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PREVALANC OF MUSCULOSKELETAL DISORDERS AMONG TRADITINAL FARMER

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PREVALANCE OF MUSCULOSKELETAL DISORDERS AMONG TRADITINAL FARMER

Submitted by Moasena Akter for partial fulfillment of the requirements for the degree of Bachelor of Science in Physiotherapy (B. Sc.PT).

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DECLERATION

I declare that the work presented here is my own. All the sources used have been cited appropriately. Any mistake or inaccurate 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.

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parents and family members for their sincere sacrifices and blessings during the entire course of my study.

ABBREVIATIONS

DP	Department of physiotherapy
SPSS	Statically Package for Social Science
IEC	Information, Education and Communication
BMI	Body Mass Index
ADL	Activity of daily living
ROM	Range of motion
VAS	Visual analogue scale
CI	Confidential information
WHOQOL	World health organization quality of life
SD	Standard deviation

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ABSTRACT

Background: Musculoskeletal pain is the pain that affects the muscles, ligaments and tendons, and bones. These are concern as a significant public health problem. **Purpose:** A descriptive type of cross sectional study was conducted to assess the prevalence of musculoskeletal pain among the traditional farmer with a sample size of 100 where age range was 21-61 years. **Methods:** A pre-tested, modified, semi-structure questionnaire was used to collect the data by face to face interview and then these data were entered and analyzed by using SPSS. **Results:** It is found that 17.0%, 32.0%, 39.0%, 11.0% and 1.0% of the respondents belonged to age group of 20-30 years, 31-40 years, 41-50 years, 51-60 years and more than 61 years respectively with mean age $3.47 \pm .939$ years. This study indicated Among the respondent 22% farmers are neck pain , 82% are back pain , 5% are dorsal pain , 28% are shoulder pain , 1% are elbow pain , 3% are wrist pain , 56% are hip pain , 68% are suffering from knee pain , 7 % are ankle pain .Among the participant 14% are suffered mild pain before treatment , 79% are suffered moderate pain before treatment , 7% are suffered severe pain before treatment .On the study 97% farmer are receiving medication and 19% patient are receiving physiotherapy**.** **Conclusion:** To developed musculoskeletal pain Illiteracy, lack of knowledge about occupational diseases, low economic condition and poor working facilities.

Key words: Musculoskeletal pain, low back pain, farmer,

CHAPTER-I INTRODUCTION

1.1 Background:

war is not good national data on the extent of these injuries and illnesses either within agriculture or relative to other industries, there is growing evidence that this problem likely exceeds all other types of injury and disease in the agricultural industry (Basher A et al., 2015).

Farming activities lead to awkward physical postures. These postures are: leaning, kneeling, crawling, bending, twisting to one side and repeated work that can result in physical stress and traumatic injuries. According to the results low back pain is the major problem among farmers caused during collection of harvests from farm. Stature and age of farmers have considerable role in prevalence of farmer's musculoskeletal disorders (Ahmed et al., 2015).

Farming is an occupation that predisposes individuals to health problems including musculoskeletal disorders. Farming is generally perceived, by both farmers and the general public, as a healthy outdoor occupation. The reality, however, is that farming is a hazardous activity which presents a range of threats to health. In addition to their physical effects, MSDs affect the psychosocial status of individuals and impact on their families (Osborn et al., 2010).

To determine the prevalence of musculoskeletal disorders among farmers and to establish the most common regional MSDs reported. Musculoskeletal disorders are defined as a group of disorders that affect the musculoskeletal system including the nerves, tendons, muscles, and supporting structures such as intervertebral discs. MSDs affect millions of people around the world and are the most common cause of severe long-term pain and physical disability (Aoife et al., 2012).

Musculoskeletal Disorders are prevalent and the impact is pervasive across a wide spectrum of occupations, as is evident from numerous studies conducted across the globe Musculoskeletal Disorders are prevalent in communities across the globe and their impact is pervasive. Musculoskeletal Disorders could result in pain, injury, illness, poor quality of life and reduced productivity (Gupta et al., 2013).

A scrutiny of occupational profile of population in India where maximum population depends for their livelihood on agriculture only points out that women make up 46 percent of total agriculture work force and there is hardly any activity in agriculture except pouching and household chores in which women are not actively involved. This a study was conducted on sixty farm women to identify the extent of musculoskeletal problems in them (Nidhi et al., 2013).

Farming is an occupation that predisposes individual to health problems including musculoskeletal disorders. Farming is a hazardous activity which presents a range of threats to health. MSDs affect millions of people around the world and are the most common cause of severe long-term pain and physical disability. In addition to their physical effects, MSDs affect the psychosocial status of individual and impact on their families and careers (Sarker et al., 2016).

Back pain is the most prevalent occupational health problem experienced by much of the world's workforce. However, agricultural work-related back pain occurring among US farmers working on small operations or family farms is usually not included in surveillance. With data collected by Colorado Farm Family Health and Hazard Surveillance Survey, this study reports characteristics of and risk factors for back pain among adult farmers living in eight Colorado counties (Xiang et al.,1999).

Farming has been considered a high-risk occupation for musculoskeletal disorders. The farmers reported significantly more symptoms affecting the hands and forearms, low

back, and hips than did the non-farmers, and a non-significant trend in the same direction was found for symptoms from the neck, shoulders, and knees. However, the farmers did not seek medical advice more often than the referents, and they reported significantly less sick leave for these problems (Holmberg et al., 2002).

Farming is a physically arduous occupation and this places farm workers at potential risk of musculoskeletal disorders such as osteoarthritis of the hip and knee, low back pain, neck and upper limb complaints, and hand-arm vibration syndrome. There is also weaker, but suggestive evidence that farmers more often have knee OA and LBP than workers in occupations with fewer physical demands (Walker et al., 2002).

1.2 Justification of Study

Musculoskeletal Disorders are prevalent and the impact is pervasive across a wide spectrum of occupations, as is evident from numerous studies conducted across the globe Musculoskeletal Disorders are prevalent in communities across the globe and their impact is pervasive. Musculoskeletal problems among farmer population are not infrequent. Emerging data suggest that agriculture faces a near epidemic of musculoskeletal disorders.

It covered reports addressing the problems associated with the prevalence of low back pain and musculoskeletal disorders among farmers. The review confirmed that the prevalence of back pain is significantly higher in farmers exposed to whole body vibration than in the control group not exposed to vibration. The results of the study suggest that the repeated or constant exposure to mechanical shocks may increase the risk of low back pain.

Ergonomists identified poor ergonomic risk factors that may lead to musculoskeletal disorders including poor postures of the shoulders, wrists, neck, low back, and knees. Severe flexion and lifting of heavy loads were common across farms. While many of the concerning risk factors identified were similar to those in other parts of the world, one was unique in this population - deep knee flexion while weeding, harvesting, and sorting.

1.3 Research question

What is the prevalence of the musculoskeletal disorder among traditional farmer?

1.3 Objectives of the Study

1.3.1 General Objective

To determine prevalence of musculoskeletal disorders among traditional farmer

1.4.2 Specific Objectives

To find out the socio-demographic factors of the respondents.

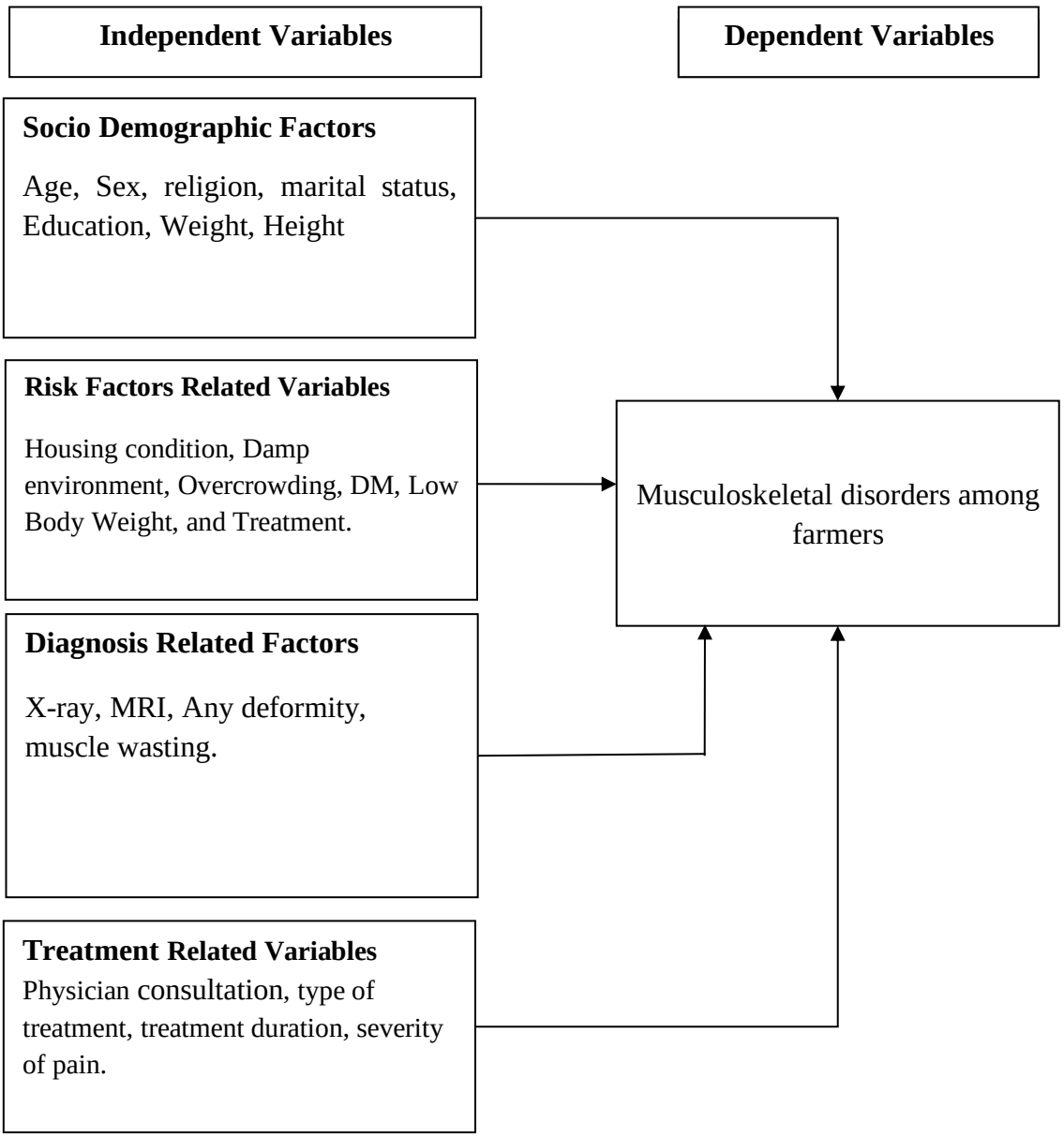
To determine the risk factors associated with musculoskeletal disorder.

