

**SATISFACTION ABOUT PHYSIOTHERAPY SERVICE AMONG
PATIENTS WITH PROLAPSED LUMBAR INTERVERTEBRAL
DISC**

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Bachelor of Science in Physiotherapy (B.Sc. PT)

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

SATISFACTION ABOUT PHYSIOTHERAPY SERVICE AMONG PATIENTS WITH PROLAPSED LUMBAR INTERVERTEBRAL DISC

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DECLARATION

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

Signature:

Date:

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Acronyms

BHPI	Bangladesh Health Professions Institute
BMRC	Bangladesh Medical Research Council
CRP	Centre for the Rehabilitation of the Paralysed
IRB	Institute of Review Board
LBP	Low Back Pain
MS	Musculoskeletal
MRI	Magnetic Resonance Imaging
CT	Computed Tomography
WHO	World Health Organization
USA	United States of America
UK	United Kingdom

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Abstract

Purpose: The purpose of the study was to investigate the range of dimensions of the care that patients believe are important in their satisfaction with an episode of physiotherapy. *Objectives:* To identify the satisfaction about physiotherapy service among patient with prolapsed lumbar intervertebral disc at CRP. *Methodology:* The study was conducted with qualitative type of research. The purposive sampling procedure & a semi structured face-face interview were used. In depth interview was conducted with 8 individual who had attended an outpatient physiotherapy department at CRP. The data was analysed by using content analysis. *Result & Discussion:* Out of 8 participants. Among them (20-40) year old patient were percentage of about (62.5) and (40-55) year old participant were percentage of about (37.5) of age. Six separate themes were identified from the study. The themes were Physiotherapy is an effective treatment for prolapsed lumbar disc patient, A physiotherapist spends sufficient time for patient recovery, Physiotherapist behaviour is very well and caring, Physiotherapist provides lots of effort for patient improvement, Hospital environment is friendly for physiotherapy treatment, and Recommendations to extension of treatment time. The study shows that there is clearly a wide range of issues about which patients make judgments in relation to satisfaction. Patients always hope the therapist, who is friendly, communicative, attentive, and cordial & offers them personalized care. They want to someone who is skilled & knowledgeable & able to provide them with a wide range of information about back pain & self-management. *Conclusion:* Finally, the results indicated that the majority of the patients were satisfied with physiotherapy service for LBP and they rated it as highly satisfactory. Most of them agreed that they would use the same health facilities in future if need arises.

Keywords: Prolapsed lumbar intervertebral disc, Low back pain, Physiotherapy, Patient satisfaction.

1.1 Background

Low back pain is well documented to be an extremely common health problem and it is the leading cause of activity limitation and work absence among civilized population throughout world, and it causes an enormous economic burden on individuals, families, communities, industry and governments. Until 10 years ago, it was largely thought as a problem confined to Western countries and since that time an increasing amount of research has demonstrated that low back pain is also a major problem in low- and middle income countries (Hoy et al., 2010).

Low back pain (LBP) is common among the general population, with a lifetime prevalence and point prevalence estimated to be greater than 80% and 28%, respectively (Rabin et al., 2014). The LBP point prevalence was estimated to be 6.8% in North America, 12% in Sweden, 13.7% in Denmark, 14% in the United Kingdom, 28.4% in Canada, and 33% in Belgium (Kent & Keating, 2005).

Low back pain is strongly associated with degeneration of the intervertebral disc. Disc degeneration, although in many cases asymptomatic, is also associated with sciatica and disc herniation or prolapsed. It alters disc height and the mechanics of the rest of the spinal column, possibly adversely affecting the behaviour of other spinal structures such as muscles and ligaments (Raj, 2008).

Intervertebral discs are pads of fibro cartilage that resist spinal compression while permitting limited movements. They spread loading evenly on the vertebral bodies, even when the spine is flexed or extended. Individual lamellae of the annulus fibrosus consist primarily of collagen type I fibers passing obliquely between vertebral bodies, with orientation of the fibers being reversed in successive lamellae. The nucleus pulposus consists of proteoglycan and water gel held together loosely by an irregular network of fine collagen type II and elastic fibers (Adams & Roughley, 2006).

More than 90% of symptomatic lumbar disc herniations (back and leg pain due to a prolapsed lumbar disc compressing a nerve root) occur at the L4/L5 and L5/S1 levels. Many patients have self-limited episodes of acute low back pain and do not seek medical care. Among those who do seek medical care, pain, disability, and return to work typically improve rapidly in the first month. However, up to one third of patients report persistent back pain of at least moderate intensity 1 year after an acute episode and 1 in 5 report substantial limitations in activity. Approximately 5% of the people with back pain disability account for 75% of the costs associated with low back pain (Chou et al., 2007).

In the USA, for people aged 45 years or less, LBP is the most frequent cause of activity limitation. In Walker's data, over the previous 6-month period 42.6% of a sample of the Australian adult population reported experiencing low intensity LBP and low associated limitations of activity. A further 10.9% reported experiencing high intensity LBP, but also with low activity limitation. In contrast, an additional 10.5% reported experiencing high intensity LBP with high activity limitation. Though a common problem, it would appear that most LBP in Australia is of low intensity and results in low activity limitation. However, about one in 10 Australian adults have had activity limitation as a result of LBP in the past six months severe enough to result in significant time off from usual activities (Kent & Keating, 2005).

Low back pain is the fifth most common reason. Approximately one quarter of U.S. adults reported having low back pain lasting at least 1 whole day in the past 3 months, and 7.6% reported at least 1 episode of severe acute low back pain (see Glossary) within a 1-year period. Low back pain is also very costly: Total incremental direct health care costs attributable to low back pain in the U.S. were estimated at \$26.3 billion in 1998. In addition, indirect costs related to days lost from work are substantial, with approximately 2% of the U.S. work force compensated for back injuries each year (Chou et al., 2007).

Most people suffer incapacitating back pain at some stages in their lives. On any given day, an estimated 6.5 million people in the United States are bed-ridden because of back pain and approximately 1.5 million new cases of back pain are seen.

In India, occurrence of low back pain is also alarming; nearly 60 per cent of the people in India have significant back pain at some time or the other in lives (Singh & Sandhu, 2008).

Most treatments for low back pain have modest efficacy at best. Exercise is one of the few proven treatments for chronic low back pain; however, its effects are often small, and no form has been shown to be clearly better than another (Sherman et al., 2005).

Traction is very effective in chronic low back pain. Various types of traction are used to treat low-back pain patients, often in combination with other treatments. The most commonly used traction techniques are mechanical or motorized traction (where the traction is exerted by a motorized pulley) and manual traction (in which the traction is exerted by the therapist, using his or her body weight to alter the force and direction of the pull) (Clarke et al., 2006).

Electrophysical agents (EPAs) are part of the arsenal of techniques that manual therapists have at their disposal for the management of neuro musculoskeletal disorders (Chipchase, 2012).

1.2 Rationale

Low back pain (LBP) is a common and costly problem. In Western society, sizeable resources have been directed at providing solutions, yet this investment has so far shown relatively little return. One approach to reducing the societal impact of LBP is through improving the quality of health care (Evans et al., 2010).

Low back pain (LBP) is a growing health problem in the industrialized world. Despite the high medical expenses required for its management (Ferrari et al., 2015). Recent cost-of-illness studies showed that back pain is also a major socioeconomic problem, with relative cost estimates ranging up to 1.7% of gross national product (GNP) for The Netherlands. For Germany, the annual costs of LBP to the economy have been estimated at 16 billion (0.8% of GNP), with chronic patients accounting for a third of the total cost (Schweikert et al., 2006).

The extend of low back pain problem has been increasing. Young adults are vulnerable to LBP as it is productive age 20% of the population suffering from chronic low back pain in Bangladesh in each year between 30-60 years (Rashid et al., 2012). The most common treatment of LBP prescribed by physician including oral drugs that is non steroid anti inflammatory drugs (NSAIDs) (e.g. aspirin, ibuprofen), physical therapies (e.g., bed rest, manipulation, stabilization, specific exercise that is extension, flexion, lateral shift, traction) (Fritz, et al., 2007). So, most of the patients are deprived of getting proper treatment. That's why, I want to find out the patient's satisfaction about physiotherapy or not. It is also beneficial for the physiotherapy services because it indicate the effectiveness of physiotherapy treatment for prolapsed lumbar intervertebral disc patient. This would be important because it will find out the physiotherapy management, time, cost, environment, communication and behaviour of therapist. This study can be beneficial for our country because, when a person is unconscious about health condition. However through the finding of the research, we can make sure patient's safety providing evidence based treatment and satisfaction.

