)	1.3% (n=4)	2.0% (n=6)		
Primary	1.0% (n=3)	0.7% (n=2)	5.3% (n=16)	18.7% (n=56)		
Secondary	1.7% (n=5)	0.7% (n=2)	5.7% (n=17)	20.7% (n=62)	39.24	**0.001***
Higher secondary	0.3% (n=1)	1.7% (n=5)	7.7% (n=23)	13.7% (n=41)		
Graduation	0% (n=0)	0.3% (n=1)	4.3% (n=13)	6.3% (n=19)		
Post-graduation	0.7% (n=2)	2.0% (n=6)	2.3% (n=7)	2.7% (n=8)		
Living Area						
Rural	1.7% (n=5)	1.0% (n=3)	7.7% (n=23)	16.0% (n=48)		
Semirural	1.0% (n=3)	2.0% (n=6)	7.3% (n=22)	21.7% (n=65)	3.09	0.80
Urban	1.3% (n=4)	2.3% (n=7)	11.7%(n=35)	26.3% (n=79)		
Occupation						
Farmers	0.7% (n=2)	0.3% (n=1)	2.0% (n=6)	4.0% (n=12)		
Garments workers	0% (n=0)	0.3% (n=1)	0.7% (n=2)	5.7% (n=17)		
Day Laborer	0.3% (n=1)	0% (n=0)	0.3% (n=1)	3.0% (n=9)		
Service Holder	2.0% (n=6)	1.0% (n=3)	6.3% (n=19)	10.3% (n=31)		
Businessman	0.7% (n=2)	0.7% (n=2)	4.3% (n=13)	10.3% (n=31)	26.64	0.32
Retired	0% (n=0)	0.3% (n=1)	1.0% (n=3)	2.0% (n=6)		
Student	0% (n=0)	1.0% (n=3)	1.7% (n=5)	3.7% (n=11)		
Teacher	0.3% (n=1)	0.3% (n=1)	1.7% (n=5)	4.7% (n=14)		
Housewife	0% (n=0)	1.3% (n=4)	8.7% (n=26)	20.3% (n=61)		
Tobacco Intake						
Cigarette	0.7% (n=2)	1.7% (n=5)	4.7% (n=14)	16.3% (n=49)		
Betel leaf	0.7% (n=2)	0% (n=0)	6.3% (n=19)	11.0% (n=33)		
Jorda	0% (n=0)	0% (n=0)	0.3% (n=1)	1.0% (n=3)	8.36	0.76
Gull	0% (n=0)	0% (n=0)	0% (n=0)	0.3% (n=1)		
Null	2.7% (n=8)	3.7%(n=11)	15.3%(n=46)	35.3%(n=106)		

*Chi-Square test

4.5.1 Association between Age and Numeric pain rating scale in Above Knee region:

In Table- 5:This study found no association in between Age and Numeric Pain Rating Scale in Above Knee region among the participants. The Chi-Square value of this association was 4.42 and P value was 0.62. This wasnot significant. Significant value wasP<0.05.

4.5.2 Association between Gender and Numeric pain rating scale in Above Knee region:

In Table- 5: This study found an association in between Gender and Numeric Pain Rating Scale in Above Knee region among the participants. The Chi-Square value of this association was 9.36 and P value was 0.03. P<0.05 is significant.

4.5.3 Association between Marital Status and Numeric pain rating scale in Above Knee region:

In Table- 5: this study found no association in between Marital Status and Numeric Pain Rating Scale in Above Knee region among the participants. The Chi-Square value of this association was 6.23 and P value was 0.39. This wasnot significant. Significant value wasP<0.05.

4.5.4 Association between Educational Qualification and Numeric pain rating scale in Above Knee region:

In Table- 5: this study found an association in between Educational Qualification and Numeric Pain Rating Scale in Above Knee region among the participants. The Chi-Square value of this association was 39.24 and P value was 0.001. P<0.05 was significant.

4.5.5 Association between Living Area and Numeric pain rating scale in Above Knee region:

In Table- 5: this study found no association in between Living area and Numeric Pain Rating Scale in Above Knee region among the participants. The Chi-Square value of this association was 3.09 and P value was 0.80. This wasnot significant. Significant value wasP<0.05.

4.5.6 Association between Occupation and Numeric pain rating scale in Above Knee region:

In Table- 5: this study found no association in between Educational Qualification and Numeric Pain Rating Scale in Above Knee region among the participants. The Chi-Square value of this association was 26.64 and P value was 0.32. This wasnot significant. Significant value wasP<0.05.

4.5.7 Association between Tobacco Intake and Numeric pain rating scale in Above Knee region:

In Table- 5: this study found no association in between Tobacco Intake and Numeric Pain Rating Scale in Above Knee region among the participants. The Chi-Square value of this association was 8.36 and P value was 0.76. This wasnot significant. Significant value wasP<0.05.

4.6 Association between Numeric pain rating scale in below knee & Socio-demographic variables:

Table 6: Association between Numeric pain rating scale in below knee & Socio-demographic variables-

Variable	Numeric pain rating scale in below knee				Chi-Square	P-Value
	None	Mild	Moderate	Severe		
Age						
18-30	1.0% (n=3)	0.7% (n=2)	5.7% (n=17)	13.7% (n=41)		
31-43	1.3% (n=4)	0.7% (n=2)	7.7% (n=23)	27.7% (n=83)	4.08	0.67
44-56	2.7% (n=8)	2.0% (n=6)	9.7% (n=29)	27.3% (n=82)		
Gender						
Male	4.0%(n=12)	3.0% (n=9)	15.3%(n=46)	38.3%(n=115)	9.02	**0.03***
Female	1.0% (n=3)	0.3% (n=1)	7.7% (n=23)	30.3% (n=91)		
Marital Status						
Married	4.0%(n=12)	3.0% (n=9)	19.0%(n=57)	64.3%(n=193)		
Unmarried	1.0% (n=3)	0.3% (n=1)	2.7% (n=8)	4.3% (n=13)	18.66	**0.005***
Widow	0% (n=0)	0% (n=0)	1.3% (n=4)	0% (n=0)		
Education						
Illiterate	0% (n=0)	0% (n=0)	1.3% (n=4)	2.3% (n=7)		
Primary	1.7% (n=5)	0.7% (n=2)	6.3% (n=19)	17.0% (n=51)		
Secondary	1.0% (n=3)	0.3% (n=1)	5.7% (n=17)	21.7% (n=65)	25.85	**0.04***
Higher secondary	1.0% (n=3)	0.3% (n=1)	5.0% (n=15)	17.0% (n=51)		
Graduation	0.7% (n=2)	0.7% (n=2)	2.0% (n=6)	7.7% (n=23)		
Post-graduation	0.7% (n=2)	1.3% (n=4)	2.7% (n=8)	3.0% (n=9)		
Living Area						
Rural	2.3% (n=7)	0.3% (n=1)	6.7% (n=20)	17.0% (n=51)		
Semirural	1.3% (n=4)	1.3% (n=4)	7.0% (n=21)	22.3% (n=67)	5.20	0.52
Urban	1.3% (n=4)	1.7% (n=5)	9.3% (n=28)	29.3% (n=88)		
Occupation						
Farmers	1.0% (n=3)	0.7% (n=2)	2.0% (n=6)	3.3% (n=10)		
Garments workers	0% (n=0)	0% (n=0)	1.0% (n=3)	5.7% (n=17)		
Day Laborer	0% (n=0)	0% (n=0)	0.7% (n=2)	3.0% (n=9)		
Service Holder	2.0% (n=6)	1.3% (n=4)	4.3% (n=13)	12.0% (n=36)		
Businessman	0.7% (n=2)	0% (n=0)	4.0% (n=12)	11.3% (n=34)	33.79	0.09
Retired	0% (n=0)	0% (n=0)	1.0% (n=3)	2.3% (n=7)		
Student	0.7% (n=2)	0.3% (n=1)	2.0% (n=6)	3.3% (n=10)		
Teacher	0% (n=0)	0.3% (n=1)	3.0% (n=9)	3.7% (n=11)		
Housewife	0.7% (n=2)	0.7% (n=2)	5.0% (n=15)	24.0% (n=72)		
Tobacco Intake						
Cigarette	0.7% (n=2)	1.0% (n=3)	5.7% (n=16)	16.3% (n=49)		
Betel leaf	1.3% (n=4)	0.7% (n=2)	3.7% (n=11)	12.3% (n=37)		
Jorda	0% (n=0)	0% (n=0)	0.3% (n=1)	1.0% (n=3)	2.68	0.99
Gull	0% (n=0)	0% (n=0)	0% (n=0)	0.3% (n=1)		
Null	3.0% (n=9)	1.7% (n=5)	13.7%(n=41)	38.7%(n=116)		

*Chi-Square test

4.6.1 Association between Age and Numeric pain rating scale in Below Knee region:

In Table- 6: this study found no association in between Age and Numeric Pain Rating Scale in Below Knee region among the participants. The Chi-Square value of this association was 4.08 and P value was 0.67. This wasnot significant. Significant value wasP<0.05.

4.6.2 Association between Gender and Numeric pain rating scale in Below Knee region:

In Table- 6: this study found an association in between Gender and Numeric Pain Rating Scale in Below Knee region among the participants. The Chi-Square value of this association was 9.02 and P value was 0.03. P<0.05 was significant.

4.6.3 Association between Marital Status and Numeric pain rating scale in Below Knee region:

In Table- 6: this study found an association in between Marital Status and Numeric Pain Rating Scale in Below Knee region among the participants. The Chi-Square value of this association was 18.66 and P value was 0.0.005. P<0.05 was significant.

4.6.4 Association between Educational Qualification and Numeric pain rating scale in Below Knee region:

In Table- 6: this study found an association in between Educational Qualification and Numeric Pain Rating Scale in Below Knee region among the participants. The Chi-Square value of this association was 25.85 and P value was 0.04. P<0.05 was significant.

4.6.5 Association between Living Area and Numeric pain rating scale in Below Knee region:

In Table- 6: this study found no association in between Living area and Numeric Pain Rating Scale in Below Knee region among the participants. The Chi-Square value of this association was 5.20 and P value was 0.52. This wasnot significant. Significant value wasP<0.05.