To identify the diseases related factors of the respondents.

To assess the diagnosis of the respondents.

To find out knowledge regarding of musculoskeletal pain.

1.5 Conceptual Framework;



1.6 Operational definition

Musculoskeletal disorders:

Musculoskeletal disorders include a group of conditions that involve the nerves, tendon, muscles and supporting structures such as intervertebral disc. They represent a wide range of disorders, which can differ in severity from mild periodic symptom to sever chronic and debilitating conditions. Examples include carpal tunnel syndrome, tenosynovitis, tension neck syndrome and low back pain.

Inflammation:

A localized protective reaction of tissue to irritation, injury and infection characteristic by pain, redness, swelling and sometimes loss of function.

Pain:

An unpleasant sensory or emotional experience associated with actual or potential tissue damage or described in terms of such damage.

Low back pain

Pain around the back is called back pain. pain at the lower back due to long our seated in an unchanged position, often with a poor posture, is tight and painful lower.

Intermittent pain

Stopping ceasing for a time; alternately ceasing and beginning again is called intermittent pain.

Radiating pain

Radiating means spreading outwards, radiating pain is pain that starts in one area and spreads until a larger area hurts. Sometimes that is due to the nerve for example, if a nerve get pinched or pulled; it may hurt all along the nerve instead of just at the one spot that got hurt. Sometimes it is due to the bodys attempt to compensate for the injury- for example, if you hurt your ankle, you may feel pain in the opposite leg as you try to avoid patient weight on that ankle.

Numbness

Partial or total lack of sensation in a part of the body; a symptom of nerve damage or dysfunction.

Burning pain

A pain that feels hot, regardless of whether or not the area is physically hot. the sensation of pain and temperature travel along very small nerve fiber called C-fibers. The nerve fiber does not have an insulating myelin sheath. when pain or heat (burning) is felt without a stimulus it may be due to a type of neurologic over sensitivity.

Burning sensation

The experience of heat or burning without a hot stimulus, this can be due to changes in the sensitivity of the nerves that sense heat. Heat and pain sensation travel along small nerves fibers called C fibers. Their sensitivity is regulated by several mechanism in the spinal cord and brain.

CHAPTER-II LITERATURE REVIEW

Questionnaires were mailed out to 499 active farmers of a Farmers' Cooperative in Southeast Kansas. The participation rate was 57.2%. The low back was the anatomical area with the highest prevalence of self-reported work-related pain 37.5%, followed by the shoulders 25.9%, knees 23.6%, and neck 22.4%. Close to 60% of the farmers reported that they experienced farm work-related musculoskeletal disorders symptoms in at least one of the nine body areas in the previous year (Rosecranc et al., 2006).

A large number of workers could not complete their primary education 33.0% to 43.0%and remained below the poverty line 91.3%. From the MSD assessment lower back problem was prevalent 48.8% among the workers when all rice cultivation tasks were consider together, but it was extremely prevalent in reaping job 92.0% and transplantation job 84.0%. So, some free-hand exercise, proper work-rest scheduled and awareness program may be helpful for reducing the MSD and proper handling of

A questionnaire survey of Irish farmers was conducted (Kar et al., 2007).

The study sample comprised 600 farmers 56% had experienced a MSD in the previous year. The most commonly experienced MSDs were back pain 37% and neck/shoulder pain 25%. Other MSDs experienced in the previous year included knee pain 9%, hand-wrist-elbow pain 9% ankle/foot pain 9% and hip pain 8%. Farm enterprise hand tools.[12]was not a factor in influencing the development of musculoskeletal disorders (Osborne et al., 2010).

A cross-sectional survey was conducted among 283 rice farmers in Wangnamkhu subdistrict, Muang district, Phitsanulok province, a rural community in Lower Northern Thailand. The lifetime, 1-years point prevalence rates of LBP were 77%, 56% and 49%,

respectively. No relationship between age and LBP was found. However women 61% had significantly greater 1-year prevalence than men 51%. Ninety-five percent of LBP rice farmers with a mean duration of 292 weeks 5.6 years (Taechasubamorn et al., 2011).

Twenty-four studies fulfilled the inclusion criteria and were incorporated into this review. From these studies, life-time prevalence of any form of MSD among farmers was 90.6% while 1-year MSD prevalence was 76.9%. The majority of studies focused on spinal MSDs with low back pain the most frequently investigated. Life-time LBP prevalence was 75% while 1-year LBP prevalence was 47.8%. The next most common regional MSDs reported were3.6-71.4% upper extremities and 10.4-41% lower extremities (Osborne et al., 2012).

This was a community based cross-sectional study of 310 consenting, adult, full-time farmers, age range 18-58 years sampled, 208 had LBP 67.10%. Low back pain was more prevalent in the 31-40 years age group 49.04%, females 50.96%, those who were non-obese 68.95% or tall 73.2% and those who had practiced farming for a long duration. Severe LBP was significantly ($p<0.05$) linked to 51-60 years (Birabi et al., 2012).

The most frequently reported MSD in farmers and farm workers were located in the lower back 50%, the shoulders 47% and neck 33% among farmers, and in the hands/wrist 41% among farm workers. MSD in the elbows 23% and feet 21% were significantly more frequently reported by farmers than farm workers. In addition, female farm workers had significantly higher reported frequencies of MSD in the upper and lower back 39% than their male counterparts 5%. Milking was perceived as a weakly to moderately physically demanding work task. (Kolstrup et al., 2012).

The measurements showed that the cumulative vibration dose for the selected group of 98 farmers between 15-50 years of work in conditions of exposure to vibration. The back pain 94% of the total number of respondents than academic workers control group 63%; $p < 0.0001$. Also the frequency of back pain in all the three time intervals of employment 15-25, 26-35, 36-50 years is significantly higher in the group of farmers than in the control group ($p < 0.05$) (Solecki et al., 2014).

It covered reports addressing the problems associated with the prevalence of low back pain and musculoskeletal disorders among farmers. The review confirmed that the prevalence of back pain is significantly higher in farmers exposed to whole body vibration than in the control group not exposed to vibration. The results of the study suggest that the repeated or constant exposure to mechanical shocks may increase the risk of low back pain (Solecki et al., 2011).

This paper describes the burden of four major musculoskeletal conditions: osteoarthritis in the knees and hips affects 9.6%. It affects 0.3-1.0% of the general population and is more prevalent among women and in developed countries. Hip fracture is the most detrimental fracture, being associated with 20% mortality and 50% permanent loss in function. Low back pain is the most prevalent of musculoskeletal conditions; it affects nearly everyone at some point in time and about 4-33% of the population at any given point (Woolf et al., 2003).

Agricultural workers are at increased risk for developing osteoarthritis of the hip and knee. Arthritis comprises 10%-12% of the disability referrals to state and national Arability programs. Back pain, joint injury, and orthopedic injury account for another 38%. The ability to perform agricultural job duties is significantly affected by arthritis and lack of access to health care. Obesity is an additional independent risk factor for osteoarthritis in the rural population (Kirkhorn et al., 2003).

Multiple logistic regression analysis was used to identify the risk factors for MSDs. Subjects reported MSDs in the neck or upper extremities 5.89%, lower extremities 19.62% and back 26.9%. Working in animal husbandry significantly increased the risk of MSDs in the neck/upper extremities, compared with irrigation farming odds ratio: 1.837, 95%. The risk of MSDs increased significantly with number of years of farming, after adjusting for age and sex neck/upper extremities, P for trend = .0002; lower extremities, <.001; back, <.001 (Kang et al., 2016).