1.3 Research question

What is the satisfaction about physiotherapy services among patient with Prolapsed lumbar intervertebral disc?

1.4 Objectives

General objective

1. To identify the patient satisfaction about physiotherapy service of prolapsed lumbar intervertebral disc patient at CRP.

Special objectives

1. To identify the characteristics of socio demography of the patient with prolapsed lumbar intervertebral disc.
2. To find out the opinion about physiotherapy treatment.
3. To find out patients satisfaction with cost of treatment at CRP.
4. To find out patients satisfaction with patient and therapist communication.
5. To find out patients satisfaction with facilities (therapy room, waiting room, and supporting staff).
6. To develop a strategy how to enhance patient satisfaction about physiotherapy services at CRP.

1.5 Operational Definition

The main Key words are –Low back pain, prolapsed lumbar inter vertebral disc, physiotherapy, satisfaction.

Low back pain

Low back pain refers to a symptom complex in which pain is localized to the lumbar spine or referred to the leg or foot. Low back pain affects the area between the lower rib cage and gluteal folds and often radiates into the thigh (Shakoor, et al., 2007).

Prolapsed lumbar intervertebral disc

The intervertebral discs are complex structures that consist of a thick outer ring of fibrous cartilage termed the annulus fibrosus, which surrounds a more gelatinous core known as the nucleus pulposus; the nucleus pulposus is sandwiched inferiorly and superiorly by cartilage endplates (Raj, 2008).

Physiotherapy

Physiotherapy is a health profession that provides treatment for physical problems due to accident, illness or disability, promoting normal function and mobility, using skills of manipulation, electrotherapy and/or appropriate exercise regimes. Physiotherapists are involved also in preventive health care as well as in rehabilitation and are key personnel in the provision of injury care and rehabilitation in sport (Dictionary of Sports and Exercise Science and Medicine, 2008).

Satisfaction

Satisfaction is the act of fulfilling a need, desire, or appetite, or the feeling gained from such fulfilment.

The official definition of pain endorsed by the International Association for the Study of Pain states “Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described interns of such damage”. Pain complaints are a leading reason for medical visits. The definition also includes “Activity induced in the nociceptor and nociceptive pathways by a noxious stimulus is not pain, which is always a psychological state, even though we may well appreciate that pain most often has a proximate physical cause.” The definition of pain is important because it emphasizes that pain is a multidimensional problem (Widerstrom-noga, 2009).

Symptomatic lumbar disc degeneration is a leading cause of pain and disability throughout the world. Chronic low back pain has been linked to the degenerative lumbar spine. Spinal degeneration is a common problem that typically worsens with age and includes clinical conditions such as disc degeneration, facet joint osteoarthritis, vertebral body degeneration, and ligament degeneration. Initial degenerative changes in the lumbar spine typically occur within the nucleus pulposus of the intervertebral disc. Normal discs function as shock absorbers. Injured and degenerative discs lose their function and the results in painful and unstable spines (Zou et al., 2009).

Low back pain (LBP) is defined as pain localized between the 12th rib and the inferior gluteal folds, with or without leg pain. Most cases are non-specific, but in about 10% of cases a specific cause is identified. LBP has a lifetime prevalence of 60–85%. At any one time, about 15% of adults have LBP (Van et al., 2006).

Low back pain (LBP) of young individuals is relatively common in the western society. Degeneration of intervertebral discs is a progressive and normal age-related phenomenon in adults. If exacerbated, it may cause LBP and disc herniation, but the causal association has not been firmly established. Disc degeneration (DD) is reported to be more common in patients with LBP than in asymptomatic subjects (Waris et al., 2007).

Low back pain (LBP) from degenerative disc disease (DDD) is one of the most common disorders seen in general and orthopaedic practices (Chan et al., 2006).

Epidemiological studies, estimates of the 1 year incidence of a first-ever episode of low back pain range between 6.3% and 15.4%, while estimates of the 1 year incidence of any episode of low back pain range between 1.5% and 36%. In health facility- or clinic-based studies, episode remission at 1 year ranges from 54% to 90%. Most people who experience activity limiting low back pain go on to have recurrent episodes. Estimates of recurrence at 1 year range from 24% to 80%. Many environmental and personal factors influence the onset and course of low back pain. Studies have found the incidence of low back pain is highest in the third decade, and overall prevalence increases with age until the 60–65 year age group and then gradually declines (Hoy et al., 2010).

The physiotherapy service is a new and emerging field in most hospitals throughout Malaysia as well as internationally. It is timely and relevant then that research is conducted on the quality of services in teaching hospitals in terms of physiotherapeutic system which includes examination, treatment, advice and instructions for the purpose of connection with movement dysfunction, bodily malfunction, physical disorder, disability, healing and pain from trauma and disease. This study was to determine the level of patient satisfaction and its contributing factors as well as to determine the quality of services in Physiotherapy (Mahdzir & Ismail, 2012).

Accessibility to health care services and satisfaction are key components of quality of care. Wait time has been identified by Canadians as an important measure of access and is cited as the most prominent barrier among those who experience difficulties obtaining care. “Satisfaction” can refer to a health care recipient’s reaction to aspects of the service delivered which, in turn, affects overall perceptions of quality of service (Bath et al., 2011).

Patient satisfaction is directly associated with better therapeutic outcomes and health status. Satisfied patients will be more likely to follow their recommended treatments

and maintain a positive relationship with their health care practitioner (Henschke et al., 2013). Patient satisfaction may involve more physical contact and active involvement of the patient than encounters with other health professionals (Kidd et al., 2011).

The causes of prolapsed lumbar intervertebral disc are multifactorial, such as – physical, environmental, pathological factors. Disc prolapsed in the work place are rarely caused by direct trauma; typically it result of overexertion of individual factor (Hestbaek et al., 2003).

Diagnostic triage into 1 of these 3 categories helps guide subsequent decision making. Clinicians should inquire about the location of pain, frequency of symptoms, and duration of pain, as well as any history of previous symptoms, treatment, and response to treatment (Chou et al., 2007).

The most commonly prescribed medications for low back pain are nonsteroidal anti-inflammatory drugs (NSAIDs), skeletal muscle relaxants, and opioid analgesics. Benzodiazepines, systemic corticosteroids, antidepressant medications, and antiepileptic drugs are also prescribed. Frequently used over-the-counter medications include acetaminophen, aspirin, and certain NSAIDs (Chou & Huffman, 2007).

One widely used intervention for low back pain is spinal manipulative therapy (SMT) in most guidelines, SMT is considered to be a therapeutic option in the acute phase of a low back pain episode. The US, UK, New Zealand, and Danish guidelines consider SMT a useful treatment, whereas the Dutch, Australian, and Israeli guidelines do not recommend SMT for the acute phase (Rubinstein et al., 2013).

Exercise seems to increase the rate of return to normal activities in patients with persistent low back pain. A Cochrane review of randomized trials of various exercises for low back pain, including strengthening, general stretching, the McKenzie method of passive end-range stretching exercises, and conventional physical therapy (consisting of hot packs, massage, and stretching, flexibility, and coordination

exercise) (Carragee, 2005). The McKenzie approach to treating back pain was developed and the “extension principle” was established (McKenzie, 1981).

Mobilizations use low-grade velocity, small or large amplitude passive movement techniques within the patient’s range of motion and control (Rubinstein et al., 2013). With moderate evidence, one might argue that the mobilization of the spine gets better results in the treatment of low back pain, but get the same effect as standard medical practice through the use of analgesics. The evidence level becomes moderate when mobilization and standard medical practice are combined and is more effective than medical treatment in isolation. Evidence is also moderate when viewed equal effects produced by therapeutic exercise and manipulation in low back pain (Vargas et al., 2012).

Therapeutic ultrasound is a widely used treatment for low-back pain. When a patient has ultrasound therapy, a healthcare provider uses a hand-held device to rub against the skin over the lower back. The device produces vibration that goes through the skin. The goal is to deliver heat and energy to body parts under the skin, to reduce pain and speed recovery (Ebadi et al., 2014).

Transcutaneous electrical nerve stimulation (TENS) and interferential currents (IFC) both are more effective than placebo for the treatment of nonspecific chronic low back pain. And it is not suggested for acute back pain, sub-acute back pain, or acute radicular pain syndromes. TENS is suggested for select use in chronic back pain or chronic radicular pain syndrome as an adjunct for more efficacious treatments (WCB, 2013). TENS in the management of musculoskeletal conditions highlights that TENS indeed has evidence of positive effects. TENS as a sole treatment for acute or chronic low back pain (Chipchase, 2012).

