LOW BACK PAIN AMONG THE SOIL WORKERS IN MANIKGANJ DISTRICT

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

LOW BACK PAIN AMONG THE SOIL WORKERS IN MANIKGONJ DISTRICT

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

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This study with the title- ''**low back pain among the soil workers in Manikganj District**'' by Md. Mahabub Islam, Department of Physiotherapy, Saic College of Medical Science and Technology, was done in my close supervision and direct guidance. I have gone through the papers. This is up to my full of satisfaction.

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DECLARATION

This work has not previously been accepted in substance for any degree and isn't concurrently submitted in candidature for any degree. This dissertation is being submitted in partial fulfillment of the requirements for the degree of B.Sc. in Physiotherapy. I confirm that if anything identified in my work that I have done plagiarism or any form of cheating that will directly awarded me fail and I am subject to disciplinary actions of authority. I confirm that the electronic copy is identical to the bound copy of the thesis. In case of dissemination the finding of this project for future publication, research supervisor will highly concern, it will be duly acknowledged as graduate thesis and consent taken from the physiotherapy department of Saic College of Medical Science and Technology.

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Acknowledgement

Acronyms	
SCMST :	Saic Collage of Medical Science and Technology
LBP :	Low back pain
CI :	Confidence intervals
ODI :	Oswestry disability index
MSD :	Musculoskeletal disorders
BPS :	The British pain society
MOM :	Map of medicine
NP :	Neck pain
ALBP :	Adolescent low back pain
LOD :	Length of disability
WBV :	Whole-body vibration
SPSS :	Statistical package for social sciences
CLBP :	Chronic low back pain
VAS :	Visual analogue scale
NRS :	Numeric rating scale
BMI :	Body mass index
OA :	Osteoarthritis
HAVS :	Hand-arm vibration syndrome
BPS :	British pain society
DDD :	Degenerative disc disease
LBA :	Low back ache
CBVS :	Complete body vibrations
ILO :	International labour organization
CT scans :	Computed tomography scans
MRI scans :	Magnetic resonance imaging scans
EU:	European Union
U.S. :	United States
GHDx:	The Global Health Data Exchange
MI:	Monthly income

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Abstract

Purpose: Aims of the study to determine the low back pain among the soil workers in Manikganj District.

Objective: This study's objective was to describe socio demogrfic characteristics like age, sex, BMI and work related factors like type of pain, type of treatment etc. To find out the level of low back pain among the soil worker in Manikganj District.

Methodology: This study was performed in a descriptive type of cross-sectional study design was conducted to determine. This study sample was collected through a convenience sampling procedure and total sample of 358. The data was collected from Manikganj District. The data collection process was a questionnaire with a face to face interview. Data was analyzed with Microsoft Office, using SPSS 20 version softwer program and test use of study frequency test.

Results: One hundred and fifty workers took part, a participation rate of 42%. The LBP was 35% (n = 358), being higher in males than females (80.77% versus19.23%. This study's participants mean and stander deviation of the particapints age where are mean±SD=30.65±9.464, was found that 17 (32.7%) Participants belonged to the age group of 18-25years, it was also found that 23 (44.2%) Participants were in the age group of 26-35 years, it was also found that 7 (13.5%) Participants were in the age group of 36-45 years and it was also found that 5 (9.6%) Participants were in the age group of 46-52 years.

Conclusions: This study suggests that mechanical load may be the leading cause of LBP among the soil workers.

Key words: Low back pain, occupation, soil workers.

CHAPTER-1   INTRODUCTION

1.1 Background

Low back pain (LBP) is described as a not unusual, painful circumstance affecting the lower component of the spine, with or without radiating symptoms to the leg or legs. LBP may be categorized as acute, subacute, and persistent. LBP is an important reason of discomfort and disability in evolved international locations and is envisioned to be the maximum typical pain grievance. Standard, about three-quarters of the general population have experienced LBP at the equal time. In our united states, the occurrence of LBA is excessive; nearly 60% of the humans across the world suffer from returned ache at some factor in their lives. It influences both the genders equally (Lamba and K Upadhyay, 2018).

Some of low returned specific consequences measures exist which are designed as proxy measures of incapacity and/or pain. One of the maximum typically used is the Oswestry disability index (ODI), which is a ten item scale that examines findings related to activities of day by day residing, along with status, on foot, lifting, sitting, lying down, dressing and personal care that might be disrupted by using low lower back ache. The ODI has been used to evaluate pre and publish surgical effects and is taken into consideration a benchmark for willpower of treatment effectiveness (Goode et al., 2011).

A survey was executed on 1221 men among the longtime of 18 and 55 years who have been seen in an own family-practice facility among 1975 and 1978 every patient completed a questionnaire concerning any records of low-lower back ache, related signs inside the lower limbs, resultant incapacity, varieties of health care applied, sure occupational traits, exposure to vehicular vibration, and sports activities (Frymoyer,et al., 1983).

Consistent with Eurostat facts, greater than 20 million eu employees bitch of occupational ill-fitness; with the most regularly reported shape being musculoskeletal disorders (MSDs). In Poland, msds are the second one maximum not unusual motive of complete

lack of ability to work and one of the primary causes of the very best variety of sick-depart days (Malinska, Bugajska and Bartuzi, 2021).

Almost every person studies low back pain sooner or later of their lives. Low again ache is typically innocent. It tends to start abruptly and lasts a few days or even weeks. The pleasant factor you could do then is carry on going approximately your each day life and live as bodily active as viable. Resting an excessive amount of or spending a whole lot of time in bed could make the returned pain closing longer (Nathan, 1979).

Returned pain has been notably studied, both in terms of its prevalence and its feasible causes. Whilst studying or reviewing the literature, it is critical to differentiate the reporting of pain from its effects, which include disability, care-in search of, sick depart, and its final give up-factor: early pension. Obviously, both descriptive findings and hyperlinks with different elements will range relying at the definition of again pain that was used. My presentation will deal with 'self-reported lower back pain' (Leboeuf Yde, 2004).

Low back pain is a relatively common disabling musculoskeletal condition affecting al-most absolutely everyone at a while. The biopsychosocial model is the winning framework used for know-how, coping with and treating again ache. This approach shows that similarly to biology, psychological, socio-financial, environmental and cultural factors all make a contribution to the occurrence and endurance of returned ache signs. Many musculoskeletal situations begin in center-age and require interactions with health care seasonedviders over a few years (Stewart,et al., 2015).

Both psychosocial factors and bodily elements related to paintings had been observed to be related to low back pain (LBP) in many go sectional and a few longitudinal studies. In analyses of capability chance elements for LBP associated with paintings, often physical factors handiest, or psychosocial elements handiest, had been considered. Much less regularly both types of factors had been studied and analyzed simultaneously. Even less frequently have conditions outdoor work been studied in parallel with work related situations (Thorbjornsson,et al., 1998).

Hospital nurses have a high occurrence of low back pain, and the danger of low again issues from physical activities in patient care has been the focal point of extensive re-seek. In evaluation, rather few studies have explored the have an effect on of affected person coping with on neck and shoulder ache, and most of these were pass sectional in de-signal. As a part of a prospective investigation to evaluate the impact of an ergonomic intervention on musculoskeletal symptoms, we accrued longitudinal information at the incidence of neck and shoulder pain in a cohort of nurses. We here gift an evaluation of the risk of incident neck/shoulder ache on the subject of personal and occupational hazard elements ascertained at baseline (Smedley, 2003).

Sanatorium employees enjoy more low returned pain than many other businesses, the incidence varies among international locations. Paintings sports regarding bending, twisting, frequent heavy lifting, awkward static posture and mental stress are regarded as causal factors for many back injuries (Karahan,et al., 2009).

In many countries persistent low again ache is the maximum commonplace cause of long term disability in middle age. Persistent low lower back pain is proof against treatment, and patients are regularly referred for multidisciplinary treatment. Modern multidisciplinary biopsychosocial rehabilitation regards disabling persistent ache as the result of multiple interrelating physical, psychological, and social or occupational elements (Guzman, 2001).

Low back pain remains an essential clinical, social, monetary, and public health hassle, affecting the population of the united states and the complete global. Multiple research has shown an incidence of recurrent or continual low returned pain at 3 months, 6 months, and three hundred and 65 days to variety from 35% to 79%. Chance elements of low again pain are many, however none are convincingly causal. Probable chance factors include genetic elements, age, and smoking. Viable risk elements encompass lower back pain history, task dissatisfaction, heavy bodily work, static work postures, lifting, vibration, obesity, and psychosocial factors (Skovron, 1992).

Low back pain (LBP) describes pain between the lower fringe of the ribs and the buttock. It can last for a short time (acute), a touch longer (sub-acute) or a long time (continual). It is able to have an effect on all and sundry. LBP makes it difficult to move and can affect great of life and mental properly-being. It can restriction paintings sports and engagement with circle of relatives and buddies. LBP can be specific or non-unique. Precise LBP is pain this is due to a certain disease or structural hassle inside the spine, or when the ache radiates from any other a part of the body. Non-precise lbp is whilst it isn't viable to become aware of a specific ailment or structural reason to explain the pain. LBP is non-specific in about 90% of cases (Spangfort, 1987).

Low back pain (LBP) is a project for health care systems and the society in lots of eu international locations. Sufferers with back pain are a heterogeneous institution and fluctuate in several dimensions inclusive of pain revel in, severity of disease, impairment elements, emotional disturbance, and useful limitations. It's miles a famous truth that the prognosis for unmarried episodes of acute ache is good, but a sizable range of sufferers develop chronic or recurrent illness, often characterized by means of a complex sample and interaction of somatic, psychological, and social elements (Pfingsten,et al., 2014).

Low back pain (LBP) is extraordinarily common and is the largest unmarried cause of loss of disability adjusted life-years and the largest single purpose of years lived with disability in England. In terms of incapacity adjusted lifestyles-years misplaced in line with a hundred 000, lbp is responsible for 2313. In evaluation, the rest of musculoskeletal proceedings account for 911, depression 704 and diabetes 337. It should be borne in mind that this mainly occurs in human beings of working age or with families. Lower back pain money owed for 11% of the entire disability burden from all sicknesses within the United Kingdom. The British pain society (BPS) and map of medicine (Mother) ache pathways and the countrywide pathway of take care of low again and radicular ache may be discussed on this presentation ('I125　Pain Pathways for Managing Low Back Pain and Radicular Pain', 2016).

Low back pain (LBP) is one of the maximum not unusual occupational fitness problems in our international locations and is associated with considerable absence from work and loss in productivity, resulting in monetary burdens to employers, personnel and fitness care systems .Studies of the epidemiology of LBP have implicated mechanical threat elements, which includes manual dealing with, wearing heavy masses and paintings-related posture .Different studies have established the role of psychosocial elements, which includes high and low process demands, low task delight, low tiers of help from colleagues, low decision making strength and occasional process control in LBP (Paudyal,et al., 2013).

Low back pain (LBP) is the most commonplace purpose of dis capability in sufferers younger than 45 years of age and the second one-most commonplace purpose for travelling a medical doctor. LBP is also one of the most common paintings-related musculoskeletal disorders (MSDs), the 0.33-most commonplace purpose for surgical treatment, and the fourth-maximum common cause for hospitalization (Rafeemanesh,et al., 2017).
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Low returned pain is a common fitness problem inside the place of business and most people are expected to enjoy signs and symptoms of low again ache in the course of their working life. Low returned pain has a profound impact each at once and in a roundabout way on individual people and their families, industries and governments. Direct healthcare expenditure for low returned pain has been said to variety from $50 to $90.7 billion every year within the us. General charges of direct scientific fees and loss of paintings productivity combined related to low returned pain have been expected to be as high as $635 billion annually in the us (Yang,et al., 2016)..

Low back pain is a primary health problem in western nations. A diffusion of pathologies can cause low back pain, one in all that's degenerative disc disease (DDD). It has been hypothesized that thru disc dehydration, annular tears, and loss of disc peak or crumble, DDD can bring about extraordinary movement of the segment and biomechanical instability causing pain (Van den Eerenbeemt,et al., 2010).

Low back pain is incredibly conventional amongst nurses and is related to a excessive lev-el of sickness absence. Folks that regularly file non-musculoskeletal signs and symptoms have been significantly more likely to report low again ache. Unique guide coping with obligations were associated with an extended hazard of returned ache; but, no such association become determined with mechanized patient transfers (Smedley,et al., 1995).

Low back ache is the 5th maximum not unusual purpose for all medical doctor visits in the united states. Approximately one zone of U.S. Adults reported having low lower back pain ultimateing as a minimum 1 complete day within the past three months, and 7.6% suggested as a minimum 1 episode of severe acute low lower back ache (see thesaurus) within a 1-yr duration . Low returned ache is likewise very steeply-priced: total incremental direct health care prices on account of low returned pain within the U.S. Had been envisioned at $26.3 billion in 1998. Further, indirect costs associated with days lost from work are extensive, with approximately 2% of the U.S. Work force compensated for returned accidents each year (Chou,et al., 2007).

Non-specific neck pain (NP) and low back pain (LBP) are enormously common musculo skeletal problems and the main causes of disability worldwide. It's been properly established that np and lbp aren't only risk elements for intense backbone problems and functional incapacity, but that they're also associated with decreased high-quality of life and productivity of people. Of observe, despite the fact that NP and LBP are musculoskeletal situations affecting special body elements, they normally have comparable signs and symptoms, hazards and aetiology (Ye,et al., 2017).

For the reason that Nineteen Eighties there has been a growing appreciation of the extent of adolescent low lower back pain (ALBP) in the community. This shift in focus appears to have resulted from a sequence of international epidemiological studies which diagnosed a tremendous incidence of pronounced spinal ache in in any other case 'healthy' teenagers. This expanded focus of the superiority of ALBP is meditated within the increase in published research on ALBP over the last 30 years (Milanese, 2010).

Sleep constitutes an equally complicated and critical biological characteristic, with the behaviorally driven purpose to maintain homeostasis across more than one physiological systems: it is essential for restoration of bodily and mental stressors, learning, bodily performance, cognition, emotional modulation, mind plasticity reminiscence encoding, and consolidation, in addition to standard health of the mammalian organism .Moreover, poor sleep poses a well-known and effective risk component for a multitude of physical and physiological ailments, together with weight problems, dementia, diabetes, substantial and continual pain, in addition to all-reason mortality (Vinstrup, Jakobsen and Andersen, 2020).

Symptoms associated with returned problems, particularly low back pain (LBP), account for a massive percent of all illness absence in western industrialized countries.1 2 in Germany, about 14% of the days misplaced from work are because of again issues.1 a few trades are characterized with the aid of a comparatively high incidence of musculoskeletal issues with the development industry rating 0.33 for illness absence due to LBP in Germany (Latza, 2000).