The levels of leonine-rich alpha-2-glycoprotein, haptoglobin, complement factor B, serotransferrin, one isoform of kininogen, one isoform of alpha-1-antitrypsin, and two isoforms of hemopexin were higher in farmers with MSD than in referents. On the other hand, the levels of alpha-2-HS-glycoprotein, alpha-1B-glycoprotein, vitamin D-binding protein, Apo lipoprotein A1, ant thrombin, one isoform of kininogen, and one isoform of alpha-1-antitrypsin were lower in farmers than in referents (Ghafouri et al., 2016).

Musculoskeletal symptom prevalence varied by age and joint, with the lowest prevalence of 28% for the elbow and the highest prevalence of over 73% for the lower back. The average number of painful joints was 4.15 over the last year, with significantly older farmers experiencing knee pain. Of farmers in the older age 64.6%. Health and safety professionals can use a standardized health and safety checklist to identify areas of concern and increase the safety and health of farmers (Tonelli et al., 2015).

To verify the relevance of the Agricultural Whole-Body Assessment (AWBA) tool, we selected 50 different postures that occur frequently in agricultural work. Our results showed that the AWBA-determined risk levels were similar to the subjective risk levels determined by experts. Moreover, we believe that our verification of the assessment

tools will contribute to the enhancement of the quality of activities designed to prevent and control work-related musculoskeletal diseases in other industries (Kong et al., 2015).

In this cross-sectional population-based study, we investigate LBP comorbidity in terms of coexistent symptoms. A total of 1,013 male farmers, 40-60 years old, and 769 matched rural referents participated in an extensive health survey. In the combined farmer-referent group, the prevalence of LBP was associated with musculoskeletal symptoms other than LBP, chest discomfort, dyspepsia, symptoms from eyes, nose and throat mucous membranes, skin problems, work-related fever attacks, and primary care appointments due to digestive disorders (Holmberg et al., 2005).

Using data from three consecutive cross-sectional national surveys: the Korean National Health and Nutrition Examination Survey 1998 (n = 39,060), 2001 (n = 37,769), and 2005 (n = 34,145). Female farmers had significantly higher chronic disease prevalence than other occupational groups in all three surveys. Arthritis was the most prevalent chronic disease among farmers for both men and women. Farmers showed higher prevalence changes for intervertebral disc disorders than other occupational workers (Cha et al., 2009).

The implications for extension are highlighted, and several recommendations are provided. Small-scale commercial-oriented vegetable farmers (n = 100) from ten of the most populated agricultural areas across Trinidad were surveyed. Most prevalent were musculoskeletal disorders of the lower back and upper body extremities, watery/burning eyes, skin rashes/itching, headaches, fatigue, dehydration, stress, and injuries attributed to slips and falls (Baksh et al., 2015).

Relationships between MSDs and time spent doing farm work were investigated using tests of association. The participation rate was 48.8%. Most 85.6% of participants

reported having musculoskeletal pain in at least one body part over the past year. The lower back was most frequently affected 57.7%, followed by shoulders 44.0%, and neck (39.6%). More serious pain prevented 27.9% of respondents from performing regular work activities (Trask et al., 2015).

Musculoskeletal pain in multiple areas was reported by 925 subjects 91.3%, and low back pain 63.8% was the most frequent site of pain. Farmer's Stress Inventory (mean 77.7 [10.2]; range, 28-112] and subjective stress index (mean 5.3 [2.4]; range, 0-10) in total, 53% of participants had worked in farming for more than 30 years (Baek et al., 2016).

A cross-sectional survey was conducted with 249 rice farmers. The highest prevalence of lower extremity misalignment was foot pronation 36.14%, followed by the abnormal Q angle 34.94%, tibiofemoral angle 31.73%, pelvic tilt angle 30.52%, femoral ante torsion 28.11%, limb length inequality 22.49%, tibial torsion 21.29%, and genu recurvatum 11.24%. In females, the risk factors were abnormal Q angle, tibiofemoral angle, and genu recurvatum. Being overweight was a risk factor for abnormal pelvic tilt angle, Q angle, and tibiofemoral angle (Karukunchit et al., 2015).

A random sample of tobacco farmers was interviewed. Chronic low back pain prevalence was described in relation to independent variables, and associations were examined with Poisson regression. Chronic low back pain prevalence was 8·4%. Increasing age, rearing two or more species of livestock (PR 1·65), exposure to tasks that require heavy physical exertion (PR 2·00), working in awkward postures (PR 1·36), green tobacco sickness (PR 1·63), pesticide poisoning (PR 2·37), and minor psychiatric disorders (PR 2·55) were associated with CLBP (Meucci et al., 2015).

We report the first proven case of osteomyelitis due to Erysipelothrix rhusiopathiae. This infection occurred almost 20 years after traumatic inoculation of the bacterium,

when the patient was gored by one of his cows. Diagnosis was made by bone biopsies, and treatment included rifampicin and levofloxacin for 3 months (Denese et al., 2015). In the multiple regression analysis, the variables found to be associated with LBP included farm size and self-rated health. The odds ratios of LBP were greater among operators of medium and large compared with smaller farms $P < 0.05$. Those who perceived health as 'good' OR = 1.63; 95% CI: 1.14-2.33 by comparison with a rating of 'very good' had greater odds of LBP $P < 0.01$. Some farmers changed work habits, sought help and needed time off work due to LBP (Osborne et al., 2013).

The farmers experienced their first significant episode of LBP in their late 20s or early 30s and all attributed their LBP to farm work or a farm-related incident. Hours worked per day ranged from 9 to 13 hours. Each farmer had his own way of preventing or managing his LBP, including a mix of active self-management and passive coping strategies such as swimming, using ice, spinal manipulation, and taking medication (Osborne et al., 2014).

The purpose of this study was to determine possible effects of 12-week Prop Pilates Exercise Program for the fruit farmers with musculoskeletal disorders on body stability and pain. 131 fruit farmers aged 50 to 65 years old voluntarily participated. As a result, it was found that lateral-medial and anterior-posterior of body stability significantly improved in male and female fruit farmers (Kim et al., 2014).

The results indicated the prevalence of WMSDs among sugarcane farmers in the 7 days before the interview and looking back over the previous 12 months were 82.96% and 88.70%, respectively. Factors significantly associated with reporting WMSDs (P value < .05) during past 12 months were (a) repetitive motions adjusted OR= 1.90; 95% CI = 1.05-3.43, (b) working in awkward postures adjusted OR = 1.95; 95% CI = 1.01-3.77, (c) forceful exertions adjusted OR = 2.78; 95% CI = 1.54-5.02, and (d) stress about

future income adjusted OR = 1.80; 95% CI = 1.02-3.16. Recommendations are made for risk prevention strategies (Phajan et al., 2014).

We found no difference between rates and type of co-morbidities between farmers no farmers. However, the socio demographic differences between farmers and no farmers with CBD may impact the design of effective interventions and have implications for health services planning and health care delivery. The information presented is anticipated to help address the identified need for musculoskeletal disorder prevention in agriculture (Trask et al., 2014).

From the literature it emerges a convincing evidence for an association of arthritis of the hip and work in the agricultural sector, while there is a less evidence when studying knee osteoarthritis and farming. For what concerns cervicobrachial pain, current available epidemiological data are not sufficient to define farmers at risk. Moreover, there is uncertainty about the role of hand-arm vibration as a strong risk factor among farmers (Mattioli et al., 2013).

The analysis of working posture indicated that most of the groundnut cultivation activities needed corrective measures as soon as possible. Most of the groundnut farmers suffered from discomfort at different parts of the body, especially at the lower back 99%, knee 92%, ankle 66%, shoulder 61%, and hand 60% regions. This study also showed that groundnut farmers suffered from excessive thermal 33.4 degrees C and physiological stress (heart rate rose up to 121.5 beats/min, systolic and diastolic blood pressure up to 132 and 80 mm/Hg (Das et al., 2013).

This study it was revealed that the most subjects 99% suffered discomfort at different parts of the body especially at low back 93.8%, shoulder 60.9%, hand 53.6% and knee 80.9% due to awkward posture 99% and excessive repetitive task 95% for a prolonged period of time. Both group of rice farmers suffered maximum discomfort feeling during

digging 87.7%, showing seeds 82.7%, harvesting 90.9% and carrying crops 99% activities (Das et al., 2015).

Ergonomists identified poor ergonomic risk factors that may lead to musculoskeletal disorders including poor postures of the shoulders, wrists, neck, low back, and knees. Severe flexion and lifting of heavy loads were common across farms. While many of the concerning risk factors identified were similar to those in other parts of the world, one was unique in this population - deep knee flexion while weeding, harvesting, and sorting (Kotowski et al., 2014).

Results were expected to support interventions and guidelines for famers on physical behaviors towards minimizing risk of injury as well as validation of the screening approach. Comparison of analyst screening results and farmer pain ratings using self-ratings and interviews. Farmer experience and age were significantly correlated with occurrence of pain and cramping. Less experienced farmers reported less pain in high-risk body parts e.g., neck and lower back (Swangnetr et al., 2014).

A semi-structured questionnaire was used to obtain information on socio-demography, lifestyle, occupation and other risk factors associated with LBP. There were 59.4% female and 40.6% male respondents. The point prevalence of LBP was 46.8%. Occupational activities, previous back injury and tobacco smoking were significant associated factors for the total population (Adetola et al., 2013).