The SWD is a deep heating modality and applied sufficiently to provide heat to the deep tissues. It has been used for therapeutic purpose since 1928. Two different modes are continuous mode termed as constant mode and the pulse mode provide intermittent heating. SWD with continuous mode can help in managing pain and relieve muscle spasm reduce swelling, increase joint range and decrease joint stiffness (Yasmeen & Rizvi, 2013).

Clarke et al., (2006) mentioned that, traction (continuous or intermittent) as a single treatment for LBP was not more effective than placebo, sham treatment or other treatments. For patients with sciatica, there is conflicting evidence on many of the comparisons, but moderate evidence that continuous or intermittent traction is not more effective than other treatments. It has been suggested that spinal elongation, through decreasing lordosis and increasing intervertebral space, inhibits nociceptive impulses, improves mobility, decreases mechanical stress, and reduces muscle spasm or spinal nerve root compression, releases luxation of a disc.

Low back pain is a common problem affecting both genders and most ages, for which about one in four adults seeks care in a six-month period. It results in considerable direct and indirect costs, and these costs are financial, workforce and social. Care-seeking behaviour varies depending on cultural factors, the intensity of the pain and the extent of activity limitation and the presence of co-morbidity. Care-seeking for low back pain is a significant proportion of caseload for some primary-contact disciplines. Most recent-onset low back pain episodes settle but only about one in three resolves completely over a 12-month period. About three in five will recur in an on-going relapsing pattern and about one in 10 does not resolve at all (Kent & Keating, 2005).

3.1 Study Design

Qualitative research approach was applied to explore the satisfaction about physiotherapy services among patient with prolapsed lumbar intervertebral disc. It was an interpretive approach within the philosophy of phenomenology to gain an understanding of individual patient's opinions, feelings, attitudes, beliefs and behaviour. That's why the researcher selected the qualitative research approach, which helps to gain understanding and explore the feelings, attitude, opinions, fears and behaviour of prolapsed lumbar intervertebral disc patients about physiotherapy services.

3.2 Study Setting

Musculoskeletal unit of the Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka-1343. CRP is a renewed rehabilitation centre in Bangladesh. The available patients are come from here. For this reason researcher had to collect data with in short time to maintain the contrasts of course module time.

3.3 Study Population

All prolapsed lumbar intervertebral disc patients who come to CRP for receiving physiotherapy services at musculoskeletal unit.

3.4 Sample Size

For this study researcher took a small sample size. So, the researcher could analyse the data from the participant deeply and easily. Researcher took 8 participants as sample.

3.5 Sampling Technique

Data was collected through purposive sampling technique because this technique was more feasible and less time consuming to obtain relevant information. This sampling procedure allowed the researcher to choose a typical case for the study.

3.6 Inclusion Criteria

Patient having at least 6 session treatment. After six session it can be easily understandable the treatment outcome. Treatment outcome is one of the important factors of patient satisfaction.

Prolapsed Lumbar Intervertebral Disc (PLID).

Age group- 20-55 years. Because, most people are affecting in this age range.

Male and female both were the including. Because, this study is no discrimination between male and female.

Willingness - Because the subject willingness were helpful for coordinating with them and avoiding bias.

Both literate and illiterate patient were including the study.

3.7 Exclusion Criteria

Patient who are not interested to the participation in this study.

PLID with associated disease. Such as- spinal tuberculosis. It may create back pain. But physiotherapy is not effective for this type of patient. So, always tried to exclude this type of patient during data collection.

Patient with severe osteoporosis- exercise therapy is contraindicated for this type of patient.

Patient with spinal stenosis-exercise therapy is not effective for this patient.

Patient with Prolapsed lumbar intervertebral disc surgery.

Patient with severe neurological problem as they might not be able to follow instruction.

3.8 Data collection tools

To conduct the study data was collected through using different types of data collection tools. The organized materials were consent paper, questionnaire, paper, pen, pencil and a tape recorder.

3.8. a. Data Collection procedure

The researcher took qualitative data with respect to the subject of the study. All the data were collected by the physiotherapist and there was not any assistant researcher used during data collection. The data was collected in a natural setting.

The researcher was collects data through face to face interviews. The interview was recorded using a tape recorder by taking permission from the patients. Audiotape was used to record the all interviews to discover exact feeling, attitude and emotions of the participants during interviews. The interview was conducted in Bengali as though they can understand the questions easily. The several materials were organized to successfully complete the interview session. The organized materials were questionnaire, consent form, a tape recorder, paper, pen and a pencil. For a data collection a semi-structured questionnaire were designed to conduct the interviews, during the interview instrument were paper, pen and pencil. Which include close ended questionnaire and open ended questionnaires obtain patient's identification, Socio-demographic information and finding out complicated information. The interview was held at CRP in a quiet place where external variable did not interrupt the interview. The interviews were tape-recorded. In order to ensure the trustworthiness of the recorded data, the tape was replayed for the patient to ascertain that, what was recorded was exactly what he or she said. Subsequently, the data transcription followed and they were shown a copy of the transcribed data to ensure that what was transcribed was exactly what they had said.

Data was collected in between 20th August 2015 to 20thSeptember 2015. Each data was collected carefully and confidentiality is maintained. Each questionnaire took approximately 15- 20 minutes to complete.

3.8. b. Data analysis

In this study, data was analysed by using content analysis. Content analysis is a methodology for determining the content of written, recorded, or published communications via a systemic, objective, and procedure. Thus, it is a set of procedure for collecting and organizing information in a standard format that follows analysts to draw inference about the characteristics and meaning of recorded material. Through this analysis the researcher can make numerical comparisons among and within document. Because, this analysis are important for tabulating the result of

semi-structured question. In this study data analysis about the data organization with each interview questions. The participants answer was analysed and the major categories from each interview question were found. The major categories were then found to be emerging themes.

At the beginning of the data analysis listened to the recorded interview several times. After that the interview was transcribed into Bengali. The researcher reviewed the interviews with the transcript to ensure all the data was presented within the text and made three sets of transcripts from the main copy.

3.9. Ethical consideration

The research proposal was submitted to the Institutional Review Board (IRB) of Bangladesh Health Professions Institute (BHPI) and approval was taken Bangladesh Medical and Research Council (BMRC) and World Health Organization (WHO) guideline were followed. After the proposal was approved to carry on with the study the researcher had moved the study. Then collect the approval to carry out with the study from musculoskeletal department of CRP. Initially a consent form was given to each participant. This form explains the title, objective, confidentiality and anonymity of the research project. The participant was also informed that, they were free to withdraw at any time. The researcher was assured them that it would be never harmful for them and it would never affect in their lives. Otherwise they would not give the right information. The researcher also assured that their information will keep in a secured place. It was being explained to all the participants that their personal identity will be kept confidential, their name and address would not be written, except for social number or a pseudonym. Only principle investigator had the access of that information. The raw data destroyed after the completion of the research and all the data on computer file were deleted. Finally the study was reviewed and appropriate by the authorities.

Participant for the interview were explained clearly about the study and verbally informed that their information would be published but their name and address would not be used in any means in the study project. The interview notes and recording words would not be shared or discussed with others. Before participating in the study the researcher had provided them a written consent form to sign, responsible physiotherapist sign as a witness. The researcher had also signed in the consent form.

The researcher ensured that there will be no direct benefit for the sample when they participating in this study but the knowledge that is gained from this study may indirectly benefit them and others in the future. Considering all those ethical norms and values no ethical problem arises as there were some personal and sensitive questions. The participants were informed that they have the right to withdraw consent and discontinue participation at any time without any prejudice.

3.10. Rigor

Researcher always tried not to influence the process by his own value and biases. No leading questions were asked or no important question is avoided. The participant's information was coded accurately and checked by the research supervisor to eliminate any possible errors. The entire information was handled with confidentiality. In the result section researcher was not influenced about outcome by showing any personal interpretation. During conduct the study every section of the study is checked and re-checked by the research supervisor.

Socio demographic information:

Among 8 participants of low back pain sufferers male were four and female were five. The age range 20-55 years. Seven participants were muslim and one was Christian. Five participants lived in a nuclear family and three participants lived in extended family. Out of 8 participants three came from rural area, and five came were from urban area. Seven participants were married and one was single. Among eight participants one was illiterate, one was up to class five, three were SSC, one was HSC completed and two were bachelor.

