CHARACTERISTICS OF PAIN, DISABILITY AND ITS EFFECTS ON QUALITY OF LIFE AMONG PATIENTS WITH LOW BACK PAIN ATTENDED AT CRP

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CHARACTERISTICS OF PAIN, DISABILITY AND ITS EFFECTS ON QUALITY OF LIFE AMONG PATIENTS WITH LOW BACK PAIN ATTENDED AT CRP

Submitted by **Gazi Md. Najmul Alam** for partial fulfillment of the requirements for the degree of Bachelor of Science in Physiotherapy (B. Sc. PT)

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DECLERATION

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also decline that for any publication, presentation or dissemination of information of the study. I would bound to take written consent of my supervisor and from the head of physiotherapy department of Bangladesh Health Professions Institute (BHPI).

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CONTENTS

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Abbreviations

BHPI: Bangladesh Health Professions Institute

BMI: Body Mass Index

BMRC: Bangladesh Medical Research Council

CRP: Centre of the Rehabilitation for the Paralysed

IRB: Institutional Review Board

LBP: Low Back Pain

NHIS: National Health Interview Survey

QoL: Quality of Life

SPSS: Statistical Package for the Social Sciences

WHO: world Health Organization

List of Tables

List of Figures

Abstract

Background: Low back pain (LBP) is one of the most common phenomenon in the general population and about 80% of general population People can be affected at any age in their livelihood by it. ***Objective:*** To find out the characteristics of pain and its effects on quality of life among the low back pain patients attending at CRP. ***Methodology:*** A cross sectional study was conducted with a structured and close ended interviewer administered questionnaire to collect information from 75 low back pain patients in respects through purposive sampling procedure. Data was represented by descriptive analysis, such as – socio-demographic information, work and posture related information, pain related information, different types of pain, disability due to back pain and inferential statistics, such as – quality of life. ***Result****:* This study found that, among the 75 participants 61.3% was male and 38.7% was female, 20% was unmarried and 80% was married, that are most affected and maintain prolong sitting posture about 68%. Most of the patients (47%) had normal BMI, 36% was over weighted 16% was obese and only 1.3% was under weighted. About 21 patients (28%) had pain intensity level 6. 56% (42) patients had intermittent pain and 44% patients had constant pain. Most of the patient 70.8% (n=53) was moderate type of disable, 16% was mild disable and 13.4% were severe disable. In this study, it is found that only 5.7% had good physical health and only 12.3 % had good mental health. And both of the components have an effect on quality of life. Significant result is found between the disability with the physical & mental health and seven domains of SF-36 questionnaire (PF, RP, BP, VT, SF, RE and MH) and pain intensity level are found significant. ***Conclusion:*** Low back pain is very much common in every age range of Bangladesh. Sometimes is responsible for disability and decline quality of life. Quality of life is especially important when discussing low back pain. The results of this study explore the QoL of patients with LBP attended at CRP and found that LBP effects the quality of life.

CHAPTER: I INTRODUCTION

1.1: Background

Pain is a state which is an unpleasant sensory and emotional experience which may have actual or potential tissue damage, or described in terms of such damage. Pain can be explained in an another way by defining the pain as an unpleasant emotional experience which is usually initiated by noxious stimulus and transmitted over a specialized neural network that connect to the central nervous system where it is interpreted (Kumar & Elavarasi, 2016).

Low back pain (LBP) is one of the most common phenomenon in the general population. Among all the musculoskeletal disorders, low back pain affects 80% of general population People can be affected at any age in their livelihood. In the United States, it is very much common. In the job related disability the most common causes are low back pain. But people absent in their work due to low back pain. In 2007 in United State 27 million adult people whose age was 18 or older among them about 11% of the total adult population complained of having low back pain. In 2002, a National Health Interview Survey (NHIS) find out the prevalence of low back pain and compared it with the recorded prevalence. There were 31,044 adult respondents who claimed themselves as low back pain patients and they complained that the pain persist for last 3 months. In Egypt, a high percentage of low back patients received outdoor medical services. In Alexandria university hospital and El-Hadara University Hospital, the total number of all musculoskeletal conditions who attended at out patient's services among of them about 25.34% of the patients were suffering from LBP (Al-Disoky et al, 2015).

The causes of low back pain are not same in every case, it differs from an individual to individual. Sometime LBP is caused by without any specific reason that has no actual relationship with low back pain such as headache, appetite, overweight and the diseases in which pain is the main problem. Among them, low back pain that is originated from the lumbar spine can be classified into the following three categories: (1) Non-specific low back pain, (2) radicular pain, and (3) pain due to serious spinal lesions. Spine can be

classified into the following three categories: (1) Non-specific low back pain, (2) radicular pain, and (3) pain due to serious spinal lesions. It is very difficult to find out the actual cause of low back pain because of its onset with such a background that is called nonspecific low back pain, and it is more common in the young & middle age when compared to other age groups (Taguchi, 2003).

Low back pain (LBP) is one of the major and most common health conditions among older adults aged 60 years or older. It can lead a person to lead a life that make him unable to do any work of ADLs. The prevalence of musculoskeletal pain in older adults ranges from 65 to 85% and among of them 36 to 70% patients are suffering from low back pain (Wong et al., 2017).

There are many things that may lead to cause low back pain such as excessive mechanical stress. Excessive mechanical stress on spinal structures which causes compression on the spinal structure and lead to disc degeneration and finally resulting in chronic LBP. This loading is further exacerbated when there is increased in body weight. Weight control or diet control and proper workplace design may cause in the reduction of the additional spinal stress associated with low back pain (Marras et al., 2001).

During pregnancy, generally there will be increased in body weight of pregnant women and that causes the changes in the center of gravity and joint stability and that changes in the musculoskeletal normal alignment and resulting in painful symptoms and also causes an effect on the quality of sleep during pregnancy (de Sousa et al., 2015).

Low back pain (LBP) suggest that LBP is a long-term musculoskeletal health disorder which is characterized by Symptomatic episodes, remission, and recurrence of pain. In most cases people with acute LBP recover quickly but still there is some possibility of recurrences that is very much common. But here is no strong evidence of the risk factors that could be accepted as for the recurrences of LBP or of factors that may predict LBP recurrence. But some studies have shown some prognostic factors. There is an evidence of recurrence in about 33% of patients with LBP in a single year (Hartvigsen et al., 2018).

Low back pain affects all the aspects of life that lead disturbance in substantial economic, social and psychological stresses for both the community and the individual (De Beek &

Hermans, 2000). It sometimes hampers one's physical activity during work and it includes: loss of physical functioning, deterioration of general health and reconditioning, weight gain, constant or intermediate pain or increase in the level of pain, loss of social functioning all in a short decreased in social participation & leisure activities. Low back pain is sometimes accompanied by decreased family income and/or job loss and disruption of psychological functioning manifested through insomnia, irritability, anxiety, depression and somatic complications (Al-Disoky et al, 2015).

Patients may be complaints of some symptoms that may cause problem in life and which can create an impact on quality of life of the patient. Because those problems cause some disturbances or some limitations in life. They are: unable to sleep well, difficult to get up from bed, difficult to stand for long time, face difficulties in stirring, putting on/off clothes, can't walk long distance, unable to pick up things from the floor, unable to carry heavy load (Geller et al., 2016).

In such way low back pain can hamper one's quality of life. And quality of life may be affected due to suffering, failed treatments, medication dependence, social isolation, difficulties at work and emotional distress etc. In addition, it causes limitations in professional and leisure activities and decreases patients' functional ability. It can be responsible for irritation, sleep disorders, reduced appetite and severe physiological, psychological and social consequences. The assessment of pain intensity, quality of life and any physical disability brings about some information and permits further knowledge on low back pain patients. If we measure these variables, it can contribute to the direct treatment, through the monitoring of pain conditions and the assessment of care outcomes. (Stefane et al., 2013).

1.2 Justification of the study

LBP is one of the most common musculoskeletal conditions that include a large amount of population. A large part of population has lack of physical knowledge and they don't do regular exercise, and maintain normal posture and these are the common predisposing factors for mechanical low back pain in Bangladesh. Stressful occupations, hardworking and low income increase the demand of physical activity that provide a continuous, prolonged stress on back that causes mechanical deformation of spinal structures or dysfunction which leads to acute, recurrent or chronic low back pain.

There is lack of evidence on characteristics of low back pain and its impacts on quality of life in Bangladesh. It is very important to find out the characteristics of low back pain because without that a proper treatment can't be provided. And it is also very important to find out the causes, risk factors and causes of reinjure of low back pain to prevent further damage.

Quality of life need to be explained because LBP very much depends on the patients day to day life activities. LBP has a significant impact on work, lifestyle and social well- being and associated with high impact on the community in terms of economic and disease burden as well as on individuals in terms of quality of life and disability.

Considering all these things the researcher decided to conduct a study on the title. Because, according to researcher this study will be beneficial to estimate the effects of low back pain In quality of life, to determine whether patient's characteristics are associated with pain intensity, disability and will be helpful in understanding and managing the health condition.

So, the researcher wanted to conduct the study and wanted to know the information about characteristics of low back pain and its effect on quality of life of patients attending at CRP for beneficial expectancies for both patients and physiotherapists.

1.3: Research question

- What are the characteristics of pain and disability and its effects on quality of life among the low back pain patients attended at CRP?

1.4 Objectives

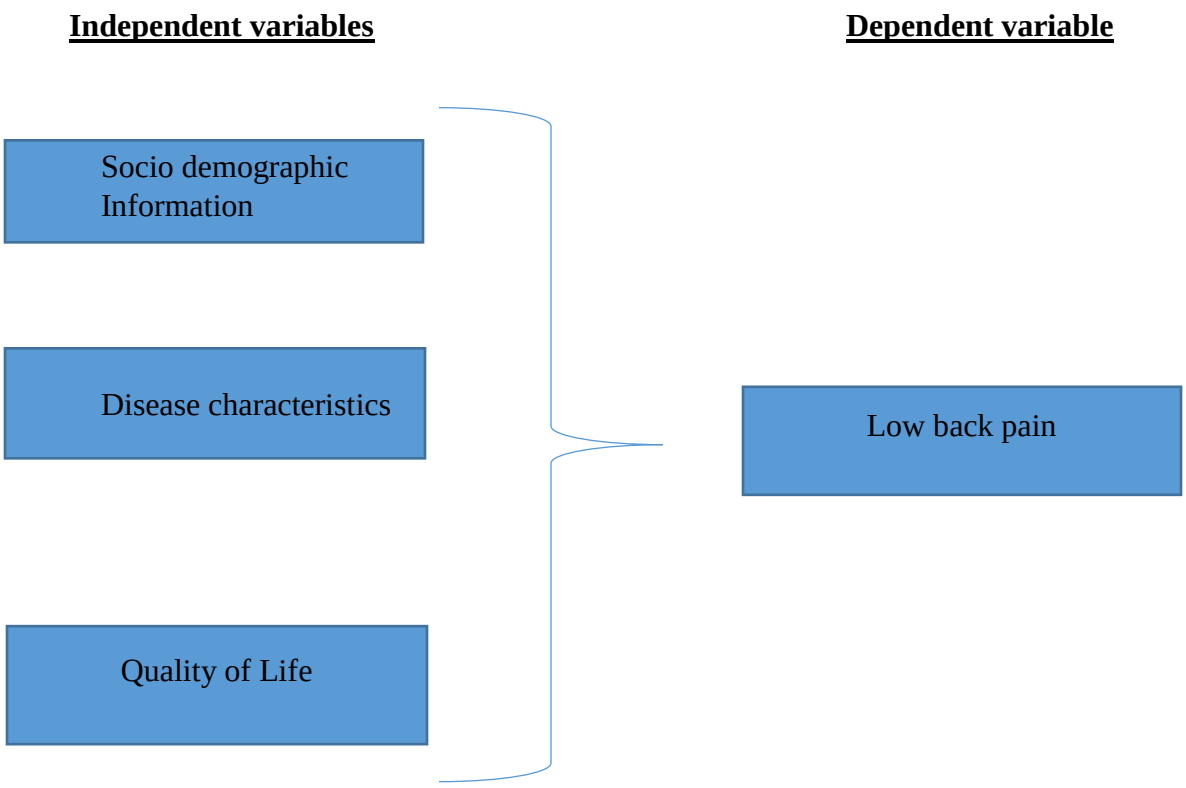
1.4. 1. General Objectives:

- To find out the characteristics of pain and disability and its effects on quality of life among the low back pain patients attended at CRP.

1.4. 2. Specific Objectives:

- To find out the socio demographic information of the LBP patients.
- To find out the work related information of LBP patients.
- To find out the pain related information of low back pain patients.
- To identify the level of disability of low back pain patients.
- To explore the characteristics of pain and disability on quality of life

1.5 Conceptual framework



1.6: Operational Definition

- **Pain:** Feeling of suffering or discomfort in a particular part of the body.
- **Low back pain**: Low back pain (LBP), perhaps more accurately called lumbago or lumbo-sacral pain occurs below the 12th rib and above the gluteal folds.
- **Quality of life:** The general well-being of individuals and societies.
- **Mobility:** The ability to organize and accomplish the act of moving.
- **Characteristics of pain:** characteristics of pain includes types of pain, nature of pain, duration of pain, pain radiation, intensity of pain,
- **Disability:** A physical or mental condition that limits a person's movements, senses, or activities.

CHAPTER- II LITERATURE REVIEW

Pain is an unpleasant sensation that is perceived in a specific localized part of the body. It is often explained as term of a penetration or tissue destruction process such as: Stabbing, burning, twisting, tearing, and squeezing and/or there is given a bodily or emotional reaction like: Terrifying, nauseating, and sickening. Pain is a defense mechanism of the body to create an awareness of the subject to protect the injured part from further damage (Kumar & Elavarasi, 2016).

There are many musculoskeletal conditions that are suffered by the general population. But among of them low back pain (LBP) is the most common musculoskeletal condition affecting the adult population. The prevalence of low back pain among the adult population is up to 80%. LBP is a chronic pain syndrome that is mainly perceived in the lower back region and the pain lasts for at least 12 weeks (Allegri et al., 2016).

Low back pain is a common health condition in the general population. The prevalence of LBP generally increases with age. If one feel back pain in the adolescent then it can be assumed that that back pain will be continued in the adulthood and the pain will make sufferer the patient from the adolescence. Adolescent boys and girls may experience LBP due to carrying of school bags. There may be some other factors responsible for low back pain in school going adolescence like: anatomical, physiological, or environmental. These might play an important role in pain perception of school going adolescence (Aprile et al., 2016). 80% of adults must experience low back pain sometime during their lifetime. Low back pain usually involves muscle spasm of the supportive muscles along the spine of the lumber region. And patients may also experience various type of symptoms like of pins and needles, numbness, tingling, weakness, stiffness and instability are common in the buttock or in the back and in the lower but the most important symptom or the most vulnerable symptom will be is pain in the back (Bentsen et al., 2008).

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In 2013 Aranjana Lione have shown Some studies have said that chronic low back pain generally lasts for more than 3 months and this affect an estimated 15-45% of the population and it is the one of most common causes of disability in a person whose age vary from 45 and 65 years. Chronic low back pain has a high morbidity with high social and economic effects.

Low back pain does not cause any affect any particular group but it can be common in both the athletic and nonathletic population in nature and the prevalence is almost same between athletes and non-athletes groups (Amrinder et al., 2013). Calculating the rate incidence of low back pain is difficult because the incidence of LBP first-ever episodes is increasing by every year and symptoms tend to recur over time. The prevalence of non-specific low back pain is estimated at 60–70% in industrialized countries which include one-year prevalence is about 15–45% and adult incidence 5% per year. This also effect on the quality of life of every individual as well as country as it has impacts on Socioeconomic and work loss (Duthey, 2013).

Low back pain is more commonly called lumbago or lumbosacral pain that occurs below the 12th ribs and above the gluteal fold (L & Hanifa S, 2010). The pain or discomfort is felt in the lumbo-sacral region of the back. LBP is described as a common phenomenon in the general population that affects public health and it is now being increasingly popular among the adolescence as well as in old age. LBP is becoming now a common complaint that is suffered by adults and old age (Adegoke et al, 2015).

Based on the anatomical view, the term LBP refers to pain in the lumbosacral area of the spine surrounded the distance from 1st lumber vertebra to 1st sacral vertebra. Normally lordotic curvature is found in this area of the spine. The most common site for LBP is in the 4th and 5th lumber segment and in most frequent cases, a straight curvature is most common which is found in the lumber area of the spine. Lumbosacral transitional vertebrae (LSTV) are a spinal anomalies which is congenital. In which an elongated transverse process of the 5^{th} lumbar vertebra is fused with verity level of degree to the 1^{st} sacral segment. LSTV spans a spectrum from partial/complete L5

sacralization to partial/complete S1 lumbarization, When the L5 vertebra fuses completely to the sacrum (Jancuska et al., 2015).