Fabric fishing internet manufacturing is one of the main industries in southeast Asia, which includes khon kaen province in Thailand. Fabric fishing internet workers are often ex-posed to repetitive actions, twisting, stooping, awkward and prolonged postures, and pro (Keawduangdee,et al., 2012).

The electromyographic patterns produced by using recording the left and right Para spinal muscular tissues of topics whilst in motion (bending and growing) and still (status up-right, sitting supported and unsupported, and inclined) have been contrasted for human beings with: 1 no records of again pain; 2 past episodes of low back ache however currently ache unfastened; and three persistent low returned ache with numerous diagnosed etiologies. Every of the eighty-three individuals recorded during episodes of low back pain produced a completely unique sample of muscle contraction which was exceptionally strong between weekly recording sessions (Sherman, 1984).

The mechanical risks inside the hospitals consist of low back pain (LBP) from manual lifting (lifting sufferers specially) which makes nursing one of the occupations most affected by LBP. Nurses are required to raise and shipping sufferers or equipment's, regularly in tough environment in particular in developing international locations like Africa, in which lifting aids aren't always available or possible. The objective of this study changed into to determine the prevalence and threat factors of LBP amongst nurses in African (Sikiru and Shmaila, 2009).

The wide variety of people in Europe and the united states laid low with spinal pain is attaining 49% to 70% of the whole adult population. The prevalence of low lower back ache turned into higher amongst girls than guys across all age corporations. The mean distinction become full-size between those elderly 20–29 and those elderly 40–69. Low back pain (LBP) turned into described as pain concerning or derived from structures in the lumbosacral area among the lower posterior margin of the rib cage and the horizontal gluteal fold and persistent low again pain as present at least 12 h per day and lasting more than six months. In the etiopathogenetic course of LBP, LBP is well-known in 37% of the entire populace (Zywien, Barczyk-Pawelec and Sipko, 2022).

The goal of this observe is to decide whether or not melancholy is an independent threat element for onset of an episode of tough neck and coffee back ache. There may be developing proof that pain troubles increase the danger of melancholy. However, the evidence about the role of melancholy as a threat aspect for onset of ache issues is contradictory. Depression is a sturdy and independent predictor for the onset of an episode of instressful and/or disabling neck and coffee lower back ache (Carroll, Cassidy and Cote, 2004).

The superiority of musculoskeletal proceedings in dentists is excessive even though relatively few studies had cognizance in this career. The intention of this study become to investigate the relations between bodily, psychosocial, and character characteristics and specific endpoints of musculoskeletal proceedings of low back, neck, shoulders and hand/wrist (Alexopoulos, Stathi and Charizani, 2004).

There are many kinds of returned pain questionnaires. There are at the least 24 techniques consisting of regional or private. However, most of the returned pain questionnaires are used for post treatment observe up as opposed to for diagnostic cause. Besides this, studies regarding the relation among lower back pain questionnaires at the references and real spinal disease are inadequate. Consequently, the authors translated 3 forms of returned pain questionnaires into Korean after which undertook a survey focused on examinees of the bodily examination for the military draft, to permit an assessment of the relationship between the results of the three lower back ache questionnaires and actual spinal ailment, especially lumbar disc herniation, in addition to its usefulness as a screening test for disc herniation (Kim,et al., 2012).

1.2 Rational

Low back pain (LBP) is one of the maximum common occupational fitness problems in our nations and is related to vast absence from work and loss in productivity, resulting in economic burdens to employers, personnel and fitness care systems. Low back Pain (LBP) became described as returned pain lasting an afternoon or longer for the duration of the preceding 365 days in a place among the twelfth ribs and the gluteal folds. Studies of the epidemiology of LBP have implicated mechanical risk elements, which include guide handling, carrying heavy hundreds and work-related posture. Some studies have located psychosocial components to be more strongly predictive of LBP and its progression in comparison with mechanical exposures. The big populace of employees hired in this zone in Bangladesh, and the physical nature of the duties involved, there has been no reseek on its effect on musculoskeletal fitness. It's far anticipated that, international, 37% of LBP is attributable to occupational hazard factors. This look at aimed to determine the low-returned ache among soil employees in Manikganj district and to research the have an effect on of exposure to mechanical and different factors on LBP reporting in Bangladesh. Low back pain (LBP) is the most not unusual reason of incapacity in patients younger than 45 years of age and the second one-most not unusual cause for traveling a physician. LBP is also one of the most common paintings-related musculoskeletal disorder (MSDs), the third-maximum common cause for surgical operation, and the fourth-maximum commonplace cause for hospitalization. Most people will experience back ache at some point in their lifestyles but in some occupational sectors which include industrial people, nurses, and drivers. International, LBP effects in decreased productivity and imposes widespread costs up-at the affected person, circle of relatives, society, industry, and the government. We should do not forget that LBP isn't always merely a sickness, however additionally it is a signal of numerous systemic, musculoskeletal, and neurological disorders. LBP is a multifactorial disorder and lots of chance elements and prevalence may additionally make contributions to its development and seasoned cess, inclusive of psychological, ergonomic, and physical elements. Many soil workers in Manikganj district in Bangladesh, many of them be afflicted by LBP however no research whole with them. They are very accountable for our economic system. So I'm making a research with them.

1.3 Research question

What is the level of low back pain among the soil workers in Manikganj district?

1.4 Objectives of the study

1.4.1 General objective

To determine the level of low back pain among soil workers in Manikganj district.

1.4.2 Special objectives

1. To calculate the proportion of soil workers having low back pain in Manikganj district by using a questionnaire.
2. To assess the level of the pain of the soil workers by a VAS scale.
3. To enquire about treatment for low back pain of the study subjects.
4. To find out the absenteeism from work due to pain.
5. To investigate the sociodemographic information of the participants.

1.5 List of variables of the study

Conceptual Frame Work:

Independent variables	Dependent variable

Socio demographic factors: Age, sex, religion, education level, marital status, family type, living area, occupation, BMI, monthly income.

Low back pain among soil workers

- No pain
- Mild pain
- Moderate pain

Life-style & Work-related factors:

Smoking, sleeping, treatment.
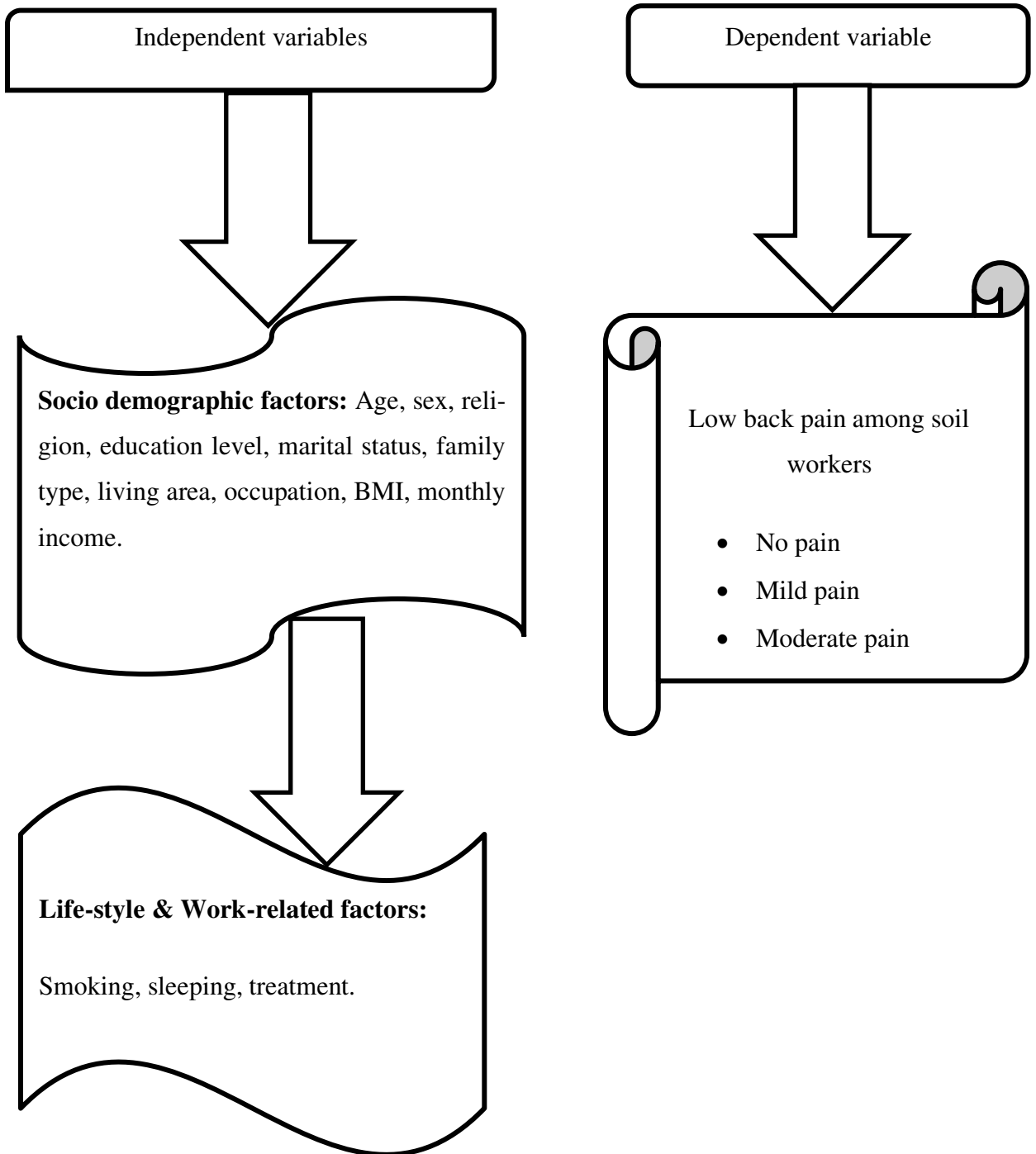
1.6 Operational definitions of the variables

Low back pain

Low back pain (LBP) describes pain between the lower edge of the ribs and the buttock.

Occupation

A person's usual or principal work or business, especially as a means of earning a living; vocation: Her occupation was dentistry. Any activity in which a person is engaged.

Soil-worker

It refers to the person working in the brickfield usually involved in processing soil for brick. Both male and female workers were included in the research as participants.

The incidence of lowback pain (LBP) changed into investigated in a populace of 1155 tractor drivers exposed to whole-body vibration (WBV) and postural stress (reaction fee 91.2%) and in a control organization of 220 workplace employees (reaction rate 92.2%). The topics had been questioned about numerous styles of low-returned symptom (LBP, sciatic ache, acute LBP, temporary and persistent LBP) and numerous paintings and person-associated threat elements, by using the use of a standardized questionnaire. Vibration measurements were achieved on a representative pattern of the vehicles driven with the aid of the tractor drivers in the closing ten years (Bovenzi and Betta, 1994).

The physical task demands show a clean affiliation with the point and lifetime occurrence of low returned pain, and upgrades in work situations may also decrease low lower back signs amongst employees. It's miles possibly that a circle of relative's history of low lower back pain and physical and mental conditions of workers additionally need to be considered in the management of low back pain (Matsui,et al., 1997).

Paintings-associated physical elements and psychosocial paintings characteristics need to be considered as danger factors for first-ever low lower back pain. First-ever episodes of low lower back pain are common inside the first 12 months of employment. This can mirror a loss of paintings experience or education (Van Nieuwenhuyse, 2004).

The incidence and severity of low back ache were higher in ladies, even though they regarded to be less uncovered to recognized occupational hazard elements. However, our consequences indicate a preponderance of these threat elements amongst female workers. Specific interest ought to therefore be paid to lifting of weights and uncomfortable operating positions in female jobs (clerk, buying and selling, fitness care group of workers) (Alcouffe,et al., 1999).

The life-time prevalence of low returned ache court cases become 48.2%. The prevalence over the last year become 31.5%, and point incidence was 11.5%. The variety of

patients with low returned pain lawsuits expanded with age. The length of a low lower back ache episode turned into much less than 2 weeks in 88.2% of the patients, and extra than 12 weeks in handiest in 1.8% of the patients. Evaluation of a few social, person, and expert elements revealed institutions between low returned ache and occasional degree of training, marital reputation, absence of sports activities hobby, depth of smoking, and frequent lifting and bending during the paintings day (Toroptsova,et al., 1995).

Evidence-primarily based care may be a success in maintaining sufferers at work, reducing day without work paintings or on changed obligations and lowering recurrences and chronicity. The gains are accomplished with the aid of conscientiously talking to the sufferers, and not by means of any unique or unique passive interventions (McGuirk and Bogduk, 2006).

The superiority price of musculoskeletal issues, specifically low returned pain and severe low back ache in a randomly selected pattern of one,773 construction workers was studied. Its relationship to physical and psychosocial factors changed into analyzed. The workers spoke back a postal questionnaire. Workload changed into measured by way of eight manual materials coping with indices and ten psychosocial indices, based totally on consequences from component analyses. The 1-yr prevalence fee of low again ache changed into 54% and of intense low returned ache 7%. The connection to heavy guide materials coping with differed with age in this kind of manner that it can be interpreted as a healthy worker impact (Holmstrom, Lindell and Moritz, 1992).

The superiority of low back pain within the popular population is anticipated to be be-tween 60 and 80%. Low lower back pain is taken into consideration to be the second one criticism of patients arriving to their primary care doctor, simplest following upper respiration tract contamination, and is one of the maximum not unusual reasons that every occupational doctor faces every day in his/her daily practice. The superiority of low back pain is 25 instances higher within the industrial countries, and it's far not unusual all through the second one and fifth a long time, this means that it creates a heavy economic burden on society (Shabat,et al., 2005).

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The efficacy of a bodily remedy outpatient software with multiple interventions to treat low returned pain in topics receiving employees' repayment turned into examined. The primary reason of the examine turned into to describe the level of disability, bodily impairment, and price of return to paintings for compensated patients. Compliance, chronicity, and leg symptoms are all elements which can affect the outcome of physical therapy. The nice effects for topics who complied with remedy endorse that a bodily remedy program with multiple interventions may additionally decrease disability and impairment (Di Fabio, Mackey and Holte, 1995).

This initial go-sectional look at changed into undertaken to decide if there were measurable relationships between posture, lower back muscle persistence and occasional returned ache (LBP) in commercial workers with a stated records of flexion stress damage and flexion pain provocation. Medical reports kingdom that topics with flexion pain problems of the lumbar spine normally adopt passive flexed postures together with stoop sitting and present with related disorder of the spinal postural stabilizing musculature (O'Sullivan,et al., 2006).

Despite the fact that statistics exists on the price of employees' repayment low back pain (LBP), there may be confined information at the period of misplaced work time in addition to the association between cost and duration. For this study, value and period of lost paintings time in-formation were derived from a large employees' compensation employer's database for 1992 lbp claims (n = 106,961). The distribution of cost was skewed, with a median value of a claim being 20 instances higher than its median. A disproportionately small percentage of the most expensive lbp claims (10%) were accountable for a large percent of the full cost (86%). The distribution of duration of disability (lod) changed into also skewed, with a median of 102 days and a mean of zero (Hashemi,et al., 1997).