Among the eight participants two were housewives, two were Businessmen and four were others (service holder). Out of eight participants earning member included five were himself / herself, two were husband, and one was parent. Among eight participants monthly income included five ranging from 3000-20000 and three ranging from 21000-50000.

Sex

The result reveals that among the 8 participants half of the participants were male and half of the participants were female.

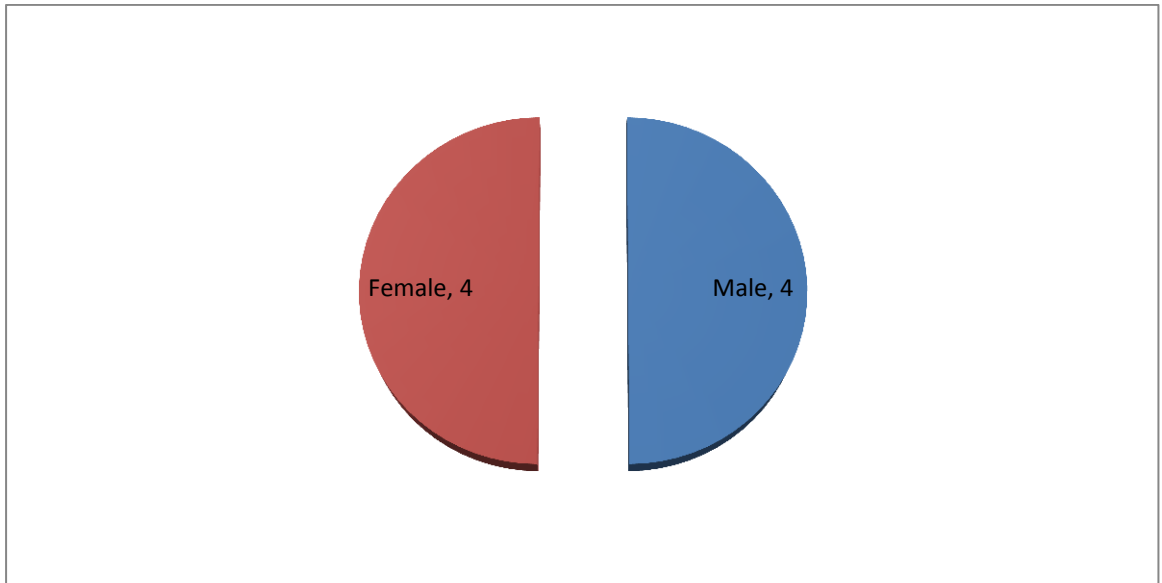


Figure: Sex of the participants.

Base line data

Variable	Number (n)
Age	
20-40	5
40-55	3
Sex	
Male	4
Female	4
Family type	
Nuclear family	5
Extended family	3
Residential area	
Rural	3
Urban	5
Religion	
Islam	7
Christian	1
Marital status	
Married	7
Single	1
Educational status	
Illiterate	1
Up to class- 5	1
SSC	3
HSC	1
Bachelor	2
Occupation:	
Housewife	2
Businessman	2
Others (service holder)	4

Variable	Number (n)
Earning member:	
Himself/herself	5
Husband	2
Parents	1
Monthly income:	
3000-20000	5
20000-50000	3

Table - 1: Socio demographic information

Health related information

Type of treatment	Number (n)
Physiotherapy	8

Table - 2: Health related information

Following Themes were emerged on the basis of data analysis

1. Physiotherapy is an effective treatment for prolapsed lumbar intervertebral disc patient.
2. Physiotherapists spend sufficient time for patient recovery.
3. Physiotherapist behavior is very well and caring.
4. Physiotherapists provide lots of effort for patient improvement.
5. Hospital environment is friendly for physiotherapy treatment.
6. Recommendations to extension of treatment time.

Summary of theme that emerged from data analysis

Theme 1

Physiotherapy is an effective treatment for prolapsed lumbar intervertebral disc patient

(Emerged from category-1)

Category-1: Improvement of physical status after receiving physiotherapy

Coding	P1	P2	P3	P4	P5	P6	P7	P8	Response (Total)
Improvement has occurred due to exercise and heat		✓	✓	✓		✓	✓	✓	6
Improvement is little and fluctuating					✓				1
No improvement has occurred	✓								1
									8

Table - 3: Improvement of physical status after receiving physiotherapy

Majority patients said that, their improvement has occurred due to exercise and heat. One patient said that, his improvement is little but fluctuating and another patient said that, no improvement has occurred.

Theme 2

A physiotherapist spends sufficient time for patient recovery

(Emerged from category-2)

Category-2: Patients opinion about treatment time at CRP

Coding	P1	P2	P3	P4	P5	P6	P7	P8	Response (Total)
Treatment time is enough	✓	✓	✓	✓		✓		✓	6
Treatment time is not enough					✓		✓		2
									8

Table - 4: Patients opinion about treatment time

Majority patient's mentioned that, treatment time is enough. A little number of patient's said that, treatment time is not enough.

Theme 3

Physiotherapist behavior is very well and caring

(Emerged from category-3)

Category-3: Patients views about patient therapist communication

Coding	P1	P2	P3	P4	P5	P6	P7	P8	Response (Total)
Very good relationship	✓		✓	✓		✓	✓		5
Very careful		✓			✓				3
									8

Table- 6: Patients view about patient therapist communication

Majority patient's state that, therapist communication is very good. Minority patient state that, therapist are very careful.

Theme 4

Physiotherapists provide lots of effort for patient improvement

(Emerged from category-4)

Category-4: Patients view about professional behaviour of therapist

Coding	P1	P2	P3	P4	P5	P6	P7	P8	Response (Total)
Provide best treatment	✓	✓	✓	✓	✓	✓	✓	✓	8
									8

Table -7: patients view about professional behaviour of therapist

The entire patient's said that, physiotherapist provide best treatment for patient improvement.

Theme 5

Hospital environment is friendly for physiotherapy treatment

(Emerged from category-5)

Category-5: Patient impression about the environment of therapy room

Coding	P1	P2	P3	P4	P5	P6	P7	P8	Response (Total)
CRP environment is very neat and clean and well decorated	✓	✓	✓	✓		✓	✓	✓	7
CRP environment is not bad					✓				1
									8

Table - 7: Patient impression about the environment of therapy room

Majority of the patient's comment that, CRP environment is very neat and clean and well decorated. Only one patient comment that, environment is not bad.

Theme 6

Recommendations to extension of treatment time.

(Emerged from category-6)

Category-6: Recommendations for the physiotherapy service

Coding	P1	P2	P3	P4	P5	P6	P7	P8	Response (Total)
Physiotherapy is good treatment	✓	✓	✓	✓		✓		✓	6
Extension of treatment time					✓		✓		2
									8

Table - 8: Recommendations for physiotherapy services

Majority patient's said that, physiotherapy is good treatment. A little number of patient's said that, physiotherapy treatment is good but extension treatment time.

The analysis and discussion is about to identify published papers and determining the relevance with the acquired data. In this chapter the results of the study are discussed in relation to the research questions and objectives of the study. The discussion focus on dimensions of patient satisfaction with physiotherapy service that they received for their prolapsed lumbar intervertebral disc.

Theme- 1: Physiotherapy is an effective treatment for prolapsed lumbar intervertebral disc patient.

According to transcripts, maximum participant stated that their pain being reduced by taking physiotherapy treatment.

One of the participants said that,

“Improvement has occurred. After receiving physiotherapy improvement has started. No drug has taken”

Another participant added that,

“After taking physiotherapy treatment, I have been changed a lot.”

Among them two participants sated that their pain had reduced after receiving physiotherapy treatment. They could not stand and walk at straight.

They said that,

“Improved physical condition .The pain is reduced because therapy is given. I could not walk at before but now I can walk.”

According to transcripts, one participant sated that her pain was not reduced totally but changed.

One mentioned that,

“It has improved a little but fluctuating. I don’t know the cause. Also cannot understand why it increases”

Among eight of one participant stated that his pain was not change.

One stated that,

“My pain has no changed. Because, I could not follow the rules which therapist told to me.”

The maximum participants got the improvement, which were main things for the satisfaction. Though most of the patients were satisfied with treatment outcome but it was clear that overall satisfaction depend on many things.

So this theme represents that, effectiveness of physiotherapy care at CRP is an acceptable standard to solve low back pain. Majority of the participants were satisfied with this care. They got effective results from physiotherapy care.

Theme- 2: A physiotherapist spends sufficient time for patient recovery.