4.6.6 Association between Occupation and Numeric pain rating scale in Below Knee region:

In Table- 6: this study found no association in between Educational Qualification and Numeric Pain Rating Scale in Below Knee region among the participants. The Chi-Square value of this association was 33.79 and P value was 0.09. This wasnot significant. Significant value wasP<0.05.

4.6.7 Association between Tobacco Intake and Numeric pain rating scale in Below Knee region:

In Table- 6: this study found no association in between Tobacco Intake and Numeric Pain Rating Scale in Below Knee region among the participants. The Chi-Square value of this association was 2.68 and P value was 0.99. This wasnot significant. Significant value wasP<0.05.

4.7 Association between Ronald-Morris disability questionnaire&Demographic variables:

Table 7: Association between Ronald-Morris disability questionnaire & Demographic variables-

Variable	Number of participants	Mean	Std. Deviation	F value	P value
Age					
18-30	63	16.89	3.19		
31-43	112	16.19	3.79	0.86	0.42
44-56	125	16.58	3.38		
Gender					
Male	182	16.35	0.27	0.85	0.36
Female	118	16.73	0.29		
Marital Status					
Married	271	16.37	3.57		
Unmarried	25	17.64	2.74	1.89	0.15
Widow	4	18.00	0.82		
Educational Qualification					
Illiterate	11	15.00	4.24		
Primary	77	16.53	3.29		
Secondary	86	16.41	3.68		
Higher secondary	70	16.91	3.29	1.08	0.37
Graduation	33	16.94	2.72		
Post graduation	23	15.52	4.58		
Living area					
Rural	79	15.80	3.33		
Semirural	96	16.85	3.68	2.24	0.11
Urban	125	16.66	3.44		
Occupation					
Farmers	21	16.29	3.52		
Garments workers	20	17.10	3.04		
Day Laborer	11	16.09	4.23		
Service Holder	59	16.83	3.25		
Businessman	48	15.75	4.37	0.56	0.81
Retired	10	17.00	3.74		
Student	19	17.21	3.07		
Teacher	21	16.38	3.93		
House Wife	91	16.46	3.15		
Tobacco intake					
Cigarette	70	16.64	3.25		
Betel leaf	54	16.44	3.25		
Jorda	4	14.00	3.56	0.54	0.70
Gull	1	16.00	0		
Null	171	16.51	3.69		

*One-Way ANOVA test

Association between Ronald-Morris disability questionnaire & Demographic variables-

Variable	Number of participants	Mean	Std. Deviation	F value	P value
MRI Findings					
Protrution	100	15.90	4.53		
Harniation	93	16.05	2.58	4.30	**0.005***
Bulging	98	17.38	2.91		
Type of pain					
Acute pain	48	16.08	3.57	1.23	0.29
Sub acute pain	107	16.91	3.06		
Chronic pain	145	16.33	3.78		

*One-Way ANOVA test

4.7.1 Association between Age and Ronald Moris Disability Questionnaire:

In Table- 7: this study found no association in between Age and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 16.89 in the age group (18-30) was indicating the severe disability and lowest mean value 16.19 in the age group (31-43) was indicating the low level of disability. In this association F value was 0.86 and P value was 0.42. This wasnot significant. Significant value wasP<0.05.

4.7.2 Association between Gender and Ronald Moris Disability Questionnaire:

In Table- 7: this study found no association in between Gender and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 16.73 in female was indicating the severe disability and lowest mean value 16.35 in male was indicating the low level of disability. In this association F value was 0.85 and P value was 0.36. This wasnot significant. Significant value wasP<0.05.

4.7.3 Association between Marital Status and Ronald Moris Disability Questionnaire:

In Table- 7: this study found no association in between Marital Status and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 18.00 in widow was indicating the severe disability and lowest mean value 16.37 in married was indicating the low level of disability. In this association F value was 1.89 and P value was 0.15. This wasnot significant. Significant value wasP<0.05.

4.7.4 Association between Educational Qualification and Ronald Moris DisabilityQuestionnaire:

In Table- 7: this study found no association in between Educational qualification and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 16.94 was indicating the severe disability and lowest mean value 15.00 was indicating the low level of disability. In this association F value was 1.08 and P value was 0.37. This wasnot significant. Significant value wasP<0.05.

4.7.5 Association between Living area and Ronald Moris Disability Questionnaire:

In Table- 7: this study found no association in between Living area and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 16.85 was indicating the severe disability and lowest mean value 15.80 was indicating the low level of disability. In this association F value was 2.24 and P value was 0.11. This wasnot significant. Significant value wasP<0.05.

4.7.6 Association between Occupation and Ronald Moris Disability Questionnaire:

In Table- 7: this study found no association in between Occupation and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 17.21 in students was indicating the severe disability and lowest mean value 15.75 in Businessman's was indicating the low level of disability. In this association F value was 0.56 and P value was 0.81. This wasnot significant. Significant value wasP<0.05.

4.7.7 Association between Tobacco Intake and Ronald Moris Disability Questionnaire:

In Table- 7: this study found no association in between Tobacco intake and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 16.64 was indicating the severe disability and lowest mean value 14.00 was indicating the low level of disability. In this association F value was 0.54 and P value was 0.70. This wasnot significant. Significant value wasP<0.05.

4.7.8 Association between MRI finding and Ronald Moris Disability Questionnaire:

In Table- 7: this study found an association in between MRI finding and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 18.11 was indicating the severe disability and lowest mean value 15.90 was indicating the low level of disability. In this association F value was 4.30 and P value was 0.005. P<0.05 was significant.

4.7.9 Association between Type of Pain and Ronald Moris Disability Questionnaire:

In Table- 7: this study found no association in between Type of pain and Ronald Moris Disability Questionnaire among the participants. The highest mean value of this association 16.91 was indicating the severe disability and lowest mean value 16.08 was indicating the low level of disability. In this association F value was 1.23 and P value was 0.29. This wasnot significant. Significant value wasP<0.05.

4.8 Association between Tampa scale for Kinesiophobia&Demographic variables:

Table 8: Association between Tampa scale for Kinesiophobia questionnaire & Demographic variables-

Variable	Tampa scale for Kinesiophobia		Chi-Square	P-Value
	No Kinesiophobia	Suffering From Kinesiophobia		
Age				
18-30	1.0% (n=3)	20.0% (n=60)		
31-43	1.3% (n=4)	36.0% (n=108)	0.29	0.86
44-56	1.3% (n=4)	40.3% (n=121)		
Gender				
Male	0.7% (n=2)	60.0% (n=180)	8.64	**0.003***
Female	3.0% (n=9)	36.3% (n=109)		
Marital Status				
Marred	3.3% (n=10)	87.0% (n=261)		
Unmarried	0.3% (n=1)	8.0% (n=24)	0.161	0.92
Widow	0% (n=0)	1.3% (n=4)		
Educational Qualification				
Illiterate	0.0% (n=0)	3.7% (n=11)		
Primary	1.0% (n=3)	24.7% (n=74)		
Secondary	1.3% (n=4)	27.3% (n=82)		
Higher secondary	1.0% (n=3)	22.3% (n=67)		
Graduation	0.3% (n=1)	10.7% (n=32)	1.66	0.89
Post graduation	0.0% (n=0)	7.7% (n=23)		
Living Area				
Rural	1.3% (n=4)	25.0% (n=75)		
Semirural	1.0% (n=3)	31.0% (n=93)	0.59	0.74
Urban	1.3% (n=4)	40.3% (n=121)		
Occupation				
Farmers	0.3% (n=1)	6.7% (n=20)		
Garments workers	0% (n=0)	6.7% (n=20)		
Day Laborer	0% (n=0)	3.7% (n=11)		
Service Holder	0% (n=0)	19.7% (n=59)		
Businessman	0% (n=0)	16.0% (n=48)		
Retired	0% (n=0)	3.3% (n=10)		
Student	0.7% (n=2)	5.7% (n=17)	12.48	0.13
Teacher	0.3% (n=1)	6.7% (n=20)		
House Wife	2.3% (n=7)	28.0% (n=84)		
Tobacco Intake				
Cigarette	0.3% (n=1)	23.0% (n=69)		
Betel leaf	1.3% (n=4)	16.7% (n=50)		
Jorda	0% (n=0)	1.3% (n=4)	3.33	0.50
Gull	0% (n=0)	0.3% (n=1)		
Null	2.0% (n=6)	55.0% (n=165)		

*Chi-square test

4.8.1 Association between Age and Tampa scale for Kinesiophobia:
In Table- 8: this study found no association in between Age and Tampa scale for Kinesiophobia among the participants. The Chi-Square value of this association was 0.29 and P value was 0.86. This wasnot significant. Significant value wasP<0.05.

4.8.2 Association between Gender and Tampa scale for Kinesiophobia:
In Table- 8: this study found an association in between Gender and Tampa scale for Kinesiophobia among the participants. The Chi-Square value of this association was 8.64 and P value was 0.003. P<0.05 was significant.

4.8.3 Association between Marital Status and Tampa scale for Kinesiophobia:
In Table- 8: Table- 8: this study found no association in between Marital Status and Tampa scale for Kinesiophobia among the participants. The Chi-Square value of this association was 0.16 and P value was 0.92. This wasnot significant. Significant value wasP<0.05.

4.8.4 Association between Educational Qualification and Tampa scale for Kinesiophobia:
In Table- 8: this study found no association in between Educational Qualification and Tampa scale for Kinesiophobia among the participants. The Chi-Square value of this association was 1.66 and P value was 0.89. This wasnot significant. Significant value wasP<0.05.

4.8.5 Association between Living Area and Tampa scale for Kinesiophobia:
In Table- 8: this study found no association in between Living Area and Tampa scale for Kinesiophobia among the participants. The Chi-Square value of this association was 0.59 and P value was 0.74.This wasnot significant.Significant value wasP<0.05.