Low back pain (LBP) is the hugest contributor to years lived with disability. Accordingly, lbp is one of the most not unusual reasons for pastime problem, I'll leave, and paintings disability. LBP is rather regularly occurring the various running population, and it has been predicted that approximately 26% to 37% of lbp may be resulting from work-related threat

factors. Therefore, LBP is many of the most essential effects in epidemic common sense research of labor associated musculoskeletal disorders (Rasmussen, Holtermann and Jorgensen, 2018).

The superiority of musculoskeletal disorders (MSD) within the aluminum enterprise is excessive, and there may be a great work-related fraction. More knowledge about the predictors of illness absence from msd in this industry can be precious in figuring out strategies for prevention. The intention of this look at turned into to examine the relative effect of frame parts, psychosocial and person elements as predictors for quick- and lengthy-term illness absence from msd amongst industrial people (Morken, et al., 2003).

A pilot observes become performed to explore the relationship between the prevalence of low-back pain and parameters of trunk muscle strength. Dynamic strength degreements had been accomplished among 53 male workers without low-again ache and 31 male workers with low-back pain. The average torque of lateral right movement become drastically lower for employees with low-lower back pain compared to those without. The utility of discriminant evaluation talked about that any other 4 electricity measures contributed to the discriminant function (Burdorf, van Riel and Snijders, 1992).

Epidemiological research has supplied records on the prevalence and chance factors of low again pain (LBP) in white collar employees in industrialized countries. Little information has related character, work ergonomic, and psychosocial elements to the incidence of LBP in low income nations (Spyropoulos, 2007).

Most epidemiological records regarding low back pain (LBP) are from high-earnings international locations and there's little or no records about LBP in the working population in developing nations. LBP is a common hassle in the running populace even in a developing U. S. A. Age and gender in addition to certain work-related bodily and psychosocial factors encouraged the prevalence of lbp but the variations between specific categories of workers have been small in-text quotation: (Spyropoulos, 2007).

On this cohort of newly employed employees, from a variety of occupations, several components of the work-region surroundings, aside from mechanical factors, have been important in predicting new-onset LBP. Those results emphasize that interventions geared toward lowering the occurrence of LBP are likely to be maximum successful if they interfere throughout those domains (Harkness, 2003).

Both physical and psychosocial place of job factors are considered danger elements for low lower back pain. However, nowadays no consensus has been reached regarding the exact position of these factors in the genesis of low again pain. Having a sedentary activity would possibly have a protective or impartial impact when it comes to low lower back ache, whereas having a heavy physical job constitutes an enormous chance aspect. Because of migration between exposure groups (the "healthful-employee" effect), longitudinal research is necessary for investigating the associations between bodily workload and low back pain (Hartvigsen,et al., 2001).

The main motive of this have a look at turned into to evaluate some of the man or woman and occupational chance factors contributing to induction or intensification of LBP a few of the hire ees suffering from this hassle in four small size factories in Ardabil, Iran. This look at changed into a move-sectional look at that become conducted most of the personnel of four industrial corporations. Interview, questionnaire survey, scientific exam (lasegue take a look at), radio-photograph evaluation, and ergonomic survey (the use of the niosh checklist) had been the strategies to accumulate facts. The end result of the take a look at was divided into two components: man or woman factors and work-associated elements (Mazloum, Nozad and Kumashiro, 2006).

Low returned ache is the most common musculoskeletal hassle within the place of job. Data from low-profits nations are scant. The prevalence of low back pain in this observe is similar with that pronounced in research from extra industrialized nations, however does no longer represent a major motive of sickness absence on this staff (Omokhodion, 2003).

Formerly published epidemiologic studies of low returned ache (LBP) have said that the prevalence of low lower back disability has improved dramatically. Those studies based their findings on either the wide variety of disability claims filed, the disability period, or both. This fact was from international locations apart from the USA or from the us social security disability insurance statistics, with findings pronounced only to the early 1980s. Extra current research folks people' repayment LBP claims pronounced a decrease inside the occurrence rate from the past due Nineteen Eighties to the mid-Nineties. No studies have been located that re-port at the traits of disability duration for workers' compensation LBP claims (Hashemi, Webster and Clancy, 1998).

Cause we systematically reviewed the proof on factors that expect length of sick leave in employees after 6 weeks' low returned ache (LBP) related sick go away. We hypothesized that different factors affect the duration of the leave depending at the time far-away from paintings. We searched for research that stated episodes of lbp and I'll leave that lasted more than 6 weeks. All blanketed studies reported at least one prognostic aspect in which go back to work become the final results. Outcomes we recognized twenty-two relevant publications (Peters,et al., 2011).

There has been a good deal hobby in identifying variables that may predict which individuals are susceptible to developing continual low-back pain. There presently are a number of research which might be comparing number one predictors (which unhurt people are possibly to increase persistent low-returned pain) and secondary predictors (which people with acute episodes will broaden continual ache). The present observe reviews the primary results from a huge-scale research of tertiary predictors. Especially, it addresses the problem of what psycho sociomedical variables are predictive of success/failure in response to a complete purposeful recovery remedy program with the aid of people who are chronically disabled with low-returned ache (Polatin,et al., 1989).

Low returned ache (LBP) has been documented to be a common occupational fitness trouble amongst fitness care workers. A move sectional has a look at become finished in a hospital in south – south Nigeria to determine the prevalence and danger factors of low

lower back pain a number of the people. LBP became a commonplace hassle amongst workforce within the clinic. Additionally, extended standing/ sitting, being obese or over-weight, and lifting of heavy items were among risk factors suggested via people with LBP (Johnson and Edward, 2016).

The occurrence of low-returned pain (LBP) was investigated in a population of 1155 tractor drivers uncovered to complete-frame vibration (WBV) and postural strain (reaction fee 91.2%) and in a manipulate organization of 220 office workers (response charge 92.2%). The topics have been wondered about several kinds of low-again symptom (LBP, sciatic ache, acute LBP, transient and chronic LBP) and diverse paintings- and individual-associated risk factors, by the use of a standardized questionnaire. Vibration measurements have been performed on a consultant pattern of the cars driven by means of the tractor drivers inside the closing ten years. Vibration magnitude and length of publicity were used to calculate a vibration dose for every tractor motive force (Bovenzi and Betta, 1994).

To have a look at the lengthy-time period fitness impact of whole-frame vibration, a questionnaire on signs of sick health became mailed to 242 drivers and a reference organ-ization of 210 people from six harbor businesses (response 81%). Automobiles driven were fork-carry trucks and freight-field tractors. Vibration stage in the course of a representative working duration (vector sum of the frequency weighted acceleration in the x-, y-, and z-instructions) was 0.8 m/sec2 for the fork-lift vans and 1.0 m/sec2 for the freight-container tractors (Boshuizen, Bongers and Hulshof, 1992).

The medical literature on paintings-related back problems was reviewed to become aware of steady hazard factors and to determine the energy of the affiliation among the two. Thirty-5 publications had been decided on with quantitative statistics. Lifting or sport-ing masses, complete-frame vibration, and common bending and twisting proved to be the bodily load risk factors continually related to work-related lower back disorders. Activity dissatisfaction and occasional job decision range proved to be important, however the evi-dence become not consistent throughout distinctive research and look at designs (Burdorf and Sorock, 1997).

Occupational exposure to whole-frame vibration (WBV) is full-size and might purpose returned hassle. Several epidemiological studies of the relationship among wbv exposure and lower back problem have been achieved at the coronel laboratory of the college of Amsterdam. This venture comprised studies of disability and long-time period unwell go away due to again issues amongst drivers of agricultural tractors, cranes, vans and buses. In addition, self-suggested back ache was studied amongst helicopter pilots and drivers of forklift vans, wheel-loaders and agricultural tractors. In every study information on back trouble of the uncovered organization were as compared to a nonexposed reference institution, after adjustment for different hazard factors for returned problem (Bongers and Boshuizen, 1992).

Farming is a physically hard career and this locations farm workers at potential hazard of musculoskeletal disorders together with osteoarthritis (OA) of the hip and knee, low returned pain (LBP), neck and higher limb court cases, and hand-arm vibration syndrome (HAVS). This assessment considers the epidemiological evidence regarding such dangers. The most powerful evidence relates to OA of the hip, for which the general public health effect is in all likelihood to be good sized. There's additionally weaker, however suggestive evidence that farmers greater regularly have knee OA and LBP than people in occupations with fewer bodily needs (Walker-Bone, 2002).

The incidence of numerous varieties of low back pain (LBP) turned into investigated by means of a standardized questionnaire in a collection of 219 port equipment operators exposed to whole-frame vibration (WBV) and postural load and in a manage group of 85 renovation workers employed on the identical delivery corporation. The group of port equipment operators included 85 straddle provider drivers, 88 fork-lift truck drivers, and 46 crane operators. The vector sum of the frequency weighted R.M.S. Acceleration of vibration measured at the seat pan of port automobiles and machines averaged zero·90 m/s2 for fork-carry vehicles, 0·45 m/s2 for straddle companies, 0.50 three m/s2 for mobile cranes, and 0·22 m/s2 for overhead cranes (Bovenzi, Pinto and Stacchini, 2002).

In an intensive evaluate of complete-body vibrations (CBVS), seidel and heide concluded that there's an expanded health threat to the spine and peripheral anxious system after extreme long-term exposure to WBV. They said that "whole frame vibration can considerably get worse certain endogenous situations, E.G., the improvement of a prolapse of the intervertebral disc in the case of a bifid spine." vibration transmission can cause lower back problems for mechanical reasons along with tissue failure or metabolic interference, or a combination of these (Kumar,et al., 1999).

City taxi drivers range from other expert drivers in their exposures to bodily and psychosocial dangers within the paintings environment. Epidemiological records on low returned pain (LBP) of this occupational institution are very scarce. We've got identified that long using time and numerous physical and psychosocial elements are associated with high incidence of LBP in taxi drivers. This ought to be in addition investigated in seasoned-spective studies. Future studies are had to examine the capability unfavorable results of extended publicity to low levels of complete-body vibration (Chen,et al., 2005).

Occupational using has often been related to a high incidence of returned ache. The elements that contribute to cause the ache are numerous and may encompass pro-longed sitting, negative postures, exposure to entire-body vibration and other non-riding elements consisting of heavy lifting, poor weight loss program or other psychosocial factors. In europe, truck drivers are possibly to be considered an 'at risk' institution in step with the bodily retailers (vibration) directive and therefore dangers will need to be decreased (Robb aand Mansfield, 2007).

Occupational low back pain has multifactorial etiology and improved prevalence and prevalence. It's miles characterized by using pain of varying depth and period and may lead to work incapacity and invalidity. Low lower back ache reasons workers to suffer and increases the prices of employers and of social security and healthcare systems. The relevance of this difficulty led this paper's authors to undertake a bibliographic evaluate with emphasis on the theoretical and conceptual heritage and on the experience of professionals (Walsh,et al., 1989).

Publicity to whole-body vibration (WBV) in expert drivers of industrial ma-chines and/or automobiles is associated with an excess danger for back signs and problems of the lumbar tract of the spine. Opinions of the epidemiological literature have said that the occurrence of low lower back ache and early degeneration of the lumbar backbone, including intervertebral disc disorders, is greater in expert drivers than in control corporations unexposed to wbv (Bovenzi,et al., 2006).

Low back Pain (LBP) became described as returned pain lasting an afternoon or longer for the duration of the preceding 365 days in a place among the twelfth ribs and the gluteal folds (indicated by way of a diagram). Topics have been requested to exclude ache happening best throughout pregnancy, menstruation, or febrile illness. Sciatica was described as LBP which radiated down the leg to beneath the knee. Low again pain was classed as "tough" if it had made it difficult or impossible to position on socks, stockings, or tights (Palmer, 2003).

There are many different structures in the anatomy of the back that work together to support your body. Problems with any one of these structures can cause back pain. There are four regions of the spine as Cervical spine, Thoracic spine, Lumbar spine, Sacrum and coccyx. Parts of the spine and back include as Vertebrae, Spinal cord, Intervertebral discs, Ligaments, Tendons, Muscles. Several factors increase your risk of developing back pain and can include as Fitness level, Weight gain, Job-related risk factors, Stress level, Age, Heredity. Types of Back Pain are as follows 1. Acute back pain happens suddenly and usually lasts a few days to a few weeks, 2. Subacute back pain can come on suddenly or over time and lasts 4 to 12 weeks, 3. Chronic back pain may come on quickly or slowly and lasts longer than 12 weeks and occurs daily (Nancy Garrick, 2017).

Symptoms of Low Back Pain like might range from a dull ache to a stabbing or shooting sensation. Pain make it hard to move or stand up straight. Pain that comes on suddenly is "acute." It happen during sports or heavy lifting, muscle strain or sciatica, job condition, Workout as overdoing it at the gym or golf course etc, bad posture, herniated Disk, Back Pain Culprit: Chronic Conditions as Spinal stenosis, Ankylosing spondylitis, Fibromyalgia,

osteoporosis. If pain lasts more than 3 months is considered "chronic." You should consult a doctor, if your pain is not better within 72 hours. Or require urgent care for back pain after a fall or injury, back pain with bowel or bladder control problems, leg weakness, fever, or pain when coughing or peeing. Low Back Pain can be diagnose your doctor according to your history as the source of pain, when it started, related symptoms, any history of chronic conditions, by physical examination, X-rays, CT or MRI scans etc. Treatment can be done by home care, bed rest, yoga, spinal manipulation, massage therapy, acupuncture, medications, injections, surgery, physical therapy etc. (https://www.facebook.com/WebMD, 2017).

CHAPTER-III	METHODOLOGY

3.1 Study design

The purpose of the study was to find out the low back pain among the soil workers in Manikganj district. The cross section study was conducted to find out the objectives. This design involves identifying group of people and then collecting the information that requires when they use the particular service. This type of data can be used to assess the prevalence of acute or chronic conditions in a population. Survey research is one of the most common forms of research that involves the asking a large group of people questions about a particular topic or issue and these are related to the interest of the participant. Survey is a method of collecting data which involves the measuring relevant sample variables (often using s questionnaire) without any form of manipulation or systemic intervention .The idea with the survey usually approaches a sample of target group of interest, interviews them or ask them questionnaire (Iftekhar, 2013).

3.2 Study place

The study was conducted the Soil workers at Singair in Manikgonj district.

3.3 Study period

One year from January 2023 to June 2023

3.4 Study population

The soil workers from different Brickfields at Singair upazila constitute the study population for the present study.

3.5 Sample size

Formula of one-sample population had been used for calculating sample size.