Three hundred and forty-four farmers, aged 20–59 years old, were asked to answer a questionnaire modified from the Standard Nordic Questionnaire. The questionnaire sought demographic, back-related, and psychosocial data. The prevalence of low back pain was 83.1%. Farmers younger than 45 years old who worked in the field fewer than six days were more likely to experience low back pain than those who worked for at

least six days. Farmers with high stress levels were more likely to have low back pain (Petcarat et al., 2015).

Data was summarized using descriptive statistics of mean, range, frequency, standard deviation, percentage. Chi2 and Mann-Whitney-U test were used to find association between variables. The level of significance was set at $\alpha = 0.05$. The 12-month prevalence of LBP among the respondents was 74.4%. Low back pain was described as moderate in 53.4%. Prolonged bending 51.3% was the most related risk factor. A considerable 65.9% of the respondents were unable to continue some of the previously enjoyed activities (Bosedabidemi et al., 2013).

Prevalence of RA-related back pain among women was slightly greater among those who performed farm work than those whose duties were restricted to work in the home, but this difference was not statistically significant. Because of back pain, 38% of men and 30% of women had made "major" changes in work activities; 10% and 8%, respectively, either changed or stopped their work permanently. Dairy farmers were substantially more likely to report back pain 43% than farmers who produced field crops 27%; p=0.058 or raised livestock 25%; p=0.054 (Xiang et al., 1999).

A cross-sectional survey was conducted among 283 rice farmers in Wangnamkhu sub district, Muang district, Phitsanulok province, a rural community in Lower Northern Thailand. The lifetime, 1-years point prevalence rates of LBP were 77%, 56% and 49%, respectively. No relationship between age and LBP was found. However women 61% had significantly greater 1-year prevalence than men 51%. Ninety-five percent of LBP rice farmers with a mean duration of 292 weeks 5.6 years (Taechasubamorn et al., 2011).

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The study shows high 12-months prevalence of LBP 78.7% and point prevalence rate 67.6%. Prevalence was higher among men 55.0% than women. Seventy-four 33.3% of participants reported having LBP one to four years ago, while 16.7% reported LBP onset of less than a year. LBP was experienced almost every day by 19.4% of the farmers. It caused absenteeism in close to half of them 47.3% while over a quarter 28.4% were prevented from going to farm because they could not walk efficiently (Salamatu et al., 2014).

Associations between back pain and potential risk factors were examined in logistic regression models which included age, gender, education levels, perceived stress, main farm activities, smoking, and drinking status. A total 38.4% farmers reported back pain. Two-thirds of those with back pain (66.0%) reported that back pain affected work quantity and quality. The adjusted odds ratios of reporting back pain increased with advancing age (Xiaotong et al., 2012).

Face-to-face 323 Thai rice farmers' interviews were conducted using the 13-item Delphi criteria questionnaire, after which an objective examination was performed using aberrant movement sign, painful catch sign, and prone instability test to obtain information. Individual factors such as sex, body mass index, waist-hip ratio, smoking, and number of years of farming experience. The prevalence of CLI in Thai rice farmers calculated by the method described in this study was 13%. Number of years of farming experience was found to be significantly correlated with the prevalence of CLI odds ratio =2.02, 95% (Puntumetakul et al., 2014).

It covered reports addressing the problems associated with the prevalence of low back pain and musculoskeletal disorders among farmers. The review confirmed that the prevalence of back pain is significantly higher in farmers exposed to whole body vibration than in the control group not exposed to vibration. The results of the study suggest that the repeated or constant exposure to mechanical shocks may increase the risk of low back pain (Solecki et al., 2011).

Data were collected using face-to-face interviews and objective examination and were analyzed using multivariate logistic regression. Of the 433 rubber farmers, the point and 12-month prevalence of LBP in rubber farmers was 33% and 55.7%, respectively. BMI, primary school education, exposure to pesticides, and tapping below knee level were statistically associated with LBP after controlling for other variables. Low back pain is common among rubber farmers. Only four factors were identified as being associated with the high prevalence of LBP (Udom,et al., 2016).

In total 368% of these farmers were interviewed by telephone. In 1992, the one-year prevalence rates of unspecified low-back pain 13.3% and sciatic pain 9.6% were low. Full-time farmers had a significantly higher prevalence of sciatic pain than did part-time or retired farmers. In the logistic regression modelling of sciatic pain in men, the odds ratio was 9.6 for current smokers and 13.1 for ex-smokers as compared to never smokers. Mental stress, body height, body mass index and production factors did not predict unspecified low-back pain or sciatic pain (Manninem et al., 1995).

CHAPTER-III METHODOLOGY

3.1 Study design

It was a descriptive type of cross-sectional study.

3.2 Study area

The study was conducted in Shalikha Thana, Magura.

3.3 study population

The study population was all musculoskeletal disorders among traditional farmer

3.4 Study site

The site was in rural area of Magura district

Location- Shalikha Thana

Type of area – Rural area

3.5 Study period

1st August, 2016 to 30th November, 2016.

3.6 Sample size

Following formula was used to determine the sample size.

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

Here

n = the desired sample size

z = the standard normal deviate usually set at 1.96 which correspondents to 95% confidence level

p = 56% (Estimated proportion of musculoskeletal disorder)

q = 1-p = 1.00-0.56

q = 0.44

d = degree of accuracy desired, usually set at 0.05%.

Now, required sample size

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

$$n = \frac{(1.96)^2 \times 0.56 \times 0.44}{(0.05)^2}$$

= 378.628096

So, required sample size is 379.

As there were limitation of time it was very difficult for the researcher to research toward 379 children, that's why 100 samples were taken by kind permission of Guide.

3.7 Inclusion and Exclusion criteria

Inclusion criteria

1. Both sexes are included
2. Those who were willing to give consent and participate in the interview.
3. Age group > 18 years old

Exclusion criteria

1. Those who were not willing to give consent and participate in the interview.
2. Psychologically handicapped

3.8 Sampling technique

Non randomized purposive sampling technique was applied to collect the data.

3.9 Data collection tools

A structural and semi-structured questionnaire was used to collect the data.

3.10 Data collection technique

From the participant by face to face interview.

3.11 Ethical consideration

Prior to the commencement of this study, the research protocol was approved by the research committee of the academic institution. The aims and objectives of the study along with its procedure, risks and benefits were explained to the respondents in easily understandable local language and informed consent was taken from each. Then it was assured that all information and records will be kept confidential and used only research purpose.

3.12 limitation of the study

As a student, this study conducted my own fund / finance so, there might have some limitation of financial aspect within this study.

There was less time to carry out this study and thus calculated sample could not take.

This study does not represent whole population within country.

This research is a part my academic study and I am not expert on statistical analysis, so there might have poor analysis effect.

My sample size was 379 but I have collected of 100 data for this research.

Problem raised in getting permission.

1.13 Data management and analysis

After collection of data of the respondents were organized. Data was entered into the computer by using Statistical package for the social science (SPSS) Version 16.0. Result is presented by frequency, distribution, range, mean, and percentage. All scores and percentages were computed and presented in tabular form, charts, and graphs as appropriate. Association was analyzed by chi-square test. Finally, the data was interpreted on the basis of study findings.

CHAPTER-IV RESULTS

The cross-sectional type of descriptive study was conducted in musculoskeletal disorder among farmer with a sample size of 100. A pre tested modified interviewer administrated semi structured questionnaires was used to collect the information. Section-A: Socio-demographic characteristics; Section-B: Risk factors related variables, Section-C: Diagnosis related variables and section-D: treatment related variables. All the data were entered and analyzed by using Statistical packages for social science (SPSS) software version 16.0 (Chicago).

The study found that Among the respondent 22% farmers are suffering from neck pain , 82% are back pain , 5% are dorsal pain , 28% are shoulder pain , 1% are elbow pain , 3% are wrist pain , 56% are hip pain , 68% are suffering from knee pain , 7 % are ankle pain .Among the participant 14% are suffered mild pain before treatment , 79% are suffered moderate pain before treatment , 7% are suffered severe pain before treatment

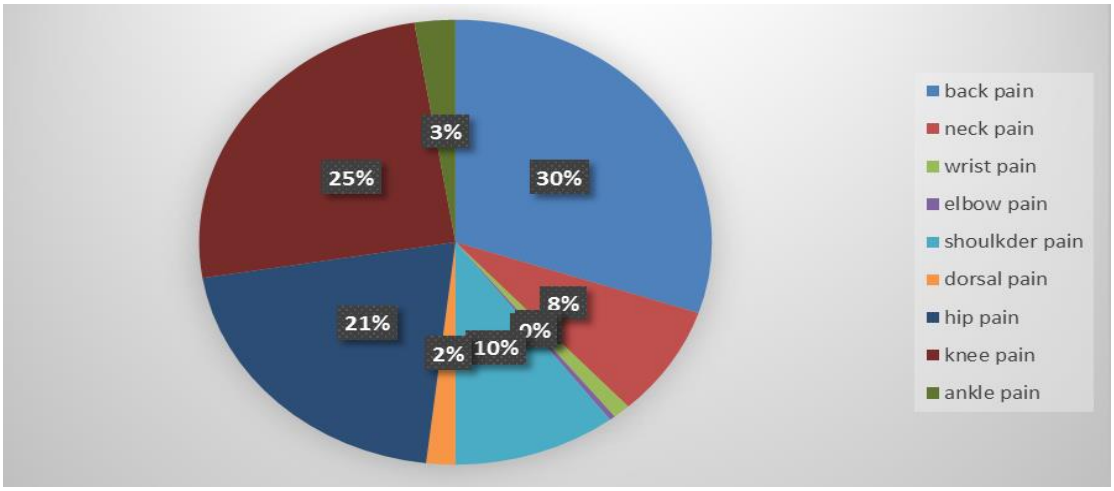

Fig 1: distribution of the disorder rate by respondent

It is found from table no. 1, that 17.0%, 32.0%, 39.0%, 11.0% and 1.0% of the respondents belonged to age group of 20-30 years, 31-40 years, 41-50 years, 51-60yrears and more than 61 years respectively with mean age 3.47 ± .939 years.