4.8.6 Association between Occupation and Tampa scale for Kinesiophobia:
In Table- 8: this study found no association in between Occupation and Tampa scale for Kinesiophobia among the participants. The Chi-Square value of this association was 12.48 and P value was 0.13. This wasnot significant. Significant value wasP<0.05.

4.8.7 Association between Tobacco Intake and Tampa scale for Kinesiophobia:
In Table- 8: this study found no association in between Tobacco Intake and Tampa scale for Kinesiophobia among the participants. The Chi-Square value of this association was 3.33 and P value was 0.50. This wasnot significant. Significant value wasP<0.05.

4.9 Association between SF-36 Questionnaire &Demographic variables:
Table 9: Association between SF-36 Questionnaire & Demographic variables-

Variable (SF-36 domain)	Number of participants	Mean	Std. Deviation	F value	P value
Age (Physical Functioning)					
18-30	63	18.38	2.60		
31-43	112	18.79	3.28	2.78	**0.04***
44-56	125	17.94	2.42		
Occupation (Physical Functioning)					
Farmers	21	17.81	2.69		
Garments workers	20	18.65	2.48		
Day Laborer	11	18.45	2.02		
Service Holder	59	18.37	2.52	0.59	0.79
Businessman	48	18.13	2.38		
Retired	10	17.90	3.45		
Student	19	17.58	2.24		
Teacher	21	18.24	3.08		
House Wife	91	18.74	3.37		
MRI finding (Physical Functioning)					
Protrution	100	17.82	2.42	4.89	**0.002***
Harniation	93	18.08	3.03		
Bulging	98	19.21	2.92		
Sequestration	9	17.67	1.58		
Gender (Role Physical)					
Male	182	4.46	0.66	1.72	0.19
Female	118	4.58	1.04		
MRI finding (Role Physical)					
Protrution	100	4.43	0.67		
Harniation	93	4.67	0.66	2.61	**0.04***
Bulging	98	4.48	1.10		
Sequestration	9	4.00	0.00		
Marital Status (General Health)					
Married	271	15.78	2.44		
Unmarried	25	15.80	2.52	0.50	0.61
Widow	4	17.00	0.82		
Living Area (General Health)					
Rural	79	16.09	2.08	1.15	0.32
Semirural	96	15.53	2.49		
Urban	125	15.82	2.58		
Education (Vitality)					
Illiterate	11	14.00	1.95		
Primary	77	13.49	3.80		
Secondary	86	11.92	3.44	3.60	**0.004***
Higher secondary	70	11.71	3.48		
Graduation	33	13.58	3.56		
Post graduation	23	13.30	3.16		

Association between SF-36 Questionnaire & Demographic variables-

Variable (SF-36 domain)	Number of participants	Mean	Std. Deviation	F value	P value
Type of Pain (Vitality)					
Acute	48	12.21	3.50		
Sub-acute	107	12.38	3.21	1.26	0.09
Chronic	145	12.97	3.84		
Marital Status (Social Functioning)					
Married	271	5.83	1.25		
Unmarried	25	5.36	1.11	2.86	**0.04***
Widow	4	6.75	0.96		
Living area (Social Functioning)					
Rural	79	5.91	1.35		
Semirural	96	5.70	1.27	0.66	0.52
Urban	125	5.82	1.16		
Age (Mental Health)					
18-30	63	15.29	4.53		
31-43	112	17.79	3.68	7.95	**0.000***
44-56	125	17.18	4.06		
Gender (Mental Health)					
Male	182	17.69	3.86	13.33	**0.000***
Female	118	15.95	4.31		
Occupation (Mental Health)					
Farmers	21	18.00	3.38		
Garments workers	20	16.30	3.89		
Day Laborer	11	17.91	4.57		
Service Holder	59	18.32	3.48		
Businessman	48	17.69	4.01	2.80	**0.005***
Retired	10	16.20	5.07		
Student	19	15.37	3.89		
Teacher	21	17.90	4.35		
House Wife	91	15.84	4.28		

*One-Way ANOVA test

4.9.1 Association between Age and SF-36 Questionnaire (Physical Functioning):
In Table- 9: this study found an association in between Age and SF-36 Questionnaire (Physical Functioning) among the participants. The P value was 0.04. P<0.05 was significant.

4.9.2 Association between Occupation and SF-36 Questionnaire (Physical Functioning):
In Table- 9: this study found no association in between Occupation and SF-36 Questionnaire (Physical Functioning) among the participants. The P value was 0.79. This wasnot significant. Significant value wasP<0.05.

4.9.3 Association between MRI finding and SF-36 Questionnaire (Physical Functioning):
In Table- 9: this study found an association in between MRI findings and SF-36 Questionnaire (Physical Functioning) among the participants. The P value was 0.002. P<0.05 was significant.

4.9.4 Association between Gender and SF-36 Questionnaire (Role Physical):
In Table- 9: this study found no association in between Gender and SF-36 Questionnaire (Role Physical) among the participants. The P value was 0.19. This wasnot significant. Significant value wasP<0.05.

4.9.5 Association between MRI finding and SF-36 Questionnaire (Role Physical):
In Table- 9: this study found an association in between MRI findings and SF-36 Questionnaire (Role Physical) among the participants. The P value was 0.04. P<0.05 was significant.

4.9.6 Association between Marital Status and SF-36 Questionnaire (General Health):
In Table- 9: this study found no association in between Marital status and SF-36 Questionnaire (General Health) among the participants. The P value was 0.61. This wasnot significant. Significant value wasP<0.05.

4.9.7 Association between Living Area and SF-36 Questionnaire (General Health):
In Table- 9: this study found no association in between Living area and SF-36 Questionnaire (General Health) among the participants. The P value was 0.32. This wasnot significant. Significant value wasP<0.05.

4.9.8 Association between Educational Qualification and SF-36 Questionnaire (Vitality):
In Table- 9: this study found an association in between Educational qualification and SF-36 Questionnaire (Vitality) among the participants. The P value was 0.004. P<0.05 was significant.

4.9.9 Association between Type of Pain and SF-36 Questionnaire (Vitality):
In Table- 9: this study found no association in between Type of pain and SF-36 Questionnaire (Vitality) among the participants. The P value was 0.09. This wasnot significant. Significant value wasP<0.05.

4.9.10 Association between Marital Status and SF-36 Questionnaire (Social Functioning):
In Table- 9: this study found an association in between Marital status and SF-36 Questionnaire (social functioning) among the participants. The P value was 0.04. P<0.05 was significant.

4.9.11 Association between Living area and SF-36 Questionnaire (Social Functioning):
In Table- 9: this study found no association in between Living area and SF-36 Questionnaire (Social Functioning) among the participants. The P value was 0.52. This wasnot significant. Significant value wasP<0.05.

4.9.12 Association between age and SF-36 Questionnaire (Mental Health):
In Table- 9: this study found an association in between Age and SF-36 Questionnaire (Mental health) among the participants. The P value was 0.000.P<0.05 was significant.

4.9.13 Association between Gender and SF-36 Questionnaire (Mental Health):
In Table- 9: this study found an association in between Gender and SF-36 Questionnaire (Mental health) among the participants. The P value was 0.000.P<0.05 was significant.

4.9.14 Association between Occupation and SF-36 Questionnaire (Mental Health):
In Table- 9: this study found an association in between Occupation and SF-36 Questionnaire (Mental health) among the participants. The P value was 0.005.P<0.05 was significant.

CHAPTER –V	DISCUSSION

The purpose of this study was to find out the associations between pain, kinesiophobia, disability and quality of life among patients with Prolapsed Lumber Intervertebral Disc (PLID). According to Rhon& Fritz (2015), LBP is one of the top ten worldwide burden diseases on society. In this study 300 Patients with PLID were included as sample, among them the age group 18-30 has 21% (n=63), 31-43 has 37.3% (n=112), 44-56 has 41.7% (n=125) participants. In which Mean 40.56 and Std. Deviation 10.94. According to West et al., 2010, 78.2 percent of people had Prolapsed Lumbar Intervertebral Disc Disease. Disc bulging affects 56% of people (Orthofracs, 2021).Deyo et al (2006) showed that 26% of American adults reporting low back pain between the age of 26-40 years. In this study most frequent age range of participants was (41.7%) who suffered from low back pain in between 44-56 years. It was observed from this study that the prevalence of low back pain was higher among the male (60.70%) than the female (39.30%). In a research that was published by Tissot et al (2009) a significantly larger proportion of men (58%) than women (51%) usually stand at work. 90.3% (n=271) were married, 8.3% (n=25) were unmarried, and 1.3% (n=4) were widow.

Among 300 patients 26.3% (n=79) came from rural living area, 32% (n=96) came from semirural living area, and 41.7% (n=125) came from urban living area. Among the 300 participants, 3.7% (n=11) were Illiterate, 25.7% (n=77) were Primary, 28.7% (n=86) were Secondary, 23.3% (n=70) were Higher secondary, 11% (n=33) were Graduation and 7.7% (n=23) were Post-graduate participants.

Workers with low back pain scored considerably lower on the SF36 (63.90 17.39 vs. 79.42 15.01; P 0.001) and General health sub-domains (58.29 19.63 vs. 69.84 18.63; P0.001) than other workers (Bahrami et al., 2016). In this study Occupation of the participants, 7% (n=21) were Farmer, 6.7% (n=20) were Garments worker, 3.7% (n=11) were Day laborer, 19.7% (n=59) were Service holder, 16% (n=48) were Businessmen 3.3% (n=10) were Retired, 6.3% (n=19) were Students, 7% (n=21) were Teacher and 30.3% (n=91) were House wife. And 23.3% (n=70) were take cigarette, 18% (n=54) were take betel leaf, 1.3% (n=4) were take jorda, 0.3% (n=1) were take gull and 57% (n=171) participants were didn't take anything.

The radiological MRI report finding among the 300 participants, 32.7% (n=100) had Disc Protrusion, 30.4% (n=93) had Disc Harniation, 32% (n=98) had Disk Bulging, 4.9% (n=15) had Disc Sequestration and X-Ray Report finding of the participants 7.6% (n=44) had increase lumbar lordosis, 41.3% (n=239) had decrease lumbar lordosis, 4.7% (n=27) had flat lumbar spine, 17.5% (n=101) had disc space reduce, 27.9% (n=161) had disc degenerative change and 1% (n=6) had normal study in X-ray report findings.