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

Now, required sample size is

= 358.20

Sample size will be 358.20

Here,

    n = Sample size

    z = 1.96 (constant)

    d = 0.05 (constant)

  p = Estimated prevalence

     = 37%

     = 0.37

(Rafeemanesh et al., 2017).

q = (1-p)

    = (1.00-0.37)

    = 0.63

So the aimed to focus his study by 358 samples following the calculation above initially. But as the study was done as a part of fourth professional academic research project and there were some limitations, so the researcher had to limit with 150 soil workers as sample.

3.6 Sampling technique

The study was conducted by using the convenience sampling methods because it is the easiest, cheapest and quicker method of sample selection. It is easy to get those subjects according to the criteria concerned with the study purpose through the convenience sampling procedure.

3.7 Eligibility Criteria

3.7.1 Inclusion

- Age: 18- 59 years because most of the soil workers usually work between this age level. The Labor Rules prohibits employment of children below the age of 14, and 18 for hazardous works. Retirement age in Bangladesh is set at 59 years BIDA (2021).
- Male and female.
- Only soil workers who ware doing work with soil.

3.7.2 Exclusion

- Mentally unstable people.
- Unwillingness person.
- LBP due to pregnancy because it can interfere the result.
- Subjects who had recent major accident or major surgery in any part of the body which could produce pain as acute inflammatory reaction.

(Iftekhar, 2013).

3.8 Method of data collection

Face to face interview method was used to collect data from the participants.

3.9 Instruments of data collection

A pretested questionnaire was used to collected data from the respondents. The questionnaire has two parts. The first contained questions on Socio Demographic Information for the participants. The second part contained questions on Life style & Work related question.

3.9.1 Data editing

At the end of each day the questionnaire were checked for any mistake or inconsistency. Necessary corrections were done.

3.9.2 Data entry

The responses in the questionnaire were coded accordingly. Then data were entered into the computer to analyze with Statistical Package for Social Sciences (SPSS) Version 16.0.

3.9.3 Data analysis

Data was analyzed with the software named Statistical Package for Social Sciences (SPSS) Version 20. Data was numerically coded and captured in Microsoft Excel, using an SPSS 25 version software program. Microsoft Office Excel 2016 was used to decorate the bar graph and pie charts.

3.10 Procedure of data collection

The researcher identified two brickfields at Singair. Obtain permission from the owners of the brickfields to carry out the research. The aim and objectives were explaining to the soil workers in detail. Then workers who agreed to participate were include in to the study. Obtaining verbal informed consent from the participants, interview started with individual worker. A pretested questionnaire was used as an instrument of data collection. At the end of the interview the researcher thanked the respondents.

3.11 Ethical consideration

I followed all ethics strictly. I obtained permission from ethical board of Saic Collage of Medical Science & Technology to start my research work & to start my data collection. At very beginning it clarified that the participant had the right to refuse to answer of any question during completing questionnaire. They could withdraw from the study at any time. It also clarified to all participants about the aim of the study. Participants were ensured that any personal information will not be published anywhere. Permission took from each participant by using a written consent form. After getting consent from the participants, a questionnaire was used to identify the prevalence of low back pain among the soil workers.

Stimuli that can destruct interviewee were removed to ensure adequate attention during interview. Face to face interview is the most effective way to get full cooperation of the participant in the survey. According to the understanding level of the participant, sometimes the questions were described in the native language, so that the participants can understand the questions perfectly and answer accurately. All data were collected by the researcher himself.

This descriptive type of cross-sectional study was conducted in Bangladesh in order to determine the level of low back pain among soil workers in Manikganj district. A pre-tested modified interviewer administrated semi questionnaire was used to collect the information. A total of 150 participants were interviewed to collect the information. Part-1 contained the questions about socio-demographic characteristics; Part 2 contained life-style & work-related factors. All the data were entered and analyzed by using statistical packages for social science (SPSS) software version 20.

4.1 Distribution of the respondents by low back pain

Low back pain among the soil workers in Manikganj District Among the 150 participants, 52 participants were suffering from low back pain and 98 participants were not suffering from low back pain. In percentage 35% participants were suffer from low back pain and 65% participants were not suffering from low back pain.

Low back pain among the participants
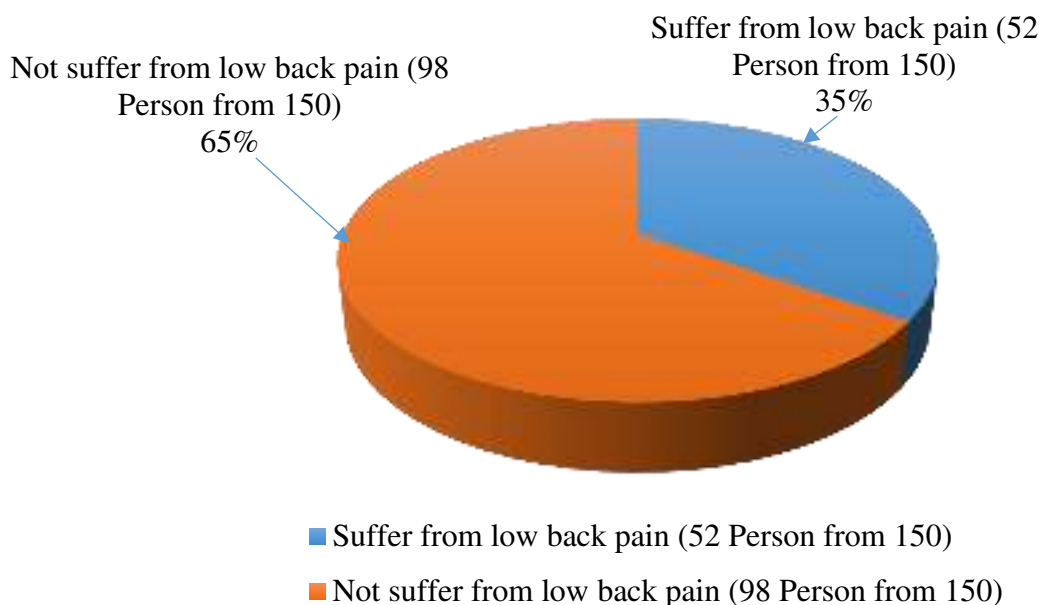
Figure-1: Participant of the low back pain

A. Socio-demographic factors:

4.2 Distribution of the respondents by age

Table no. 1: Frequency distribution of the participants by age

Age group in years	Frequency	
	N	%
18-25	17	32.7
26-35	23	44.2
36-45	7	13.5
>45	5	9.6
Total	**52**	**100.0**
	Mean=30.65,	**SD=9.464**

Frequency distribution of the participants, it was found that 17 (32.7%) Participants belonged to the age group of 18-25years, it was also found that 23 (44.2%) Participants were in the age group of 26-35 years, it was also found that 7 (13.5%) Participants were in the age group of 36-45 years and it was also found that 5 (9.6%) Participants were in the age group of 46-52 years. The mean age participants was 30.65 years and Std. Deviation 9.464 (Table number-1).

4.3 Distribution of the respondents by sex

Revels that among the respondents, 81% (n=42) were Male and 19 % (n=10) were Female.

Sex of the participants

Male (42 Person) Female (10 Person)
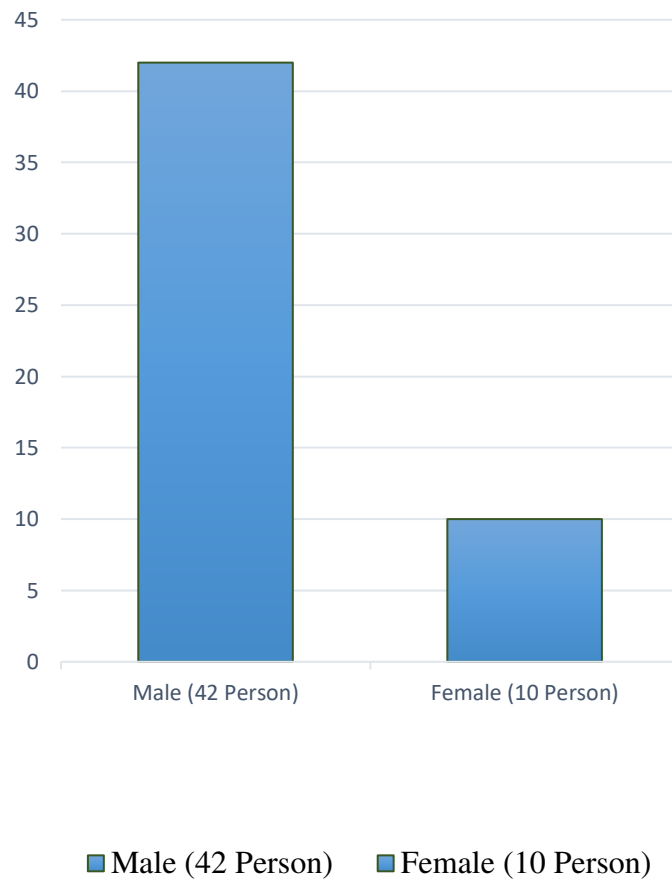
Figure- 2: Distribution of the respondents by sex

4.4 Distribution of the respondents by religion

Revels that among the respondents, 90% (n=47) were Muslim ,10 % (n=5) were Hindu, 0 % (n=0) were Christen, 0 % (n=0) were Buddies, 0 % (n=0) were Other's.

Religion of the Participant
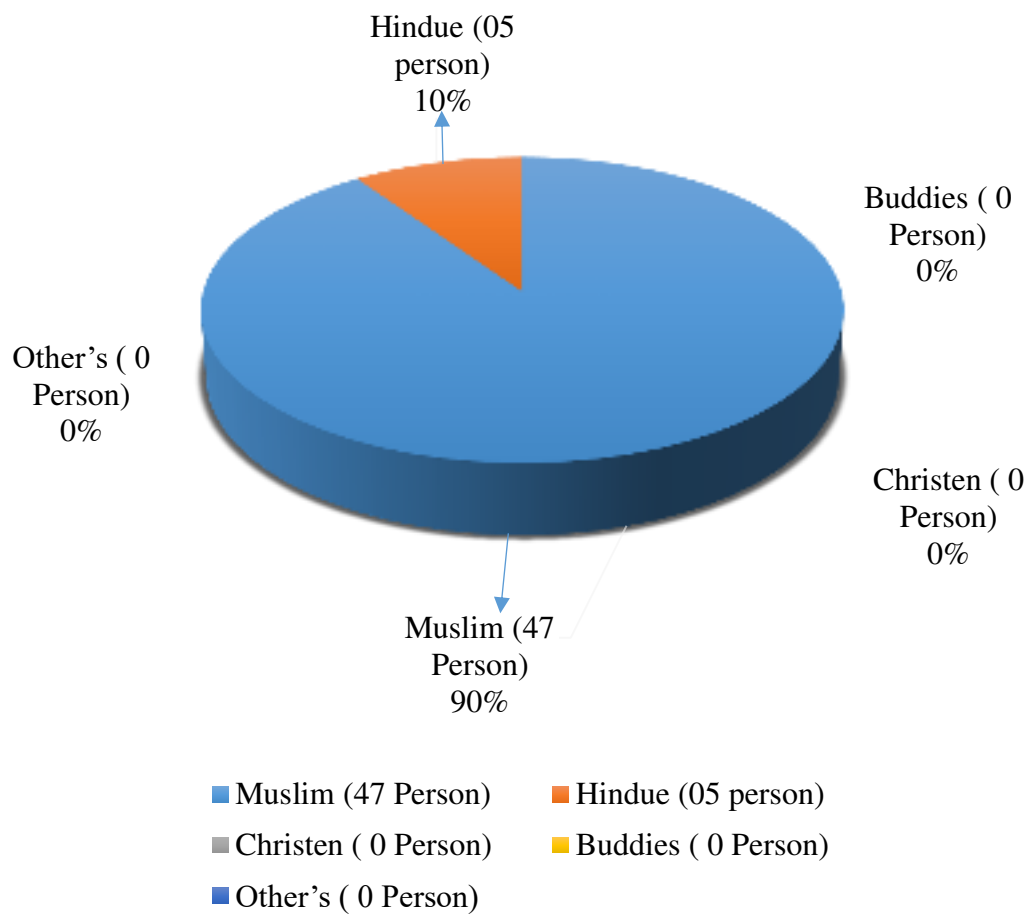
Figure- 3: Distribution of the respondents by religion

4.5 Distribution of the respondents by level of education

It was found that, the respondents of belonged to level of education 21% (n=11) iliterate, 25% (n=13) literate, 27% (n=16) primary and 23% (n=12) secondary.

Education Level

Secondary (12 Person)
23%

Iliterate (11 Person)
21%

Literate (13 Person)
25%

Primary (16 Person)
31%

- Iliterate (11 Person)
- Literate (13 Person)
- Primary (16 Person)
- Secondary (12 Person)
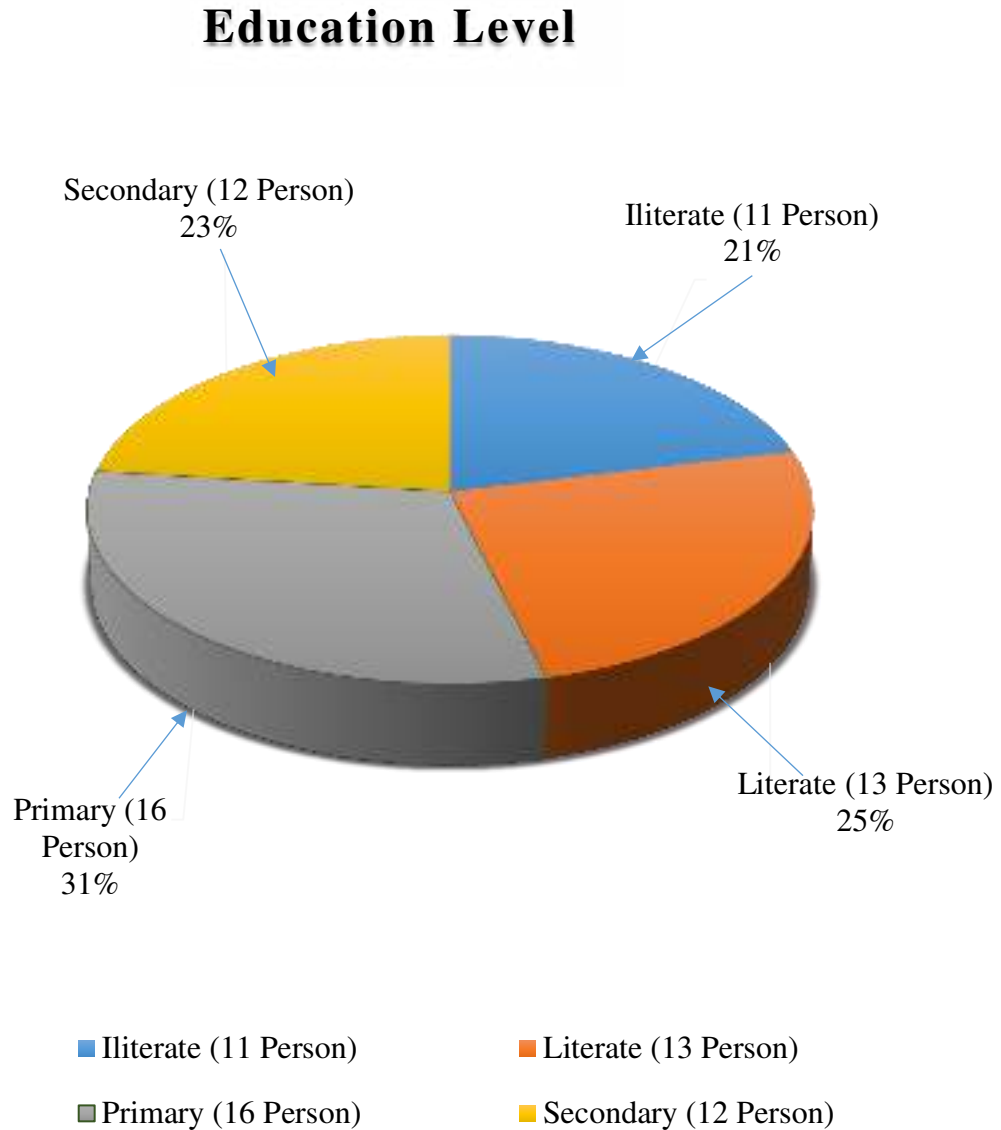
Figure- 4: Distribution of the respondents by level of education