The symphyseal joints provide mobility to the vertebral column between the vertebral bodies, with an IVD in between. The facet joints are situated between and behind neighboring vertebrae, providing spine stability. They are originated at every spinal level and make available about 20% of the twisting stability in the neck and low back segments Ligaments aid in joint stability during rest and movement, preventing injury from hyperextension and hyperflexion. There are mainly three main ligaments in the spine. They are:- the anterior longitudinal ligament (ALL), posterior longitudinal ligament (PLL), and ligamentum flavum (LF). The canal is bordered by vertebral bodies and discs anteriorly and by laminae and LF posteriorly. Both the ALL and PLL run the entire length of the spine, anteriorly and posteriorly, respectively. Laterally, spinal nerves and vessels come out from the intervertebral foramen. Beneath each lumbar vertebra, there is the corresponding foramen, from which spinal nerve roots exit. For example, the L1 neural foramina are located just below the L1 vertebra, from where the L1 nerve root exits; the lumbar spine consists of five vertebrae which range is L1 to L5. The complex anatomy of the lumbar spine is a combination of these strong lumber vertebrae, linked by joint capsules, ligaments, tendons, and muscles, with extensive innervation. The spine is designed to be strong, since it has to protect the spinal cord and spinal nerve roots. At the same time, they are highly flexible that is to providing for mobility in many different planes. LBP symptoms can be derived from many potential anatomic sources, such as nerve roots, muscle, fascial structures, bones, joints, intervertebral discs (IVDs), and organs within the abdominal cavity (Allegri et al. 2016).

Low back pain has several different possible causes: strain on the muscles of the lower back may be caused by obesity; Ligament sprain; poor posture; age; disc bulge; pregnancy; or job-related stooping, bending, or other stressful postures. There are some other causes:-bladder / kidney infection, endometriosis, cancer, or ovarian problems(Service, 2004). Back pain in young people may have many causative factors:

Sitting for long periods of time with poor posture, use of anatomically incorrect furniture, watching television for long periods of time, performing different ADL with incorrect posture, sleeping less than seven hours a day, smoking, obesity, and psychological factors such as depression and anxiety are some of the common risk factors for onset of back pain in students. At the age of 10 years, 31% of total children complains of pain is in the lumbar spine and at the age of 18, the rate is increased that is 74%. This gradual increase in the incident of pain may be due to the increase and accumulation of weight and overload or stress on the spine. Based on this assumption, it can be assumed that low back pain in childhood is a predisposing factor of low back pain in later life (Fonseca et al., 2016).

The main causes of low back pain is the mechanical cause that is 80% to 90% of total causes. Pain from mechanical causes is typically aggravated with motion and relieved with rest. In the mechanical causes of LBP, Lumbar strain is the most responsible part (cause) for low back pain which contribute 65% to 70% of mechanical causes. A lumbar strain is a stretch injury to the ligaments, tendons, and or muscles of the lower back. The stretching incident results in microscopic tears of varying degrees in these tissues. Lumbar strain is considered one of the most common causes of LBP. The injury can occur because of over use, improper use or trauma, heavy weight lifting (Arya, 2014).

Strain or sprains, poor mal-alignment or fusion of the vertebra, degenerative disease, osteoarthritis, disc bulge, disc herniation, spinal stenosis, spondylolisthesis , small ruptures to the spine from osteoporosis, Scoliosis are some of the common causes of low back pain (Borenstein et al., 2012).

The occurrence of LBP is the cause for various abnormalities of the spine which can be detected in MRI. There is strong 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 found in the absence of symptoms and many patients with back complaints do not exhibit any demonstrable pathology on MRI (Centeno et al., 2017).

The classification of back pain is established on either duration of persistence of symptoms or on etiology. There are three types of back pain on the duration of symptoms. They are: 1) acute lower back pain which persists less than 6 weeks, 2) sub-acute lower back pain which persists between 6 and 12 weeks and 3) chronic lower back pain which persists more than 12 weeks. There is another two types based on etiology. They are: 1) mechanical or non-specific lower back pain which have no underlying pathology and 2) secondary lower back pain which is generally associated with underlying pathology (Refshauge & Maher, 2006).

Based on etiology, Low back pain can be classified into another two categories: They are:-1) Nonspecific/mechanical – the most common type of diffuse pain that does not change in response to particular movements, is localized & non-radiating. 2) Radicular – pain which radiates down the leg below the knee may be unilateral or bilateral and changes in intensity in response to particular positions or maneuvers. The most common radicular pain is due to sciatica (Manusov, 2012).

Non-specific low back pain has been described as pain or discomfort that is localized below the costal margin and above the inferior gluteal folds, with or without leg pain, but not attributable to a known or specific pathology. Globally, it has been identified as an important public health problem among adults with an estimated lifetime prevalence of over 60% associated with adverse consequences. The first episodes of non-specific low back pain could be experienced as early as nine years of age, and continue into adulthood (Baron et al., 2016)

Mechanical or nonspecific LBP has no serious underlying pathology or nerve root compromise. A century of intense study has produced no clear understanding of common place back pain. Secondary LBP, occurring in fewer patients, is associated with underlying pathology. Metastatic cancer, spinal osteomyelitis, and epidural abscess account for back pain patients. The most common neurologic impairment associated with back pain is herniated disc, and 95% of disc herniation occurs at the lowest two lumbar intervertebral levels. Various superficial muscles present in the back which contribute to back pain include the trapezius muscle, latissimusdorsi, the

rhomboid major and minor muscles and the muscle gluteus maximus. Back pain was a pressing issue since it seemed to be constantly on the rise in adolescence. School age children are at a high risk for major back problems if they started with back problems from early age (Sirsat et al., 2015).

There are many possible risk factors for lower back pain. It is important to study about risk factors because studies about it for development of low back pain will help in falling the incidence of back pain and help to prevent acute back pain from progressing into chronic low back pain. Different studies express risk factors in different ways. Most of the studies describe the factors in two ways: one is associated with LBP and the other is non-associated with LBP. But it is not understood why the factors are explained in associated and non-associated with LBP. The possible predisposing associated factors are: body weight, physical activities, heredity, posture, level of education, smoking, socio-economic background, reduced intake of protein, intake of alcohol, pregnancy etc (Lione, 2013).

The diagnosis of nonspecific LBP in must rule out a number of organic causes, such as Scheuermann's disease, infections (discitis and osteomyelitis), tumors (leukaemia, sarcomas), spondylolysis, spondylolisthesis and the rheumatic pathologies. Epidemiological data is accumulated during the past two decades suggest that most back pain in children is of nonspecific origin (Kordi & Rostami, 2011).

To diagnose a patient with low back pain is very challenging and difficult too and requires complex clinical decision-making. (Allegri et al., 2016). In cases of LBP, it is important to ask some specific questions during the first meeting with a general practitioner to diagnose the mechanical or inflammatory nature of the pain, the presence of a triggering factor, the pain intensity and impulsivity. Duration and history of the lumbar disorder should also be investigated to detect the phase of low back pain. Clinical examination should be done to identify a pain-relieving posture, nature of pain, the presence of paraspinal muscle contractures and pain on spinous pressure. Wide-ranging physical examination is important in the presence of red flags and in the absence of red flags, imaging is not helpful for the diagnosis. Finally, yellow flags

should also be taken into account. For back pain management, widely used first-line treatment combines paracetamol with counselling, mainly based on patient reassurance. For LBP management, clinical examination, physiotherapy and imaging prescriptions and some risk factors for chronicity must be taken into account. (Lione, 2013)

Imaging findings are comparatively less related to symptoms. In one cross sectional study of asymptomatic persons who were in aged 60 years or older age group, 36% had a herniated disc, 21% had spinal stenosis, and more than 90% had a degenerated or bulging disc (Allegri et al., 2016)

Current treatment are inadequate for many patients. With current therapies many patients fail to achieve adequate relief for chronic pain. (Lione, 2013). The most popular treatment for back pain is medication; especially nonsteroidalanti-inflammatory drugs (NSAIDs), muscle relaxants, and narcotic analgesics. In a study of primary patient management with low back pain, 69% were prescribed non-steroidal anti-inflammatory drugs, 35% muscle relaxants, 12% narcotics, and 4% acetaminophen; 20% received no medications. For Pain relief from acute LBP, the guidelines recommended paracetamol as a first choice and NSAIDs as a second choice. If paracetamol or NSAIDs fail to reduce pain then NSAIDs are used (Enthoven et al., 2014)

There has been a recent approach to manage individuals with back pain. Now, we don't aim to diagnose a faulty structure and aim our treatment at that particular structure. Internationally recommend advice and analgesia plus physiotherapy interventions such as exercise, manual therapy and acupuncture as appropriate treatment techniques to use in the management of individuals with back pain. Stratified care is the targeting of treatment to subgroups of patients based on characteristics. There are three different approaches to stratification: Patient prognosis, Responsiveness to treatment, underlying mechanisms (Physiopedia, 2018).

CHAPTER –III METHODOLOGY

3.1 Study design

The purpose of the study was to find out the characteristics of pain and disability and its effect on quality of life among the low back pain patients attended at CRP in musculoskeletal unit. Cross sectional study design was used to conduct this study.

3.2 Study area

Data was collected from the Musculoskeletal Unit of Physiotherapy Department, Centre for the Rehabilitation of the Paralysed (CRP),Savar, Dhaka.

3.3 Study population

Based on the inclusion and exclusion criteria, all the low back pain patients attended at CRP in musculoskeletal unit was considered as the study population.

3.4 Sample size

The equation of sample size calculation are given below-

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

Here,

z= 1.96

p = 0.36 (Here, p = Prevalence = 0.5)

q = 1 - 0.5

=1 - 0.5

= 0.5

d = 0.05

The actual sample size for this study is calculated as 384, but as the study is a part of academic research project and there were time limitation. So, 75 low back pain patients were considered as the sample of this study considering the inclusion and exclusion criteria.

3.5.1 Inclusion criteria of the study

- Male and female patients who were suffering from low back pain is included. (Amundsen et al., 2018)
- Patients who were voluntarily agreed to participate in this study (Henschke et al., 2009)
- Patients having back pain at least <6-weeks in duration. (Henschke et al., 2009)
- Low back pain patients With or without referred Leg pain (Amundsen et al., 2018)
- Patients who are in 14 years and older. (Henschke et al., 2009)

3.5.2 Exclusion criteria of the study

- Patients who were not-interested.
- Fracture patients and psychologically unstable patient.
- Pregnant women with low back pain
- Patients with cognitive problems
- Patients with serious pathological conditions such as tumor, TB, rheumatoid arthritis, spondylitis etc.

(Amundsen et al., 2018)

3.6 Data collection tools

The tools that needed for the study were- Consent paper, questionnaire, paper, pen, file, calculator, computer, and printer.

3.7 Data collection procedure

Data was collected by using a structured questionnaire paper set, developed by the investigators by conducting a face to face interview to collect information. Data was collected in double blinded procedure to avoid bias. The researcher used some questionnaires: SF-36 to measure the quality of life and socio-demographic questionnaire, work and pain related questionnaire, McGill questionnaire Roland Morris disability questionnaire to find out the characteristics of pain and disability.

3.8 Data Analysis

Data was analyzed using Microsoft office Excel 2008 and SPSS 20 version software program. Data was represented by descriptive analysis, such as – socio-demographic information, work and posture related information, pain related information, different types of pain, disability due to back pain and inferential statistics, such as – quality of life.

3.9 Ethical consideration

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. The proposal of the dissertation including methodology was approved by Institutional Review Board and obtained permission from the concerned authority of ethical committee of Bangladesh Health Professions Institute (BHPI). A research proposal is submitted to local ethical review committee of Bangladesh Health Professions Institute (BHPI) for being

approval. At first, I applied for official permission for the study and data collection from the head of the Physiotherapy Department of CRP through the head of Department of Physiotherapy Department, BHPI, CRP, Savar, Dhaka. Then the head of the Physiotherapy Department of CRP permitted me to collect data at musculoskeletal department of CRP, Savar, Dhaka. The researcher strictly maintained the confidentiality regarding participant's condition and treatments.

3.10 Informed Consent

The researcher obtained informed consent to participate from every subject. A signed informed consent was taken by an informed consent letter to the participant. Consent was obtained by providing each participant a clear description of the study purpose, the procedure involves in the study and also informing them that if they wish they can withdraw themselves any time from the study, participant were explained about his/her role in the study and it was explained that there is no direct benefit from the study but in future, cases like these may be benefited from it. Participants are also advised that they are free to decline answering any questions during interview. The necessary information has been kept in a secure place to ensure confidentiality. They are also assured that it would not cause any harm to them. Then they signed the consent form.

CHAPTER: IV Results

All the patient relevant information was analyzed by SPSS version 20 software. In this survey, all the variables were grouped into main three categories such as- socio demographic, posture and work related variables, pain related information, different types of pain, disability related information and quality of life of low back pain patients.

Socio demographic variables include the information about age, gender, marital status, educational status, living areas and occupations. Posture and work related variables includes- working posture status, lifting heavy object, employment period etc. In pain related information it gives information about the B.M.I., pain intensity, types of pain, pain radiation, history of pain, aggravating & easing factors etc. For different types of pain here, McGill questionnaire was used. To identify the disability level, Roland-Morris Disability Questionnaire (RMDQ) was added. Lastly for the measurement of the quality of life SF-36 was used.

All information were collected by using a structured questionnaire where all question types were close ended and information was gathered by a face to face interview in double blinded process with maintaining the ethical considerations from both the part of musculoskeletal department of physiotherapy in Center for the Rehabilitation of the Paralysed (CRP) and the incoming outdoor low back pain patient.

The researcher collected the descriptive data and calculated as percentages by using the Microsoft excel, SPSS 20 version software and presented by using table, bar charts and pie charts. The number of respondents were 75. This sample size was selected purposively.

The collected data's from the survey were analyzed to explore the above gotten information to diminish the presenting complains of low back pain, to find out the characteristics and its effects on quality of life of low back pain patients. These data's analysis and description are given as follows:

Part- 1: Socio-demographic

4.1 Age of the participants

Ages are grouped into 6 categories that found in this study such as age group 14-23 were 14.7 % where (n=11), age group 24-33 were 24.0 % (n=18), age group 34-43 were 21.3 %(n=16), age group 44-53 were 21.3 (n=16), age group 54-63 were 12.0% (n=9), and age ranges 64-73were 6.7% (n=5).

Table-1: Age of the participants

Age group	Frequency (n)	Percentage (%)
14-23	11	14.7
24-33	18	24.0
34-43	16	21.3
44-53	16	21.3
54-63	9	12.0
64-73	5	6.7
Total	75	100.0

4.2 Gender of the participants

Among 75 participants 61.3 %(n=46) were male and 38.7 %(n=29) were female. From the above pie chart we can easily realize that both male and female patients came with low back pain at CRP-Savar. There was tendency for more men to report low back pain than women, but this difference generally was not statistically significant because most women were not agreed to voluntarily participate. This pie chart shows that 75 participants were collected by using purposive sampling.

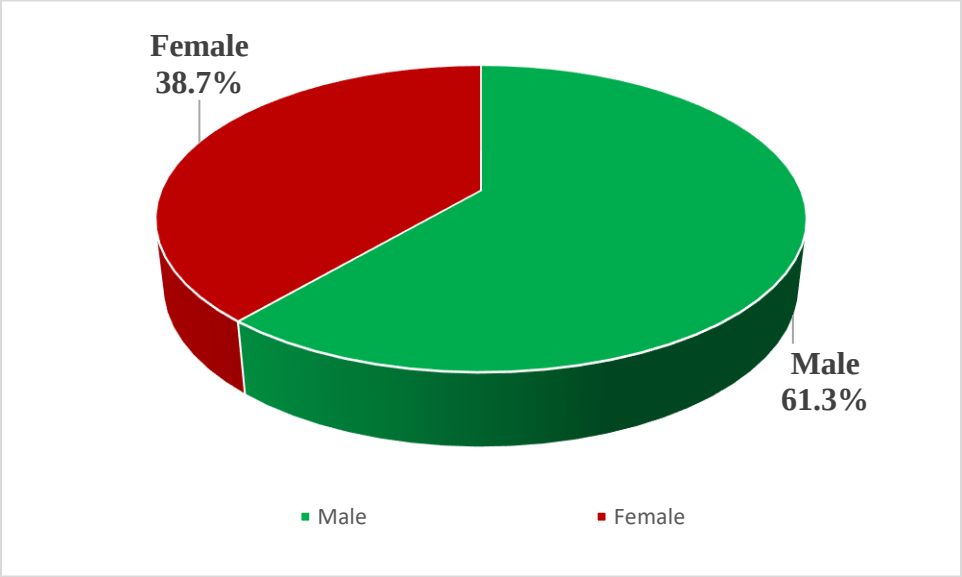

Figure-1: Gender of the participants

4.3 Marital status of the participants

There were 75 participants in which 20% (n=15) were unmarried and the other 80% (n=60) were married. In this study, married persons were more affected than unmarried.