LBP was projected to have a global age-standardized point prevalence of 9.4% in 2010 (Hoy et al., 2014). Back pain that interferes with daily activities is very common (17% to 70%) (Takasaki &May, 2014). Lumbar radiculopathy has an annual incidence of 83.2 per 100000 in the general population, with a higher frequency in the fifth decade of life (Polston, 2007). The participants suffering from PLID minimum duration is 1 month and maximum duration is 60 month. In which Mean 16.09 and Std. Deviation 18.42 and in there was acute type of pain had 16%(n=48), sub-acute type of pain had 35.7%(n=107) and chronic type of pain had 48.3%(n=145). Self-reported pain intensity was assessed using a numeric rating scale for pain (NRS). This questionnaire consists out of an 11-point scale ranging from 0 ("no pain") to 10 ("worst pain imaginable") (Farrar et al., 2008)

The study concludes that participants who were suffering from PLID0.3% (n=1) had no pain in back region, 3.3% (n=10) had mild pain in back region, 10.3% (n=31) had moderate pain in back region and 86% (n=258) had severe pain in back region. The association between gender and numeric pain rating scale in back region was significant, Chi-Square value was 13.08 (P<0.05). Educational qualificationand numeric pain rating scale in back region was significant, Chi-Square value was 44.63 (P<0.05). Radiating leg pain due to lumber disc prolapsed was one of the painful experiences the patients ever had. Stynes et al. (2018) stated that of the 395 participants, 75% participants had radiating leg pain and that worsen their functional capability in their daily livelihood. In this study found an association in between marital status, Gender, educational qualification and Numeric Pain Rating Scale in Below Knee region among the participants. Low back pain is the most common causes for chronic or temporary impairment in U.S. adults under the age of 65, & the most common cause of activity limitations in persons under the age of 45 & it is established by (Sabino&Grauer, 2008). Leg pain as a referred symptom associated

with back pain or a prolapsed lumbar intervertebral disc has been estimated to be 35 percent common, while real sciatica frequency is 2-5 percent (Nachemson et al., 2009). 4.3% (n=13) had no radiating pain, 66% (n=198) had radiating unilateral pain and 29.7% (n=89) had radiating bilateral pain.5.7% (n=17) had no radiating pain above knee region, 65.3% (n=196) had radiating unilateral pain above knee region, 29% (n=87) had radiating bilateral pain above knee region and Association between educational qualification, Gender and Numeric Pain Rating Scale in Above Knee region was also significant (P<0.05). About6.3% (n=19) had no radiating pain below knee region, 63% (n=189) had radiating unilateral pain below knee region and 30.7% (n=92) had radiating bilateral pain below knee region. In this study found an association in between marital status, Gender, educational qualification and Numeric Pain Rating Scale in Below Knee region among the participants (P<0.05).

According to the World Health Organization, 10% of Bangladesh's population is disabled (Hossain, 2012). Prolapsed Lumbar Intervertebral Disc, or PLID, is one of the most prevalent causes of disability and a financial burden on individuals, society, and the National Health Service around the world (McKenzie, 1995). Ronald Moris Disability Questionnaire has been verified to be a reliable and valid LBP measurement for patients (Koc et al.,2018). Duration of suffering from lumber disc degenerative disorders like lumber disc prolapse could be a trigger to fall in disability in worldwide (Jacobsen et al., 2012). Among the 300 participants suffering from PLID minimum disability score was 7 and maximum disability score was 22. In which Mean 16.50 and Std. Deviation 3.50. For functional disability, the mean Ronald Moris Disability score was 13.94 ([3–24] median: 14; S.D.: 4.72). Seventy percent of the patients had Ronald Moris Disability score above 12 (Thomas et al., 2010). Among the 15% patients needed surgery who had lumber disc prolapsed and they had more chance to fall in disability and among these patients, 42.5% patients had anxiety (Arif et al., 2019). Researcher found an association in between MRI finding and Ronald Moris Disability Questionnaire among the participants (P<0.05). PLID is frequently accompanied by disability, which can range in severity and be temporary or permanent (Waddell, 2013). The highest mean value of this association was indicating the severe disability and lowest mean value was indicating the low level of disability. The Ronald Moris Disability Questionnaire is a health status measure, which is designed to be completed by patients to assess their physical

disability of LBP. It consists of 24 items addressing daily life and physical activity, such as personal care, sleeping,work and walking (Roland & Fairbank, 2000). One point is assigned to each of these items, resulting in the total scores of 0 (no disability) to 24 (maximum disability) points (Fan et al., 2019).

All of the 300 participants there was 3.7% (n=11) had no kinesiophobia and 96.3% (n=289) had severe kinesiophobia. The association between gender and Tampa Scale of Kinesiophobia was significant, Chi-Square value was 8.64 (P<0.05). For the Tampa Scale of Kinesiophobia score, interpretation was possible for 44 patients, with an average of 46 ([19–65] median: 46; S.D.: 9.50); 79.55% of the patients(95% CI: 64.25–89.67) had a score over 40 (Thomas et al.,2010).

From 300 participants the mean score of physical functioning was 41.75, Role physical was 12.67, Bodily Pain was 55.80, General Health was 53.98, Vitality was 43.20, Social Functioning was 47.58, Role Emotional was 43.44, Mental Health was 48.03 And standard deviation of PF was 14.11, RP was 20.80, BP was 16.99, GH was 12.15, VT was 17.87, SF was 15.55, RE was 50.25, MH was 16.48.The SF-36 is composed of 8 multi-item scales, which can assess the physical function, role limitations due to physical health problems, bodily pain, general health, vitality, social functioning, role limitations due to emotional problems and emotional well-being of patients (Wang et al., 2003). The impact of lumber disc prolapsed on devastating in individuals life on physically, socially, mentally and also economically (Gardner et al., 2019). Association between age, MRI finding and physical functioning was significant (P<0.05). In this study found an association in between MRI findings and role physical was also significant (P<0.05). Association in between Educationalqualification and vitality was significant (P<0.05). Association between marital status and social functioning was significant (P<0.05). Researcher found association between age, gender, occupation and mental health was significant (P<0.05). Specifically, these eight scales have been aggregated into two summary measures, which are the Physical Component Summary (PCS) score and Mental Component Summary (MCS) score (Zhou et al., 2012). The lowest score indicate the poor quality of life and highest score indicate the good quality of life. Because LBP can result in a temporary loss of productivity, substantial medical and indirect costs, or even permanent disability, it has a significant socioeconomic impact (Apfel et al., 2010).

| CHAPTER –VI | CONCLUSION AND RECOMMENDATION |

6.1 Conclusion

The result of this study has shown that, the associations between pain, kinesiophobia, disability and quality of life among patients with Prolapsed Lumber Intervertebral Disc (PLID). Low back pain is a very common musculoskeletal condition in the developing country where Bangladesh is not out of range. Everyday a lot of patients of low back pain with Prolapsed Lumbar Intervertibral disc come to the physician's. Low back pain has great impact causing severe long term physical disability and give rise to huge cost for the society. Literature showed that more than one-third of disability is caused due to low back pain. From this study, it was found that the more frequency of PLID among the age group 44-56 years. It was observed from this study that the prevalence of PLID was higher among the male 60.70% than the female 39.30% and about half of the participants came from urban area. Most of the participants of this study were service holder. In numeric pain rating scale there was about 86% participants has severe back pain with 66% patients had unilateral radiating pain and about 30% had bilateral radiating pain. In numeric pain rating scale, severe back pain among the male were 146 & female were 112 participants. Among the 300 participants suffering from PLID, minimum disability score was 7 and maximum disability score was 22. In MRI report findings, the participants who had sequestration were highest level of disability. All of the 300 participants there was 3.7% (n=11) had no kinesiophobia and 96.3% (n=289) had severe kinesiophobia among them male were 180 and female were 109 participants and 11 participants had no kinesiophobia. According to SF-36 scoring, among the 300 participants the mean value of physical functioning, Bodily pain, General health, Vitality, Social functioning, Role emotional and Mental health was moderate score and the Role physical mean score was poor. So among the participants their physical health quality of life was poor and mental health, social, emotional quality of life was fair.

6.2 Recommendation

A recommendation evolves out of the context in which the study was conducted. The purpose of the study was to find out the associations between pain, kinesiophobia, disability and quality of life among patients with Prolapsed Lumber Intervertebral Disc (PLID). Through the research has some limitation but researcher identified some further step that might be taken for the better accomplishment of further research. For the ensuring of the generalization of the research it is recommended to investigate large sample. But due to time limitation the investigator was not able to gather huge amount of participants and for this result cannot be generalized in all over the Bangladesh. So for further study it is strongly recommended to increase sample size to generalize the result PLID patients in Bangladesh.

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Approval of Thesis Proposal

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

Ref: CRP-BHPI/IRB/07/2020/398

Date: 28th July 2020

To
Md. Mahmudul Hasan Manik
B.Sc. in Physiotherapy
Session: 2015-16, Student ID:112150318
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal **"Associations between pain, kinesiophobia, disability and quality of life among patients with Prolapsed Lumber Intervertebral Disc (PLID)"** by ethics committee.

Dear Md. Mahmudul Hasan Manik,
Congratulations.
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above mentioned dissertation, with yourself, as the Principal investigator. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Dissertation Proposal
2	Questionnaire (Bengali version)
3	Information sheet & consent form.

The purpose of the study is to determine the pain, disability, kinesiophobia and quality of life among PLID patients in Bangladesh (Thesis aims / objectives). The study involves use of a questionnaire to identify the pain, disability, kinesiophobia and quality of life among PLID patients in Bangladesh, that may take 20 to 25 minutes to answer the questionnaire and there is no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 10 AM on 01/03/2020 at BHPI (23rd 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 accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

Muhammad Millat Hossain
Assistant Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

CRP-Chapain, Savar, Dhaka-1343, Tel : 7745464-5, 7741404
E-mail : principal-bhpi@crp-bangladesh.org, Web: bhpi.edu.bd, www.crp-bangladesh.org

60

Permission letter

15/06/2020

The Head of Department

Department of Physiotherapy

Centre for the Rehabilitation of the Paralysed (CRP),

Chapain, Savar, Dhaka-1343.