Table No. 1: Distribution of the respondents by age (n=100)

Age	Frequency	Percent
21-30	17	17.0
31-40	32	32.0
41-50	39	39.0
51-60	11	11.0
More than 61 years	1	1.0
Total	100	100.0
Mean ± SD	3.47 ± .939	

Shows that among that the respondents 11.0% were <150cm, 44.0% were 151-160 cm, 40.0% were 161-170 cm, and 5.0% were >171 cm.

Table No. 2: Distribution of the respondents by height (n=100)

Height	Frequency	Percent
Less than 150 cm	11	11.0
151-160 cm	44	44.0
161-170 cm	40	40.0
More than 171 cm	5	5.0
Total	100	100.0

shows that among that the respondents 14.0% were below than 2 years, 13.0% were 3-5 years, and 73.0% were missing system

Table No. 03: Distribution of the respondents by if yes how long are you suffering (n=100)

If yes how long are you suffering	Frequency	Percent
Below than 2 years	14	14.0
3-5 years	13	13.0
Missing system	73	73.0
Total	100	100.0

shows that among that the respondents 68.0% were yes, and 32.0% were no

Table No. 4: Distribution of the respondents by others (n=100)

Others	Frequency	Percent
Yes	68	68.0
No	32	32.0
Total	100	100.0

shows that among that the respondents 22.0% were yes, and 78.0% were no.

Table No. 5: Distribution of the respondents by neck pain (n=100)

Neck	Frequency	Percent
Yes	22	22.0
No	78	78.0
Total	100	100.0

shows that among that the respondents 82.0% were yes, and 18.0% were no.

Table No. 6: Distribution of the respondents by back pain(n=100)

Back	Frequency	Percent
Yes	82	82.0
No	18	18.0
Total	100	100.0

shows that among that the respondents 1.0% were yes, and 99.0% were no.

Table No. 7: Distribution of the respondents by elbow pain. (n=100)

Elbow	Frequency	Percent
Yes	1	1.0
No	99	99.0
Total	100	100.0

shows that among that the respondents 3.0% were yes, and 97.0% were no.

Table No. 08: Distribution of the respondents by wrist pain (n=100)

Wrist	Frequency	Percent
Yes	3	3.0
No	97	97.0
Total	100	100.0

T shows that among that the respondents 56.0% were yes, and 44.0% were no.

able No. 09: Distribution of the respondents by hip pain (n=100)

hip	Frequency	Percent
Yes	56	56.0
No	44	44.0
Total	100	100.0

shows that among that the respondents 7.0% were yes, and 93.0% were no

Table No. 10: Distribution of the respondents by ankle pain (n=100)

Ankle	Frequency	Percent
Yes	7	7.0
No	93	93.0
Total	100	100.0

shows that among that the respondents 14.0% were yes, and 86.0% were no.

Table No. 11: Distribution of the respondents by others (n=100)

Others	Frequency	Percent
Yes	14	14.0
No	86	86.0
Total	100	100.0

shows that among that the respondents 97.0% were yes, and 3.0 % were no.

Table No. 12: Distribution of the respondents by medication (n=100)

Medication	Frequency	Percent
Yes	97	97.0
No	3	3.0
Total	100	100.0

shows that among that the respondents 19.0% were yes, and 81.0% were no.

Table No. 13: Distribution of the respondents by physiotherapy (n=100)

Physiotherapy	Frequency	Percent
Yes	19	19.0
No	81	81.0
Total	100	100.0

shows that among that the respondents 14.0% were 1-3 (mild), 79.0% were 4-6 (moderate), and 7.0% were 7-9 (severe).

Table No. 14: Distribution of the respondents by severity of pain before treatment (n=100)

severity of pain before treatment	Frequency	Percent
1-3 (mild)	14	14.0
4-6 (moderate)	79	79.0
7-9 (severe)	7	7.0
Total	100	100.0

shows that among that the respondents 16.0% were 0 (no pain), 69.0% were 1-3 (mild), and 15.0% were 4-6(moderate)

Table No. 15: Distribution of the respondents by severity of pain after treatment (n=100)

severity of pain after treatment	Frequency	Percent
0 (no pain)	16	16.0
1-3 (mild)	69	69.0
4-6 (moderate)	15	15.0
Total	100	100.0

This figure show 5 that among that the respondents, 82.0% were male and 18.0% were female worker

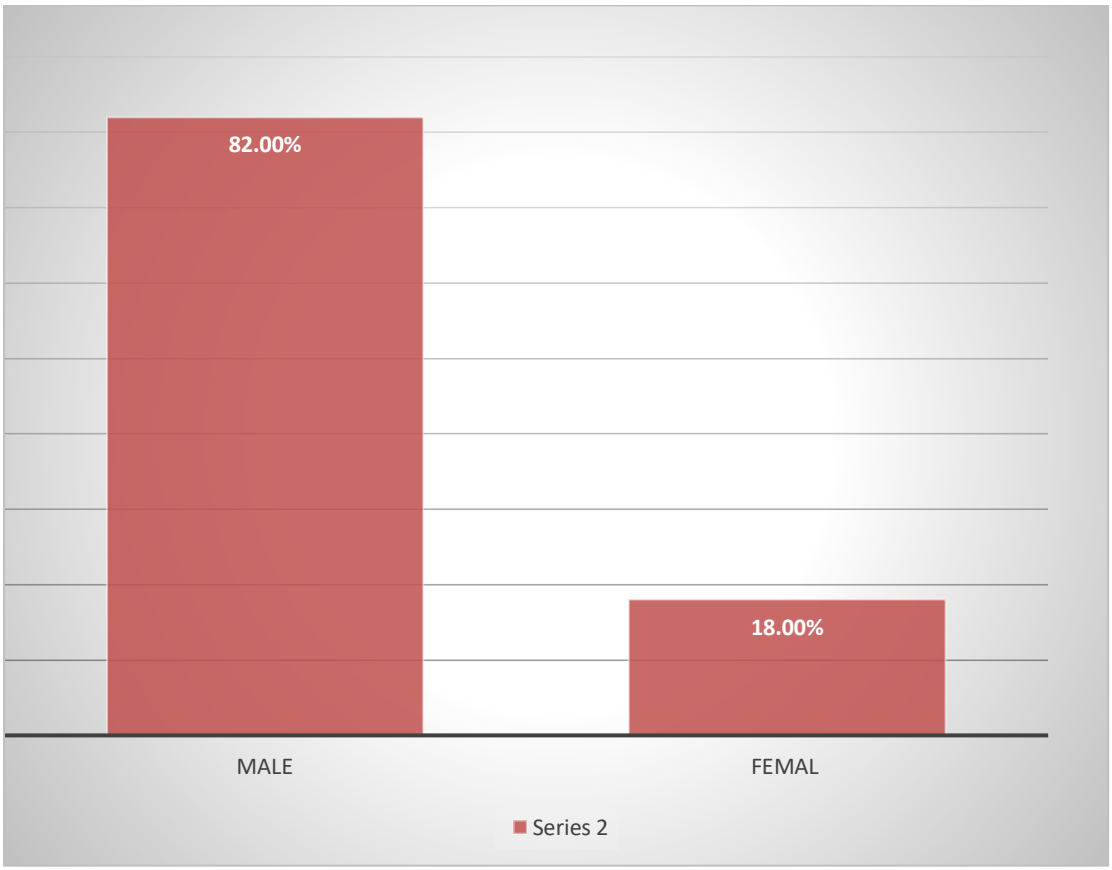

Figure 2: Distribution of the respondents by sex

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Shows that among that the respondents, 87.0% were Muslim and 13.0% were Hindu.

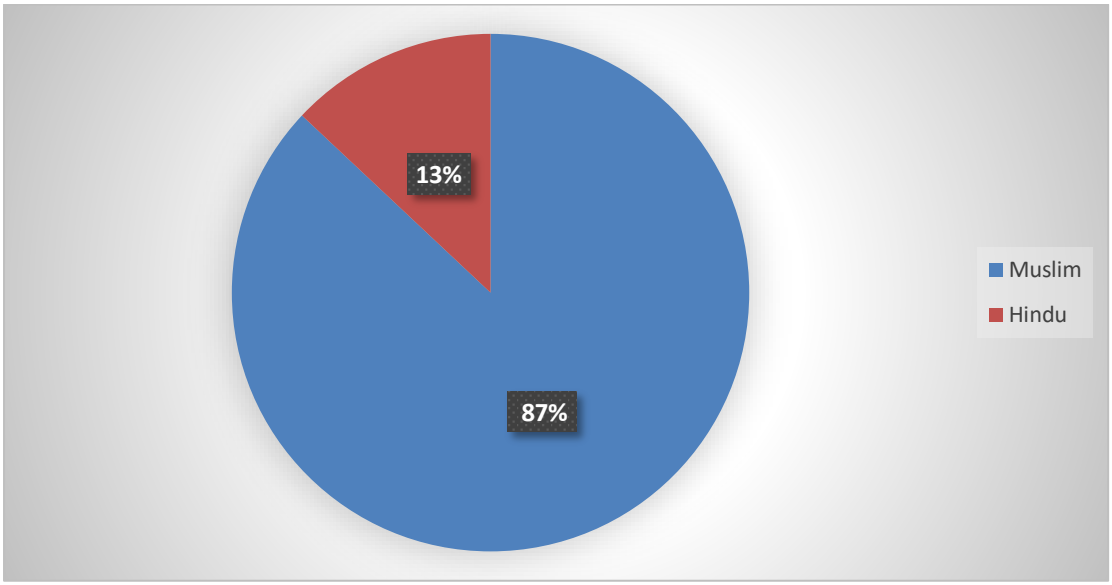

Figure 3 : Distribution of the respondents by religion

Shows that among that the respondents, 87.0% were Muslim and 13.0% were Hindu.