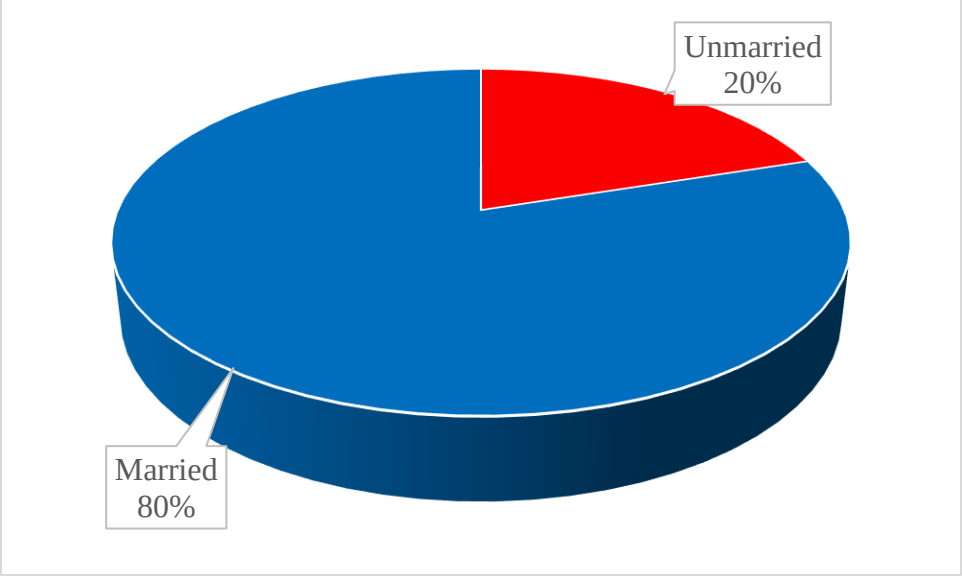

Figure-2: Percentage of marital status of the participants

4.4 Educational status of the participants

In this study, it is showed that the participants who had primary education are more effected. Mainly educational status describe the socio-economic condition of the participants and consciousness of health of themselves. Among the 75 participants 5.3% (n=4) were illiterate, 25.3% (n=19) had primary education, 17.3% (n=13) completed S.S.C., 20.0% (n=15) had passed H.SC. , 17.3% (n=13) were graduate and 14.7% (n=11) had an education level of masters and above.

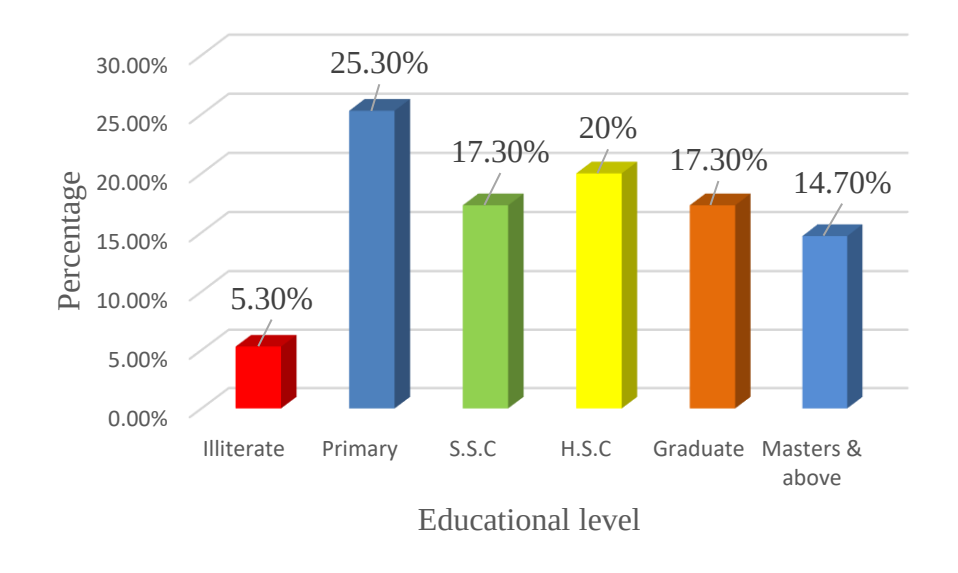

Figure-3: Educational status of the participants

4.5 Living area of the participants

In this study, among 75 participants, there were 48% (n=36) are lived in rural areas and other 52% (n=39) are lived in urban areas. Figure 4 shows the number of people's living condition.

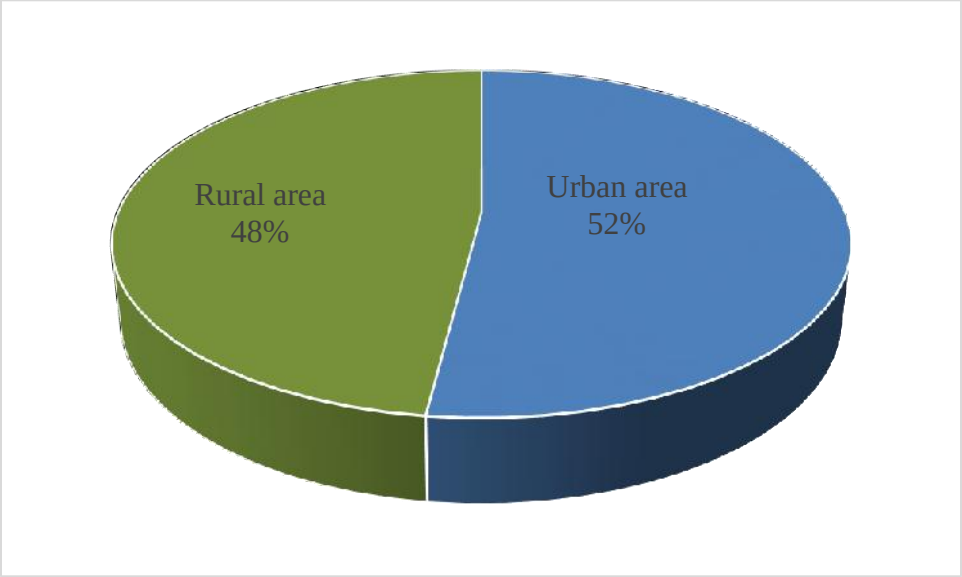

Figure-4: Living area of the participants

4.6 Occupation of the participants

Although there were no categories in the questionnaire but in SPSS the occupation is categorized in 6. Among the 75 participants, most of them were employee 28% (n=21), 18.7% (n=14) were students, 22.7% (n=17) were businessman, 22.7% (n=17) were housewife, 1.3% (n=1) were driver and 6.7% (n=5) were farmer.

Table-2: Occupation of the participants

Occupation	Frequency (n)	Percentage (%)
Employee	21	28.0
Student	14	18.7
Business	17	22.7
Housewife	17	22.7
Driver	1	1.3
Farmer	5	6.7
Total	75	100.0

Part-2: Work and posture related

4.7 Postural status during work of the participant

Most participants of LBP would prefer most of the time/often as sitting posture 68.0% (n=51), bending posture 10.7% (n=8), squatting posture 2.7% (n=2) and sometimes or seldom maintained standing posture 18.7 %(n=14).

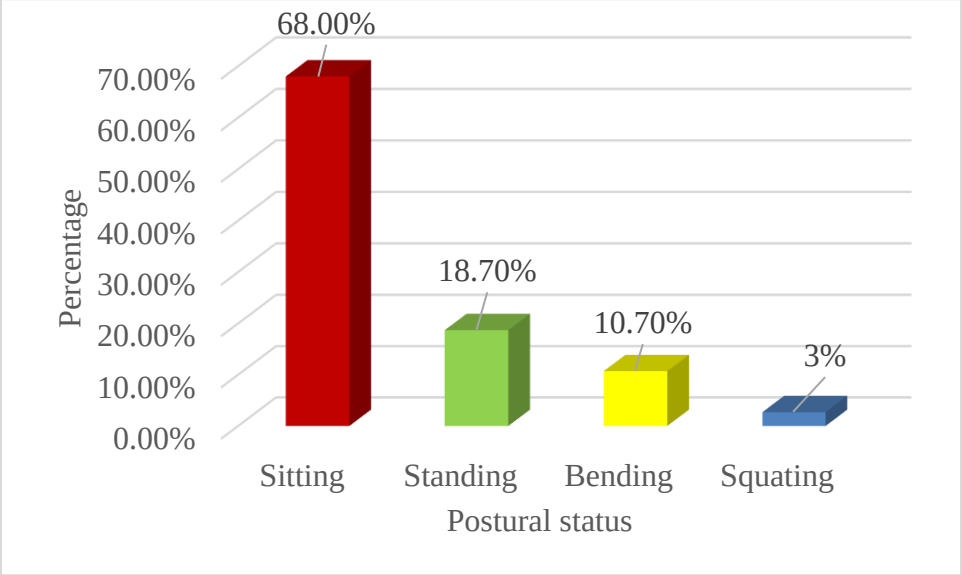

Figure-5: Postural status of patients of LBP by percentage

4.8 History of participants of lifting heavy objects

The study showed that most of the time participants lifted heavy objects about 2.7 % (n=2), often lifted about 24% (n=18), sometimes lifted about42.7% (n=32) and never lifted participants are about 30.7% (n=23) of patients suffered with LBP.

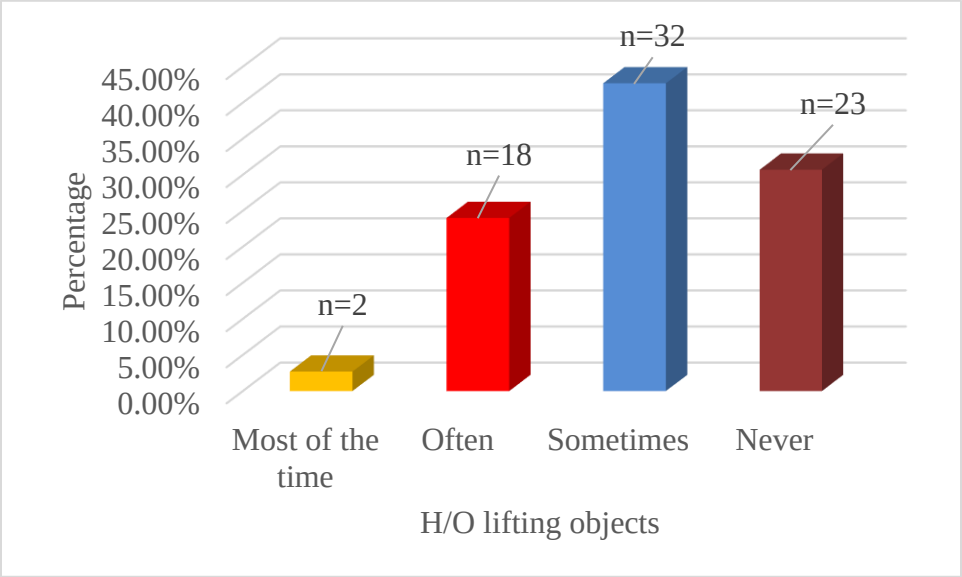

Figure-6: History of lifting heavy objects

4.9 Employment period

Among the 75 participants 46.7% (n=35) had worked less than 8 hours and other 53.3% (n=40) had to work more than 8 hours.

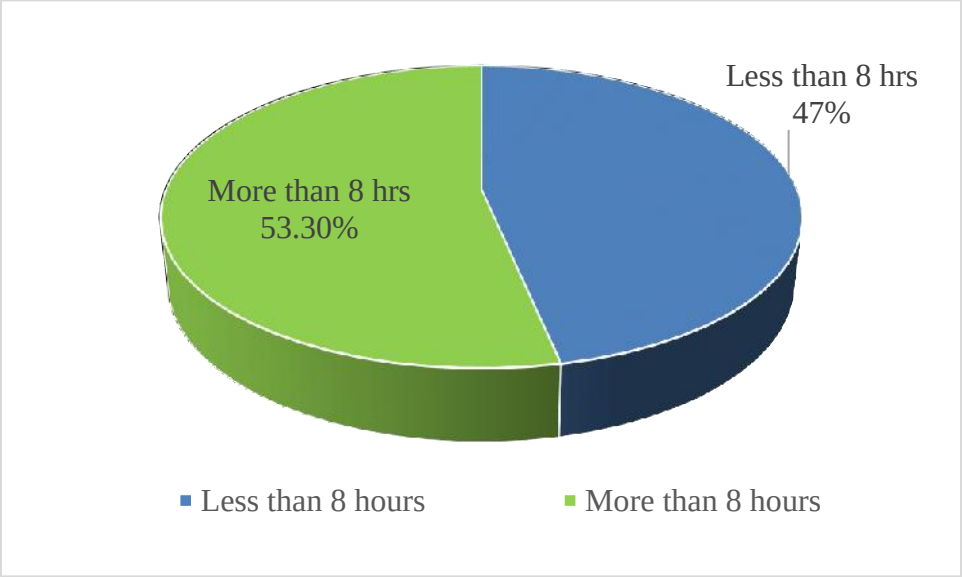

Figure-7: Employment period of the participants

Part-3: Pain related information

4.10 Body Mass Index

In this research project, Body Mass Index highlights that about 16.0% (n=12) were obese, over weighted about 36% (n=27), under weighted about 1.3% (n=1) and normal BMI about 46.7% (n=35).

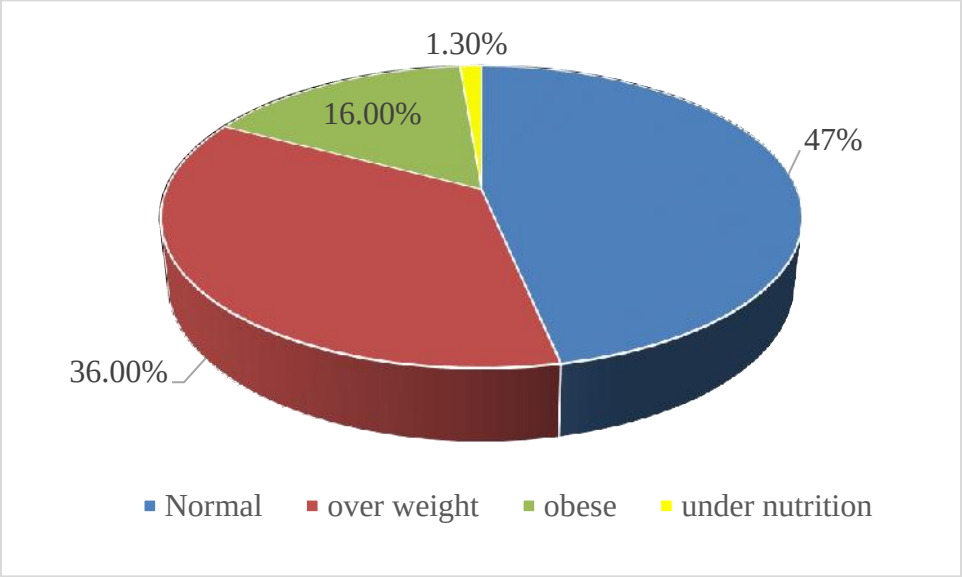

Figure-8: Percentage of Body Mass Index of patients of LBP

4.11 Pain intensity level

Among the 75 LBP 2.7% (n=2) patients claimed pain intensity level 3, 18.7% (n=14) patients claimed 4, 21.3% (n=16) patients claimed pain level as 5, 28.0% (n=21) claimed pain level as 6, 21.3% (n=16) claimed pain level as 7, 6.7% (n=5) claimed pain level as 8 and 1.3% (n=1) patients claimed pain level as 9. Most of the patients had pain level 5, 6,7 because most of them was under physiotherapy treatment. The mean value of the pain intensity is 5.72 and standard deviation is 5.72± 1.32.

Table no- 3: Pain intensity level

Pain intensity level	Frequency (n)	Percentage (%)
0	0	0
1	0	0
2	0	0
3	2	2.7
4	14	18.7
5	16	21.3
6	21	28.0
7	16	21.3
8	5	6.7
9	1	1.3
10	0	0
Total	75	100.0

4.12 Nature of pain

In this research, 56% (n=42) patients had intermittent pain and 44% (n=33) patients had intermittent pain.