Through: Head, Department of Physiotherapy, BHPI

Subject: Seeking permission for data collection of 4ᵗʰ year physiotherapy research project.

Respected Sir,

With due respect and humble submission to state that I am Md. Mahmudul Hasan Manik, student of 4ᵗʰ Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The ethical committee has approved my research project entitled on **"Associations between pain, kinesiophobia, disability and quality of life among patients with Prolapsed Lumber Intervertebral Disc (PLID)"** under the supervision of Mohammad Anwar Hossain, Associate Professor (BHPI), Head of the department of Physiotherapy, CRP, Savar, Dhaka-1343, Bangladesh. Conducting this research project is partial fulfillment of the requirement for the degree of B.Sc in physiotherapy. I want to collect data for my research project from the patients of musculoskeletal unit, department of Physiotherapy, CRP-Savar. So, I need permission for data collection from the musculoskeletal unit of Physiotherapy department of CRP-Savar. I would like to assure that anything of my study will not be harmful for the participants.

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

Yours obediently,

Md. Mahmudul Hasan Manik

4ᵗʰ professional B.Sc in Physiotherapy

Roll: 47, Session: 2015-16

Bangladesh Health Professions Institute (BHPI)

(An academic Institute of CRP)

CRP, Chapain, Savar, Dhaka-1343.

Forwarded to

MOHAMMAD ANWAR HOSSAIN
Senior Consultant &
Head of Physiotherapy Dept
Associate Professor, BHPI
CRP Savar, Dhaka-1343

Recommended from BHPI

15.06.21

Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Savar

Permission letter

12/9/2021

The Head of Department

Department of Physiotherapy and Rehabilitation

Enam Medical College and Hospital

Savar, Dhaka-1343.

Through: Head, Department of Physiotherapy, CRP, Savar, Dhaka.

Subject: Seeking permission for data collection of 4th year physiotherapy research project.

Sir,

With due respect and humble submission to state that I am Md. Mahmudul Hasan Manik, student of 4th Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The ethical committee has approved my research project entitled on **"Associations between pain, kinesiophobia, disability and quality of life among patients with Prolapsed Lumber Intervertebral Disc (PLID)"** under the supervision of Mohammad Anwar Hossain, Associate Professor (BHPI), Head of the department of Physiotherapy, CRP, Savar, Dhaka-1343, Bangladesh. Conducting this research project is partial fulfillment of the requirement for the degree of B.Sc in physiotherapy. I want to collect data for my research project from the patients of Department of Physiotherapy and Rehabilitation, Enam Medical College, Savar, Dhaka. So, I need permission for data collection from the Physiotherapy and Rehabilitation department of Enam Medical College, Savar. I would like to assure that anything of my study will not be harmful for the participants.

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

Yours obediently,

Manik

Md. Mahmudul Hasan Manik

4th professional B.Sc in Physiotherapy

Roll: 47, Session: 2015-16

Bangladesh Health Professions Institute (BHPI)

(An academic Institute of CRP)

CRP, Chapain, Savar, Dhaka-1343.

Forwarded & Recommended to HOD, Department of Physiotherapy & Rehabilitation for kind consideration
12/09/21

Dr. A N M Mashud Rana (PT)
MPH (NCD-ASAUB), BSPT (BHPI-DU)
Consultant Physiotherapist & Head
Department of Physiotherapy and Rehabilitation
Enam Medical College Hospital

MOHAMMAD ANWAR HOSSAIN
Senior Consultant &
Head of Physiotherapy Dept
Associate Professor, BHPI
CRP Savar Dhaka-1343

62

সম্মতিপত্র

আসসালামুয়ালাইকুম,

আমি মোঃ মাহমুদুল হাসান মানিক, বাংলাদেশ হেলথ প্রফেশন্স ইন্সটিটিউট এর বি.এস.সি ইন ফিজিওথেরাপি কোর্সের ৪র্থ বর্ষের একজন শিক্ষার্থী। অধ্যায়নের অংশ হিসেবে আমাকে একটি গবেষণা সম্পাদন করতে হবে এবং এটা আমার প্রাতিষ্ঠানিক কাজের একটা অংশ। নিম্নোক্ত তথ্যাদি পাঠ করার পর অংশগ্রহণকারীদেও গবেষণায় অংশগ্রহনের জন্য অনুরোধ করা হলো।

আমার গবেষণার বিষয় হলো **"এসোসিয়েশন বিটউইন পেইন, কাইনেশিওফোবিয়া, ডিজেবিলিটি এন্ড কোয়ালিটি অফ লাইফ আমোং পেশেন্টস উইথ প্রোলাপস্ড লাম্বার ইন্টারভারটিব্রাল ডিস্ক (পিএলআইডি)।"** এই পরীক্ষামূলক গবেষণার মাধ্যমে আমি পিএলআইডিতে আক্রান্ত ব্যক্তিদের পেইন, কাইনেশিওফোবিয়া, ডিজেবিলিটি এন্ড কোয়ালিটি অফ লাইফ এর মধ্যে সম্পর্ক নিরূপণের চেষ্টা করবো। আমি যদি আমার গবেষণাটি সার্থকভাবে সম্পূর্ণ করতে পারি তবে যেসব ব্যক্তিরা 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 বৈশিষ্ট্য 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 মোঃ মাহমুদুল হাসান মানিক অথবা আমার সুপারভাইজার সহযোগী অধ্যাপক মোঃ আনোয়ার হোসেন, বিভাগীয় প্রধান, ফিজিওথেরাপি বিভাগ, সিআরপি, সাভার, ঢাকা- ১৩৪৩ ।

শুরু করার আগে আপনার কি কোন প্রশ্ন আছে ?	হ্যাঁ ☐	না ☐
আমি কি শুরু করতে পারি ?	হ্যাঁ ☐	না ☐

অংশগ্রহনকারীর স্বাক্ষর .... তারিখ

সাক্ষীর স্বাক্ষর .... তারিখ

তথ্য সংগ্রহকারীর স্বাক্ষর...তারিখ

Informed Consent
(Please read out to the participant)

Assalamualaikum,

My name is Md. Mahmudul Hasan Manik. I am conducting this research study which is the part of B.Sc. in Physiotherapy program and my research title is "Associations between pain, kinesiophobia, disability and quality of life among patients with Prolapsed Lumber Intervertebral Disc (PLID)" under Bangladesh Health Professions Institute (BHPI), University of Dhaka. I would like to know about some personal and other related information regarding depression among people who having Prolapse lumbar intervertebral disc. You have to answer some questions which are mention in the attached form. This will take approximately 20-30 minutes.

I would like to inform you that this is a purely professional study and will not be used for any other purpose. So your participation in the research will have no impact on your present or future treatment. All information provided by you will be treated as confidential and in the event of any report or publication it will be ensured that the source of information remains anonymous.

Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don't like or do not want to answer during interview.

If you have any query about the study or your right as a participant, you may contact with researcher Md. Mahmudul Hasan Manik or my supervisor Mohammad Anwar Hossain, Associate Professor (BHPI), Head of the department of Physiotherapy, CRP, Savar, Dhaka-1343.

Do you have any questions before I start?   Yes [   ]   No [   ]

So may I have your consent to proceed with the interview?

Yes [   ]   No [   ]

Signature of the Participant's... Date………………

Signature of the Witness's………………………………………..Date………………

Signature of the Data collector's…………………………………Date……………..

64

প্রশ্নপত্র

প্রথম অংশ: আর্থ-সামাজিক তথ্য

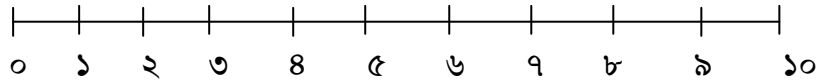| বয়স:	লিঙ্গ:
বৈবাহিক অবস্থা	১. বিবাহিত ২. অবিবাহিত ৩. বিবাহবিচ্ছিন্ন ৪. পৃথকীকৃত ৫. বিধবা ৬. বিপত্নীক
শিক্ষাগত যোগ্যতা	১. নিরক্ষও ২. প্রাথমিক ৩. মাধ্যমিক ৪. উচ্চ মাধ্যমিক ৫. স্নাতক ৬. স্নাতকোত্তর
বসবাসের এলাকা	১. গ্রাম ২. মফস্বল ৩. শহর
পরিবারের আকার	১. ছোটপরিবার ২. যৌথপরিবার
পরিবারের সদস্য সংখ্যা	
পেশা	১. কৃষক ২. গার্মেন্টসশ্রমিক ৩. ড্রাইভার ৪. দিনমজুর ৫. চাকুরিজীবী ৬. ব্যাবসায়ী ৭. অবসরপ্রাপ্ত ৮. শিক্ষার্থী ৯. শিক্ষক ১০. বিদেশ ফেরত ১১. অন্যান্য
তামাক গ্রহন	১. সিগারেট ২. পানপাতা ৩. জর্দা ৪. গুল
মাসিক আয়	

দ্বিতীয়অংশ : রেডিওলজিকালপরীক্ষা

এমআরআই রিপোর্ট সন্ধান	ডিস্ক প্রেট্রুশন ডিস্ক হার্নিয়েশন

65

	ডিস্ক বালজিং
	ডিস্ক সিকোয়েস্ট্রেশন
এক্স-রে রিপোর্ট সন্ধান	ইনক্রিজ লর্ডোসিস
	ডিক্রিজ লর্ডোসিস
	ফ্ল্যাট লাম্বার স্পাইন
	ডিস্ক স্পেস রিডিউজ
	ডিজেনারেটিভ চেঞ্জ
	নরমাল স্টাডি