This theme describes the opinion of the patient about treatment schedule which is given by therapist. The researcher asked the same question from the participants to know the valuable opinion of them.

One participant stated that,

“Therapist used to give me enough time. It is enough time to treat the patient. Therapists assess us carefully and give much time.

The time of treatment is important for acquiring patient satisfaction. Most of the patients are agreed with treatment time at CRP. One of the participant state that

“Treatment time is enough”

Treatment time is very necessary for better treatment procedure and also patient satisfaction.

Another participant added that

“Treatment time is perfect. Because, my physical condition is improved during this time”

This statement represented that patients were comfortable with the time the physiotherapist spent with them during the treatment. In this study there was significant association between time factor and patient satisfaction. Two participants said that treatment time must be increased so that treatment was better.

They state that,

“It will be better, if time increased. As my condition is improve after receiving physiotherapy, so it will be better after increasing time”

This statement reflects that patients were not satisfied with treatment time. They thought that treatment time was not enough for them. They want to more time during physiotherapy treatment. There was a strong relationship between physiotherapist behaviour and the patient spent time with the therapist. The underline causes for this respond is closely related with the outcome of the patients followed by physiotherapy. This domain is closely associated with patient satisfaction.

Theme -3: Physiotherapist behavior is very well and caring.

All the participants stated that the therapist behaviour was very good and some also mentioned that the therapist were cordial, communicative and attentive during treatment. The results of the study demonstrated that the majority of the patients agreed that physiotherapists explained their treatment thoroughly that’s why they were satisfied with the treatment. This was confirmed during interviews with the patients. Such explanations help the patients to take some responsibility for their own care as expressed by one of the interview:

“The behaviour of the therapist is good.”

Patient satisfaction with physiotherapy care influenced by an interaction between the therapist and the patient (Kidd et al., 2011). Another participant state that,

“Therapists behaviour is very nice”

Quality of professional interaction between the care providers and the patients in matters relating to their treatment and being treated with respect has a strong bearing towards the patient satisfaction. These findings indicate that there is an association between treating the patient with respect and their satisfaction with the service.

One participant state that,

“Therapists behave is very good and very caring of the patient.”

Spontaneous behaviour, Autonomy, Personal problem orientation, Program clarity and Staff attitude to expressed feelings were also correlated with patient satisfaction. Other studies have established factors which may affect patients’ understanding about their problems and their treatments. Other factors have been found to affect the understanding of the instructions given to the patients. It is also found that when too much information is given to the patients they tend to forget half of it. This indicates that patients need to be given specific information relevant to their problems (Sun et al., 2000).

There were various items in the questionnaire, which elicited responses regarding patient-physiotherapist interaction. This is discussed under effective communication, cultural sensitivity and patient participation in decision-making. Effective communication includes items such as explanation by the physiotherapist about the condition and treatment, advice and instruction given to the patients on their home program.

Theme -4: Physiotherapists provide lots of effort for patient improvement.

The researcher wanted to find out the physiotherapist attitude because through this the participants perspective towards the service is influenced. All of participants were satisfied of their therapist.

One mentioned that,

“Professional behavior of my therapist is so good. She or he tries to her or his best way to treat me.”

This statement indicate that she or he were satisfied her or his therapist .Therapist professional behaviour is so much important of patient satisfaction.

One participant state that,

“My physiotherapist always tries his level best to make a patients fully cure.”

Another participant state that,

“Physiotherapist’s behaviour is good; therapists were very communicative during treatment time”.

These statements reflect the physiotherapist developed trust of the patients showing professional attitude. If the therapist behavior is helpful then patient can be able to express their problem without any hesitation.

Another one participant stated that,

“The behavior of physiotherapist is good. He/she gives lot of effort in order to make me cure.

This statement reflects that, patient is satisfied with the behaviour of CRP’s physiotherapist. Therapists are so much cooperative with the patient.

This theme represent that participants express physiotherapist’s entire attitude is good, polite and also communicative and cooperative. We can see that the physiotherapist has a very positive professional behaviour than other professionals.

Theme – 5: Hospital environment is friendly for physiotherapy treatment.

The researcher wanted to know the satisfaction of the patients about environment of the therapy place and surrounding at CRP. To find out this opinion every participant was asked the same question.

Among 7 respondents, one of them stated that, *“The treatment place is neat and clean. It is well decorated. I am very impressed to receive therapy from CRP”*.

One participant said that environment of CRP is good but it is better if more clean.

One stated that,

“CRP environment is not bad but it would be better if bed cover and pillow cover is more neat and cleaned.”

By these statement participants try to making a understanding about the environment was not bad. It is also the indicator of a patient satisfaction.

Among three participants said that the therapy room is very nice and beautiful. They also said that this place is very comfortable to take treatment.

They stated that,

“Environment of CRP therapy room is very nice. Because, here treatment is given separately to male and female patient.”

The study found that cleanliness of the treatment areas had a significant association with patient satisfaction. The safe place is important during patient treatment. If the place is not quite or safe then the treatment may be hampered and the patient may feel comfortable and also patient may be de motivated. So, it is very essential to have neat and clean, safe and quiet environment for providing better service.

“Environment is good. Not dirty at all and so much discipline in here.”

These statements represent that; environment of service centre should be peaceful, safe and must have neat and clean. If the treatment place is peaceful and quiet the

patient may feel comfortable and also patient may be motivated to take physiotherapy. So these are very important to achieve patient satisfaction.

Theme – 6: Recommendations to extension of treatment time.

After taking opinion from the participants about satisfaction towards physiotherapy services, the investigator found that two of the participants are recommended to extension of treatment time, but other the participants have no recommendation. Rest of them mentioned the stated other recommendation.

One of the participants said that,

“It will be better, if you extend the treatment time. So, I think there should be a solution to this limitation.”

Every patient has the right to recommended about the services. A patient satisfaction study needs to measure the factors or dimensions of care that patients feel are necessary to evaluate or comment on. The time of the therapist spent with patient and the behaviour of the therapist are important for patient satisfaction, emphasis on cost-cutting, high patient volume, the use of care extenders may jeopardize satisfaction (Beattie et al., 2002).

One participant said that,

“Here, patients are given better treatment at lower coast which is not possible other hospitals.”

Patient satisfaction is one of the indicators of the quality of care being given to the users of a service. It can also be used as benchmark for ensuring the delivery of quality physiotherapy service in health facilities (Gargulo, 2013).

Another participant state that,

“Before coming here, I took treatment from other hospital and my pain had not reduced. But after receiving physiotherapy treatment, my pain has decreased.”

The impact of physiotherapy on the quality of life of the patient with prolapsed lumbar intervertebral disc was good. In order to determine the effects of physiotherapy on quality of life, it is essential to identify the impact of PLID to the patients before they received physiotherapy treatment.

One patient mentioned that,

“CRP treatment is so much well planned which is not given anywhere else.”

Most of the findings of this investigation were in agreement with the results of other studies. It was noted that patient satisfaction depends on their recommendations. If there was no recommendation it thought that patient were satisfied with the treatment process (Kamau, 2005).

In this chapter, results of the study were discussed by comparing and contrasting with results from related studies. Most of the findings of this investigation were in agreement with the results of other studies. It was noted that patient satisfaction depends on their interaction with the physiotherapists. This interaction was found to play an important role in the management of the patients. Further, this relationship results into formulation of a treatment program accepted by the two and the patient scores high treatment compliance. Associations were found between most of the factors and patient satisfaction. Participants who are illiterate and come from rural area were less satisfied in relation to coming from urban and literate participant. In the same way, Aged people were less satisfied rather than adult person. Compare to same study that is, patient satisfaction towards physiotherapy services, and perspective of prolapsed lumbar intervertebral disc and positive effect on quality of life after receiving physiotherapy.

Limitations

In this study, tried to my level best for systemic way to conduct the research. As a result there are many strength point of this study such as participants education level was not considered because; this study was related with satisfaction. The most data was collected directly in a home environment. For this reason researcher could collect more appropriate data in a systemic way. Though there are many strong point of this study the limitations are also sophisticated agreed as following because others can easily overcome these errors.

The study was only conducted among prolapsed lumbar intervertebral disc patient who were receiving physiotherapy at CRP.

Time and resources were limited which have a great deal of impact on the study.

The latest recent literatures especially the recently issued journals were not accessible.