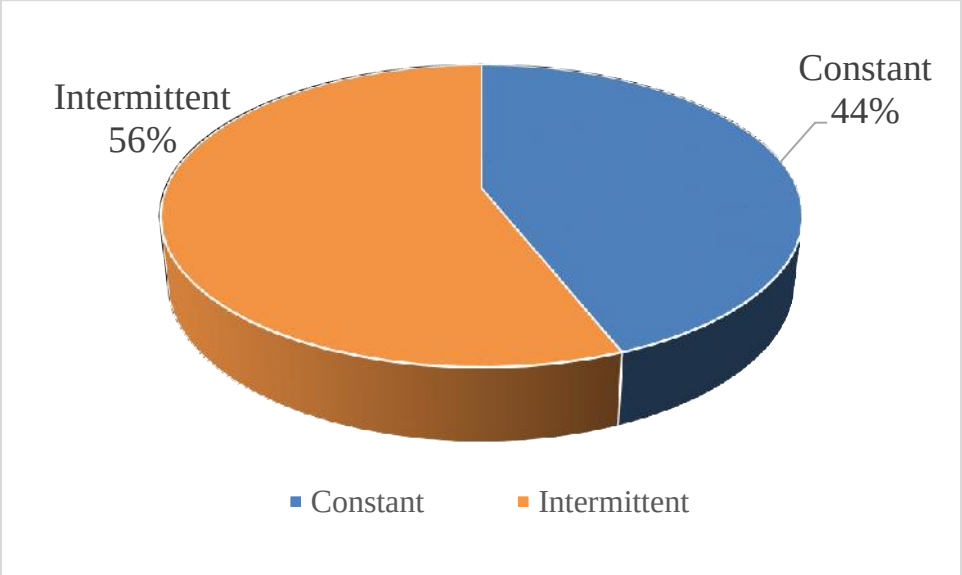

Figure-9: Nature of pain

4.13 Previous episode of back injury

In this study, among 75 participants (37.3%) 28 patients had 1-2 previous episodes, 22.7% (n=17) had no previous episode, 9.3% (n=7) had 3-5 previous episodes, 13.3% (n=10) had more than 5 and 17.3% (n=13) had more than 10 episodes.

Table no.- 4: Previous episode of back pain

Previous episode	Frequency (n)	Percentage (%)
None	17	22.7
1-2	28	37.3
3-5	7	9.3
More than 5	10	13.3
More than 10	13	17.3
Total	75	100.0

4.14 Causes of injury

The above chart showed the result that suggest 24% (n=18) patients were direct trauma, 36% (n=27) were lifting injury, 22.7% (n=17) were twisting injury, 17.3% (n=13) were carrying, vibration and sports injury is about 1.1%.It is also suggests that high incidence of low back pain occurrence precipitated by direct trauma.

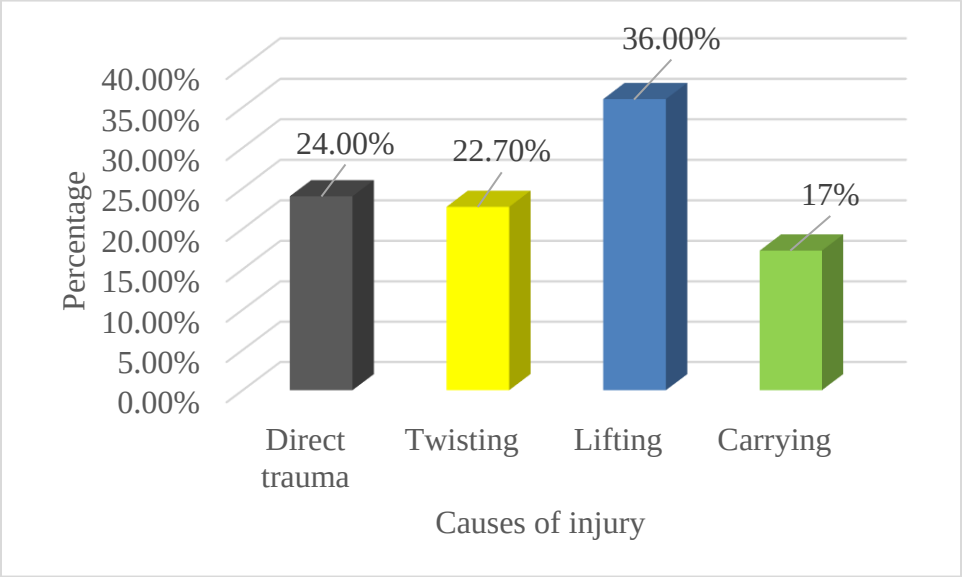

Figure-10: Causes of injury

4.15 Factors that aggravate pain

Among the total participants, in 34.7% (n=26) cases pain is aggravated in sitting position, in 25.3% (n=19) cases pain is increased in standing, in 21.3% (n=16) cases improve in bending, in 16.0% (n=12) aggravate in walking and in 2.7% (n=2) pain is increased in lying.

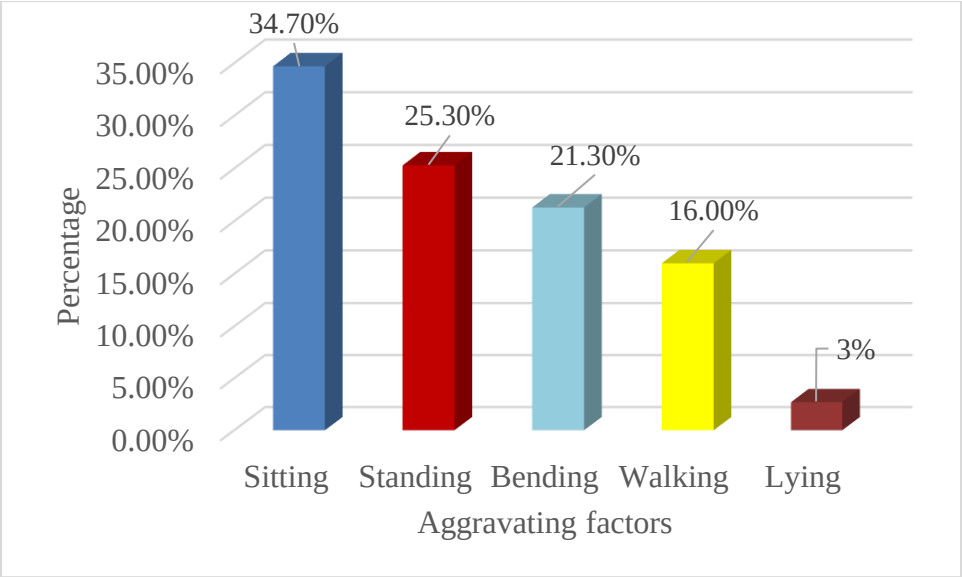

Figure-11: Factors that aggravate pain

4.16 Factors that ease pain

Among the total participants, in 9.3% (n=7) cases pain is eased in sitting position, in 6.7% (n=5) cases pain is decreased in standing, in 2.7% (n=2) cases decreased in bending, in 13.3% (n=10) eased in walking, in 66.7% (n=50) pain is decreased in lying and 1.3% (n=1) decreased as the day progress.

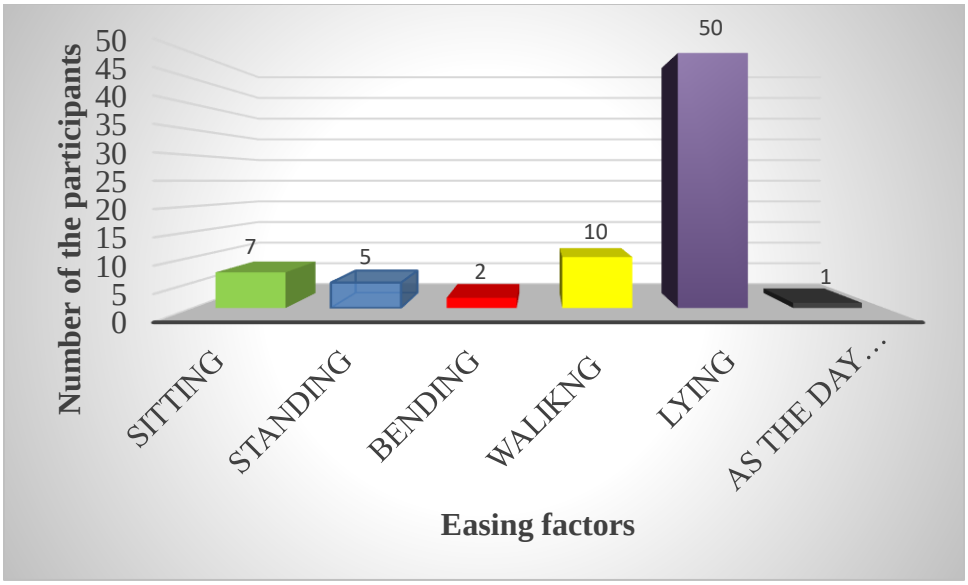

Figure-12: Factors that ease pain of the participants

4.17 Features of pain: According to McGill Questionnaire

In the table no. 4.17 showed that 96% (n=72) of the total participants did not have throbbing type of pain.

Among 75 participants, 53.3% (n=40) said that they had not experienced shooting pain, 28% (n=21) had mild pain, 17.3% (n=13) had moderate shooting pain and only 1.3% (n=1) had experienced sever shooting pain.

58% (n=44) said that they had not experienced shooting pain, 30.7% (n=23) had mild pain, 10.7% (n=8) had moderate shooting pain.

Splitting pain and fearful pain are less common in low back pain patients.

32% patients complains of moderate type of punishing pain. In most of the patients sickening pain very much common, in 47.8% patients had mild type of sickening pain.

Tiring-exhaustion is present in 37.3% mild type of pain and 32% moderate type of pain in patients.

About half of the patients did not have tender pain, aching and hot-burning. These type of pain less affects the patients.

The other pain qualities are more or less common in one-third patients.

Table no.- 5: Features of pain (According to McGill questionnaire)

Pain quality	None n(%)	Mild n(%)	Moderate n(%)	Severe n(%)
a) Throbbing	72(96.0%)	3(4.0%)	0(0%)	0(0%)
b) Shooting	40(53.3%)	21(28.0%)	13(17.3%)	1(1.3%)
c) Stabbing	44(58.7%)	23(30.7%)	8(10.7%)	0(0%)
d) Sharp	49(65.3%)	16(21.3%)	7(9.3%)	3(4.0%)
e) Cramping	25(33.3%)	25(33.3%)	25(33.3%)	0(0%)
f) Gnawing	28(37.3%)	26(34.7%)	17(22.7%)	4(5.3%)
g) Hot-burning	41(54.7%)	19(25.3%)	11(14.7%)	4(5.3%)
h) Aching	38(50.7%)	32(42.7%)	4(5.3%)	1(1.3%)
i) Heavy	28(37.3%)	28(37.3%)	15(20.0%)	4(5.3%)
j)Tender	29(52.0%)	24(32.0%)	9(12.0%)	3(4.0%)
k) Splitting	50(66.7%)	13(17.3%)	12(16.0%)	0(0%)
l) Tiring-exhausting	21(28.0%)	28(37.3%)	24(32.0%)	2(2.7%)
m) Sickening	16(21.3%)	35(46.7%)	21(28.0%)	3(4.0%)
n) Fearful	51(68.0%)	14(18.7%)	8(10.7%)	2(2.7%)
o) Punishing-cruel	29(38.7%)	17(22.7%)	24(32.0%)	5(6.7%)

SF-36

SF-36 consists of eight scaled scores, which are the sum of the question in section. The eight sections are physical functioning, Role limitation due to physical health, Role limitation due to emotional problem, Bodily pain, General health, Vitality, Social functioning and mental health. Each scale is directly transformed into a 0-100 scale on the assumption that each question carries equal weight (ware et al.,2000). In this study the scale 0-100 is subdivided into four section. Score 0-25 indicates poor status, Score 26-50 indicates poor status, Score 51-75 indicates fair status and Score 76-100 indicates good status of all domains.

Table -6: Scoring Categories of SF-36 scale

Score (0-25)	Very poor status
Score (26-50)	Poor status
Score (51-75)	Fair status
Score (76-100)	Good status

4.18 Physical functioning (PF)

In this study, Total participants were 75 and among them 100% (n=75) scored <50 at an average out of 100 which denotes Poor physical functioning in the SF dimensions. Physical functioning of the participants had a very poor role for 36% (n=27) who score <25% at an average out of 100, poor physical functioning was 34.6% (n=26) who score <50% at an average out of 100, 26.7% (n=20) had fair physical functioning who scored <75% at an average out of 100 and finally only 2.70% (n=2) had good physical functioning. The mean value of physical functioning is 37.93 and standard deviation is 21.37.

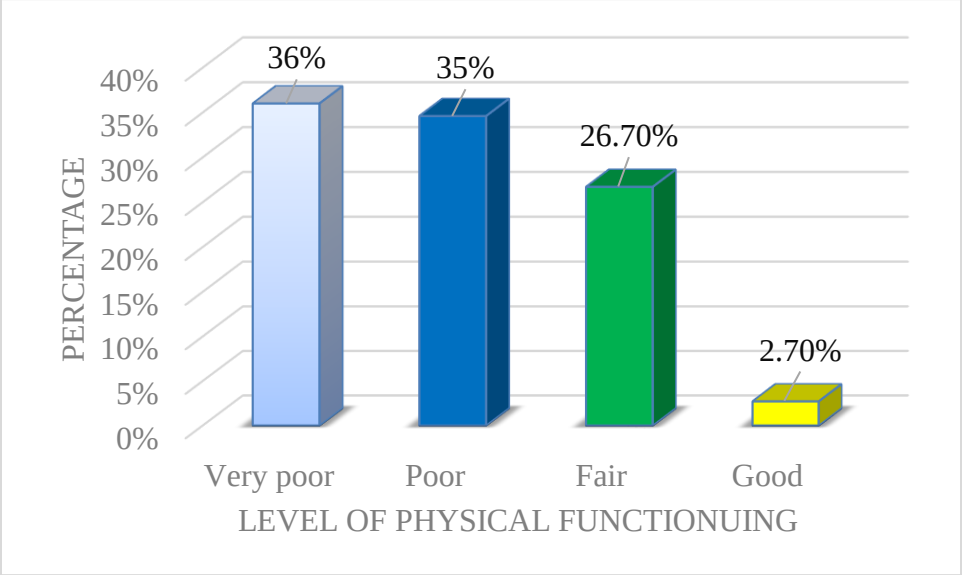

Figure-13: Physical functioning of the participants

4.19 Role limitation of physical health (RP)

There is always an impact of LBP on physical activities. As well as it makes role limitation due to physical health of the participants. Most of the participants had a very poor role for 33.3% (n=25) who score <25% at an average out of 100, poor physical functioning was 25.3% (n=19) who score <50% at an average out of 100, 9.3% (n=7) had fair physical functioning who scored <75% at an average out of 100 and finally only 32% (n=24) had good physical functioning. The mean value of physical functioning is 53.50 and standard deviation is 39.50.

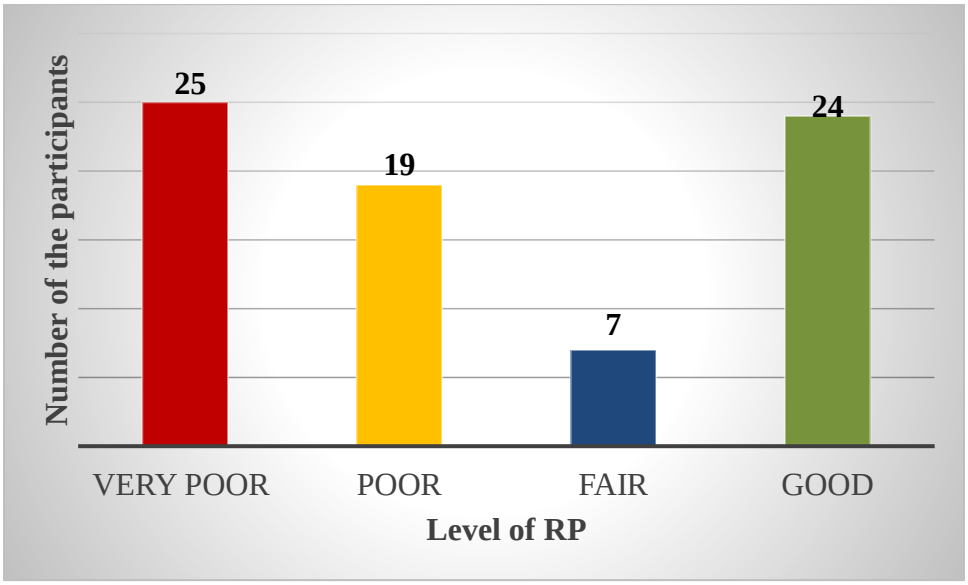

Figure-14: Role limitation due to physical health of the participants

4.20 Bodily pain (BP)

Among the 75 participants, 32% (n=24) scored <25 at an average out of 100 which denotes very poor physical status due to pain, 38.6% (n=29) scored less than 50 at an average out of 100 which denotes poor physical status due to pain , 21.3% (n=16) scored more than 50 at an average out of 100 which claims fair physical status and only 8% (n=6) scored more than 75 at an average out of 100 which claims good physical status through the short form-36 scoring system. The mean value of physical functioning is 41.30 and standard deviation is 22.50.