তৃতীয় অংশ: ব্যথাসম্পর্কিতপ্রশ্ন

আপনি পিএলআইডিতে কত দিন ধরে ভুগছেন?	
ব্যথার ধরন	একিউট পেইন
	সাব-একিউট পেইন
	ক্রোনিক পেইন
বিকিরন ব্যথা	নেই
	এক পায়ে
	দুইপায়ে
হাঁটু বা হাঁটুর উপরে ব্যথা ছড়িয়ে পরে	নেই
	এক পায়ে
	দুইপায়ে
হাঁটু বা হাঁটুর নিচে ব্যথা ছড়িয়ে পরে	নেই
	এক পায়ে
	দুইপায়ে

নিউমেরিক পেইন রেটিং স্কেল অনুযায়ী কোমড়ের ব্যথার তীব্রতা:

০ ১ ২ ৩ ৪ ৫ ৬ ৭ ৮ ৯ ১০

নিউমেরিক পেইন রেটিং স্কেল অনুযায়ী উপরে কোমড়ের ব্যথার তীব্রতা:

০ ১ ২ ৩ ৪ ৫ ৬ ৭ ৮ ৯ ১০

নিউমেরিক পেইন রেটিং স্কেল অনুযায়ী কোমড়ের নিচে ব্যথার তীব্রতা:

০ ১ ২ ৩ ৪ ৫ ৬ ৭ ৮ ৯ ১০
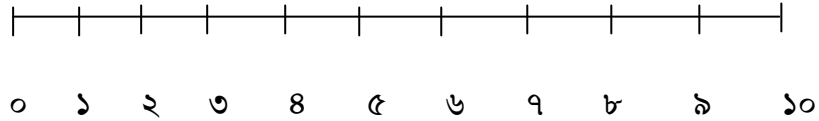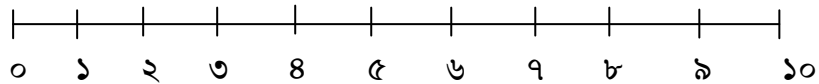
চতুর্থ অংশঃ টেম্পা স্কেল ফর কাইনেশিওফোবিয়া

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

১. আমি ব্যায়াম করতে ভয় পাই কারন আমি আঘাত পেতে পারি	১	২	৩	8
২. আমি যদি এটি কাটিয়ে উঠতে চেষ্টা করি তবেআমার ব্যাথা বাড়বে	১	২	৩	8
৩. আমার শরীর বলছে যে, আমার হয়ত কোন বড় সমস্যা আছে	১	২	৩	8
৪. যদি আমি ব্যায়াম করি তাহলে হয়ত আমার ব্যাথা কমবে	১	২	৩	8
৫. মানুষজন আমার শারিরিক অবস্থা বর্ণগোছর করেনা	১	২	৩	8
৬. একটি দুর্ঘটনা আমার জীবনকে হুমকির মুখে ফেলতেপারে	১	২	৩	8
৭. ব্যাথা মানেই আমার ভিতরেও ক্ষত আছে	১	২	৩	8
৮. ব্যাথা বাড়বে মানে এই নয় যে সমস্যাটি বিপদজনক	১	২	৩	8
৯. আমি দুর্ঘটনাবসত নিজেকে আঘাত করতে পারি	১	২	৩	8
১০. সাবধানতা অবলম্বন করা বা অপ্রয়োজনীয় চলাচল আমাকে নিরাপদ এবং ব্যাথামুক্ত রাখবে	১	২	৩	8
১১. আমার শারিরিক সমস্যা না থাকলেআমার ব্যাথা হতোনা	১	২	৩	8
১২. যদিও আমার সমস্যাটির জন্য ব্যাথা হচ্ছে কিন্তু শারিরিকভাবে সক্ষম হলে ব্যাথা কম হত	১	২	৩	8
১৩. ব্যাথার কারনে আমি বুঝতে পারি কখন ব্যায়াম বন্ধ করতে হবে	১	২	৩	8
১৪. আমার সমস্যা নিয়ে কারও পক্ষে শারিরিকভাবে সক্ষম হওয়া সম্ভব নয়	১	২	৩	8
১৫. আমি অন্যান্য মানুষের মতো কাজ করতে পারিনা কারনআমার জন্য আঘাতপ্রাপ্ত হওয়া খুবই সহজ	১	২	৩	8
১৬. যদিও আমার অনেক ব্যাথা হচ্ছে তবুও আমিমনে করি এটা বিপদজ্জনক নয়	১	২	৩	8
১৭. ব্যাথা থাকলে কারও ব্যায়াম করা উচিত নয়	১	২	৩	8

পঞ্চম অংশ: রোলান্ডমরিস লোব্যাক পেইন এন্ড ডিজেবিলিটিপ্রশ্নাবলী

সূচনা: যখন আপনার পিঠে ব্যাথা হয় তখন আপনি সাধারনত কিছু কাজ করতে অসুবিধা পেতে পারেন। নিম্নে যে বাক্যটি আপনাকে বর্ণনা করে তা চিহ্নিত করুন:-

১	আমি আমার পিঠের জন্য প্রায় সবসময় বাসায় থাকি
২	আমি পিঠের আরামের জন্য বারবার অবস্থান পরিবর্তন করি
৩	আমি আমার পিঠের জন্য খুব আস্তে হাটি
৪	পিঠের ব্যাথার জন্য আমি চাকরি করি না, সাধারনত ঘরের কাজকর্ম করি
৫	পিঠের ব্যাথার জন্য উপরে উঠার সময়আমি হ্যান্ডগ্রিল ব্যবহার করি
৬	পিঠের ব্যাথার জন্য আমি সবসময় শুয়ে থাকি
৭	পিঠের ব্যাথার জন্য আরাম কেদারা থেকে উঠার জন্য আমাকে কিছুর সাহায্য নিতে হয়
৮	আমার পিঠের কারনে, আমি চেষ্টা করি অন্য লোকেরা আমার কাজগুলো করুক
৯	আমি ব্যাথার জন্য ধীওে ধীরে পোশাক পরিধান করি
১০	আমি পিঠের ব্যাথার জন্য খুব অল্পসময়ের জন্য দাঁড়াই
১১	আমার পিঠের ব্যাথার জন্য আমি হাটু ভাজ করিনা
১২	আমার পিঠের ব্যাথার জন্য চেয়ার থেকে উঠতে অনেক কষ্ট হয়
১৩	আমার পিঠের ব্যাথা সবসময় থাকে
১৪	আমার পিঠের ব্যাথার জন্য বিছানায় এপাশ থেকে ওপাশ হলে খুব কষ্ট হয়
১৫	ব্যাথার জন্য আমার তেমন খিদা লাগেনা
১৬	আমার পিঠের ব্যাথার জন্য মৌজা পরতে খুব কষ্ট হয়
১৭	আমার পিঠের ব্যাথার জন্য কেবল অল্প দূরত্ব হাঁটতে পারি
১৮	আমার পিঠের ব্যাথার জন্য ভালো ঘুম হয়না
১৯	আমার পিঠের ব্যাথার জন্য জামা-কাপড় পরতে অন্যেও সাহায্য নিতে হয়
২০	আমার পিঠেরব্যাথার জন্য প্রায়সবসময়আমিবসে থাকি
২১	আমারপিঠেরব্যাথার জন্য প্রায়সবসময়ভারিকাজএড়িয়েচলি
২২	আমারপিঠেরব্যাথার জন্য অন্যদের চেয়ে বেশি বিরক্ত ও রাগান্বিত থাকি
২৩	আমারপিঠেরব্যাথার জন্য আমি অন্যদের চেয়েধীরেউপরেউঠি
২৪	আমারপিঠেরব্যাথার জন্য প্রায়সবসময়বিছানায় থাকি

ষষ্ঠ অংশ: এস এফ ৩৬ প্রশ্নাবলী

দয়া করে স্বাস্থ্য সম্পর্কিতজরিপটির ৩৬ টিপ্রশ্নসততা ও কোনরকমব্যাঘাতছাড়াসম্পূর্ণভাবেবেউত্তরদিন।

সাধারনস্বাস্থ্য:

সাধারনভাবেআপনার স্বাস্থ্যেরঅবস্থা	১. সর্বোচ্চভালো ২. খুব ভালো ৩. ভালো ৪. মুটামুটি/মাঝারি ৫. খারাপ
গত এক বছরেরমধ্যে আপনারবর্তমান স্বাস্থ্যের অবস্থাকে কেমনহাওেতুলনাকরবেন?	১. গত ১ বছরেরতুলনায়বর্তমানে খুব ভালো ২. গত ১ বছরেরতুলনায়বর্তমানেকিছুটাভালো ৩. একইরকম ৪. গত ১ বছরেরতুলনায়বর্তমানেকিছুটাখারাপ ৫. গত ১ বছরেরতুলনায়বর্তমানে খুব ভালো

কার্যক্ষমতারপ্রতিবন্ধকতা:

প্রদত্তজিনিসগুলোএকটিনির্দিষ্ট দিনে যে কাজ করা হয় তাসমন্ধে, আপনার স্বস্থ্য কিএখনএইসবকাজগুলো করার সামর্থ্য রাখে? যদি রাখেতাহলেকতটুকুরাখে?