Conclusion

Low back pain is a common human experience. Low back pain has become a health condition with significant socio-economic implications. The impact of physiotherapy on the quality of life of the patient with LBP was good. In order to determine the effects of physiotherapy on quality of life, it is essential to identify the impact of LBP to the patients before they received physiotherapy treatment. The main objectives of this study were to explore and find out the satisfaction of prolapsed lumbar intervertebral disc patient who have received physiotherapy treatment. The study shows that there was clearly a wide range of issues about which patients make judgments in relation to satisfaction. Factors which affect patient satisfaction with service were identified under the following dimensions of patient's satisfaction, namely interaction between physiotherapists and the patient, Treatment time, the treatment environment and Quality of physiotherapy services.

This study also shows that, most of the patients were satisfied about physiotherapy services. Most of the patient ensures the physiotherapy service is very effective and best treatment for prolapsed lumbar intervertebral disc. Many patients are also explaining that physiotherapy is not only the physical treatment but also a mental treatment. Physiotherapists are also motivated the patients to remove their mental depression. Overall most of the participants were satisfied with physiotherapy services, especially cost reduction system from social welfare for selected patient at CRP. They mostly express the positive things. Only one of them told negative things about the outcome of treatment at CRP.

Recommendations

The aim of the study to find out patients satisfaction about physiotherapy services among patient with prolapsed lumbar intervertebral disc. From this study it is concluded the effectiveness of physiotherapy treatment. There are several issues come out by this study like as Physiotherapy is an effective treatment for prolapsed lumbar intervertebral disc patient, A physiotherapist spends sufficient time for patient recovery, Physiotherapist behavior is very well and caring, Physiotherapists provide lots of effort for patient improvement, Hospital environment is friendly for physiotherapy treatment, Recommendations to extension of treatment time. Patients were satisfied with physiotherapy treatment care. In this study mentioned that patients are aware of physiotherapy services and alert on medication.

In this study have some limitations that, the research area are relatively new, that are why researcher did not get a lot of literatures addressing this area. So to conduct further study in this area, more resources should be included. As the patient's satisfaction was the outcome of physiotherapy treatment is effective and their expectation. So it is recommended to do further research on patient's satisfaction towards evidence based physiotherapy treatment for LBP and it is also recommended that the next generation of physiotherapy members continue study regarding this area, this may involve-use of large sample size and participants form different institute of Bangladesh where physiotherapy service are available.

REFERENCES

Adams, M.A., and Roughley, P.J., (2006). What is intervertebral disc degeneration, and what causes it? *Spine*, 31(18): 2151-2161.

Bath B., McCrosky, J., Janzen, B., and Pahwa, P., (2011). Healthcare utilization by people with chronic back disorders: Analysis of the 2008 Canadian Community Health Survey. Available at: <http://jyx.jyu.fi/dspace/bitstream/handle/123456789/25634/9789513941208.pdf?sequence=1>[accessed on 2nd July 2015].

Beattie, P.F., Pinto, M.B., Nelson, M.K., and Nelson, R., (2002). Patient satisfaction with outpatient physical therapy: instrument validation. *Physical Therapy*, 82(6): 557-565.

Carragee, E.J., (2005). Assessment and treatment for low back pain. *Spine*, 20(9): 104-109.

Chan, D., Song, Y., Sham, P., and Cheung, K.M., (2006). Genetics of disc degeneration. *European Spine Journal*, 15(3): 317-325.

Chipchase, L., (2012). Is there a future for electro physical agents in musculoskeletal physiotherapy? *Manual Therapy*, 17(4): 265-266.

Chou, R., Qaseem, A., Snow, V., Casey, D., Cross, J.T., Shekelle, P., and Owens, D.K., (2007). Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American College of Physicians and the American Pain Society. *Annals of Internal Medicine*, 147(7): 478-491.

Chou, R., and Huffman, L.H., (2007). Medications for acute and chronic low back pain: a review of the evidence for an American Pain Society/American College of Physicians clinical practice guideline. *Annals of Internal Medicine*, 147(7):505-514.

Clarke, J.A., van Tulder, M.W., Blomberg, S.E., de Vet, H.C., van derHeijden, G.J., Brønfort, G., and Bouter, L.M., (2006). Traction for low-back pain with or without sciatica: An Updated the Framework of the Cochrane Collaboration. 31(14):1591-1599.

Dictionary of Sports and Exercise Science and Medicine, (2008). Churchill Living stone. Available at: physiotherapy [accessed on 13 August 2015].

Ebadi, S., Henschke, N., Nakhostin Ansari, N., Fallah, E., and van Tulder, M.W., (2014). Therapeutic ultrasound for chronic low-back pain. Cochrane Database Systemic Review,doi: 10.1002/14651858.

Evans, D.W., Breen, A.C., Pincus, T., Sim, J., Underwood, M., Vogel, S., and Foster, N.E., (2010). The effectiveness of a posted information package on the beliefs and behaviour of musculoskeletal practitioners: the UK Chiropractors, Osteopaths, and Musculoskeletal Physiotherapists Low Back Pain Management (complement) randomized trial. Spine, 35(8): 858-866.

Ferrari, S., Manni, T., Bonetti, F., Villafane, J.H., and Vanti, C., (2015). A literature review of clinical tests for lumbar instability in low back pain: validity and applicability in clinical practice. Chiropractic and Manual Therapies, 23(1): 14.

Fritz, J.M., Cleland, J.A., and Childs,J.D., (2007).Sub grouping patients with low back pain: Evaluation of a classification approach to physical therapy. Journal of orthopaedic and Sports Physical Therapy, 37(6): 290-302.

Gargulo, G., (2013). A review of patient satisfaction with musculoskeletal physical therapy. Physical Therapy, 15(3): 320-323.

Hestbaek, L., Leboeuf-Yde, C., and Manniche, C., (2003). Low back pain: what is the long-term course? A review of studies of general patient populations. European Spine Journal, 12(2): 149-165.

Henschke, N., Wouda, L., Maher, C.G., Hush, J.M., and van Tulder, M.W., (2013). Determinants of patient satisfaction 1 year after presenting to primary care with acute low back pain. *The Clinical Journal of Pain*, 29(6): 512-517.

Hoy, D., Brooks, P., Blyth, F., and Buchbinder, R., (2010). The epidemiology of low back pain. *Best Practice and Research Clinical Rheumatology*, 24(6):769-781.

Kamau, P.W., (2005). Patient satisfaction with physiotherapy services for low back pain at selected hospitals in Kenya (Doctoral dissertation, University of the Western Cape). Available at: <http://etd.uwc.ac.za/userfiles/etd_init4737_117645157> [accessed on 01 October 2015].

Kent, P.M., and Keating, J.L., (2005). The epidemiology of low back pain in primary care. *Chiropractic and Osteopathy*, 13(1): 13.

Kidd, M.O., Bond, C.H., and Bell, M.L., (2011). Patients' perspectives of patient-centredness as important in musculoskeletal physiotherapy interactions: a qualitative study. *Physiotherapy*, 97(2): 154-162.

Mahdzir, M.N., and Ismail, A., (2012). Patient satisfaction with services in physiotherapy clinics: a cross sectional study at teaching hospitals in Klang Valley. *BioMed Central Public Health*, 12(2): 15.

Mason, M., (2010). Sample size and saturation in PhD studies using qualitative interviews. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 1(11): 3.

McKenzie, R.A., (1981). *The lumbar spine, mechanical diagnosis and treatment*. Waikanae, New Zealand: Spinal Publications Limited.

NASS. (2006). *Chronic low back pain*. North America. North American Spine Society (NASS). Available at: <http://www.spinalsurgeon.com/conditions/chronic-low-back-pain/> [accessed on 20 September 2015].

Raj, P.P., (2008). Intervertebral Disc: Anatomy- Physiology- Pathophysiology- Treatment. *Pain Practice*, 8(1): 18-44.

Rashid, M.H., Rahman,M., Rahman,M.A., And Hoq, M.,(2012).The alternative of medicinal for chronic lower back pain. *Journal of Innovation and Development Strategy (JIDS)*, 6(1): 98-102.

Rabin, A., Shashua, A.,Pizem, K.,Dickstein, R. and Dar, G., (2014). A Clinical Prediction Rule to Identify Patients with Low Back Pain Who Are Likely to Experience Short-Term Success Following Lumbar Stabilization Exercise: A Randomized Controlled Validation Study. *Journal of Orthopedic and Sports Physiotherapy*, 44(1): 6-18.

Rubinstein, S.M., Terwee, C.B., Assendelft, W.J., de Boer, M.R., and van Tulder, M.W., (2013). Spinal manipulative therapy for acute low back pain: an update of the cochrane review. *Spine*, 38(3): E158-E177.