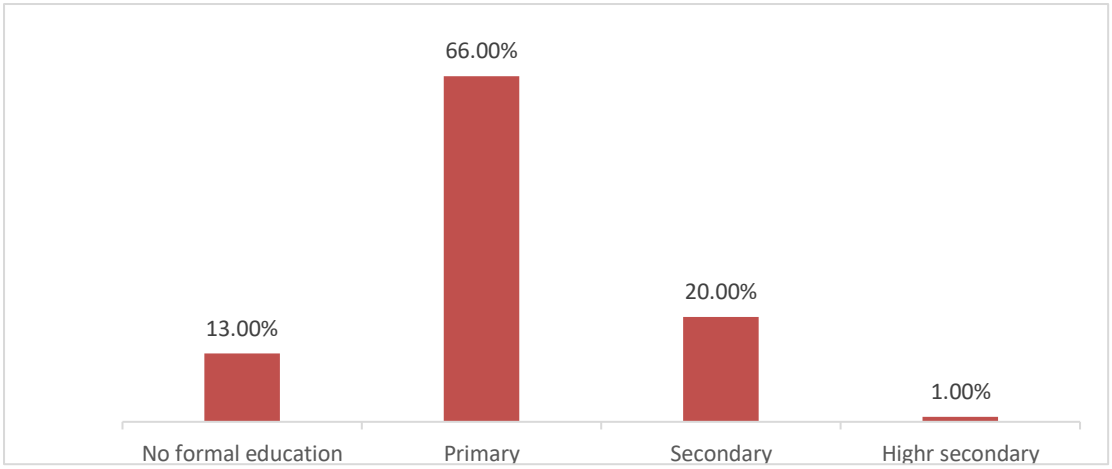

Figure 4 : Distribution of the respondents by educational background

shows that among that the respondents 13.0% were no formal education, 66.0% were primary, 20.0%were secondary, and 1.0% were higher secondary.

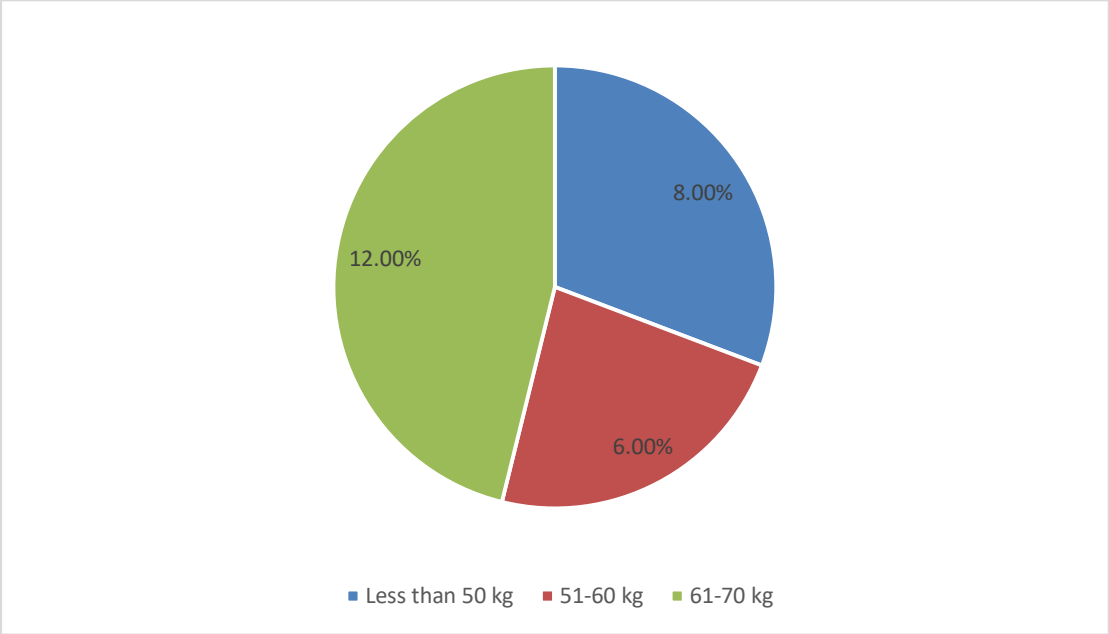

Figure 5 : Distribution of the respondents by weight

shows that among that the respondents 8.0% were <50kg, 60.0% were 51-60 kg, and 12.0% were 61-70 kg

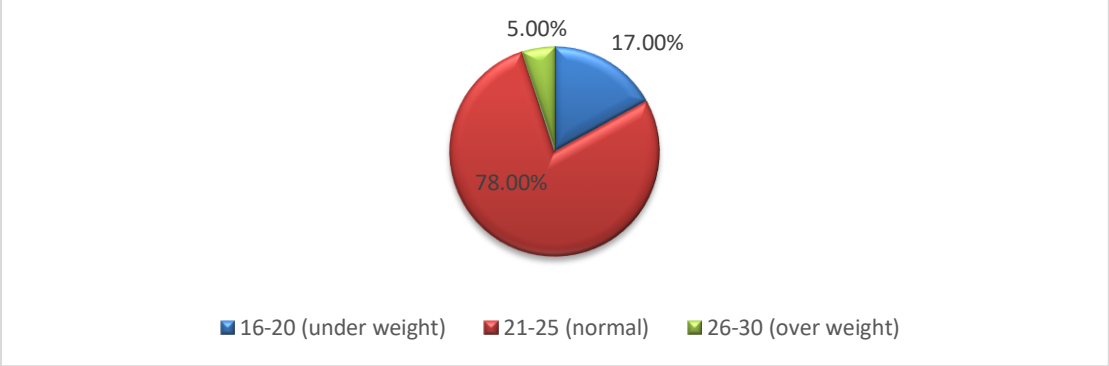

Figure 6: Distribution of the respondents by BMI

shows that among that the respondents 17.0% were 16-20 (underweight), 78.0% were 21-25 (normal), and 5.0% were 26-30 (over weight)

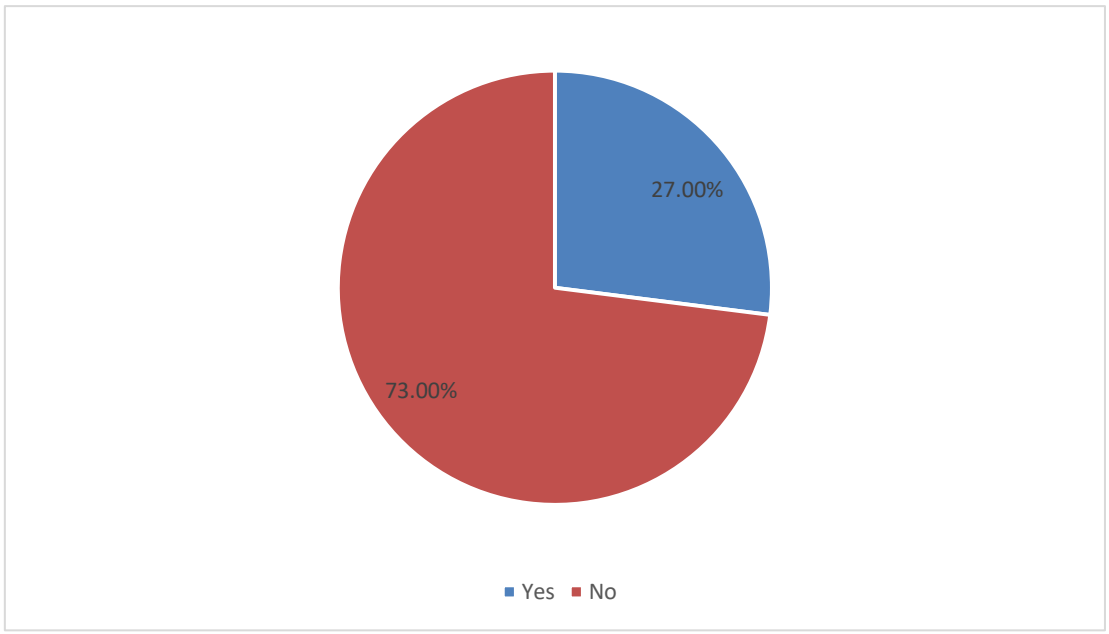

Figure 07: Distribution of the respondents by diabetic mellitus

Shows that among that the respondents 27.0% were yes, and % 73.0were no.