4.6 Distribution of the respondents by Marital status

In this study found that among the respondents, 83% (n=43) were married and 17 % (n=9) were unmarried.
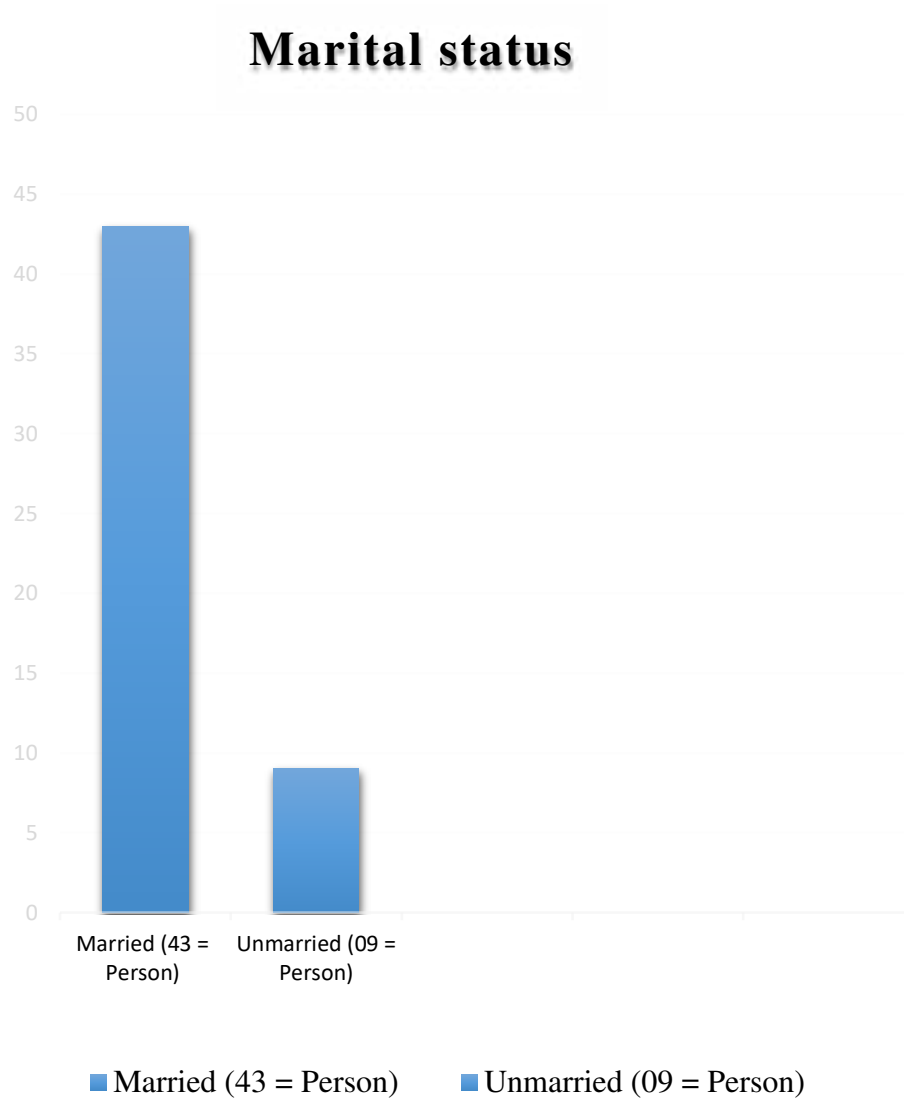
Figure- 5: Distribution of the respondents by Marital status

4.7 Distribution of the respondents by family type

Revels that among the respondents, 87 % (n=45) were nuclear family and 13 % (n=7) were extended family.

Family type

extended family (7 Person)
13%

Nuclear family (45 Person)
87%

■ Nuclear family (45 Person)   ■ extended family (7 Person)
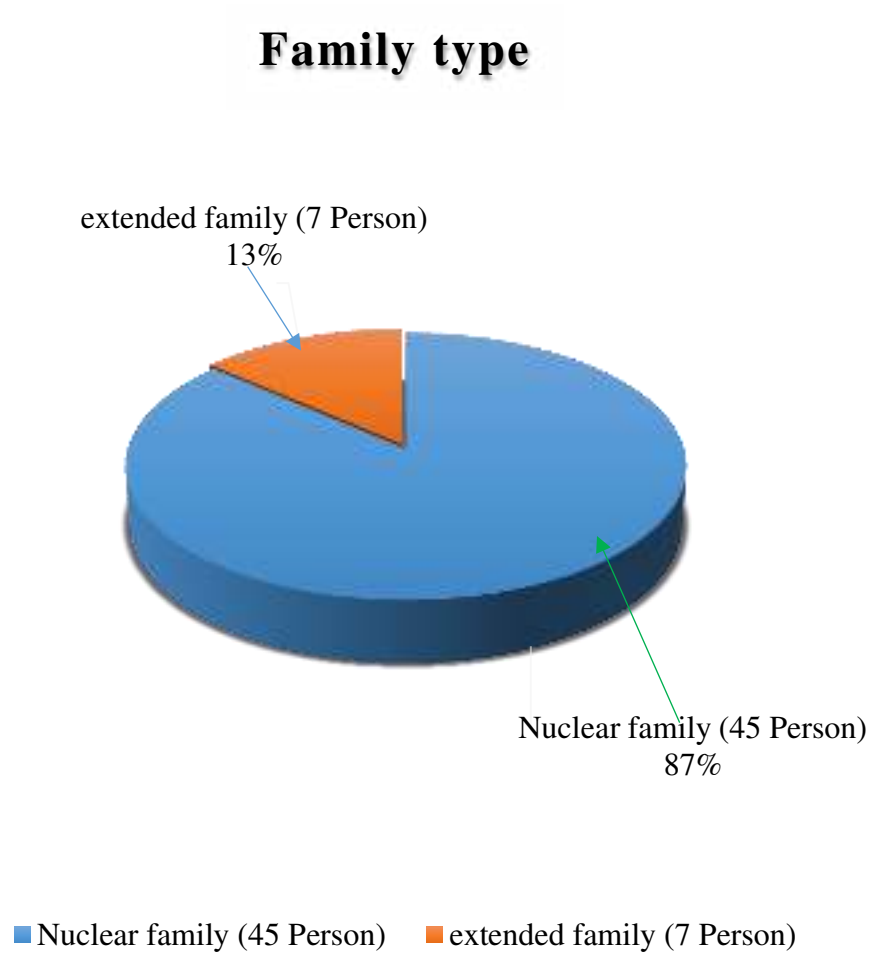
Figure- 6: Distribution of the respondents by family type

4.8 Distribution of the respondents by living area

In this study found that among the respondents, 100 % (n=52) were respond to living in rural area than semi urban area 0 % (n=0) than urban area 0 % (n=0).

Living area

Semi urban area
(0 Person)
0%

Urban area
(0 Person)
0%

Rural area
(52 Person)
100%

■ Rural area (52 Person)   ■ Semi urban area (0 Person)

■ Urban area (0 Person)
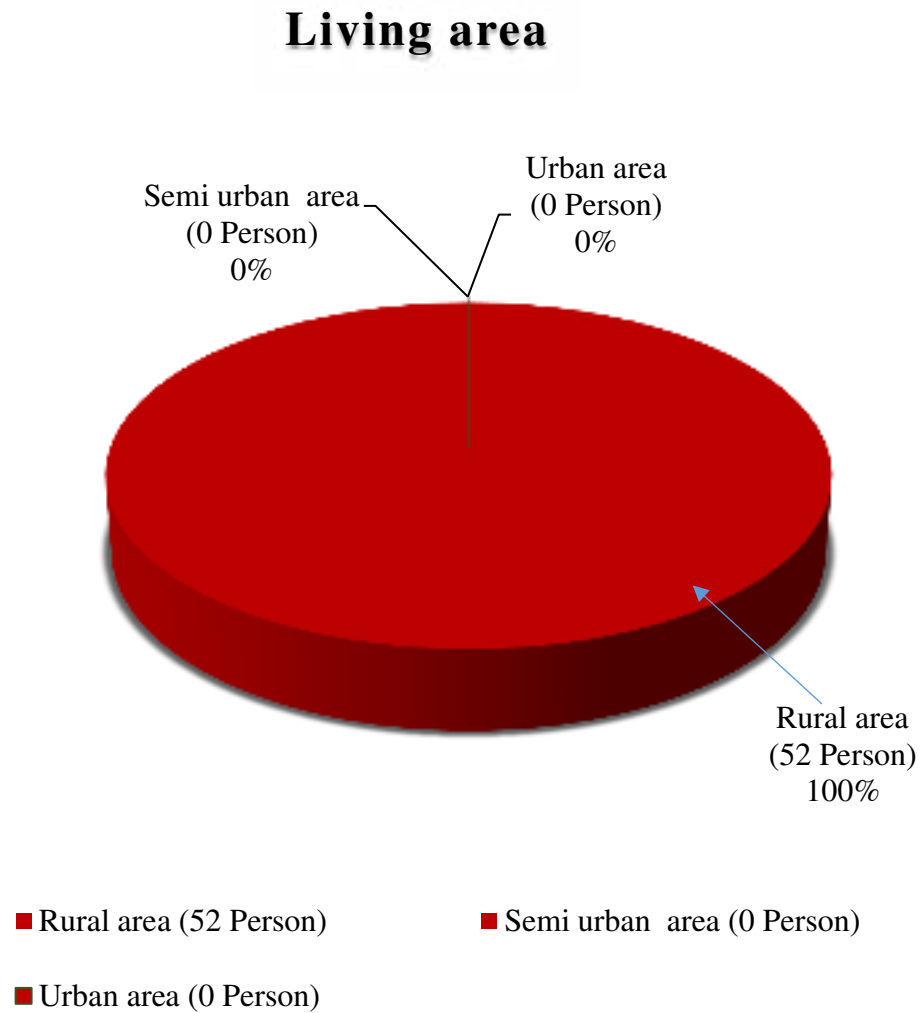
Figure- 7: Distribution of the respondents by living area

4.9: Distribution of the respondents by occupation

In this study found that among the respondents, 100% (n=150) were respond to soil work-
ing.

Occupation

Soil workers
(150 Person)
100%

◼ Soil workers (150 Person)
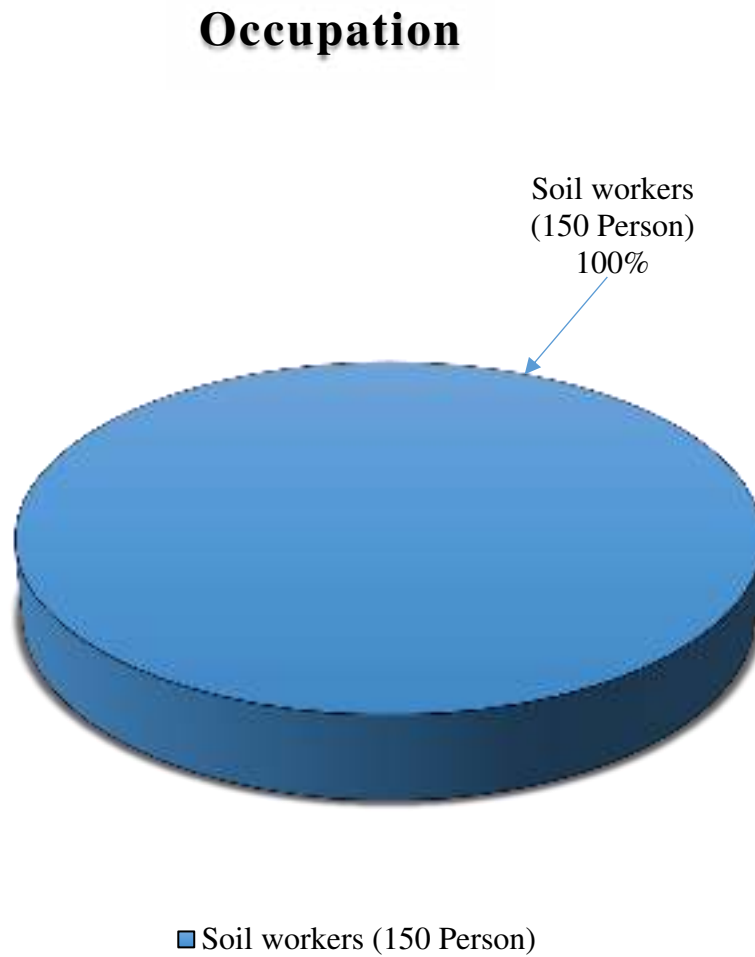
Figure- 8: Distribution of the respondents by occupation

4.10: Distribution of the respondents by BMI

Table no. 2: Frequency distribution BMI of the participants

BMI of the participants	Frequency	
	N	%
14.15-19.81	39	75
20.56-26.31	13	25
Total	52	100.0
	Mean=1.2500	SD=.43724

Frequency distribution of the participants, it was found that 39 (75%) Participants belonged to the BMI of 14.15-19.81 kg, it was also found that 13 (25%) Participants were in the BMI of 20.56-26.31 kg. The mean BMI of the participants was 1.2500 kg and Std. Deviation .43724 kg (Table number-2).