সক্রিয়কার্যকলাপ, যেমন দৌড়ানো, ভারিজিনিস তোলা, খেলাধুলায়অংশগ্রহন	১. হ্যা, অনেক বেশিসীমিত ২. হ্যা, কিছুটাসীমিত ৩. না, একেবারেইসীমিতনয়
মধ্যমক্রিয়াকলাপ যেমন টেবিলসরানো, ভ্যাকুয়ামক্লিনারধাক্কা দেয়া, বল করা, অথবাগলফ খেলা	১. হ্যা, অনেক বেশিসীমিত ২. হ্যা, কিছুটাসীমিত ৩. না, একেবারেইসীমিতনয়
পন্যসামগ্রীবহন করা বা কোনকিছু তোলা	১. হ্যা, অনেক বেশিসীমিত ২. হ্যা, কিছুটাসীমিত ৩. না, একেবারেইসীমিতনয়
বিভিন্নধরনেরসিঁড়ি চড়া বাউপরেউঠা	১. হ্যা, অনেক বেশিসীমিত ২. হ্যা, কিছুটাসীমিত ৩. না, একেবারেইসীমিতনয়
সিঁড়ির এক ধাপ চড়া	১. হ্যা, অনেক বেশিসীমিত ২. হ্যা, কিছুটাসীমিত ৩. না, একেবারেইসীমিতনয়
ঝুঁকা, বসাঅথবাউপুড়হয়েবসা	১. হ্যা, অনেক বেশিসীমিত ২. হ্যা, কিছুটাসীমিত ৩. না, একেবারেইসীমিতনয়
এক মাইলের বেশিহাঁটা	১. হ্যা, অনেক বেশিসীমিত ২. হ্যা, কিছুটাসীমিত ৩. না, একেবারেইসীমিতনয়
বিভিন্নধাপেহাঁটা	১. হ্যা, অনেক বেশিসীমিত ২. হ্যা, কিছুটাসীমিত ৩. না, একেবারেইসীমিতনয়
এক ধাপেহাঁটা	১. হ্যা, অনেক বেশিসীমিত

	২. হ্যা, কিছুটাসীমিত
	৩. না, একেবারেইসীমিতনয়
গোসল করা বানিজেনিজেকাপড়পড়া	১. হ্যা, অনেক বেশিসীমিত
	২. হ্যা, কিছুটাসীমিত
	৩. না, একেবারেইসীমিতনয়

শারিরীক স্বাস্থ্যগঠিতসমস্যা:

গত চারসপ্তাহেআপনিকিকাজেরসময়অথবাপ্রতিদিনের অন্যান্য কাজকর্মে নিচের কোনসমস্যাগুলো দেখা দিয়েছিলো?

আপনারকাজেবাঅন্যান্য কাজকর্মে আপনারসময়কমিয়ে দেয়	১. হ্যা
	২. না
আপনারচাহিদার চেয়ে কম কাজসম্পন্ন হয়	১. হ্যা
	২. না
বিভিন্নকাজেসীমাবদ্ধতা দেখা দেয়	১. হ্যা
	২. না
বিভিন্নকাজকরতেবা দৈনন্দিন কাজেঅসুবিধা (উদাহরনস্বরুপ, অতিরিক্ত চেষ্টা)	১. হ্যা
	২. না

অনুভূতিসংক্রান্ত স্বাস্থ্য সমস্যা:

গত চারসপ্তাহেআপনিকিআপনার কর্মক্ষেত্রেবা দৈনন্দিন কাজে কোনঅনুভূতিসংক্রান্তসমস্যায়পড়েছেন? (যেমন: অবসাদগ্রস্থতাবাউদ্বিগ্নতা)

কাজেরসময়কমিয়ে ফেলা	১. হ্যা
	২. না
চাওয়ারতুলনায় কম পরিমানেকাজসম্পন্ন করা	১. হ্যা
	২. না
কাজনা করা বা স্বাভাবিক দায়িত্বশীলভাবেনা করা	১. হ্যা
	২. না

সামাজিককার্যক্রম:

অনুভূতিমূলকসমস্যাগুলোসাধারনসামাজিক কর্মকান্ডসহ পরিবার, বন্ধু, প্রতিশিবা দলের উপরপ্রভাব ফেলে	১. একেবারেইনা
	২. কিছুটা
	৩. মাঝারিরকমের
	৪. তীব্রভাবে
	৫. খুব তীব্রভাবে

ব্যাথা:

গত চারসপ্তাহেশরীরেকিপরিমানব্যাথাছিলো?	১. নেই
	২. অনেক কম
	৩. কম
	৪. মাঝারি
	৫. তীব্র
	৬. অনেকতীব্র

গত চারসপ্তাহেআপনার স্বাভাবিকজীবনযাত্রায়কিপরিমানপ্রভাব ফেলেছে? (ঘরেরএবংঘরেরবাইরেরকাজ)	১. একটুওনা ২. কিছুটা ৩. মাঝারি ৪. তীব্র ৫. অতিমাত্রায়তীব্র

শক্তি এবংঅনুভূতি:

এই প্রশ্নগুলোহলো গত চারসপ্তাহধরেআপনি কেমন বোধকরেছেনএবংসবকিছুআপনার সাথে কিভাবেসমন্বয়হয়েছে। প্রতিটিপ্রশ্নের জন্য উত্তরএমনভাবেদিনযাতেআপনারঅনুভূতির সাথে যথাসম্ভব মিল থাকে।

আপনিসবটুকুউৎফুল্লতাপান?	১. সবসময় ২. প্রায়সবসময় ৩. মোটামুটিভালোইসময়েরজন্যই ৪. কিছুসময়পাই ৫. বেশ কিছুসময়পাই ৬. কোনসময়ইপাইনা
আপনিকিভীতুপ্রকৃতিরছিলেন?	১. সবসময় ২. প্রায়সবসময় ৩. মোটামুটিভালোইসময়েরজন্যই ৪. কিছুসময়পাই ৫. বেশ কিছুসময়পাই ৬. কোনসময়ইপাইনা
আপনিকি এতই ভেঙেপড়েছিলেন যে কোনকিছুইআপনারউদ্যম ফেড়াতেপারেনি?	১. সবসময় ২. প্রায়সবসময় ৩. মোটামুটিভালোইসময়েরজন্যই ৪. কিছুসময়পাই ৫. বেশ কিছুসময়পাই ৬. কোনসময়ইপাইনা
আপনিকিপ্রশান্তিএবং স্থিরঅনুভবকরেন?	১. সবসময় ২. প্রায়সবসময় ৩. মোটামুটিভালোইসময়েরজন্যই ৪. কিছুসময়পাই ৫. বেশ কিছুসময়পাই ৬. কোনসময়ইপাইনা
আপনিকিহতাশএবংনিরাশমনেকরেন?	১. সবসময় ২. প্রায়সবসময় ৩. মোটামুটিভালোইসময়েরজন্যই ৪. কিছুসময়পাই

	৫. বেশ কিছুসময়পাই
	৬. কোনসময়ইপাইনা
আপনারকিঅনেক শক্তি আছে?	১. সবসময়
	২. প্রায়সবসময়
	৩. মোটামুটিভালোইসময়েরজন্যই
	৪. কিছুসময়পাই
	৫. বেশ কিছুসময়পাই
	৬. কোনসময়ইপাইনা
আপনিনিজেকেজীর্ণ মনেকরেন?	১. সবসময়
	২. প্রায়সবসময়
	৩. মোটামুটিভালোইসময়েরজন্যই
	৪. কিছুসময়পাই
	৫. বেশ কিছুসময়পাই
	৬. কোনসময়ইপাইনা
আপনিকিসুখীমানুষ?	১. সবসময়
	২. প্রায়সবসময়
	৩. মোটামুটিভালোইসময়েরজন্যই
	৪. কিছুসময়পাই
	৫. বেশ কিছুসময়পাই
	৬. কোনসময়ইপাইনা
আপনিকিক্লান্ত বোধকরেন?	১. সবসময়
	২. প্রায়সবসময়
	৩. মোটামুটিভালোইসময়েরজন্যই
	৪. কিছুসময়পাই
	৫. বেশ কিছুসময়পাই
	৬. কোনসময়ইপাইনা

সামাজিককর্মকান্ড:

গত 4 সপ্তাহধরেআপনারসামাজিককর্মকান্ডকরতেগিয়েআপনিকতবারআপনারশারীরিক স্বাস্থ্য অথবামানসিকসমস্যাদ্বারাবাধাগ্রস্থ হয়েছেন (যেমন: বন্ধুবাআত্মীয়-স্বজনদেও সাথে দেখাসাক্ষাতকরতেযাওয়াইত্যাদি)?	১. সবসময়
	২. বেশিরভাগসময়
	৩. কিছুসময়
	৪. অল্পসময়
	৫. কখনোইনা

সাধারন স্বাস্থ্য:

নিম্নোক্ত বিবৃতিগুলোরমধ্যে কোনগুলোআপনার জন্য সত্য আর কোনগুলোমিথ্যা?

আমারমনে হয় আমিসহজেই অন্যদেরতুলনায়	১. একেবারেইসত্য

অসুস্থ হয়েযাচ্ছি-	২. প্রায়ইসত্য ৩. জানিনা 8. প্রায়ইমিথ্যা ৫. একেবারেইমিথ্যা
আমারজানামতে অন্যদেরমতোআমিও সুস্থ	১. একেবারেইসত্য ২. প্রায়ইসত্য ৩. জানিনা 8. প্রায়ইমিথ্যা ৫. একেবারেইমিথ্যা
আমারমনে হয়, আমার স্বাস্থ্যেরঅবনতিঘটবে	১. একেবারেইসত্য ২. প্রায়ইসত্য ৩. জানিনা 8. প্রায়ইমিথ্যা ৫. একেবারেইমিথ্যা
আমার স্বাস্থ্য অনেকভালো-	১. একেবারেইসত্য ২. প্রায়ইসত্য ৩. জানিনা 8. প্রায়ইমিথ্যা ৫. একেবারেইমিথ্যা

QUESTIONNAIRE
Part-I:PersonalInformation

- **Identification Number:**
- **Participant's Name:**
- **Address:**
- **Mobile Number:**

Part-II:Socio-demographic Information

- **Age:**
- **Sex:**

- **Marital Status**
    1. Married
    2. Unmarried
    3. Divorced
    4. Separated
    5. Widow
    6. Widower

- **Educational Qualifications**
    1. Illiterate
    2. Primary
    3. Secondary
    4. Higher secondary
    5. Graduation
    6. Post graduation

- **Living area**
    1. Rural
    2. Semirural
    3. Urban

- **Family size**
    1. Nuclear Family
    2. Combined Family

- **Family members ………………**

- **Occupation**
    1. Farmers

2. Garments workers

3. Driver

4. Day Laborer

5. Service Holder

6. Businessman

7. Retired

8. Student

9. Others

- **Tobacco intake**
  1. Cigarette
  2. Betel leaf
  3. jorda
  4. Gull

- **Monthly Income**

  …………………………………

- **How long you suffer from PLID?**

  ………………………………….