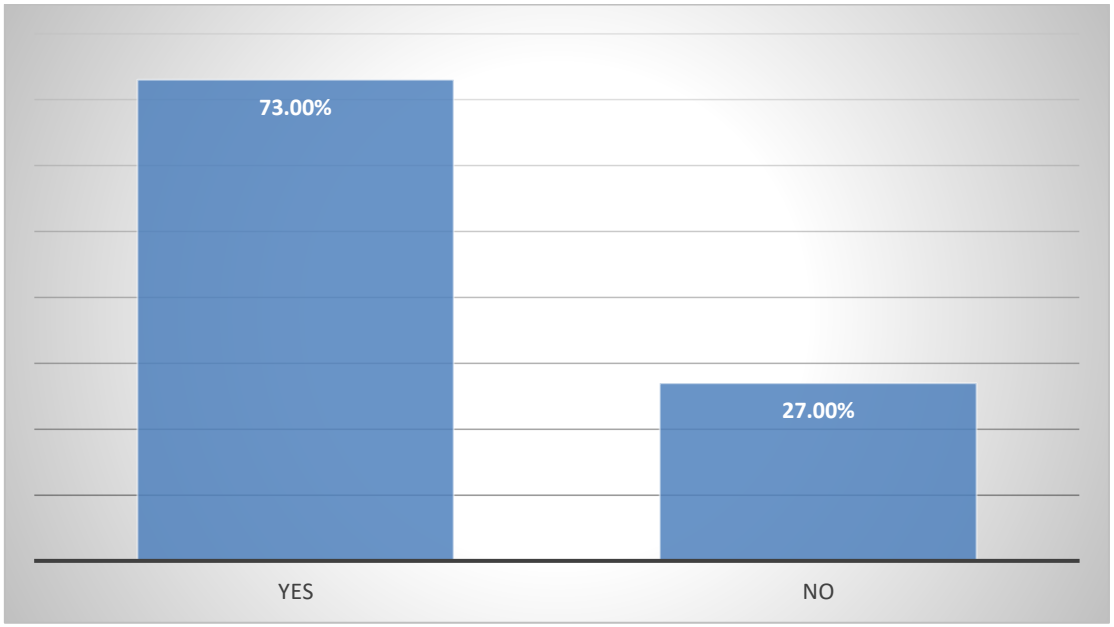

Figure 08: Distribution of the respondents by smoking

shows that among that the respondents 28.0% were yes, and 72.0% were no.

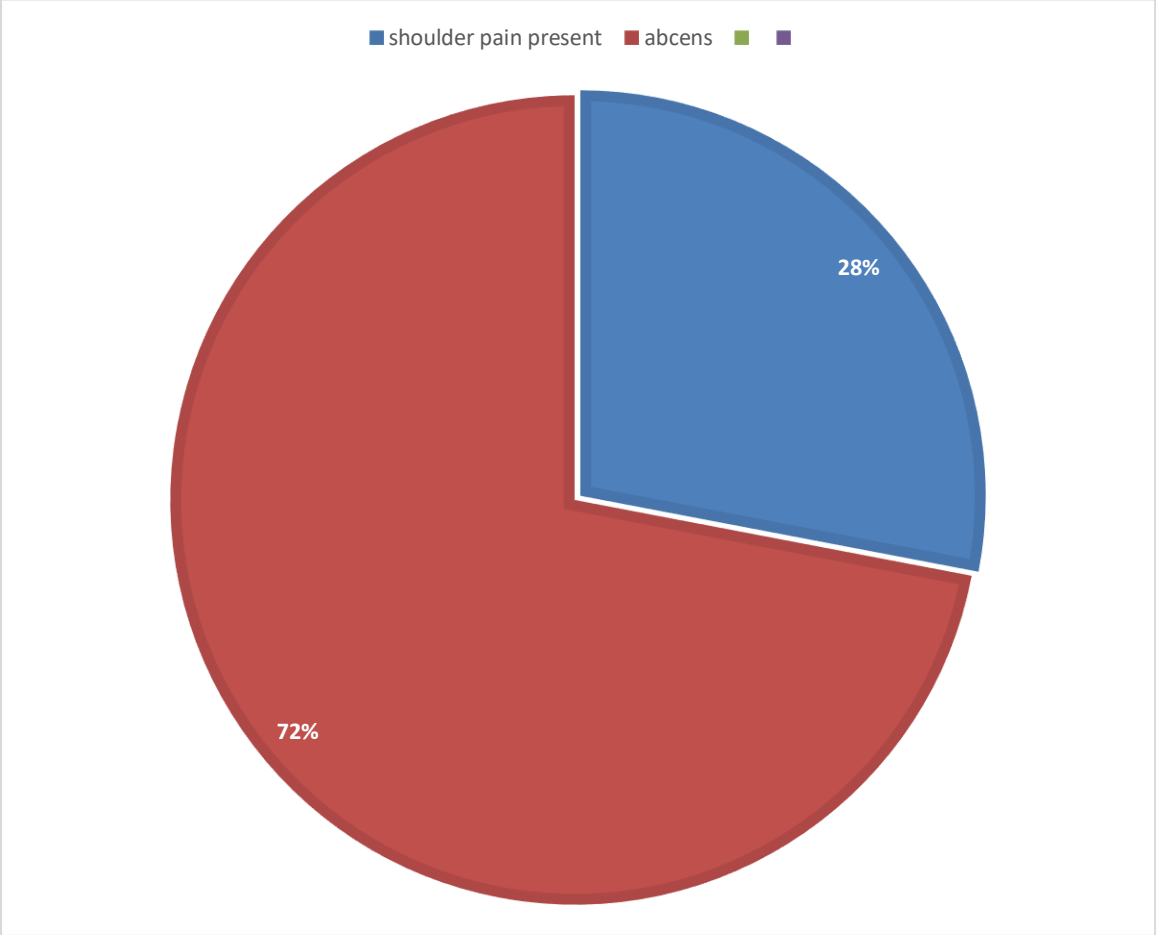

Figure 09: Distribution of the respondents by shoulder pain

shows that among that the respondents 24.0% were less than 3 month, 40.0% were 3-5 month, 28.0% were 6-9 month, and 8.0% were more than 10 month.