4.11: Distribution of the respondents by Monthly income

Table no. 3: Frequency distribution Monthly income of the participants

Monthly incomes	Frequency	
	N	**%**
9000-15000	48	92.3
16000-18000	4	7.7
Total	**52**	**100.0**
	Mean=30.65,	**SD=9.464**

Frequency distribution of the participants, it was found that 48 (92.3%) Participants belonged to the monthly incomes of 9000-15000 taka, it was also found that 4 (7.7%) Participants were in the monthly incomes of 16000-18000 taka. The mean monthly incomes of the participants was 1.08 and Std. Deviation .269 (Table number-2).

B. Life-style & W0rk-related factors:

4.12: Distribution of the respondents by smoking

In this study found that among the respondents, 100% (n=52) were respond to,17% (n=9) no smoking and 83% (n=43) smoking.
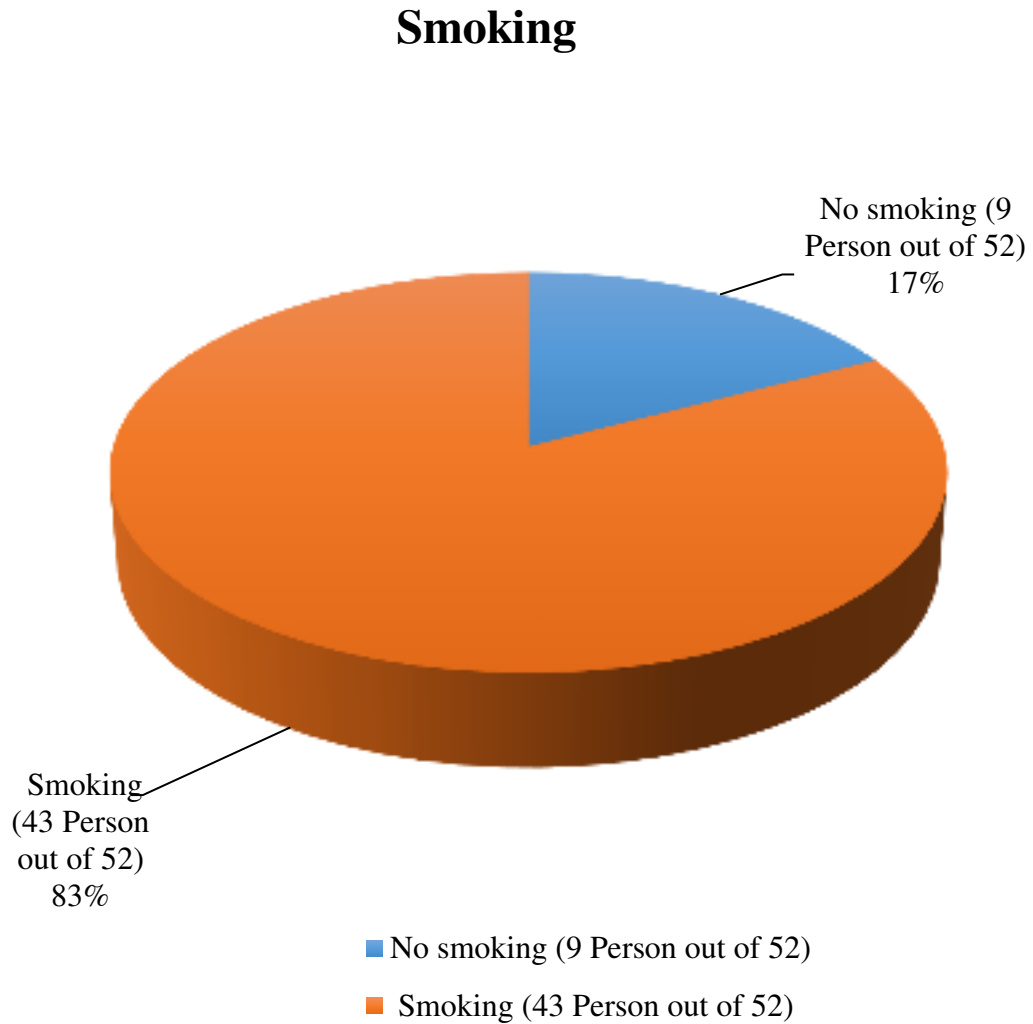
Smoking

Figure- 9: Distribution of the respondents by smoking

4.13: Distribution of the respondents to sleeping disorder

In this study found that among the respondents, 100% (n=52) were respond to, 8% (n=4) have sleeping disorder and 92% (n=48) have no sleeping disorder

Sleeping Disorder

■ Sleeping disorder (4 Person out of 52)
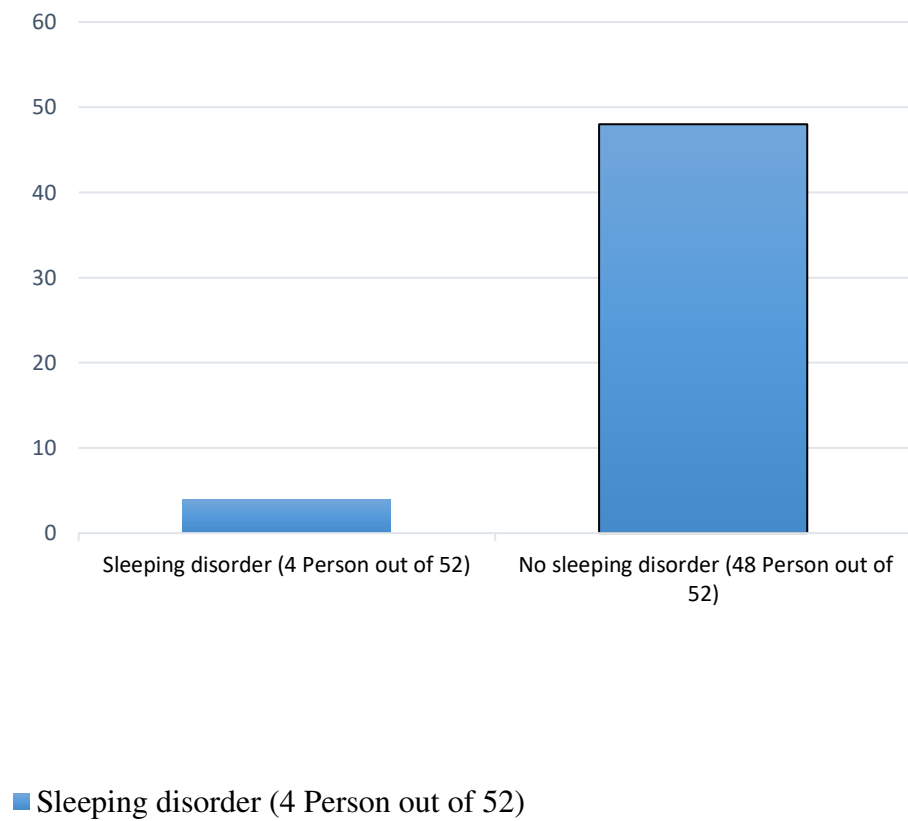
Figure- 10: Distribution of the respondents by sleeping disorder

43

4.14 Distribution of the respondents by working time

In this study found that among the respondents , 100% (n=52) were respond to, 37 % were respond to work in 7 hours, 63 % were respond to work in 12 hours.

Working time

■ working 7 hour (14 Person out of 52)
■ working 12 hour (38 Person out of 52)
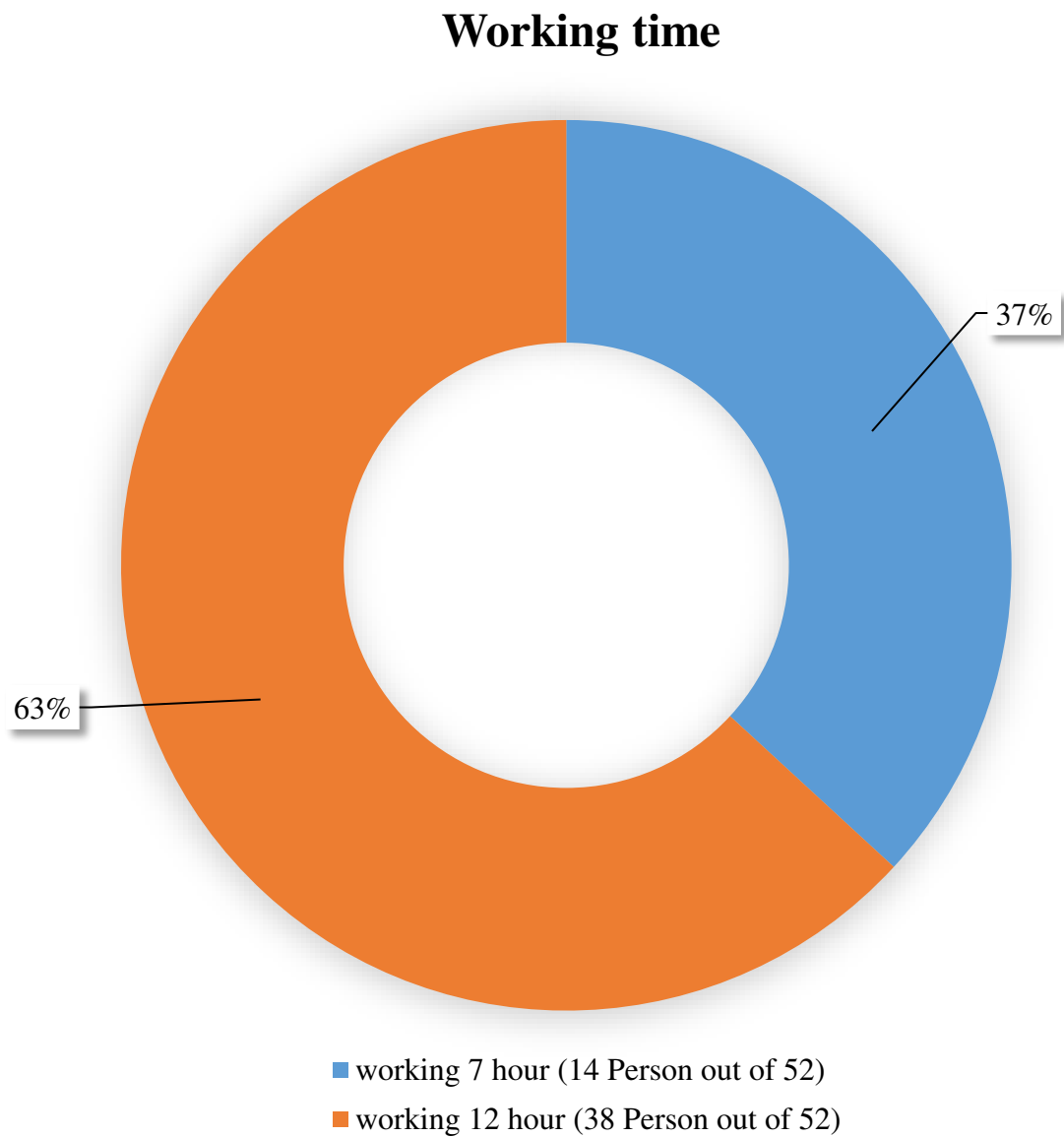
Figure- 11: Distribution of the respondents by working time

4.15: Distribution of the respondents by taking any treatment

In this study found that among the respondents, 100% (n=52) were respond to 79% (n=41) were respond in taking treatment than not taken treatment 21% (n=11).

Taking treatment
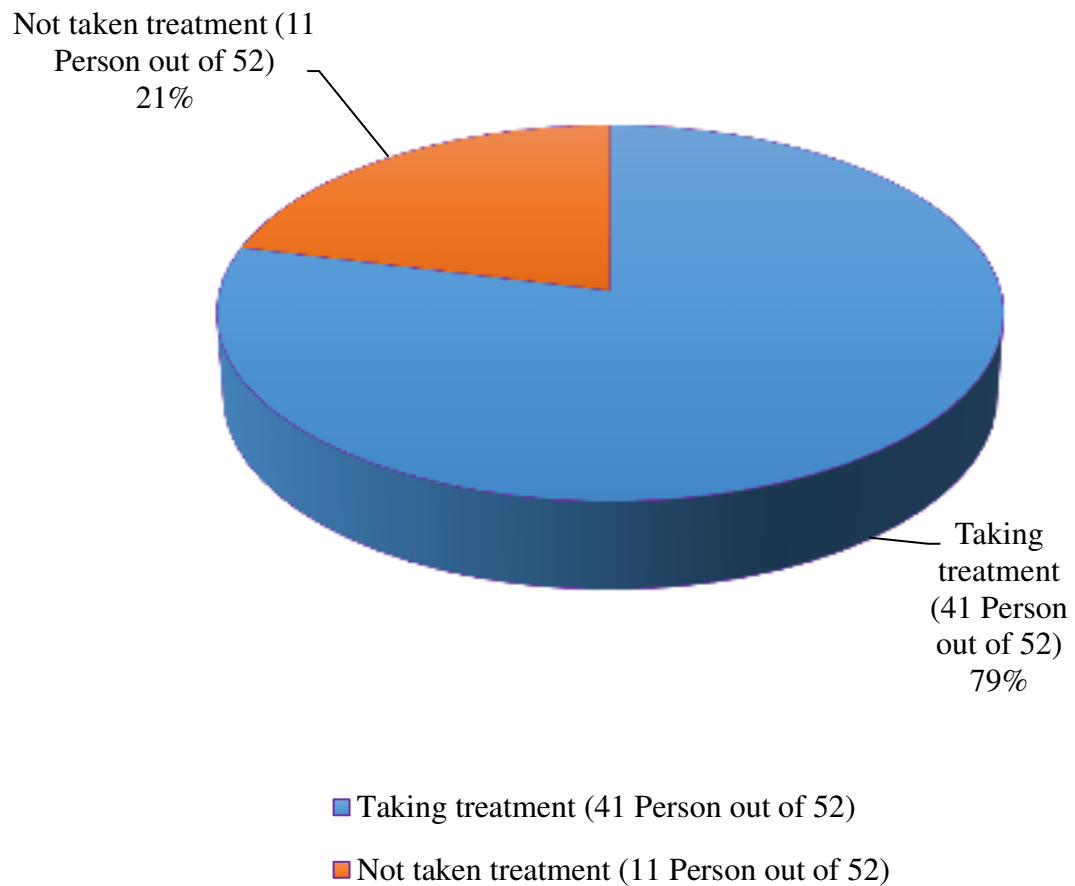
Figure- 12: Distribution of the respondents by taking any treatment

4.16 Distribution of the respondents by types of treatment

In this study found that among the respondents, 100% (n=41) were respond to 21% (n=9) taking Conservative treatment, than 21% (n=6) taking Ayurvedic medicine treatment , than 21% (n=19) taking Allopathic medicine treatment, than 21% (n=4) taking Homeopathic medicine treatment, than 0% (n=0) taking Surgery treatment, than 79% (n=3) taking physiotherapy treatment .