Sherman, K.J., Cherkin, D.C., Erro, J., Miglioretti, D.L., and Deyo, R.A., (2005).Comparing yoga, exercise, and a self-care book for chronic low back pain: a randomized, controlled trial. *Annals of Internal Medicine*, 143(12): 849-856.

Shakoor, M.A., Islam, M.A., Ullah, M.A., Ahmed, M.M., and Al Hasan, S., (2007). Clinical profile of the patients with chronic low back pain-A study of 102 cases.*Journal of Chittagong Medical College Teachers' Association*, 18(2):16-20.

Schweikert, B., Jacobi, E., Seitz, R., Cziske, R., Ehlert, A., Knab, J., andLeidl, R., (2006). Effectiveness and cost-effectiveness of adding a cognitive behavioral treatment to the rehabilitation of chronic low back pain.*The Journal of Rheumatology*, 33(12): 2519-2526.

Singh, S.K.G., and Sandhu, R., (2008). Severity of disability in elderly patients with low back pain in Amritsar, Punjab. *Anthropologist*, 10(4): 265-268.

Sun, B.C., Adams, J., Orav, E.J., Rucker, D.W., Brennan, T.A., and Burstin, H.R., (2000). Determinants of patient satisfaction and willingness to return with emergency care. *Annals of Emergency Medicine*, 35(5): 426-434.

Van Tulder, M., Becker, A., Bekkering, T., Breen, A., Gil del Real, M. T., Hutchinson, A., and Malmivaara, A., (2006). Chapter 3 European guidelines for the management of acute nonspecific low back pain in primary care. *European Spine Journal*, 15(2): s169-s191.

Vargas, A.I.C., Sanchez, M.G., Manzanares, M.T.L., and Mercant, A.G., (2012). Physiotherapy treatment on chronic non specific low back pain. University of Malaga, Spain. Available: <<http://www.intechopen.com/books/low-back-pain/physiotherapy-treatment-on-chronic-non-specific-low-back-pain>> [accessed on 13 August 2015].

WCB, (2013). Mid and low back pain injury medical treatment guidelines. New York: Workers Compensation Board (WCB).

Waris, E., Eskelin, M., Hermunen, H., Kiviluoto, O., and Paajanen, H., (2007). Disc degeneration in low back pain: a 17-year follow-up study using magnetic resonance imaging. *Spine*, 32(6): 681-684.

Widerstrom-Noga, E.G., (2009). Pain: A multidimensional problem of national priority. *Journal of Rehabilitation Research Development*, 46(1): 65-69.

Yasmeen, S., and Rizvi, S.A.S., (2013). Effect of short wave diathermy and hot pack with back strengthening exercises in the management of acute low back pain. *Pakistan Journal of Rehabilitation*, 2(2): 15-22.

Zou, J., Yang, H., Miyazaki, M., Morishita, Y., Wei, F., Machover, S. and Wang, J.C., (2009). Dynamic Bulging of Intervertebral Discs in the Degenerative Lumbar Spine. *Spine*, 34(23): 2545-2550.

Appendix

মৌখিক সম্মতিপত্র

(অংশগ্রহনকারীকে পড়ে শোনাতে হবে)

আসসালামু আলাইকুম,

আমার নাম মোছাঃ সানজিদা মনসুর, আমি একটি গবেষণা প্রকল্প হেলথ প্রফেশনাল ইন্সটিটিউট (বিএইচপিআই), ঢাকা বিশ্ববিদ্যালয়ের চিকিৎসা অনুষদের অধীনে করছি যা আমার ফিজিওথেরাপী স্নাতক কোর্সেও আংশিক অধিভুক্ত আমার গবেষণার বিষয় হল “মাজাব্যাথা রোগীদের ফিজিওথেরাপি সেবার প্রতি সন্তুষ্টি”।

আমি এই গবেষণার মাধ্যমে মাজাব্যাথা রোগীদের সিআরপির ফিজিওথেরাপি সেবার প্রতি সন্তুষ্টি মাত্রা বের করতে চাচ্ছি। আমি এ কারণে আপনার কিছু ব্যক্তিগত এবং এ সমস্যা সম্পর্কিত কিছু তথ্য জানতে চাচ্ছি। এক্ষেত্রে আনুমানিক ২০-২৫ মিনিট সময় লাগবে। আমি আপনাকে অবগত করছি যে, এটা কেবল মাত্র আমার অধ্যয়নের সাথে সম্পর্কযুক্ত এবং অন্য কোন উদ্দেশ্যে ব্যবহৃত হবে না। গবেষক সরাসরি এই বিভাগের সাথে জড়িত নয় যেখানে আপনি চিকিৎসা নিচ্ছেন এবং এই অংশগ্রহনের কারণে আপনি সরাসরি উপকৃত হবেন না এমনকি ক্ষতিগ্রস্তও হবেন না। আপনি যেসব তথ্য প্রদান করবেন তার গোপনীয়তা বজায় থাকবে এবং এটা নিশ্চিত করা হবে যে এই তথ্যের উৎস অপ্রকাশিত থাকবে। এই অধ্যয়নে আপনার অংশগ্রহণ স্বেচ্ছাপ্রণোদিত এবং আপনি যে কোন সময় এই অধ্যয়ন থেকে কোন নেতিবাচক ফলাফল ছাড়াই নিজেকে প্রত্যাহার করতে পারবেন। অধ্যয়নের অংশগ্রহনকারী হিসেবে যদি এই গবেষণা সম্পর্কিত আপনার কোন প্রশ্ন থাকে তাহলে আপনি আমার সাথে এবং/অথবা মোহাম্মদ হাবীবুররহমান, সহকারী অধ্যাপক, ফিজিওথেরাপী বিভাগ, বিএইচপিআই, সিআরপি, সাভার, ঢাকা-১৩৪৩ তে যোগাযোগ করতে পারেন।

সাক্ষাৎকার শুরু করার আগে আপনার কি কোন প্রশ্ন আছে? আপনার সম্মতি নির্দেশ করবে যে আপনি উপরোক্ত তথ্য সমূহ বুঝতে পেরেছেন এবং আপনি স্বেচ্ছায় অংশগ্রহন করতে ইচ্ছুক।

আমি কি আপনার সম্মতি সাপেক্ষে সাক্ষাৎকার গ্রহণ করতে পারি?

হ্যাঁ..... না.....

অংশগ্রহনকারীর স্বাক্ষর..... তারিখ.....

গবেষকের স্বাক্ষর..... তারিখ.....

স্বাক্ষীর স্বাক্ষর..... তারিখ.....

VERBAL CONSENT STATEMENT

(Please read out to the participant)

Assalamualaaikum,

My name is Most. Sanjeda Monsur, I am conducting a research project (dissertation) study for the partial fulfillment of Bachelor of science in physiotherapy degree from Bangladesh Health Profession Institute (BHPI) under medicine faculty of the University of Dhaka. The title of my study is “ **Satisfaction about physiotherapy services among patients with prolapsed lumbar intervertebral disc**” I want to find out the level of satisfaction of patient about physiotherapy services. That’s why I want to know about some personal and other related information about your problem. This will take approximately 20-25 minutes. I would like to inform you that it is purely academic study and will not be used for any other purpose. The researcher is not directly related with this area where you are taking treatment and you are not directly benefited as well as not harmed for this participation. You will not get any payment for this. All information provided by you will be kept confidential and it will be assured that the sources of information will remain anonymous. Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences.

If you have any query about the study you may contact with me, and or Mohammad Habibur Rahman, Assistant Professor of Physiotherapy, BHPI, CRP, Savar, Dhaka-1343.

Do you have any questions before I started? Your consent will indicate that you have understood the information provided above and you are willingly agreed to participate.

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

Yes.....

No.....

Signature of the participant.....

Date.....

Signature of the researcher.....

Date.....

Signature of Witness

Date.....