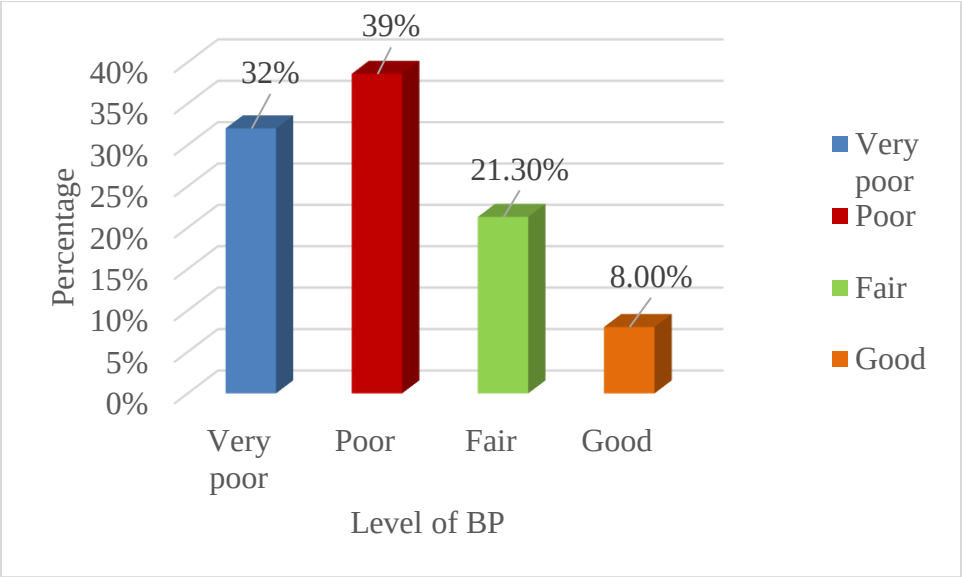

Figure-15: Bodily pain of the participants

4.21 General health (GH)

Among the 75 participants (n=75), 31% (n=23) scored less than 25 at an average out of 100 which denotes very poor general health, 51% (n=38) scored less than 50 at an average of 100 which denotes poor general health and 18.7% (n=14) scored more than 75 at an average out of 100 which claims fair general health through the short form-36 scoring system. The mean value of physical functioning is 37.53 and standard deviation is 15.51.

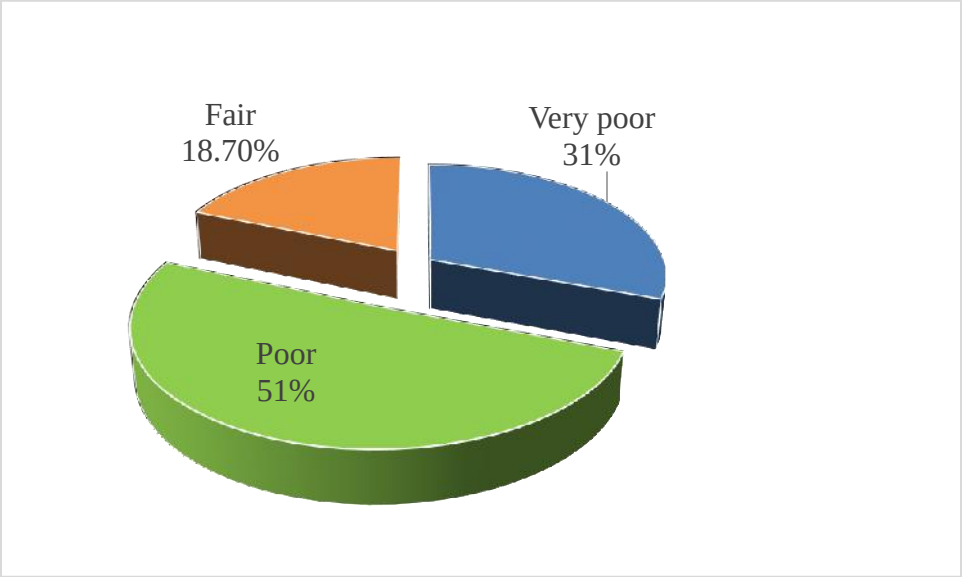

Figure-16: General health of the participants

4.22 Vitality (VT)

Among the 75 participants, 12.0% (n=9) scored less than 25 at an average out of 100 which denotes very poor vitality, 53.3% (n=40) scored less than 50 at an average out of 100 which denotes poor vitality, 28.0% (n=21) scored less than 75 at an average out of 100 which denotes fair vitality and only 6.60% (n=5) scored more than 75 at an average out of 100 which denotes good vitality through the short form-36 scoring system. The mean value of physical functioning is 46.60 and standard deviation is 16.56.

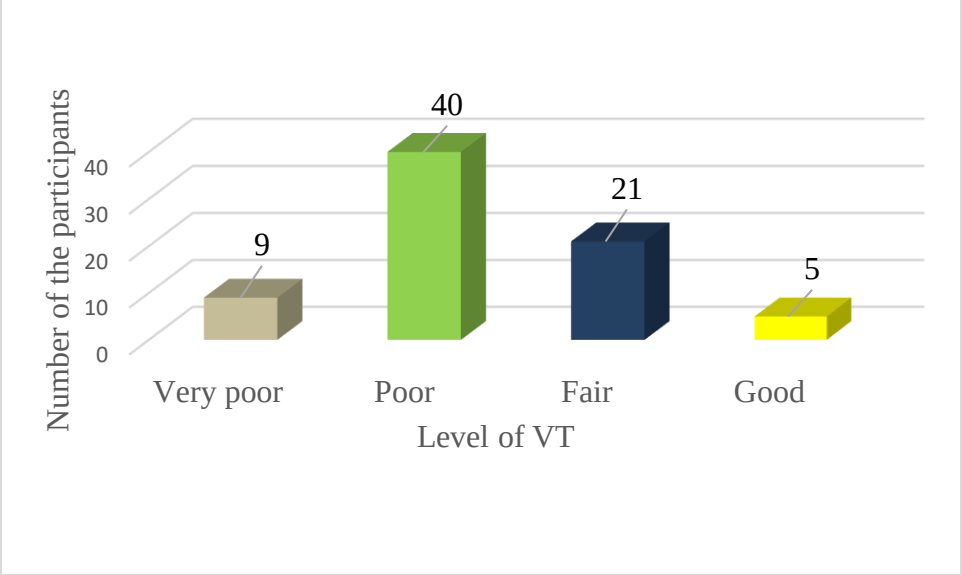

Figure-17: Vitality of the participants

4.23 Social functioning (SF)

Among the 75 participants, 28% (n=21) scored less than 25 at an average out of 100 which denotes very poor social functioning , 46.7% (n=35) scored less than 50 at an average out of 100 which denotes poor social functioning, 17.4%% (n=13) scored less than 75 at an average out of 100 which denotes fair social functioning, 8.o% (n=6) scored more than 75 at an average out of 100 which denotes good social functioning, through the short form-36 scoring system. The mean value of physical functioning is 45.16 and standard deviation is 22.31.

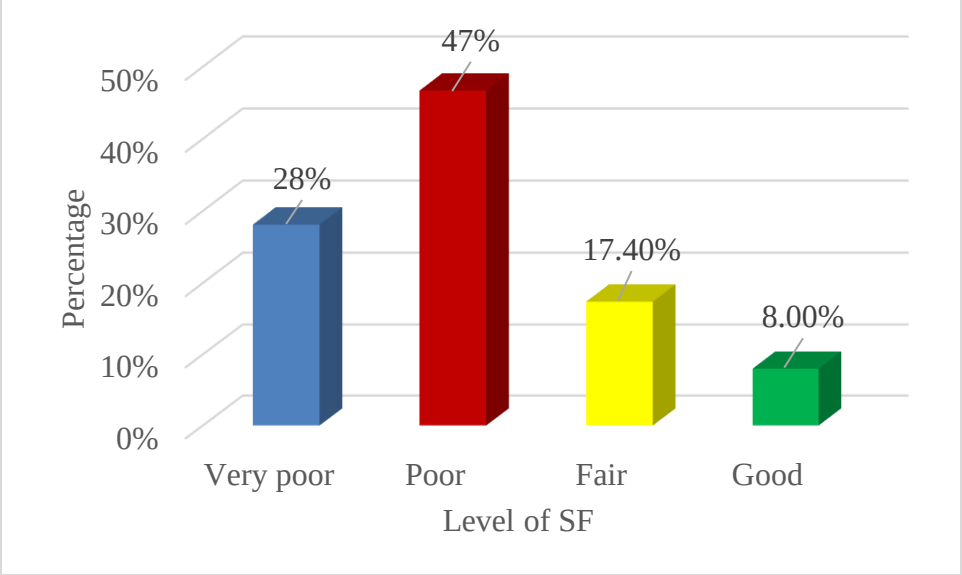

Figure-18: Social functioning of the participants

4.24 Role of emotion (RE)

Among the 75 participants, 29.3% (n=22) scored less than 25 at an average out of 100 which denotes very poor role of emotion due to mental health, 14.7% (n=11) scored less than 50 at an average out of 100 which claims poor role of emotion, 10.7% (n=8) scored less than 75 at an average out of 100 which claims fair role of emotion and 45.3% (n=34) scored more than 75 at an average out of 100 which claims good role of emotion due to mental health through the short form-36 scoring system. The mean value of physical functioning is 57.33 and standard deviation is 43.68.

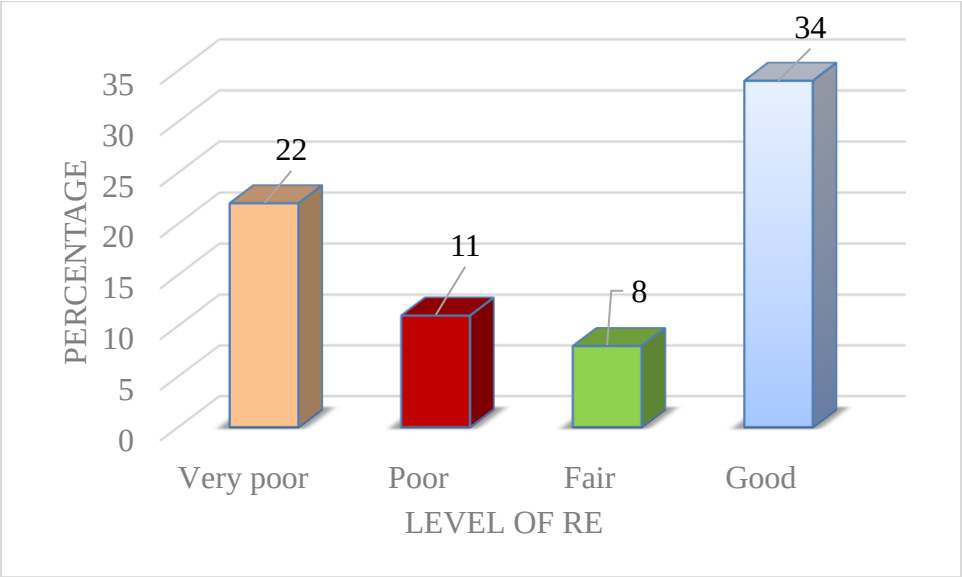

Figure-19: Role emotional of the participants

4.25 Mental Health (MH)

Among the 75 participants, 13.3% (n=10) scored less than 25 at an average out of 100 which denotes very poor mental health, 39.9% (n=30) scored less than 50 at an average out of 100 which claims poor mental health and 46.7% (n=35) scored >50 at an average out of 100 which denotes fair mental health status through the short form-36 scoring system. The mean value of physical functioning is 47.41 and standard deviation is 16.17.

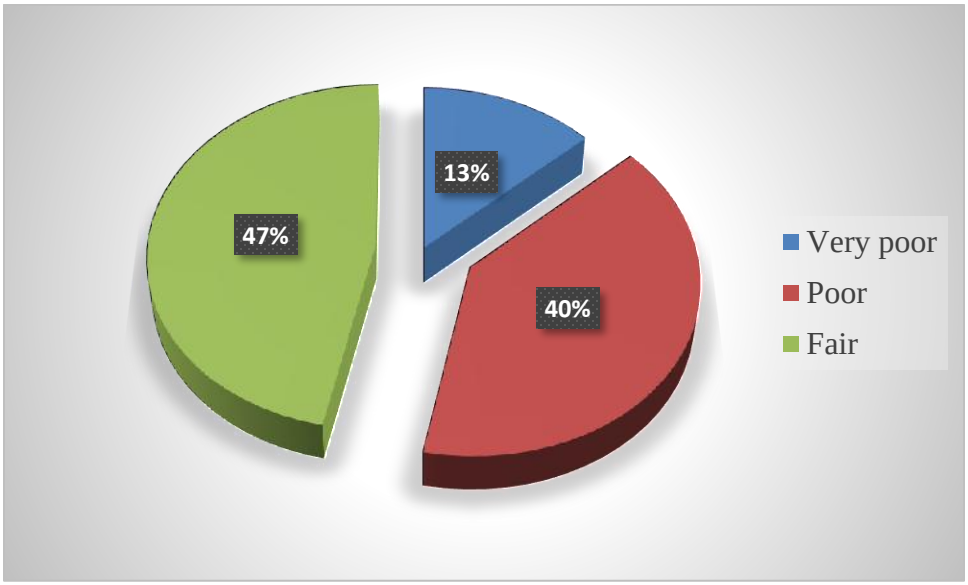

Figure-20: Mental health of the participants

4.26 Physical health

Mean value of physical health components is 42.57 and standard deviation is 21.71. Among the 75 patients of low back pain, 26.5% (n=20) had very poor physical health, 33.3% (n=25) had poor physical health, 34.4% (n=26) had fair physical health and only 5.70% (n=4) had good physical health condition.

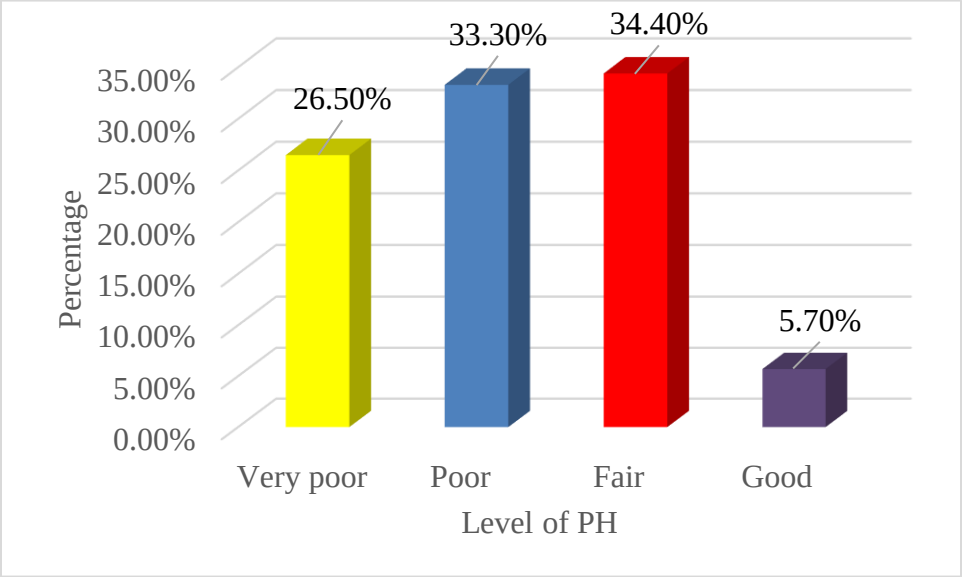

Figure-21: Overall physical health of the participants

4.27 Overall mental health

Mean value of mental health components is 49.12 and standard deviation is 21.96. Among the 75 patients of low back pain, 18.5% (n=14) had very poor mental health, 28.9% (n=22) had poor mental health, 40.3% (n=30) had fair mental health and only 12.3% (n=9) had good mental health condition.