Types of treatment

- Conservative treatment taking 9 person out of 41
- Ayurvedic medicine treatment taking 6 person out of 41
- Allopathic medicine treatment taking 19 person out of 41
- Homeopathic medicine treatment taking 4 person out of 41
- Surgery treatment taking 0 person out of 41
- physiotherapy treatment taking 3 person out of 41
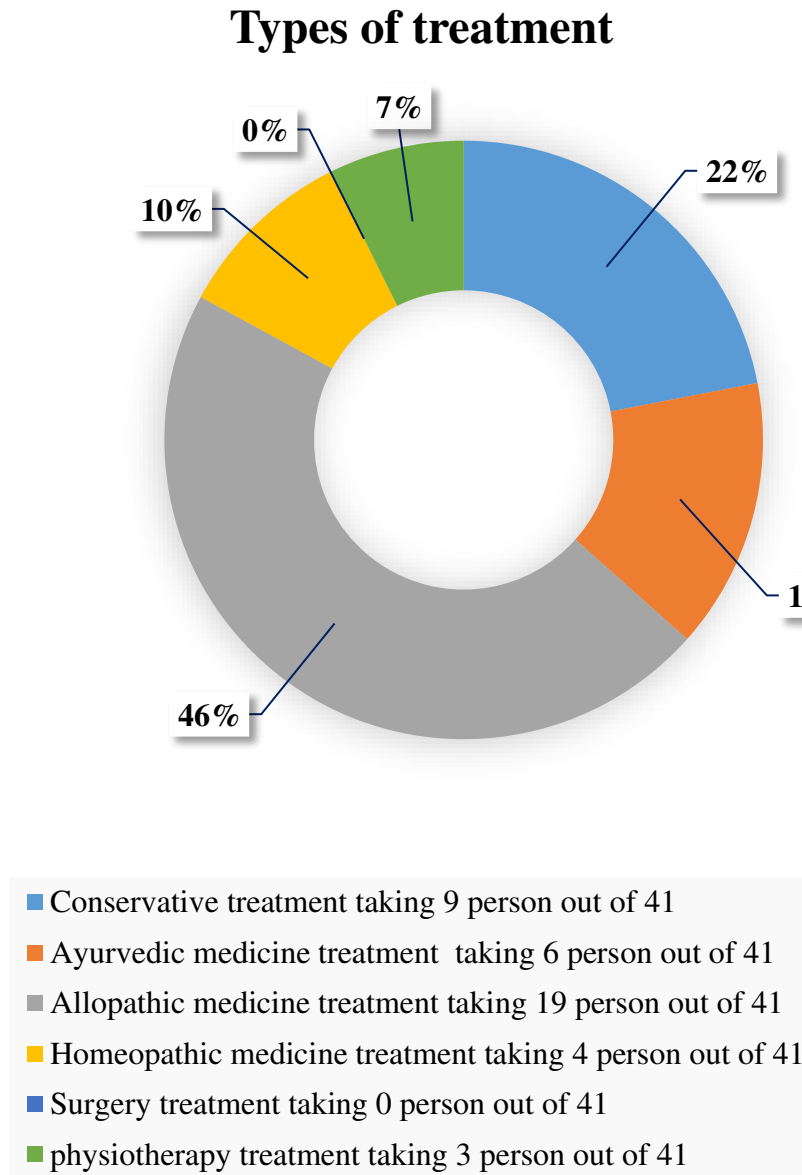
Figure- 13: Distribution of the respondents by types of treatment

4.17 Distribution of the respondents by Visual analogue scale (VAS) and numeric rating scale (NRS) for assessment of pain intensity.

Revels that among the respondents, 100% (n=150) were respond to, 0 % (n=98) were no pain (0) in VAS scale than 52.9 % (n=39) were mild pain (1-3) in VAS scale, than 52.9 % (n=13) were moderate pain (4-6) in VAS scale, than 0% (n=0) were severe pain (7-10) in VAS scale.

VAS and NRS scale

■ No pain (0) in VAS scale 98 person out of 150 participant
■ Mild pain (1-3) in VAS scale 39 person out of 150 participant
■ Moderate pain (4-6) in VAS scale 13 person out of 150 participant
■ Severe pain (7-10) in VAS scale 0 person out of 150 participant
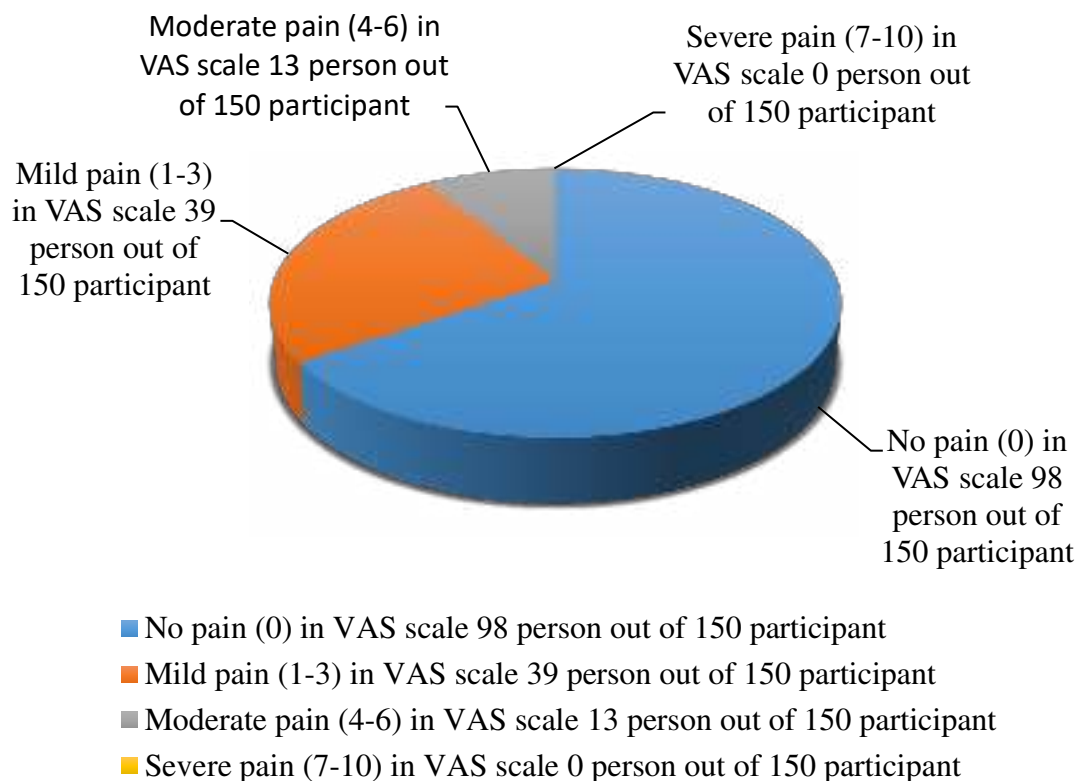
Figure- 14: Visual analogue scale (VAS) and numeric rating scale (NRS) for assessment of pain intensity.

CHAPTER-V	DISCUSSION

According to this study 150 participants were gathered as sample. Among the 150 participants; approximately respondents, 35% (n=52) were in lbp and 65% (n=98) were not in lbp. Age group of 32.7 % (n=17) 18-25years, 44.2% (n=23) 26-35 years, 13.5 % (n=7) 36-45 years, and 9.6% (n=5) 46-52 years and Mean=30.65, SD=9.464.

Another study showed that seventy-four out of a total of 80 humans participated in the observe. The prevalence of low returned pain amongst team of workers changed into 46%. The very fine preva-lence of back pain (69%) modified into recorded amongst nursing personnel, accompanied through secretaries/administrative body of workers (55%) and cleaners/aides (47%). Heavy physical art work (45%), horrible posture (20%) and prolonged status or sitting (20%) were the maximum common sports recommended to be associated with low again pain amongst these humans (Omokhodion,et al., 2000).

Another study showed that the prevalence of low back pain is excessive amongst health care personnel. In EU nations and the us, low lower back pain is one of the most not unusual and luxurious health problems amongst fitness care employees. In step with different research, the lifetime occurrence of low returned ache is 66.6% among healthcare people elderly between 30 and 49 years. Decrease again ache is likewise related to psychosocial elements along with (pressure, lack of sleep, and fatigue at some point of the day) (Rezaei,et al., 2021).

Low back pain (LBP) is vast health problems not handiest in adults however also inside the young. In research exploring populations of three hundred children or greater, the lifetime prevalence of LBP has ranged from 30% to 51%. In adolescence, 1–15% from weekly lbp. 4–6 comorbidity of the signs and symptoms has been reported (Hakala et al., 2006).

According to this study 100% (n=52),17% (n=9) no smoking and 83% (n=43) smoking. 100% (n=52) , 8% (n=4) have sleeping disorder and 92% (n=48) have no sleeping disorder.

Another study showed that the annual occurrence of low again ache become 44.1%, and it became more common among Saudi people (67.9%) in comparison with non-Saudi employees (35.1%). Multivariate evaluation indicated considerable institutions between low again ache and nationality (relative chance = 1. 93; 95% confidence c language = 1.29–2.88), smoking (rr = 1. 85; 95% ci = 1.20–2.83) and aerobic exercise (rr = 2.37; 95% ci = 1.19–4.71). Spearman rank correlation showed correlation between the symptom pain scale and smoking (rs = 0.259; p = 0.008), and exercise became associated with decrease ache scale ratings (rs = −zero.241, p = zero.0.5) (Al-Otaibi, Al-Salameen and Abugad, 2019).

According to this study 100 % (n=52), 75 % (n=39) BMI14.15-19.81kg , 75 % (n=39) BMI 20.56-26.31 kg and Mean=1.2500, SD=.43724 .

Another study showed that lbp prevailed in 79.3% of the studied group of working nurses. The very best per-centage became located among nurses working in the ICU (95.0%) and the least amongst those operating inside the outpatient clinics (64.0%). There was a notably great association be-tween lbp and frame mass index (BMI) (p < 0.001). A better occurrence of LBP changed into associated with lifting heavy loads, followed by using twisting, extended standing, extended sitting, on foot for lengthy distances, and bending ahead (Elsoud,et al., 2014).

The median length until sustainable go back to work turned into 88 days within the integrated care organization compared with 208 days inside the traditional care organization (p=0.003). Incorporated care become effective on go back to paintings (risk ratio 1.9, 95% confidence c program language period 1.2 to two.8, p=zero.004). After one year, sufferers in the included care institution improved appreciably extra on functional popularity as compared with patients inside the ordinary care institution (p=0.01). Improvement of ache among the companies did not vary notably (Lambeek,et al., 2010).

A complete of nineteen intervention departments (n = 10 with mental workloads, n = 1 with a mild physical workload, n = 4 departments with bodily and intellectual workloads, and n = 4 with heavy physical workloads) have been recruited for participation, and the reach among operating organization contributors who participated was high (87%). Constancy and pleasure towards the pe programme rated by means of the running group participants turned into good (7.3 or better). The same became discovered for the stay work ergo coach schooling. In overall, 66 ergonomic measures have been prioritized with the aid of the running organizations (Driessen,et al., 2010).

Lower back ache is a prime occupational health problem in many nations [anonymous, 1976; svensson and andersson, 1983, 1989; broberg, 1984; anderson, 1986; svane, 1987; gervais and hebert, 1987; abenhaim and suissa, 1987, 1988; buny and gravis, 1988; stubbs, 19911. But, because of special case definitions and outcome degree-ments, it is frequently hard to examine take a look at consequences. Though, it's miles apparent that returned ache may be very not unusual amongst employees in many countries and accounts for a huge wide variety of lost workdays and massive fees (How Ran Guo,et al., 1995).

Another study showed that evidence-primarily based care was widespread by using 65% of injured people. In comparison with folks that elected standard care, those employees had less time without work paintings, spent much less time on modified obligations and had fewer recurrences. A substantially greater proportion (70%) resumed regular duties immediately, and fewer advanced persistent pain, than the ones guy-aged underneath ordinary care. Three varieties of sufferers had been recognized: folks turements of LBP in comparison with quarterly and yearly retrospective measurements of LBP on a collection stage. However, the bland Altman plots found out that within individuals, the distinction among month-to-month measurements of LBP and quarterly and every year retrospective measurements of LBP become especially variable. For both quarterly and yearly do not forget, social aid from colleagues and common LBP days were extensively related to the re-name bias (Rasmussen, Holtermann and Jorgensen, 2018).

According to this study ,81% (n=42) Male and 19 % (n=10) Female. 90% (n=47) Muslim ,10 % (n=5) Hindu, 0 % (n=0) Christen, 0 % (n=0) Buddies, 0 % (n=0) Other's. 21% (n=11) illiterate, 25% (n=13) literate, 27% (n=16) primary and 23% (n=12) secondary. 83% (n=43) married and 17 % (n=9) unmarried. 87 % (n=45) nuclear family and 13 % (n=7) extended family. 100 % (n=52) living in rural area, 0 % (n=0) semi urban, 0 % (n=0) urban area. 100% (n=150), 92.3% (n=48), mi 9000-15000 taka, 7.7% (n=4) mi, 16000-18000 taka and Mean=30.65, SD=9.464. 100% (n=52) , 37 % work in 7 hoursly, 63 % work in 12 hoursly.

Another study showed that the 771 office people, 648 spoke back (84% return price). Most of the people of the participants had been girls (75.8%). Among all responders, 33%, 37.8%, 41.8%, and 69.6% offered with point, one-12 months, -year, and lifetime occurrence respectively. Sleep disturbances due to pain were stated in 37% of the workplace clerks with chronic low again pain. More than one logistic regression fashions have discovered that vast determinants for predicting lbp prevalence are age, gender, frame mass index, body distance from computer display, adjustable back support, clerk body role even as sitting, sitting time of greater than 6 hours, process satisfaction, repetitive paintings, and anger for the duration of ultimate 30 days (Spyropoulos, 2007).

22.6% of individuals without any CLBP to start with presented with clbp five years later, whilst 53.7% of participants with CLBP at baseline had CLBP at the second collection. Sporting heavy masses, the lack of reputation of finished paintings and productiveness-associated income expected a higher chance of occurrence of CLBP. But, no enormous affiliation between occupational elements and the hazard for persistence of CLBP became observed, whilst the chance was improved via for records of despair and rheumatological activities. Roc curves confirmed the massive contribution of occupational elements to occurrence of CLBP (Esquirol,et al., 2016).

LBP subjects had extensively decreased once more muscle patience ($p < 0.01$). LBP subjects sat with less hip flexion, ($p = 0.05$), suggesting extended posterior pelvic tilt in

sitting. LBP subjects postured their spines notably in the course in their surrender of variety lumbar flexion in 'not unusual' sitting than the wholesome controls (p < 0.05) (O'Sullivan,et al., 2006).