প্রশ্নপত্র

শিরোনামঃ মাজাব্যাথা রোগীদের সি.আর.পি.র ফিজিওথেরাপী সেবার প্রতি সম্ভ্রুটি।

রোগীর সনাক্তকরণঃ (রোগীর তালিকা পুস্তক/রোগীর নিকট থেকে সংগৃহীত)

১	সনাক্তকরণ নম্বরঃ
২	সাক্ষাতকারের তারিখঃ
৩	উত্তরবাদের নামঃ
৪	ডঠকানাঃ বাড়ী নং/গ্রামঃ ইউনিয়নঃ থানাঃ জেলাঃ
৫	যোগাযোগ নম্বরঃ
৬	উপাত্তসংগ্রহের স্থানঃ
৭	সম্মতিগ্রহনঃ

পর্ব-১। রোগীর সামাজিক জনতাত্তিক তথ্যাবলী (রোগীর তালিকাপুস্তক/রোগীরনিকট থেকে সংগৃহীত)

- বয়সঃ.....বছর
- লিঙ্গঃ
 - ১। পুরুষ
 - ২। মহিলা
- পরিবারের ধরনঃ
 - ১। একক পরিবার
 - ২। যৌথ পরিবার
- আবাসিক এলাকাঃ
 - ১। গ্রাম
 - ২। মফস্বল
 - ৩। শহর
- ধর্ম
 - ১। ইসলাম
 - ২। হিন্দু

৩। খ্রিষ্টান

৪। বৌদ্ধ

৫। অন্যান্য (নির্দিষ্টকরণ)

• বৈবাহিক অবস্থাঃ

১। অবিবাহিত

২। বিবাহিত

৩। তালাকপ্রাপ্ত

৪। বিধবা/বিপত্নীক

৫। অন্যান্য (নির্দিষ্টকরণ)

• শিক্ষাগত যোগ্যতাঃ

১। নিরক্ষর

২। নিম্নপ্রাথমিক

৩। প্রাথমিক

৪। নিম্নমাধ্যমিক

৫। মাধ্যমিক

৬। উচ্চ মাধ্যমিক

৭। স্নাতক

৮। স্নাতকোত্তর

৯। অন্যান্য (নির্দিষ্টকরণ)

• পেশাঃ

১। গৃহিনী

২। ছাত্র/শিক্ষার্থী

৩। কৃষক

৪। পোশাকশ্রমিক

৫। শিক্ষক

৬। ব্যবসায়ী

৭। দিনমজুর

৮। বেকার

৯। অন্যান্য (নির্দিষ্টকরণ)

• উপার্জনকারী ব্যক্তিঃ

১। নিজ

২। পিতা/মাতা

৩। স্বামী/স্ত্রী

৪। অন্যান্য (নির্দিষ্টকরণ)

• মাসিক আয়ঃ

.....টাকা

দিন	মাস	বছর

• চিকিৎসার ধরণঃ

১। ঔষধ

২। ফিজিওথেরাপী

৩। শল্যচিকিৎসা

৪। অন্যান্য (নির্দিষ্টকরণ)

পর্ব-২ প্রশ্নাবলী

১। আপনি সি.আর.পিতে কি চিকিৎসার জন্য এসেছেন?

২। আপনি ফিজিওথেরাপী চিকিৎসা নেওয়ার পর আপনার কোন পরিবর্তন হয়েছে বলে মনে করেন কি?

ক। যদি হ্যাঁ হয়, তবে কি ধরনের পরিবর্তন হয়েছে এবং কেন?

গ। যদি না হয়, তবে কি ধরনের পরিবর্তন হয়নি বলে আপনি মনে করেন এবং কেন?

৩। আপনার চিকিৎসার সময় নিয়ে কি আপনি সন্তুষ্ট?

ক) যদি হ্যাঁ হয়, তবে কেন?

খ) যদি না হয়, তবে কেন?

৪। আপনার সাথে যোগাযোগ রক্ষার ক্ষেত্রে আপনি আপনার থেরাপিস্টের প্রতি কি সন্তুষ্ট?

ক) যদি হ্যাঁ হয়, তবে কেন?

খ) যদি না হয়, তবে কেন?

৫। আপনি আপনার থেরাপিস্টের পেশাগত ব্যবহারে কি সন্তুষ্ট?

ক) যদি হ্যাঁ হয়, তবে কেন?

খ) যদি না হয়, তবে কেন?

৬। সি.আর.পির থেরাপী রুমের পরিবেশে আপনি কি সচ্ছন্দ্য বোধ করেন?

ক) যদি হ্যাঁ হয়, তবে কেন?

খ) যদি না হয়, তবে কেন?

৭। সিআরপি র ফিজিওথেরাপি সেবা সম্পর্কে বিস্তারিত মন্তব্য দিন?

Questioner

Questionnaire sheet

Title: Satisfaction about physiotherapy service among patients with prolapsed lumbar intervertebral disc

Patient identification (to be collected from medical record / respondent) :

- 1.1: Identification number:
- 1.2: Date of interview:
- 1.3: Name of respondent:
- 1.4: Address:
- House number/village:.....
- P.O:
- P.S:
- District:
- 1.5: Contact number:
- 1.6: Place of data collection:
- 1.7: Consent taken:

Part A: Socio-demographic information (to be collected from medical record / respondent):

- 1. Age:**years
- 2. Gender:**
 - i. Male
 - ii. Female.
- 3. Family type:**
 - i. Nuclear family
 - ii. Extended family.

4. Residential area:

- i. Rural
- ii. Semirural
- iii. Urban.

5. Religion:

- i. Islam
- ii. Hinduism
- iii. Christian
- iv. Buddha
- v. Other (specify).

6. Marital status:

- i. Single
- ii. Married
- iii. Divorced
- iv. Separated
- v. Widow
- vi. Other (specify)

7. Educational status:

- i. Illiterate
- ii. Up to class- 5
- iii. Primary school certificate (PSC)
- iv. Up to class- 8
- v. Junior school certificate (JSC)
- vi. Secondary school certificate (SSC)
- vii. Higher secondary certificate (HSC)
- viii. Bachelor
- ix. Masters
- x. Other (specify)

8. Occupation :

- i. Housewife
- ii. Student
- iii. Farmer
- iv. Garment's worker

- v. Teacher
- vi. Businessman
- vii. Day labourer
- viii. Unemployed
- ix. Other (specify).

9. Earning member:

- i. Himself/Herself
- ii. Husband/Wife
- iii. Father/Mather
- iv. Other (specify)

10. Average monthly income:

.....TK.

11. Pain duration:

Daymonth.....year.....

12. Type of treatment:

- i. Medication
- ii. Physiotherapy
- iii. Surgery
- iv. Other (specify).

Part B: Questionnaires

1. For, what type of treatment you have come to CRP?
2. Is there any change after receiving physiotherapy treatment?
 - i. If yes, what type of change has occurred?
 - ii. If no, what type of change didn't occur you think and why?
3. Are you satisfied with the duration of treatment?
 - i. If yes, then why?
 - ii. If no, then why?
4. In term of communication are you satisfied with your therapist?
 - i. If yes, then why?
 - ii. If no, then why?
5. Are you satisfied with the professional behaviour of your therapist?
 - i. If yes, then why?
 - ii. If no, then why?
6. Do you feel convenient with the environment of therapy room in CRP?
 - i. If yes, then why?
 - ii. If no, then why?
7. Explain your recommendation about physiotherapy service in CRP?

PERMISSION LETTER

August 08, 2015

Head

Department of Physiotherapy,

Center for the Rehabilitation of the Paralyzed. (CRP)

Chapain, Savar, Dhaka- 1343

Subject : Prayer for seeking permission to collect data to conduct a research study.

Sir,

With due respect and humble submission I beg most respectfully to state that I am a student of 4th professional, B.Sc in physiotherapy at Bangladesh Health Profession Institute (BHPI). According to course curriculum, I have to conduct a research project for the partial fulfillment of the requirements for the degree of B.Sc in physiotherapy. My dissertation title is " Satisfaction about physiotherapy services among patient with prolapsed lumbar intervertebral disc". The aim of the study is physiotherapy care that patients believe are important in their satisfaction with an episode of physiotherapy. It is a qualitative type of research. I have chosen musculoskeletal outdoor department to collect required data. Now I am looking forward for our kind approval to start my data collection.

May, I therefore pray and hope that you would be kind enough to give me the permission to collect data and allow me to conduct this study.

Yours faithfully

Most Sanjeda Monsur

Habib 8.8.15

Most. Sanjeda Monsur

4th year B.Sc in physiotherapy

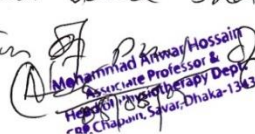
Session: 2010-2011

BHPI,CRP,Savar,Dhaka- 1343.

Forwarded for Approval
Habib 8.8.15

Md. Obaidul Haque
Associate Professor & Head of the Department
Department of Physiotherapy
Bangladesh Health Profession Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343

07.09.15

Permission is given and Shomina Islam (Nipa) is your counter of your data collection procedure. (A)  your

Mohammad Arif Hossain
Associate Professor &
Head of Physiotherapy Dept
BHPI, CRP, Savar, Dhaka-1343