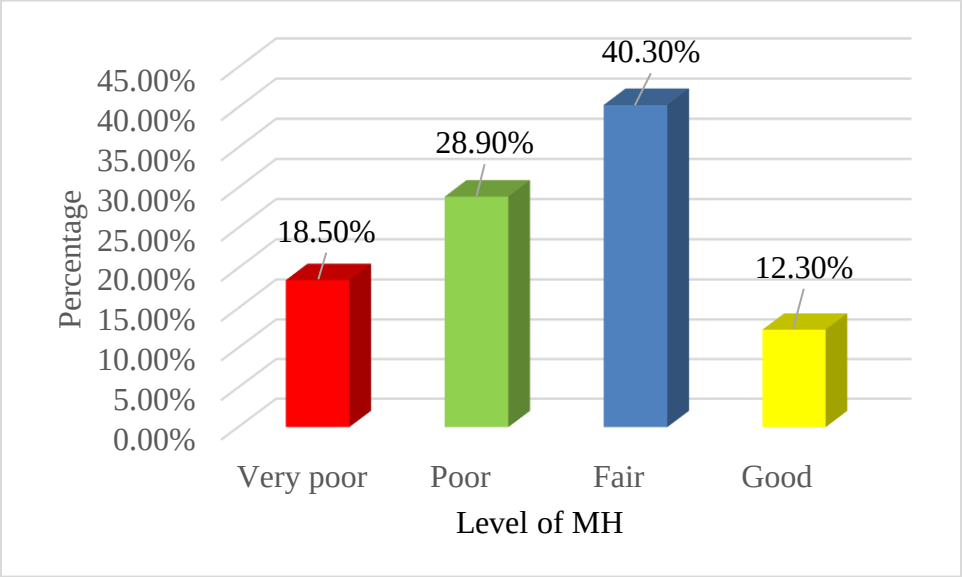

Figure-22: Overall mental health of the participants

4.28 RMDQ Score

RMDQ levels were categorized into three level: mild, moderate and severe. In this study, most of the participants were moderate type of disable 70.8% (n=53), 16% (n=12) were mild disable and 13.4% (n=10) were severe disable.

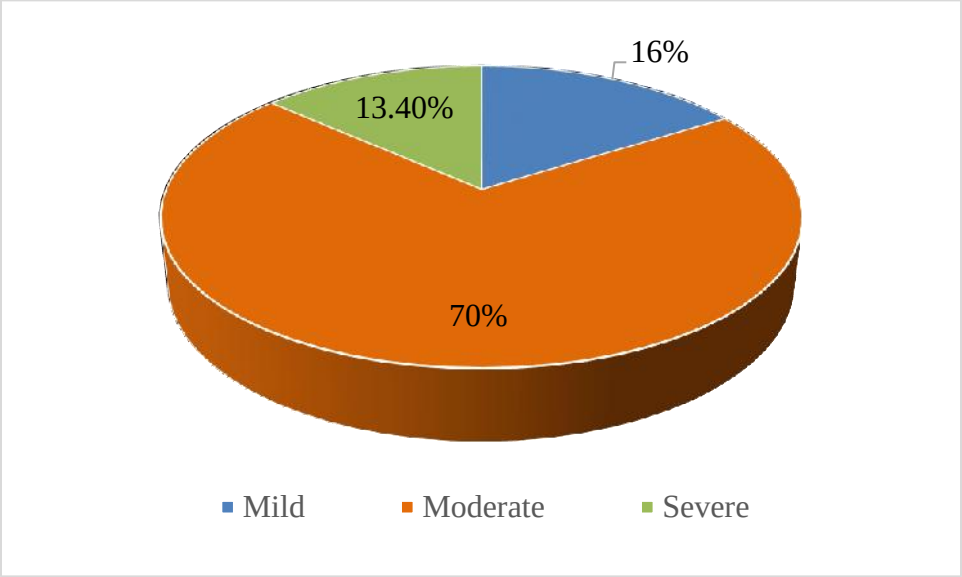

Figure-23: RMDQ score

4.29 Association between Roland Morris disability level and major Components of SF-36 (Physical health and overall mental health):

Table No-7: Association between RMDQ level and SF-36

Disability	SF-36 components	Chi-square value ($\chi 2$)	P-value	Significance
RMDQ score	Physical health	39.77	0.000	Significant
RMDQ score	Mental health	41.607	0.000	Significant

Table no-6 showed chi-square test for RMDQ level and major components of SF-36. The test showed that the result is significant because the found P-value is .000 ($P<0.05$). So, there is relationship between RMDQ and SF-36.

4.30 Association between age and major Components of SF-36 (PF, RP, BP, GH, VT, SF, RE, MH):

Table No-8: Association between age and SF-36

Variable	SF-36 components	Chi-square value ($\chi 2$)	P-value	Significance
Age	PF	4.447	0.035	Significant
	RP	.099	0.753	Not-significant
	BP	4.989	0.026	Significant
	GH	.159	0.690	Not-significant
	VT	2.428	0.119	Not-significant
	SF	4.488	0.034	Significant
	RE	1.126	0.289	Not-significant
	MH	4.746	0.029	Significant

Table no-7 showed chi-square test for age level and eight domains of SF-36. The test showed that the results of PF (P=0.035), BP (P=0.026), SF (P=0.034) and MH (P=0.029) all of them are significant because the found P-values of these domains are less than 0.05. So, there is relationship between PF, BP, SF, MH and SF-36.

RP, GH, VT and RE had a P-value of more than 0.05. So, these are not significant.

4.31 Association between Gender and eight domains of SF-36v2 (PF, RP, BP, GH, VT, SF, RE, MH):

Table-9: Association between gender and SF-36

Variable	SF-36 components	Chi-square value ($\chi 2$)	P-value	Significance
Gender	PF	4.446	0.035	Significant
	RP	7.756	0.005	Significant
	BP	3.807	0.051	Significant
	GH	10.640	0.001	Significant
	VT	5.051	0.025	Significant
	SF	3.354	0.067	Significant
	RE	12.935	0.000	Significant
	MH	3.689	0.055	Significant

Table no-8 showed chi-square test for gender and eight domains of SF-36. The test showed that the results of PF (P=0.035), RP (P=0.005), BP (P=0.051), GH (P=0.001), VT (P=0.025), SF (P=0.067), RE (P=0.000) and MH (P=0.055) all of them are significant because the found P-values of these domains are less than 0.05. So, there is a relationship between gender and the domains of SF-36.

4.32 Association between BMI and all domains of SF-36 questionnaire (PF, RP, BP, GH, VT, SF, RE, MH):

Table-10: Association between BMI and all domains of SF-36 questionnaire

Variable	SF-36 components	Chi-square value ($\chi 2$)	P-value	Significance
B.M.I.	PF	.105	0.745	Non-significant
	RP	.018	0.892	Non-significant
	BP	.001	0.973	Non-significant
	GH	1.984	0.159	Non-significant
	VT	.750	0.386	Non-significant
	SF	.031	0.860	Non-significant
	RE	.194	0.659	Non-significant
	MH	1.069	0.301	Non-significant

Table no-9 showed chi-square test for B.M.I. and eight domains of SF-36. The test showed that the results of PF (P=0.745), RP (P=0.892), BP (P=0.973), GH (P=0.159), VT (P=0.386), SF (P=0.860), RE (P=0.659) and MH (P=0.301) all of them are non-significant because the found P-values of these domains are more than 0.05. So, there is no relationship between B.M.I. and the domains of SF-36/ quality of life of low back pain patients.

4.33 Association between Pain intensity and all domains of SF-36 questionnaire (PF, RP, BP, GH, VT, SF, RE, MH):

Table-11: Association between pain intensity and all domains of SF-36 questionnaire

Variable	SF-36 components	Chi-square value ($\chi 2$)	P-value	Significance
Pain intensity	PF	41.43	0.000	Significant
	RP	31.99	0.000	Significant
	BP	35.57	0.000	Significant
	GH	40.83	0.006	Not-significant
	VT	45.61	0.000	Significant
	SF	33.34	0.000	Significant
	RE	37.23	0.000	Significant
	MH	35.85	0.001	Significant

Table no-10 showed chi-square test for pain intensity and eight domains of SF-36. The test showed that the results of PF, RP, BP, VT, SF, RE and MH all of them are significant because the found P-values of these domains are less than 0.05 but GH is not-significant. So, there is relationship between Pain intensity and the domains of SF-36/ quality of life of low back pain patients.

CHAPTER –V DISCUSSION

Discussion

The aim of the researcher was to explore the characteristics of pain, disability and its effect on quality of life among the patients attending at the center for the rehabilitation of the paralyzed (CRP). A different types of characteristics had been found from the selected samples whether it is acute, sub-acute or chronic type low back pain by a categorized variables that are socio demographic, work and posture related, pain related, different types of pain, disability and quality of life due to back pain. It is cross sectional study in which 75 participants had attended, they were taken based on the inclusion and exclusion criteria.

It is found that there are some similarities and non-similarities of the variables of this thesis with the previous related researches.

In case of the variables of socio-demographic area are: age, sex, marital status, living area, educational status, occupation.

In a research of low back pain, the authors divided the age into some group to identify which age group are most commonly affected. In their thesis they showed that the persons whose age are between 20 to 30 years, they are most vulnerable group of low back pain. Because there were 47.2% were affected (Landry et al, 2008). And in this current research, age is also divided into some groups, among the groups the 24-33 age group (24%) is more affected. Although in both study the age group are similar but the affected percentages are different. In this study only one-fourth of the participants are in this group.

In 2018 Comachio et al stated that in their research male was 30% & female was 70%, here they showed that there were female were more affected than the male. Where as in this thesis there were 61.3% male 38.7% female. But in this thesis it is clear that male are more affected. And they also showed that married persons are very commonly affected with low back pain than the single, divorced and widow. Here, there is similarities with this statement, in this research it also found that about 80% of married persons are affected among the patients attended at CRP.

The researcher found that most of the LBP patients were less educated about 28.7% were at primary level and a Thai study stated that 46.1% were at educated as primary level (Stomita et al., 2010).

A cross sectional study stated that living in a rural setting increase the chance of developing LBP. All of the patients related living in rural areas to feel more pain, as the work that they carried out were more manual (De-Souza et al., 2016). But in this study, among 75 participants, there were 48% (n=36) are lived in rural areas and other 52% (n=39) are lived in urban areas. There are no similarities in both study.

This study showed that most of the time participants lifted heavy objects about 2.7 % (n=2), often lifted about 24% (n=18), sometimes lifted about42.7% (n=32) and never lifted participants are about 30.7% (n=23) of patients suffered with LBP. And, in 2014 Arya suggested the LBP workers that those who frequently perform heavy lifting to wear belts, Patients should not lift objects that are too heavy for them.

Among the 75 participants 46.7% (n=35) had to work less than 8 hours and other 53.3% (n=40) had to work more than 8 hours. It is almost half. So, it can be assumed that working duration may not have impact on LBP. In other research explained that working more than 8 hour shifts regularly does not predict prognosis (Steenstra et al, 2005).

And among the participants who had suffered from LBP 80.00% (n=40) participants maintained sitting posture at home and most of the students studied at slouch posture 82.76% (n=24) and that's why maximum students 62.82% (n=49) makes pain worse in sitting position (Perrot et al., 2009).

This study showed that maximum participants makes pain worse in sitting posture 62.82% and less participants makes pain worse in lying posture 3.85%, 8.97% participants makes pain worse in standing posture and 14.10% participants makes pain worse in bending posture and 10.26% participants makes pain worse in walking (Macedo et al., 2015).

Here, BMI were divided into four classes and participants were divided into according to their classes. They are - 16.0% (n=12) were obese, over weighted about 36% (n=27), under weighted about 1.3% (n=1) and normal BMI about 46.7% (n=35). And in another research, it was found that Underweight were (n=2) 0.7%, normal were (n=124) 41.3%, overweight

were (n=108) 36% and obese were (n=66) 22% (Onyemaechi et al, 2016). All the results are similar for both of the studies.

In a cross sectional study, they showed the mean pain intensity score as 7.7 and standard deviation as 7.7 ± 1.7 in the numeric pain rating scale (NPR scale) (Comachio et al, 2018). But, here the mean value of the pain intensity is 5.72 and standard deviation is 5.72± 1.32. So, it is clear that the found pain intensity scores in both researches are different from each other.

At initial assessment, 45% had constant pain (n=28), 55% had intermittent pain (n=34). (McIntosh et al, 2016). The current thesis found that about 56% (n=42) participants had intermittent pain and other 44% (n=33) had constant pain, which is very much similar to the referenced evidence.

In a cross sectional study, it was found that about 75% participants had previous episode of LBP (Henschke et al., 2009). And in this study, about 77.3% participants had previous episodes of LBP. Among them 37.3% had 1-2 times, 9.3% had 3-5 times, 13.3% had more than 5 times and 17.3% had more than 10 times previous episodes of LBP.

Causes of pain among the 20 participants who had LBP. There are 60% (n=12) were unknown cause, 15% (n=3) were heavy weight lifting, 5% (n=1) were history of trauma, 5% (n=1) were history of prolonged forward bending activities, 5% (n=1) were cause of prolonged slouched sitting activities and 5% (n=1) were history of fall from height.

In this research most of the patients experienced relief of low back pain in lying position than any other position (Atlas & Deyo, 2001). As well as in this current research, more than half of the participants (n=50) 66% expressed that they also found relief of LBP in lying position.

In a cross sectional study, they experienced different types of features of pain. The participants experienced different types of pain like about 61% Throbbing pain, 43% Sharp pain, 39% Hot-burning pain, 34% Aching pain, 52% Tender pain ,65% Tiring-exhausting pain, 91% Sickening pain, 34% Punishing-cruel pain etc. This are the very much common experienced types of low back pain. Among them sickening pain the most common type of pain that is experienced by the most of the participants of this study (Marques et al,

2001). But in this current thesis throbbing sharp pain, splitting pain, fearful pain, shooting pain, stabbing pain, sharp pain, hot burning pain these are very much common type of low back pain which is found using the McGill questionnaire. But among these different types of pain throbbing (91%) is most experienced type of pain by the participants of this study whereas sickening pain was the most experienced types of back pain of the given study. But it is also found that sickening pain is also one of the commonest types of back pain.

In a study in 2018 Comachio et al stated that the mean value of disability was 14.0 using romald morris disability questionnaire. In the same way a similar result is also found in this study. In this study the mean value disability score is 12.0 which found using Ronald morris disability scale.

In this study, it is found that mean value of mental health components is 49.12, standard deviation is 21.96 and mean value of physical health components is 42.57, standard deviation is 21.71. In another study, they found the mean value of physical health and mental health are 52.92 and 61.84 and the standard deviation of physical health and mental health are 18.81 and 19.44 (Ogunlana et al, 2012). Comparing the both studies it is found that mean value of the mental health components are similar and the standard deviations of both studies are also similar.

In this study, different mean values and standard deviations of eight domains of SF-36 questionnaire has been found out. They are- a) physical functioning (PF): mean-37.93 & standard deviation (SD)-21.37 b) role limitation (RP): mean-53.50 & SD-39.50 c) bodily pain (BP): mean-41.30 & SD-22.50 d) general health (GH): mean- 37.53 & SD- 15.51 e) vitality (VT): mean- 46.60 & SD- 16.56 f) social functioning(SF): mean- 45.16 &SD-22.31 g) role emotion(RE): mean- 57.33 & SD- 43.68 h) mental health(MH): mean-47.41 & SD-16.17. In another research, they also showed different mean values and standard deviation of the eight domains of SF-36 questionnaire and they are- a)PF:mean-83 & SD-25 b)RP: mean- 81 & SD- 35 c)BP: mean- 80 & SD- 25 d)GH: mean- 70 &SD- 21 e)VT: mean-63 & SD-20 f) SF: mean- 76 & SD- 20 g)RE: mean- 85 & SD- 31 h)MH: mean- 76 & SD- 17 (Gray et al, 2004).

In this study, it is found that there is relationship between pain intensity level and the eight domains of SF-36 except general health which is not-significant. In another study, they also showed non-significant result only for mental health (p= .110) and showed significant result for physical function (p = <0.01), limitations due to physical problems (p= 0.005), vitality (p = 0.002), general health (p = 0.002) and feeling of pain (p = 0.0333) (Nasution et al., 2018). Both results almost similar, but the differences are in the current research general health is not-significant and in the referred research mental health is not-significant.

Current study showed the evidence of correlation between the disability (RMDQ) and quality of life (SF-36) by the result of significance. In 2012, Monticone et al. showed that RMDQ correlations with SF-36 reported in the literature are moderate to high when assessing physical domains only. But in the current research RMDQ is showed significant in physical and mental components of SF-36. In the mentioned literature and in this study RMDQ (disability) and SF-36 (quality of life) are correlated.

Limitation of the study:

There were some situational limitations and barriers while considering the study. Those are as follows:

Though the expected sample size was 384 for this study but due to resource constrain researcher could manage just 75 samples which is very small to generalize the result for the population of the neurology unit physiotherapist.