Msd accounted for 45% of all operating days lost the year prior to follow-up in 2000. Blue-collar workers had notably higher danger than white-collar employees for each quick- and lengthy-term illness absence from msd (lengthy-time period illness absence: rr = 3.04, 95% ci 2.08–4.45). Massive and low back ache in 1998 significantly anticipated each short- and long-term illness absence in 2000. Further, shoulder pain expected long-time period sickness absence. Low social guide anticipated short-term illness absence (rr = 1.28, 95% ci 1. Eleven–1.49) (Morken,et al., 2003).

Eight hundred and forty questionnaires were analyzed, with a response rate of 66%. The 12-month prevalence of low back pain was 38% and the point prevalence was 20%. Low back pain was significantly associated with senior staff grade and smoking. Severity of low back pain was associated with sitting for >three h. Most effective sixteen respondents (5%) stated illness absence because of decrease returned ache within the preceding one year. An entire of 75 days had been lost, a mean of 4.7 days consistent with year (Omokhodion, 2003).

Accoeding to this study, 100% (n=52), 79% (n=41) taking treatment , 21% (n=11) not taken treatment .100% (n=41) taking treatment 21% (n=9) Conservative, 21% (n=6) Ayurvedic, 21% (n=19) Allopathic, 21% (n=4) Homeopathic, 0% (n=0) Surgery, 79% (n=3) physiotherapy treatment . 100% (n=150), in VAS scale 0 % (n=98) no pain (0) , 52.9 % (n=39) mild pain (1-3), 52.9 % (n=13) moderate pain (4-6), and 0% (n=0) severe pain (7-10).

Another study showed that out of 740 contributors, the general incidence of LBP within the beyond 12 months amounted to73.9% (95% ci: 70.7–77.0). The superiority of lbp with neuro-logical symp-toms reached 50.0%. The superiority of lbp necessitating me-dicinal pills and or physiother-apy became 40.5%, at the same time as the superiority of

lbp requiring scientific consultation turned into 20%. Using multivariable logistic regression, the subsequent dan-ger factors had been identified: operating in secondary and tertiary hospitals (aor = 1.32, ninety five% ci:1.01–1.76), extended BMI (aor = 1.10, 95% ci:1.01–3.65), and wonderful history of over exertional returned trauma (aor = 11.50 , 95% ci:4.14–32.08) (Alnaami,et al., 2019).

After adjustment for confounders, Poisson generalized estimation equations showed an extended threat of low once more ache amongst employees within the lowest intercourse precise textile of in line with for mance in the static once more staying electricity exams as compared to humans within the reference category (rr=1.42; 95% ci 1.19 to 1.71), but this turn out to be no longer located for isokinetic trunk lifting electricity or mobility of the backbone (Hambergvan,et al., 2006).

Several limitations and barriers in this study should be considered. The study topic quite new in Bangladesh, so there was no information about the low back pain among the soil workers in Manikganj district. It was felt that the time duration of the research project was limitated. The convenient sampling method was selected because of time limitation. The study conductor had not done any pilot study before conducted research project.

1. The result from this survey could not be generalized to a wider population, as the sample were collected from only Singair thana, Manikganj district.

2. As data collection was done by questionnaire, so there may be problem in validity and reliability of questionnaire. It is a feasible method to collect the data in questionnaire.

3. The research project was done by an undergraduate student and it was first research project. It was only one survey, so that there were some mistakes that overlooked by the supervisor and the honorable teacher.

7.1 Conclusion

This study suggests that soil working is very hard, in percentage 43% participants were suffer from low back pain and 57% participants were not suffering from low back pain and most of the workers are young and less person are old. Male 81% workers are more than female 19% workers. Thy are early married both male and female (married 83% and un-married 17%). Most of the workers are smoking, they work long time of period about 12 hours with standing during bricks decoration for dry and burn, sitting during bricks making, banding during put bricks on van car and bricks dry with sunlight and also processing muddy in male ready for bricks. During all type of working include soil the worker carry heavy load, as a result of mechanical load may be the leading cause of LBP and the pain may mild to moderate or severe. Most of the workers taking allopathic treatment, some are conservatives medicine treatment and are also homeopathic and few physiotherapy treatment.

7.2 Recommendation

Since this study showed there was significant causes of Low back pain among soil workers in Manikganj district. Because of repetitive work so it is need to screen them more thoroughly for musculoskeletal disorders and adapt appropriate rehabilitation measures including their awareness of proper posture and if possible to develop assistive devices and to modify the workstation. In addition, programs should be designed for the elderly and measures taken to prevent and reduce the incidence of low back pain as much as possible.

<table>
<tr><td>CHAPTER-VIII:</td><td>REFERENCES</td></tr>
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Appendix-A

Institutional Review Board (IRB) Permission Letter

Permission letter for data collection
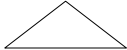
মৌখিক সম্মতি পত্র

আসসালামু আলাইকুম/আদাব,

আমি মোঃ মাহাবুবইসলাম। আমি এই গবেষণা প্রকল্পটি করছি যা আমার ফিজিওথেরাপিতে স্নাতক কার্যক্রম এর অংশ। যার শিরোনাম ' মানিকগঞ্জ জেলায় মাটির শ্রমিকদের কোমরে ব্যাথা।' এর মাধ্যমে মানিকগঞ্জ জেলায় যে সকল মাটি শ্রমিকদের কোমরে ব্যাথা আছে তা জানতে আগ্রহী। এখন আমি আপনাকে কিছু ব্যাক্তিগত, ব্যাথাজনিত বিষয়ক প্রশ্ন করবো। এতে মোটামোটি ১৫-২০ মিনিট সময় লাগবে।

আমি আপনাকে অবহিত করতে চাই যে, এটি একটি সম্পূর্ণ একাডেমিক গবেষণা এবং অন্য কোন উদ্দেশ্যর জন্য এটি ব্যবহার করা হবে না। গবেষণায় আপনার অংশগ্রহণ আপনার বর্তমান অথবা ভবিষ্যৎ চিকিৎসার উপর কোন প্রভাব ফেলবে না। আপনার প্রদত্ত সমস্ত তথ্য গোপন থাকবে এবং কোন রিপোর্ট বা প্রকাশনার ক্ষেত্রে এর উৎস গোপন থাকবে।

এই গবেষণায় আপনার অংশগ্রহণ স্বেচ্ছাধীন এবং আপনি কোন নেতিবাচক প্রশ্ন ছাড়াই যে কোন সময় এই গবেষণা থেকে নিজেকে প্রত্যাহার কওে নিতে পারবেন। আপনার অধিকার আছে কোন প্রশ্নের উত্তর না দেওয়ার বা আপনার পছন্দ মত বা ইচ্ছেমত উত্তর দেয়ার।

যদি আপনার এই গবেষণা সম্পর্কে অথবা অংশগ্রহণকারী হিসেবে কিছু জানার থাকে তবে, আপনি আমার সথে যোগাযোগ করতে পারেন অথবা আমার গবেষণা অধীক্ষক, ডাঃ কুতুবউদ্দিন লেকচারার ফিজিওথেরাপি বিভাগ, সাইক কলেজ অব মেডিকেল সাইন্স এন্ড টেকনোলজি (এস. সি. এম. এস. টি.), মিরপুর-১৪, ঢাকা ।

তাহলে এই সাক্ষাৎকারে আমি আপনার সম্মতি পেলাম ?

হ্যা △   না △

অংশগ্রহনকারীর স্বাক্ষর এবং তারিখ:..

সাক্ষাৎকার গ্রহণকারীর স্বাক্ষর এবং তারিখ :..

ফিজিওথেরাপিস্টের স্বাক্ষর এবং তারিখ:..

Consent Form (English)

Assasalamu Alaikum / Adab, I am ; I am conducting this thesis for my B.Sc. In Physio-therapy Program titled "Low Back Pain Among Soil Workers in Manikganj district" by this I would like to know the Low Back Pain Among Soil Workers In Manikganj district. Now I want to ask some personal, pain related question. This will take approximately 15-20 minutes.

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

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

If you have any query about the study or your right as a participant, you may contact with me and/ or my research supervisor, Md. Kutub Uddin, Lecturer, Department of physiother-apy, Saic College of Medical Science and Technology, Mirpur-14, Dhaka-1216.

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

Yes △   No △

Signature and date of the Participant…………………………...

Signature and date of the Interviewer………………………….

Signature and date of the Physiotherapist…………………………

Appendix-D

প্রশ্নাবলী (বাংলা)

শিরোনাম

মানিকগঞ্জ জেলায় মাটি শ্রমিকদের মধ্যে কোমরে ব্যাথা

উত্তর দাতার ক্রমিক নম্বর ঃ [   ]

তারিখ:...সময়ঃ...

উত্তর দাতার নামঃ...

ঠিকানাঃ..

মোবাইল নম্বরঃ...
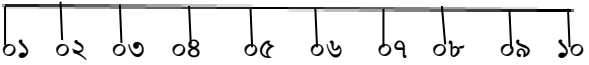
ক. সামাজিক জনসংখ্যার তথ্য সম্পর্কীত প্রশ্ন ঃ

ক্রমিক নং	প্রশ্ন	প্রতিক্রিয়া	কোড
০১	অংশগ্রহণকারীর বয়স	.................বছর	
০২	অংশগ্রহণকারীর লিঙ্গ	১ = পুরুষ ২ = মহিলা	
০৩	অংশগ্রহণকারীর ধর্ম	১ = মুসলিম ২ = হিন্দু ৩ = খ্রীষ্টান ৪ = বৌদ্ধ ৫ = অন্যান্য	
০৪	শিক্ষাগত যোগ্যতা	১ = নিরক্ষর ২ = অক্ষর ৩ = প্রাথমিক বিদ্যালয় ৪ = উচ্চ বিদ্যালয়	
০৫	বৈবাহিক অবস্থা	১ = বিবাহিত ২ = অবিবাহিত	

০৬	পারিবারের ধরন	১ = ছোটপরিবার	
		২ = বড় পরিবার	
০৭	বসবাসের স্থান	১ = গ্রাম	
		২ = মফস্বল	
		৩ = শহর	
০৮	পেশা (মাটি শ্রমিক)	১ = হ্যাঁ	
		২= না	
০৯	বি.এম.আই.	......................কেজি	
১০	মাসিকআয়	......................টাকা	

খ. জীবন ধরন ও কাজ সম্পর্কীত প্রশ্ন ঃ

১১	আপনি কি ধুমপান করেন ?	১ = হ্যাঁ	
		২= না	
১২	আপনার কি ঘুমে সমস্যা আছে ?	১ = হ্যাঁ	
		২= না	
১৩	আপনি দৈনিক কত সময় মাটির কাজ করেন ?	....................ঘন্টা	
১৪	আপনার কি কোমরে ব্যাথা আছে ?	১ = হ্যাঁ	
		২= না	
১৫	কি ধরনের ব্যাথা ?	১ = হালকা ব্যাথা	
		২ = সহনীয় ব্যাথা	
		৩ = তীব্র ব্যাথা	
		৪ = খুব তীব্র ব্যাথা	
		৫ = যন্ত্রণাদায়ক ব্যাথা	
১৬	আপনি কি কোন চিকিৎসা নিয়েছেন ?	১ = হ্যাঁ	
		২= না	
১৭	আপনি কি ধরনের চিকিৎসা নিয়েছেন ?	১ = রক্ষণ শীল	
		২ = আয়ুরবেদিক	

			৩ = এলোপ্যাথিক	
			৪ = হোমিওপ্যাথিক	
			৫ = অপারেশন	
			৬ = ফিজিওথেরাপি	
১৮	ভাস এবং এন.আর.এস স্কেল দ্বারা ব্যাথা পরিমাপ করন ঃ ০১ ০২ ০৩ ০৪ ০৫ ০৬ ০৭ ০৮ ০৯ ১০		০ = কোন ব্যাথা নাই ১-৩ = হালকা ব্যাথা ৪-৫ = সহনীয় ব্যাথা ৬-৭ = তীব্র ব্যাথা ৮-৯ = খুব তীব্র ব্যাথা ১০ = যন্ত্রণাদায়ক ব্যাথা	

English Questionnaire

Title

Lowback pain among soil workers in Manikganj District

Respondent ID: [   ]

Date:………../…………..../…………………...,Time:……………………………………

Name of respondent:…………………………………………………………………………

Address:………………………………………………………………………………………

Mobile number:………………………………………………………………………………
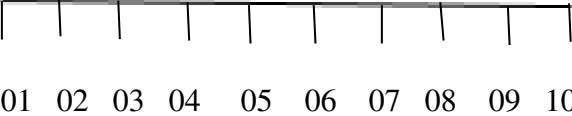
A. Socio Demographic Information:

Si.no.	Question	Response	Code
01	Age of the participants	…..………years	
02	Sex of the participants	1=Male 2=Female	
03	Religion of the participants	1=Muslim 2=Hindue 3=Christen 4=Boddios 5=Other,s	
04	Education level of the participants	I=Iliterate 2=Literate 3=Primary 4=Secondary	
05	Marital status of the participants	1=Married 2=Unmarried	

06	Family type of the participants	1=Nuclear 2=Extended	
07	Living area of the participants	1=Rural 2=Semi-urban 3=Urban	
08	Occupation of the participants	1=Soil worker 2=Others	
09	BMI (Hight in cm, weight in kg) of the participants	…………………………….Kg	
10	Monthly income of the participants	.................................BDT	

B. Life style & Work related question:

11	smoking of the participants	1=Yes 2=No	
12	Sleeping problem of the participants	1=Yes 2=No	
13	Working time of the participants	1=7hours 2=12hours	
14	Low back pain of the participants	1=Yes 2=No	
15	Types of pain of the participants.	1=Mild pain 2=Moderate pain 3=Severe pain 4=Very severe pain 5=Excruciating Pain	
16	Have you taken any treatment?	1=Yes 2=No	
17	What type of treatment have you taken?	1=Conservative 2=Ayurvedic 3=Allopathic	

		4=Homeopathy	
		5=Surgery	
		6=Physiotherapy	
18	Visual analogue scale (VAS) and numeric rating scale (NRS) for assessment of pain intensity. 01 02 03 04 05 06 07 08 09 10	0=No pain 1-3=Mild pain 4-5=Moderate pain 6-7=Severe pain 8-9=Very severe pain 10=Excruciating Pain	☐

Bangladesh Map

Gantt Chart of Study

Activities	Jan, 23	Feb, 23	Mar, 23	Apr, 23	May, 23	Jun, 23
Selection of Topic	▇					
Literature Review	▇	▇	▇	▇		
Research Proposal		▇				
Pre-test of Questionnaire			▇			
Data collection			▇	▇		
Data analysis				▇	▇	
Report writing					▇	▇