Part-III: Radiological test

- **MRI report finding**
  1. Disc Protrution
  2. Disc Herniation
  3. Disc Bulging
  4. Disc Sequestration
- **X-Ray report finding**
  1. Increase lordosis
  2. Decrease lordosis
  3. Flat Lumbar spine
  4. Disc space reduce
  5. Degenerative change
  6. Normal study

Part-IV: Pain related Question

- **Types of pain**
  1. Acute Pain
  2. Subacute Pain
  3. Chronic pain
- **Radiating pain**
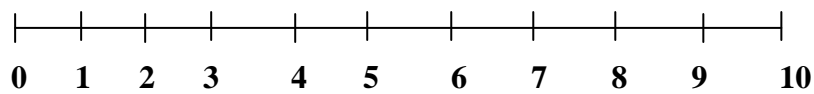 1. None

2. Unilateral
3. Bilateral

- **Radiating pain above knee/thigh region**
  - ☐ None
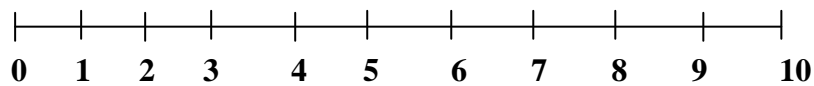 - ☐ Unilateral
  - ☐ Bilateral

- **Radiating pain below knee/leg region**
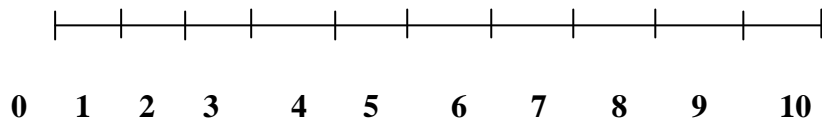 - ☐ None
  - ☐ Unilateral
  - ☐ Bilateral

- **Pain intensity low back region according to the Neumeric Pain Rating Scale**

```
├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤
0   1   2   3   4   5   6   7   8   9   10
```

- **Pain intensity thigh/above knee region according to the Neumeric Pain Rating Scale**

```
├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤
0   1   2   3   4   5   6   7   8   9   10
```

- **Pain intensity leg/below knee region according to the Neumeric Pain Rating Scale**

```
├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤
0   1   2   3   4   5   6   7   8   9   10
```

Part-V : 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

Part-VI : Roland-Morris Low Back Pain and Disability Questionnaire (RMQ)

- ☐ I stay at home most of the time because of my back.
- ☐ I change position frequently to try to get my back comfortable.
- ☐ I walk more slowly than usual because of my back.
- ☐ Because of my back, I am not doing any jobs that I usually do around the house.
- ☐ Because of my back, I use a handrail to get upstairs.
- ☐ Because of my back, I lie down to rest more often.
- ☐ Because of my back, I have to hold on to something to get out of an easy chair.
- ☐ Because of my back, I try to get other people to do things for me.
- ☐ I get dressed more slowly than usual because of my back.
- ☐ I only stand up for short periods of time because of my back.
- ☐ Because of my back, I try not to bend or kneel down.
- ☐ I find it difficult to get out of a chair because of my back.
- ☐ My back is painful almost all of the time.
- ☐ I find it difficult to turn over in bed because of my back.
- ☐ My appetite is not very good because of my back.
- ☐ I have trouble putting on my socks (or stockings) because of the pain in my back.
- ☐ I can only walk short distances because of my back pain.
- ☐ I sleep less well because of my back.
- ☐ Because of my back pain, I get dressed with the help of someone else.
- ☐ I sit down for most of the day because of my back.
- ☐ I avoid heavy jobs around the house because of my back.
- ☐ Because of back pain, I am more irritable and bad tempered with people than usual.
- ☐ Because of my back, I go upstairs more slowly than usual.
- ☐ I stay in bed most of the time because of my back.

Part-VII : SF-36 QUESTIONNAIRE

Please answer the 36 questions of the Health Survey completely, honestly, and without interruptions.

GENERAL HEALTH:

- **In general, would you say your health is:**
  1. Excellent
  2. Very Good
  3. Good
  4. Fair
  5. Poor

- **Compared to one year ago, how would you rate your health in general now?**
  1. Much better now than one year ago
  2. Somewhat better now than one year ago
  3. About the same
  4. Somewhat worse now than one year ago
  5. Much worse than one year ago

LIMITATIONS OF ACTIVITIES:

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

- **Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports.**
  1. Yes, Limited a lot
  2. Yes, Limited a Little
  3. No, Not Limited at all

- **Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf**
  1. Yes, Limited a Lot
  2. Yes, Limited a Little
  3. No, Not Limited at all

- **Lifting or carrying groceries**
  - ☐ Yes, Limited a Lot
  - ☐ Yes, Limited a Little
  - ☐ No, Not Limited at all

- **Climbing several flights of stairs**
  - ☐ Yes, Limited a Lot

- ☐ Yes, Limited a Little
- ☐ No, Not Limited at all
- **Climbing one flight of stairs**
  - ☐ Yes, Limited a Lot
  - ☐ Yes, Limited a Little
  - ☐ No, Not Limited at all
- **Bending, kneeling, or stooping**
  - ☐ Yes, Limited a Lot
  - ☐ Yes, Limited a Little
  - ☐ No, Not Limited at all
- **Walking more than a mile**
  - ☐ Yes, Limited a Lot
  - ☐ Yes, Limited a Little
  - ☐ No, Not Limited at all
- **Walking several blocks**
  - ☐ Yes, Limited a Lot
  - ☐ Yes, Limited a Little
  - ☐ No, Not Limited at all
- **Walking one block**
  - ☐ Yes, Limited a Lot
  - ☐ Yes, Limited a Little
  - ☐ No, Not Limited at all
- **Bathing or dressing yourself**
  - ☐ Yes, Limited a Lot
  - ☐ Yes, Limited a Little
  - ☐ No, Not Limited at all

PHYSICAL HEALTH PROBLEMS:

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

- **Cut down the amount of time you spent on work or other activities**
  1. Yes
  2. No
- **Accomplished less than you would like**
  - ☐ Yes
  - ☐ No
- **Were limited in the kind of work or other activities**
  - ☐ Yes
  - ☐ No

- **Had difficulty performing the work or other activities (for example, it took extra effort)**
  - ☐ Yes
  - ☐ No

EMOTIONAL HEALTH PROBLEMS:

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

- **Cut down the amount of time you spent on work or other activities**
  - ☐ Yes
  - ☐ No
- **Accomplished less than you would like**
  - ☐ Yes
  - ☐ No
- **Didn't do work or other activities as carefully as usual**
  - ☐ Yes
  - ☐ No

SOCIAL ACTIVITIES:

- **Emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?**
  1. Not at all
  2. Slightly
  3. Moderately
  4. Severe
  5. Very Severe

PAIN:

- **How much bodily pain have you had during the past 4 weeks?**
  1. None
  2. Very Mild
  3. Mild
  4. Moderate
  5. Severe
  6. Very Severe

- **During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?**
  1. Not at all
  2. A little bit
  3. Moderately
  4. Quite a bit
  5. Extremely

ENERGY AND EMOTIONS:

These questions are about how you feel and how things have been with you during the last 4 weeks. For each question, please give the answer that comes closest to the way you have been feeling.

- **Did you feel full of pep?**
  1. All of the time
  2. Most of the time
  3. A good Bit of the Time
  4. Some of the time
  5. A little bit of the time
  6. None of the Time
- **Have you been a very nervous person?**
  - ☐ All of the time
  - ☐ Most of the time
  - ☐ A good Bit of the Time
  - ☐ Some of the time
  - ☐ A little bit of the time
  - ☐ None of the Time

- **Have you felt so down in the dumps that nothing could cheer you up?**
  - ☐ All of the time
  - ☐ Most of the time
  - ☐ A good Bit of the Time
  - ☐ Some of the time
  - ☐ A little bit of the time
  - ☐ None of the Time
- **Have you felt calm and peaceful?**
  - ☐ All of the time
  - ☐ Most of the time
  - ☐ A good Bit of the Time
  - ☐ Some of the time

☐ A little bit of the time

☐ None of the Time

- **Did you have a lot of energy?**
  - ☐ All of the time
  - ☐ Most of the time
  - ☐ A good Bit of the Time
  - ☐ Some of the time
  - ☐ A little bit of the time
  - ☐ None of the Time

- **Have you felt downhearted and blue?**
  - ☐ All of the time
  - ☐ Most of the time
  - ☐ A good Bit of the Time
  - ☐ Some of the time
  - ☐ A little bit of the time
  - ☐ None of the Time

- **Did you feel worn out?**
  - ☐ All of the time
  - ☐ Most of the time
  - ☐ A good Bit of the Time
  - ☐ Some of the time
  - ☐ A little bit of the time
  - ☐ None of the Time

- **Have you been a happy person?**
  - ☐ All of the time
  - ☐ Most of the time
  - ☐ A good Bit of the Time
  - ☐ Some of the time
  - ☐ A little bit of the time
  - ☐ None of the Time

- **Did you feel tired?**
  - ☐ All of the time
  - ☐ Most of the time
  - ☐ A good Bit of the Time
  - ☐ Some of the time
  - ☐ A little bit of the time
  - ☐ None of the Time

SOCIAL ACTIVITIES:

- **During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?**
  1. All of the time
  2. Most of the time
  3. Some of the time
  4. A little bit of the time
  5. None of the Time

GENERAL HEALTH:

How true or false is each of the following statements for you?
- **I seem to get sick a little easier than other people**
  1. Definitely true
  2. Mostly true
  3. Don't know
  4. Mostly false
  5. Definitely false
- **I am as healthy as anybody I know**
  - ☐ Definitely true
  - ☐ Mostly true
  - ☐ Don't know
  - ☐ Mostly false
  - ☐ Definitely false

- **I expect my health to get worse**
  - ☐ Definitely true
  - ☐ Mostly true
  - ☐ Don't know
  - ☐ Mostly false
  - ☐ Definitely false
- **My health is excellent**
  - ☐ Definitely true
  - ☐ Mostly true
  - ☐ Don't know
  - ☐ Mostly false
  - ☐ Definitely false