The researcher was able to collect data only from the musculo-skeletal unit of CRP for a short period of time which will affect the result of the study to generalize population of Bangladesh.

The research was carried out in CRP, Savar such a small environment, so it was difficult to keep confidential the aims of the study for blinding procedure. Therefore, double blind method was used in this study.

The data was collected only from CRP.

CHAPTER –V CONCLUSION

Our study revealed that characteristics of low back pain is 48% which indicates that low back pain is a prevalent symptom that deserve more attention. Our study had shown that disability and quality of life as self-reported by patients with low back pain correlate with each other. Also showed that chronic low back pain could be the cause of greater disability and Lower quality of life.

According to the above study findings, bad posture, lack of physical exercise, presence of low back pain related genes, low levels of education and poor nutrition were found to be significant risk factors low back pain in many studies. Although physical exercises are useful in the prevention of low back pain certain physical activities such as lifting heavy weights have been responsible for causing low back pain. It is believed that the occurrence of low back pain is related to the nature, intensity and the total physical load of all the physical activities undertaken.

Quality of life is especially important when discussing low back pain, both due to the prevalence of the condition and because of its influence on various areas of daily life. Low back pain is an extremely common but very important health condition, affecting up to 80% of all adults at some point in time. It represents the second most common reason for symptom-driven patient visits to the doctor's office after the common cold. Low back pain carries an influence on various areas of daily life, including ability to work, exercise, and perform domestic activities. There is a considerable economic burden associated with the condition, for reasons ranging from its place as the most common cause of work-related disability and a frequent cause of missed work days, to direct costs of diagnosis and treatment. Impacted by the presence of low back pain include: greater sleep disturbance, shorter sleep duration, reduction in sleep quality, negative impact on daytime function, increased sleep dissatisfaction and distress, and reduced ability to fall asleep.

The results of the study explore the QOL patient with LBP attended at CRP. But further research would need to be carried out considering proof of experimental hypothesis in

between acute and chronic LBP or between without taking physiotherapy for LBP and after taking physiotherapy etc can further be included in such type of research.

CHAPTER –VI REFERENCES

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APPENDIX:

সম্মতিপত্র

আসসালামুআলাইকুম/নমস্কার

আমার নাম গাজী মোঃ নাজমুল আলম, বাংলাদেশ হেলথ প্রফেশনস ইন্সটিটিউট এর ফিজিওথেরাপী বিভাগের চতুর্থ বর্ষের ছাত্র। আমি এই গবেষণা টি ব্যাচেলর অব সাইন্স ইন ফিজিওথেরাপী ডিগ্রির পরিপূর্ণতার জন্যে করছি। আমার গবেষণার নাম – "সি.আর.পি.তে আগত রোগীদের কোমর ব্যথার বৈশিষ্ট্যসমূহ এবং রোগীদের জীবনধারণের প্রকৃতির উপর এর প্রভাব ।" আমি আপনাকে কিছু ব্যক্তিগত এবং কোমর ব্যথা সম্পর্কিত প্রশ্ন করব যা আনুমানিক ২০ মিনিট সময় নিবে।

আমি আপনাকে আশ্বস্ত করছি যে, এটি একটি সম্পূর্ণ একাডেমিক শিক্ষা এবং তা অন্য কোনো ক্ষেত্রে ব্যবহার করা হবেনা। আপনার দেওয়া সমস্ত তথ্য গোপনীয়তার সাথে সংরক্ষণ করা হবে এবং যখন এটি কোনো রিপোর্টে ব্যবহার করা হবে নামবিহীন ভাবে তা প্রকাশিত হবে। আপনি এই গবেষণায় স্বেচ্ছায় অংশগ্রহণ করছেন এবং যদি আপনি চাইলে কোনো নেতিবাচক ফল ছাড়াই এই গবেষণা থেকে নিজেকে সরিয়ে নিতে পারেন। অবশ্যই আপনার অধিকার আছে কোনো প্রশ্নের উত্তর না দেওয়ার যদি তা আপনার একান্ত ব্যক্তিগত বলে আপনি মনে করেন।

গবেষণাটি সম্পর্কে আপনার কিছু জানার থাকলে আপনি গবেষক গাজী মোঃ নাজমুল আলম এবং/ অথবা মোহাম্মাদ হাবিবুর রহমান (সহযোগী অধ্যাপক, ফিজিওথেরাপী বিভাগ বি.এইচ.পি.আই, সি.আর.পি.,সাভার,ঢাকা-১৩৪৩) এর সাথে যোগাযোগ করতে পারেন।

আমি কি শুরু করতে পারি? ☐ হ্যাঁ ☐ না

অংশগ্রহণকারীর স্বাক্ষর ---------- তারিখ----------

তথ্য সংগ্রহকারীর স্বাক্ষর ---------- তারিখ----------

-

গবেষকের স্বাক্ষর ---------- তারিখ----------

Consent Form

Assalamualaikum/Namasker,

I am Gazi Md. Najmul Alam, student of 4th professional B.Sc. in physiotherapy at Bangladesh Health Professions Institute (BHPI). I am conducting this study for my Bachelor research project entitled "Characteristics of Chronic Low Back Pain and Its Effects on Quality of Life among the patients with Low Back Pain attended at CRP". I would like to ask you some personal and other low back pain related questions. This will take approximately 20 minutes.

I would like to inform you that this is a purely academic study and will not be used for any other purpose. All information provided by you will be kept 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, you may contact with Gazi Md. Najmul Alam, researcher and/ or Mohammad. Habibur Rahman, Associate Professor, Physiotherapy Department, BHPI, CRP, Savar, Dhaka-1343.

So, May I start now? Yes No

Signature of the Patient: _____ Date: _____

Signature of the Data Collector _____ Date: _____

Signature of the Researcher _____ Date: _____

প্রশ্নাবলী (বাংলা)
"সি.আর.পি.তে আগত রোগীদের কোমর ব্যথার বৈশিষ্ট্যসমূহ এবং রোগীদের জীবনধারণের প্রকৃতির উপর ব্যাথার প্রভাব "

রোগীর নাম :	
রোগীর আইডি নং:	
ঠিকানা :	
ফোন নং :	
তথ্য সংগ্রহকারীর সাক্ষর:	
তথ্য সংগ্রহের তারিখ:	

প্রতিটি প্রশ্নের উত্তর টিক(✓) চিহ্ন এর মাধ্যমে দিন। যদি একের অধিক উত্তরের মধ্যে সন্দেহ থাকে, তাহলে আপনার কাছে যে উত্তরটি সবচেয়ে বেশী সঠিক মনে হবে সেটিকে চিহ্নিত করুন।

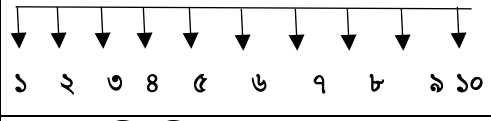
অধ্যায়-১: জনসংখ্যাতাত্ত্বিক ও আর্থসামাজিকগত তথ্য

১.	বয়স	বছর
২.	লিঙ্গ :	○ পুরুষ ○ মহিলা
৩.	বৈবাহিক অবস্থাঃ	○ অবিবাহিত ○ বিবাহিত ○ তালাকপ্রাপ্ত ○ বিধবা
৪.	শিক্ষাগত যোগ্যতা :	○ নিরক্ষর ○ প্রাথমিক ○ মাধ্যমিক ○ উচ্চ মাধ্যমিক ○ স্নাতক ○ স্নাতকোত্তর এবং অধিক
৫.	আবাসিক এলাকাঃ	○ নগরস্থ ○ গ্রামীণ
৬.	পেশাঃ	

অধ্যায়-২: কাজ ও অংঙ্গবিন্যাস গত সম্পর্কিত তথ্য

৭.	কর্মস্থলের অঙ্গবিন্যাসগত অবস্থান**:**	○ আসন গ্রহণ ○ দন্ডায়মান ○ কোমর ঝুঁকানো ○ হাঁটা ○ হাঁটু ও কোমর ভাঁজ অবস্থা
৮.	ভারবস্তু উত্তোওলনের কর্মসীমা**:**	○ সর্বক্ষণ ○ প্রায়ই ○ মাঝেমাঝে ○ কখনোই না
৯.	কর্ম সময়সীমা**:**	○ ৮ ঘন্টার বেশি ○ ৮ ঘন্টার কম

অধ্যায়-৩: ব্যাথা সম্পর্কিত তথ্য

১০.	বি এম আই **=** ভর(কেজি) /উচ্চতা**(**মি**²):**	
১১.	ব্যাথার তীক্ষ্ণতাঃ	
১২.	ব্যাথার ধরণ **:**	○ নিয়মিত ○ সবিরাম
১৩.	ব্যাথা কি ছরিয়ে যায় **:**	○ হাঁটুর উপর পর্যন্ত ○ হাঁটুর নিচে পর্যন্ত
১৪.	কোমরে ব্যথা এর আগে কতবার হয়েছিল**:**	○ একবারও না ○ ১ - ২ ○ ৩ - ৫ ○ ৫ এর বেশী ○ ১০ এর বেশী
১৫.	কোমরে আঘাতের ইতিহাস **:**	○ হ্যাঁ ○ না

১৬.	কোমরে আঘাতের কারণ:	○ সরাসরি আঘাত ○ মোচড় ○ কোন কিছু উত্তোলণ ○ কোন কিছু বহন
১৭.	অবনতিকর বিষয়গুলি	○ আসন গ্রহণ ○ দন্ডায়মান ○ কোমর ঝুঁকানো ○ হাঁটা ○ শুয়ে থাকা ○ দিন বাড়ার সাথে সাথে
১৮.	আরামদায়ক বিষয়গুলো	○ আসন গ্রহণ ○ দন্ডায়মান ○ কোমর ঝুঁকানো ○ হাঁটা ○ শুয়ে থাকা ○ দিন বাড়ার সাথে সাথে

১৯.	ব্যাথার **ধরণ :** ম্যাকগিল প্রশ্নাবলী অনুযায়ী				
	বিভিন্ন ব্যাথার ধরণ	কোনটাই না	কিছুটা	**মোটামুটি**	**তীব্র**
ক)	কাপুনী দিয়ে ব্যাথা	0)--------	১)-------	২)-------	৩)-------
খ)	তীরের আঘাতের ন্যায় ব্যাথা	0)--------	১)-------	২)-------	৩)-------
গ)	ছুরি দিয়ে খোচানোর ন্যায় ব্যাথা	0)--------	১)-------	২)-------	৩)-------
ঘ)	ধারালো ব্যাথা	0)--------	১)-------	২)-------	৩)-------
ঙ)	চাপ দিয়ে ধরা ব্যাথা	0)--------	১)-------	২)-------	৩)-------
চ)	শরীর চিবানোর ন্যায় ব্যাথা	0)--------	১)-------	২)-------	৩)-------
ছ)	শরীর জালাপোড়া করা	0)--------	১)-------	২)-------	৩)-------
জ)	ধরা ধরা ব্যাথা	0)--------	১)-------	২)-------	৩)-------
ঝ)	শরীর ভারী লাগা	0)--------	১)-------	২)-------	৩)-------
ঞ)	সূক্ষ্ম ব্যাথা	0)--------	১)-------	২)-------	৩)-------
ট)	ব্যাথার কারণে শরীর দুইভাগ হয়ে যায়	0)--------	১)-------	২)-------	৩)-------
ঠ)	ক্লান্ত লাগা	0)--------	১)-------	২)-------	৩)-------
ড)	অস্বস্থিকারক ব্যাথা	0)--------	১)-------	২)-------	৩)-------
ঢ)	ভীতিকর ব্যাথা	0)-------	১)-------	২)-------	৩)-------
ণ)	যন্ত্রণাদায়ক ব্যাথা	0)-------	১)-------	২)-------	৩)-------

অধ্যায়-৪: অক্ষমতা সম্পর্কিত তথ্য

অনুগ্রহপূর্বক নির্দেশনা পড়ুন : যখন আপনার কোমর ব্যাথা হয়, তখন এমন অনেক কাজই আছে যেগুলো করা আপনার জন্য কষ্টকর কিন্তু আপনি এই কাজগুলো সাধারনত করে থাকেন। শুধুমাত্র সেই বাক্যগুলোকে চিহ্নিত করুন যেগুলো আপনার আজকের অবস্থাকে নির্দেশ করছে।

- ☐ আমি কোমর ব্যাথার জন্য অধিকাংশ সময় বাড়ীতে থাকি।
- ☐ আমি আমার কোমোরের আরামের জন্য বারবার আমার অবস্থান পরিবর্তন করতে থাকি।
- ☐ আমি আমার কোমরের কারণে সাধারণ গতির চেয়ে ধীরে হাঁটি।
- ☐ আমি আমার বাড়ীর আশেপাশের কিছু কাজ করে থাকি যেগুলো কোমোরে ব্যাথার কারনে কিছুই করি না।
- ☐ কোমরের কারণে সিঁড়ি দিয়ে উপরে উঠার জন্য সিঁড়ির দুইপাশের হাতল ব্যবহার করি।
- ☐ আমি প্রায়ই কোমরে ব্যাথার কারণে শুয়ে আরাম করি।
- ☐ কোমরের কারণে আরামকেদারা থেকে উঠতে আমাকে অন্য কোন কিছু ধরে উঠতে হয়।
- ☐ কোমরে ব্যথার কারণে আমার কাজ করার জন্য অন্য লোকজনদের খুঁজতে হয়।
- ☐ কোমরের জন্য আমার পোষাক পরতে সাধারণের চেয়ে ধীরে করতে হয়।
- ☐ কোমরে ব্যাথার কারণ আমি খুবই কম সময়ের জন্য দাঁড়িয়ে থাকতে পারি।
- ☐ কোমরে ব্যথার কারণে আমি সামনের দিকে এবং হাঁটু গড়ে না বসার চেষ্টা করি।
- ☐ কোমরের কারণে চেয়ার থেকে উঠা আমার জন্য কষ্টকর।
- ☐ আমার কোমরে অধিকাংশ সময়ই ব্যাথা থাকে।
- ☐ কোমরে ব্যাথার কারণে বিছানায় পাশ ঘোরা আমার জন্য কষ্টকর।
- ☐ কোমরে ব্যাথার জন্য আমার খাবার ইচ্ছা খুব বেশি ভাল না।
- ☐ কোমরে ব্যাথার জন্য আমার মোজা পরতে সমস্যা হয়।
- ☐ কোমরে ব্যাথার কারণে আমি খুব অল্প দূরত্ব যেতে পারি।
- ☐ কোমরে ব্যাথার কারণে আমি প্রয়োজনের চেয়ে কম ঘুমাই।
- ☐ কোমরে ব্যাথার কারণে আ্মি পোষাক পরি অন্যের সাহায্য নিয়ে।
- ☐ কোমরে ব্যাথার জন্য আমি দিনের অধিকাংশ সময়ই বসে থাকি।
- ☐ বাড়ীর আশপাশের ভাড়ী কাজগুলোকে আমি এড়িয়ে যাই।
- ☐ কোমরে ব্যাথার কারণে আমি সাধারণের চেয়ে বেশী খিটখিটে এবং বদমেজাজি।
- ☐ কোমরে ব্যাথার কারণে আমি সাধারণের থেকে ধীরে সিঁড়ি দিয়ে উপরে উঠি।

☐ কোমরে ব্যাথার কারণে আমি অধিকাংশ সময়ই বিছানায় থাকি।

অক্ষমতার স্তর গণনাঃ

অধ্যায়-৫: রোগীদের জীবনধারনের মান

প্রশ্ন নং	প্রশ্নাবলী	উত্তর
১।	সাধারনভাবে বলতে , আপনার মতে আপনার স্বাস্থ্য হলঃ	○ চমৎকার ○ খুব ভাল ○ ভাল ○ মোটামুটি ○ খারাপ
২।	গত এক বছর এর সাথে তুলনা করলে আপনার স্বাস্থ্য কেমন ?	○ গত এক বছরের তুলনায় এখন অনেক ভাল ○ গত এক বছরের তুলনায় এখন খানিকটা ভাল ○ প্রায় গত এক বছরের মতন ○ গত এক বছরের তুলনায় এখন কিছুটা খারাপ ○ গত একবছরের তুলনায় এখন অনেক খারাপ
৩।	নিম্নলিখিত প্রশ্নগুলো আপনি একটি সাধারণ দিনে যেসব কাজকর্ম করে থাকেন সেই সম্পর্কিত । আপনার স্বাস্থ্য কি আপনার কাজকর্ম বাঁধা হয়ে দাড়িয়েছে ? যদি হয় , তবে কতটুকু?	
ক)	খুব পরিশ্রমসাধ্য কাজগুলি, যেমন দৌড়ানো, ভারি জিনিস তোলা, শ্রমসাধ্য খেলাধুলা করা -	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি
খ)	অপেক্ষাকৃত কম পরিশ্রমসাধ্য কাজগুলি, যেমন টেবিল সরানো, ঘর	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে

	ঝারু দেওয়া, বাগানে কাজ করা অথবা সাইকেল চালানো –	○ না, একেবারেই বাঁধা হয় নি
গ)	মুদিখানার পন্যদ্রব্য তোলা বহন করা –	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি
ঘ)	কয়েক তলা সিঁড়ি বেয়ে উঠা-	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি
ঙ)	একতলা সিঁড়ি বেয়ে উঠা-	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি
চ)	ঝুকে কিছু করা, হাঁটু গেড়ে বসা, নিচু হয়ে কাজ করা-	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি
ছ)	এক মাইলের বেশি হাঁটা –	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি
জ)	কয়েকশত মিটার হাঁটা-	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি

ঝ)	একশো মিটার হাঁটা-	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি
ঞ)	নিজে নিজে গোসল করা বা জামাকাপড় পড়া-	○ হ্যাঁ, অনেকখানি বাঁধা হয়ে দাঁড়িয়েছে ○ হ্যাঁ, খানিকটা বাঁধা হয়ে দাঁড়িয়েছে ○ না, একেবারেই বাঁধা হয় নি
৪.	বিগত চার সপ্তাহে, প্রাত্যহিক জীবনের কাজগুলো সম্পাদন করতে গিয়ে আপনার সাস্থ্যের জন্য আপনি কি পরিমাণ সমস্যার মুখে পড়েছেন ?	
ক)	আপনার কর্মস্থলে এবং অন্যান্য কাজগুলোতে আপনি কম সময় দিয়েছেন –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময় ○ কখনই নয়
খ)	আপনি যতটুকু চেয়েছিলেন তার চেয়ে কম কাজ করেছেন –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময় ○ কখনই নয়
গ)	আপনার নিজের কাজ বা অন্যান্য কাজেই সীমাবদ্ধ ছিলেন –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময় ○ কখনই নয়
ঘ)	আপনার নিজের কাজ বা অন্যান্য কাজ করতে গিয়ে অসুবিধা বোধ করেছিলেন –	○ সবসময় ○ বেশির ভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময় ○ কখনই নয়
৫।	বিগত চার সপ্তাহে, প্রাত্যহিক জীবনের কাজগুলো সম্পাদন করতে গিয়ে আপনার মানসিক সমস্যার কারণে আপনি নিচের কোন সমস্যাগুলোর মুখে পড়েছেন ? (যেমন – মানসিক চাপ বা দুশ্চিতাগ্রস্থ হওয়া)।	

ক)	আপনার কর্মস্থলে এবং অন্যান্য কাজগুলোতে আপনি কম সময় দিয়েছেন –	○ সবসময় ○ বেশিরভাগসময় ○ মাঝেমধ্যে ○ খুবকমসময় ○ কখনই নয়
খ)	আপনি যতটুকু চেয়েছিলেন তার চেয়ে কম কাজ করেছেন –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময় ○ কখনই নয়
গ)	অন্যান্য সময়ের চেয়ে কাজে কম মনযোগ দিয়েছেন –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময় ○ কখনই নয়
৬।	বিগত চার সপ্তাহে আপনার শারীরিক বা মানসিক সমস্যাগুলি আপনার পরিবার , বন্ধুবান্ধব , প্রতিবেশী বা গোষ্ঠীর সাথে সামাজিক কাজকর্মে কতখানি বাঁধা সৃষ্টি করেছে?	○ একেবারে না ○ সামান্য রকম ○ মাঝামাঝি রকম ○ অনেখানি ○ অত্যন্ত বেশিরকম
৭।	গত চার সপ্তাহে , আপনি কতখানি শারীরিক ব্যাথা অনুভব করেছেন?	○ একেবারে না ○ সামান্য রকম ○ মাঝামাঝি রকম ○ অনেখানি ○ অত্যন্ত বেশিরকম
৮।	গত চার সপ্তাহে , আপনি কতখানি শারীরিক ব্যাথা আপনার প্রাত্যাহিক কাজে কি পরিমাণ বাঁধা সৃষ্টি করেছে (ঘরে ও বাইরে) ।	○ একেবারে না ○ সামান্য রকম ○ মাঝামাঝি রকম ○ অনেখানি ○ অত্যন্ত বেশি রকম
৯।	বিগত চার সপ্তাহে, আপনার শারীরিক অবস্থা কেমন ছিল এবং আপনি কেমন অনুভব করেছিলেন নিচের প্রশ্নগুলো সেই সম্পর্কিত। প্রতিটি প্রশ্ন এর জন্য	

	আপনি যেমন অনুভব করেছিলেন সে অনুযায়ী সবচেয়ে প্রযোজ্য উত্তরটি দিন। গত চারসপ্তাহে কতবার –	
ক)	আপনি কি খুব স্বাচ্ছন্দবোধ করেছিলেন?	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
খ)	আপনি কি খুব বিচলিত ছিলেন ?	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
গ)	আপনি কি এমনই হতাশাগ্রস্থ হয়ে পড়েছিলেন যে কোনকিছুই আপনাকে উদ্দীপিত করতে পারছিল না ?	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
ঘ)	আপনি কি খুব স্থির ও শান্ত ছিলেন ?	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
ঙ)	আপনার কি প্রচুর প্রাণশক্তি ছিল ?	○ সবসময় ○ বেশিরভাগসময় ○ মাঝেমধ্যে ○ খুবকমসময়
চ)	আপনি কি মানসিকভাবে হতাশ ও মনমরা হয়ে পড়েছিলেন ?	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
ছ)	আপনি কি বিপর্যস্থবোধ করেছিলেন ?	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
জ)	আপনি কি আনন্দে ছিলেন ?	○ সবসময় ○ বেশিরভাগ সময়

		○ মাঝেমধ্যে ○ খুব কম সময়
ঝ)	আপনি কি ক্লান্ত ছিলেন ?	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
১০।	বিগত চার সপ্তাহে, আপনার শারীরিক এবং মানসিক সমস্যাগুলো আপনাকে সামাজিক কার্যক্রমে কি পরিমাণ বাধার সৃষ্টি করেছে ? (যেমন – বন্ধু-বান্ধব এবং আত্মীয়-স্বজনদের সাথে দেখা করতে যাওয়া)।	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
১১।	নিম্নলিখিত বিবৃতিগুলো প্রত্যেকটি আপনার ক্ষেত্রে কতটুকু সত্য বা মিথ্যা ?	
ক)	আমার মনে হয় অন্যান্য মানুষের চেয়ে একটু বেশি অসুস্থ হয়ে পড়ি –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
খ)	আমি আমার জানাশোনা মানুষ গুলোর মতই সুস্থ্য –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
গ)	আমি আমার স্বাস্থ্য খারাপ হবার আশংকা করি –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়
ঘ)	আমার স্বাস্থ্য অনেক ভাল –	○ সবসময় ○ বেশিরভাগ সময় ○ মাঝেমধ্যে ○ খুব কম সময়

Questionnaires (English)

"Characteristics of low back pain and its effects on Quality of life among the patients with low back pain attended at CRP"

Patients name :	
Patients ID:	
Address :	
Phone No. :	
Name of Interviewer :	
Interview Date:	

Answer every questions by marking the tick (✓) mark. If there is any confusion between more than one answer, please give the best answer that you think.

Part-1: Socio Demonological Information

1.	**Age**	**---------- years**
2.	**Gender :**	○ Male ○ Female
3.	**Marital status :**	○ Unmarried/single ○ Married/living with partner ○ Divorced ○ Widowed
4.	**Educational status :**	○ Illiterate ○ Primary level ○ SSC ○ HSC ○ Graduation ○ Masters and above
5.	**Living areas**	○ Rural ○ Urban
6.	**Occupations**	

Part-2: Work and posture related Information

7.	**Postural status at the work place:**	○ Sitting ○ Standing ○ Bending ○ Squatting ○ Walking
8.	**History of lifting heavy objects:**	○ Most of the time/always ○ Often ○ Sometimes ○ Never/seldom
9.	**Employment period:**	○ Less than 8 hours ○ More than 8hours

Part-3: Pain related information

10.	**BMI= weight (kg) / height(m2):**	
11.	**Intensity of pain (VAS Scale) :**	
12.	**Nature of pain :**	○ Constant ○ Intermittent
13.	**Does the pain radiate :**	○ Above knee ○ Below knee
14.	**Previous episodes of low back pain:**	○ None ○ 1 – 2 ○ 3 -5 ○ More than 5 ○ More than 10
15.	**History of back injury:**	○ Yes ○ No

16.	**Types of injury:**	○ Direct trauma ○ Twisting ○ Lifting ○ Carrying
17.	**Aggravating factors**	○ sitting ○ standing ○ bending ○ walking ○ lying ○ as the day progress
18.	**Easing factors**	○ sitting ○ standing ○ bending ○ walking ○ lying ○ as the day progress
19.	**Features of pain: According to Mcgill questionnaire**	

a)	**Pain quality**	**None**	**Mild**	**Moderate**	**Severe**
b)	**Throbbing**	0)--------	1)-------	2)-------	3)-------
c)	**Shooting**	0)--------	1)-------	2)-------	3)-------
d)	**Stabbing**	0)--------	1)-------	2)-------	3)-------
e)	**Sharp**	0)--------	1)-------	2)-------	3)-------
f)	**Cramping**	0)--------	1)-------	2)-------	3)-------
g)	**Gnawing**	0)--------	1)-------	2)-------	3)-------
h)	**Hot-burning**	0)--------	1)-------	2)-------	3)-------
i)	**Aching**	0)--------	1)-------	2)-------	3)-------
j)	**Heavy**	0)--------	1)-------	2)-------	3)-------
k)	**Tender**	0)--------	1)-------	2)-------	3)-------
l)	**Splitting**	0)--------	1)-------	2)-------	3)-------
m)	**Tiring-exhausting**	0)--------	1)-------	2)-------	3)-------
n)	**Sickening**	0)--------	1)-------	2)-------	3)-------
o)	**Fearful**	0)--------	1)-------	2)-------	3)-------
p)	**Punishing-cruel**	0)--------	1)-------	2)-------	3)-------

Part-4: Disability related information

Instructions: Please read instructions: When your back hurts, you may find it difficult to do some of the things you normally do. Mark only the sentences that describe you today.

- ☐ 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.

Total score of disability:

Part-5: Quality of Life of LBP patients

Ques No.	Questions	Response
1.	In general, would you say your health is: (Circle One)	1. Excellent 2. Very Good 3. Good 4. Fair 5. Poor
2.	Compared to one year ago, how would you rate your health in general at this time? (Circle One)	1. Much better now than one year ago 2. Somewhat better now than one year ago 3. About the same as one year ago 4. Somewhat worse than one year ago 5. Much worse now than one year ago
3.	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? (Circle the appropriate number for each question)	
	a. Vigorous activities, such as running, lifting heavy Objects, or participation in strenuous sports	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
	b. Moderate activities, such as moving a table, Vacuuming, bowling or golfing	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
	c. Lifting or carrying groceries	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
	d. Climbing several flights of stairs	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
	e. Climbing one flight of stairs	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
	f. Bending, kneeling, or stooping	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
	g. Walking more than a mile	1. Yes, limited a lot 2. Yes, limited a little

		3. No, not limited
	h. Walking several blocks	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
	i. Walking one block	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
	j. Bathing or dressing yourself	1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited
4.	During the past 4 weeks, have you had any of the following problems with your work or other regular activities as a result of your physical health?	
	a. Cut down on the amount of time you spent on work or other activities	Yes = 1 No = 2
	b. Accomplished less than you would like	Yes = 1 No = 2
	c. Were limited in the kind of work or other activities	Yes = 1 No = 2
	d. Had difficulty performing the work or other activities (For example – requiring an extra effort)	Yes = 1 No = 2
5.	During the past four weeks, have you had any of the following problems with your work or other regular daily activities as result of any emotional problems (such as feeling depressed or anxious)?	
	a. Cut down on the amount of time you spent on work or other activities	Yes = 1 No = 2
	b. Accomplished less than you would like	Yes = 1 No = 2
	c. Didn't do work or other activities as carefully as usual	Yes = 1 No = 2
6.	During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with	1. Not at all 2. Slightly 3. Moderately 4. Quite a bit 5. Extremely

	family, friends, neighbors or groups? (Circle one)	
7.	How much bodily pain have you had during the past 4 weeks? (Circle one)	1. None 2. Very mild 3. Mild 4. Moderate 5. Severe 6. Very severe
8.	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. Slightly 3. Moderately 4. Quite a bit 5. Extremely
9.	These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks?	
	a. 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 of the time 6. None of the time
	b. Have you been a very nervous person?	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 of the time 6. None of the time
	c. Have you felt so down in the dumps that nothing could cheer you up?	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 of the time 6. None of the time
	d. Have you felt calm and peaceful?	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 of the time 6. None of the time
	e. Did you have a lot of energy?	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 of the time 6. None of the time
	f. Have you felt downhearted and blue?	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 of the time 6. None of the time
	g. Did you feel worn out?	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 of the time 6. None of the time
	h. Have you been a happy person?	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 of the time 6. None of the time
	i. Did you feel tired?	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 of the time 6. None of the time
10.	During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like	1. All of the time 2. Most of the time 3. Some of the time 4. A little of the time 5. None of the time

	visiting friends, relatives etc.)?(Circle one)	
11.	How TRUE or FALSE is each of the following statements to you?	
	a. I seem to get sick easier than other people	1. Definitely True 2. Mostly True 3. Don't Know 4. Mostly False 5. Definitely False
	b. I am as healthy as anybody I know	1. Definitely True 2. Mostly True 3. Don't Know 4. Mostly False 5. Definitely False
	c. I expect my health to get worse	1. Definitely True 2. Mostly True 3. Don't Know 4. Mostly False 5. Definitely False
	d. My health is excellent	1. Definitely True 2. Mostly True 3. Don't Know 4. Mostly False 5. Definitely False

Permission letter

July 02, 2018

Head, Department of Physiotherapy,

Centre for the Rehabilitation of the Paralysed(CRP)

Chapain,Savar, Dhaka – 1343.

Through: Head, Department of Physiotherapy, BHPI.

Subject: Permission to collect data in order to conduct my research project.

Dear sir,

With due respect and humble submission to state that I am Gazi Md. Najmul Alam, student of 4th professional B.Sc. in physiotherapy at Bangladesh Health Professions Institute(BHPI). According to the course curriculum, I have to conduct a research project for the partial fulfillment of the degree of B.Sc. in Physiotherapy.The title of my research project is "Characteristics of chronic low back pain and its effects on quality of life among the patients with low back pain attended at CRP". My research project will be conducted under the supervision of Mohammad. Habibur Rahman, Associate Professor, Department of Physiotherapy, BHPI, CRP. I want to collect data for my research project from theoutpatients 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 theparticipants.

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

Forwarded
Habib
02/07/2018

Yours Sincerely.

Gazi Md. Najmul Alam.

Gazi Md. Najmul Alam

4th Professional B.Sc. in physiotherapy

Roll- 08, Session: 2013-2014

Bangladesh Health Professions Institute (BHPI)

CRP, Chapain, Savar, Dhaka-1343.

04/07/18
Prof. Md. Obaidul Haque
Head, Department of Physiotherapy
BHPI, CRP, Savar, Dhaka-1343

Approved
Mohammad Habibur Rahman
Associate Professor & Head
Physiotherapy Dept., CRP
CRP-Chapain, Savar, Dhaka-1343

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

Ref. CRP-BHPI/IRB/10/18/1254

Date: 22/1/2018

To
Gazi Md. Najmul Alam
B.Sc. in Physiotherapy
Session: 2013-2014Student ID:112130202
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal **"Characteristics of pain, disability and its effects on quality of life among the Patients with Low Back Pain attended At CRP"**by ethics committee.

Dear Gazi Md. Najmul Alam,
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 (English version)
3	Information sheet & consent form.

The purpose of the study is to find out the characteristics of pain and disability and its effects on quality of life among the low back pain patients attending at CRP. The study involves use of McGill questionnaire, Ronald Morris disability questionnaire and SF-36 questionnaire to find out pain features, disability level and quality of life that may take 20 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 11 AM on 24th January, 2018 at BHPI.

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

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ, ফোন ঃ ৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪ ফ্যাক্স ঃ ৭৭৪৫০৬৯
CRP-Chapain, Savar, Dhaka-1343, Tel : 7745464-5, 7741404, Fax : 7745069, E-mail : contact@crp-bangladesh.org, www.crp-bangladesh.org