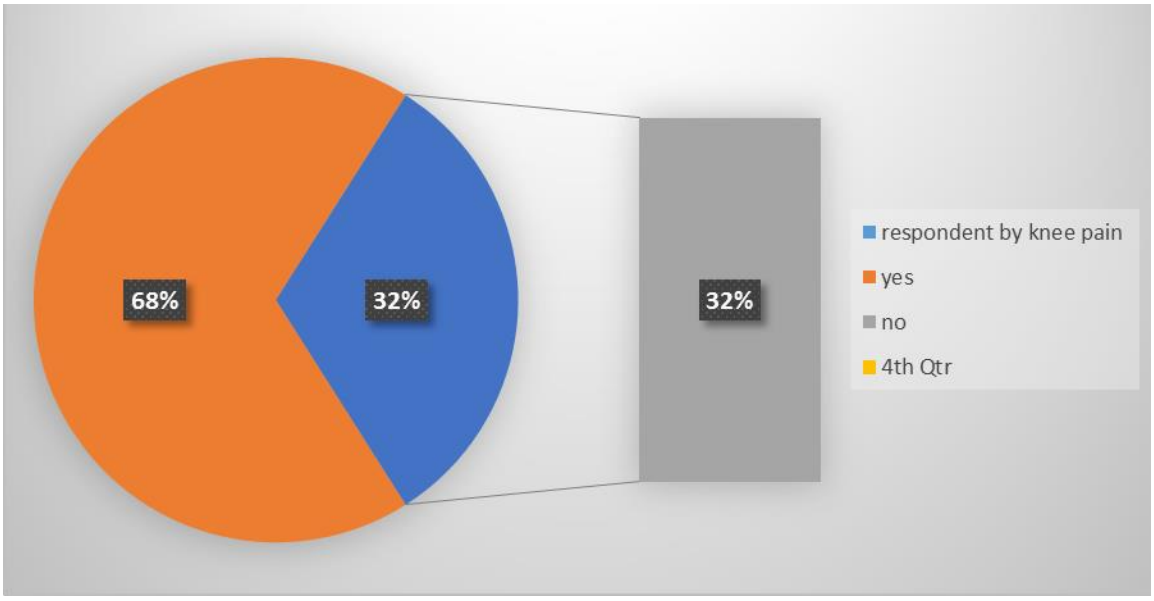

Figure 10: Distribution of the respondents by knee pain

shows that among that the respondents 68.0% were yes, and 32.0% were no

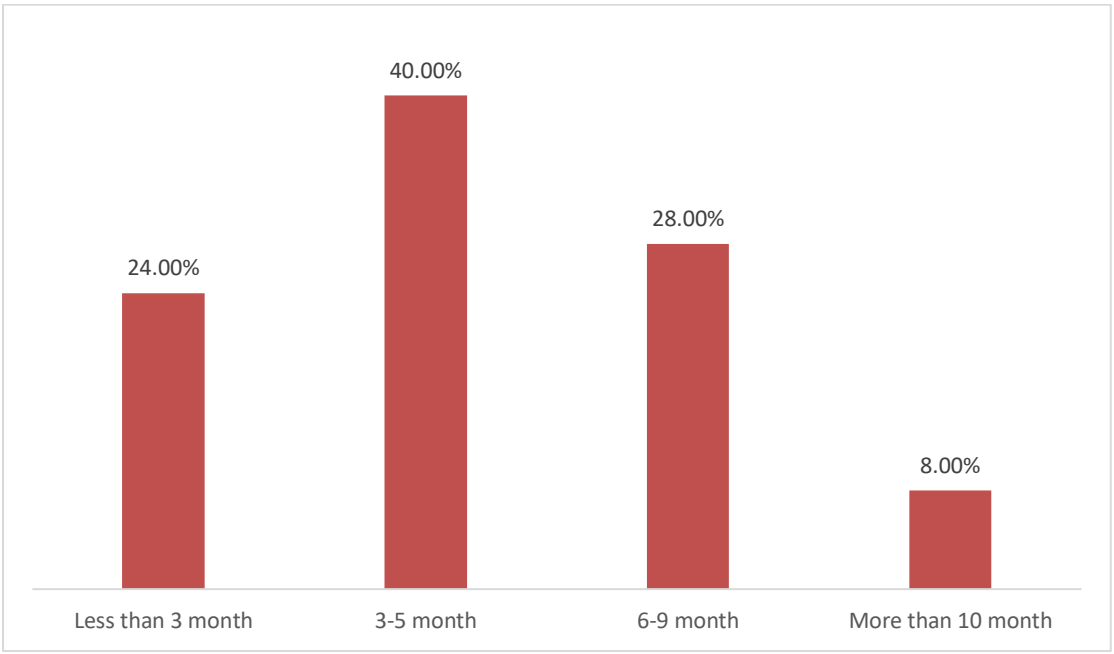

Figure No. 11: Distribution of the respondents by duration of pain.

Table no 16: association between musculoskeletal disorder among the farmer and age:

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.894[a]	28	.470
Likelihood Ratio	31.105	28	.312
Linear-by-Linear Association	1.135	1	.287
N of Valid Cases	100		

54 cells (93.1%) have expected count less than 5. The minimum expected count is .18.

Table no 17. association between musculoskeletal disorder among the farmer and sex:

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.517[a]	1	.218		
Continuity Correction	.842	1	.359		
Likelihood Ratio	1.716	1	.190		
Fisher's Exact Test				.347	.181
Linear-by-Linear Association	1.502	1	.220		
N of Valid Cases	100				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.96.

b. Computed only for a 2x2 table

Table no 18: association between musculoskeletal disorder among the farmer and marital status:

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.076[a]	3	.018
Likelihood Ratio	8.845	3	.031
Linear-by-Linear Association	.100	1	.752
N of Valid Cases	100		

6 cells (75.0%) have expected count less than 5. The minimum expected count is .18

Table no 19: between musculoskeletal disorder among the farmer and religion

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10.437[a]	1	.001		
Continuity Correction	8.880	1	.003		
Likelihood Ratio	9.834	1	.002		
Fisher's Exact Test				.002	.002
Linear-by-Linear Association	10.333	1	.001		
N of Valid Cases	100				

0 cells (.0%) have expected count less than 5. The minimum expected count is 7.56.

B Computed only for a 2x2 table

Table no 20: association between musculoskeletal disorder among the farmer and height

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.965[a]	3	.174
Likelihood Ratio	5.091	3	.165
Linear-by-Linear Association	1.666	1	.197
N of Valid Cases	100		

2 cells (37.5%) have expected count less than 5. The minimum expected count is 1.60.

CHAPTER-V DISCUSSSION

A descriptive type of cross-sectional study was conducted to assess the musculoskeletal disorder among traditional farmer District with a sample size of 100. A structural and semi-structure questionnaire was used to collect the data which were entered and analyzed by using SPSS. This study shows that 17.0%, 32.0%, 39.0%, 11.0% and 1.0% of the respondents belonged to age group of 20-30 years, 31-40 years, 41-50 years, 51-60yrears and more than 61 years respectively with mean age 3.47 ± .939 years. This study shows that among that the respondents, 82.0% were male and 18.0% were female. This study found among that the respondents, 87.0% were Muslim and 13.0% were Hindu. This study reveals that among that the respondents 88.0% were married, 6.0% were unmarried, 1.0% were divorce, and 5.0% were widow. This study shows that the respondents 13.0% were no formal education, 66.0% were primary, 20.0% were secondary, and 1.0% were higher secondary. This study found the respondents 69.0% were less than 10000 BDT, 27.0% were 10001-20000 BDT, and 4.0% were 20001-30000BDT. Shows that among that the respondents 11.0% were <150cm, 44.0% were 151-160 cm, 40.0% were 161-170 cm, and 5.0% were >171 cm. shows that among that the respondents 8.0% were <50kg, 60.0% were 51-60 kg, and 12.0% were 61-70 kg. shows that among that the respondents 60.0% were tin shed, 39.0% were semi building, and 1.0% kachabari shows that among that the respondents 26.0% were yes, and 74.0% were no-shows that among that the respondents 32.0% were yes, and 68.0% were no-shows that among that the respondents 27.0% were yes, and % 73.0were no. this study shows that among that the respondents 14.0% were below than 2 years, 13.0% were 3-5 years, and 73.0% were missing system. This study shows that among that the

respondents 24% were yes, 3.0% were, and 73.0% were missing system. Shows that among that the respondents 73.0% were yes, and 27% were no. this study shows that among that the respondents 3.0% were below 2 years, 7.0% were 2-4 years, 25.0% were 5-7 years, 3.0% were, 8-10 years, 35.0% were more than 10 years, and 7.0% were missing system. this study Shows that among that the respondents 7.0% were less than 6 sticks, 36.0% were 6-10 sticks, 240% were 11-15 sticks, 6.0% were, more than 15 sticks, and 27.0% were missing system. this study shows that among that the respondents 98.0% were yes, and 22.0% were no. this study shows that among that the respondents 6.0% were yes, and 94.0% were no. this study shows that among that the respondents 3.0% were yes, and 97.0% were no- this study shows that among that the respondents 68.0% were yes, and 32.0% were no. this study shows that among that the respondents 18.0% were yes, and 82.0% were no. shows that among that the respondents 6.0% were yes, and 94.0% were no. this study shows that among that the respondents 10.0% were yes, and 20.0% were no. this study shows that among that the respondents 100.0% were no. shows that among that the respondents 16.0% were yes, and 84.0%. This study shows that among that the respondents 26.0% were yes, and 74.0% were no. this study shows that among that the respondents 22.0% were yes, and 78.0% were. this study shows that among that the respondents 82.0% were yes, and 18.0% were no shows that among that the respondents 5.0% were yes, and 95.0% were no. shows that among that the respondents 2.0% were yes, and 98.0% were no. shows that among that the respondents 28.0% were yes, and 72.0% were no. shows that among that the respondents 1.0% were yes, and 99.0% were no. shows that among that the respondents 3.0% were yes, and 97.0% were no. shows that among that the respondents 56.0% were yes, and 44.0% were no. shows that among that the respondents 68.0% were yes, and 32.0% were no. shows that among that the respondents 7.0% were yes,

and 93.0% were no. shows that among that the respondents 14.0% were yes, and 86.0% were no. shows that among that the respondents 24.0% were less than 3 month, 40.0% were 3-5 month, 28.0% were 6-9 month, and 8.0% were more than 10 month. shows that among that the respondents 42.0% were yes, and 58.0% were no. shows that among that the respondents 80.0% were yes, and 20.0% were no. shows that among that the respondents 100% were no. shows that among that the respondents 2.0% were yes, and 98.0% were no. shows that among that the respondents 2.0% were yes, and 98.0% were no. shows that among that the respondents 1.0% were yes, and 99.0% were no. this study shows that among that the respondents 42.0% were yes, and 58.0% were no. this study shows that among that the respondents 68.0% were yes, and 32.0% were no. this study shows that among that the respondents 3.0% were yes, and 97.0% were no. this study shows that among that the respondents 3.0% were yes, and 97.0% were no. this study shows that among hat the respondents 1.0% were yes, and 99.0% were no. this study shows that among that the respondents 97.0% were yes, and 3.0 % were no. this study shows that among that the respondents 19.0% were yes, and 81.0% were no. shows that among that the respondents 3.0% were yes, and 97.0% were no. this study shows that among that the respondents 30.0% were yes, and 70.0% were no. this study shows that among that the respondents 65.0% were less than 2 month, 32.0% were 2-4 month, 2.0% were 5-7 month, and 1.0% were more than 8 month. Shows that among that the respondents 14.0% were 1-3 (mild), 79.0% were 4-6 (moderate), and 7.0% were 7-9 (severe). This study shows that among that the respondents 16.0% were 0 (no pain), 69.0% were 1-3 (mild), and 15.0% were 4-6(moderate). This study shows that among that the respondents 98.0% were self,

CHAPTER-VI CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Study conclude that most of the farmers are suffering different type of musculoskeletal disorder including neck, shoulder, back, knee, and having some musculoskeletal features as pain, restricted movement, loss of range of motion. They have taken medication and several advanced physiotherapy techniques including manipulation, mobilization, and electrotherapy.

6.2 Recommendations

Based on study findings following recommendations are given below

Continuous training of health care providers to upgrade their scientific knowledge regarding behavior change communication, health education, importance of early detection of musculoskeletal disorder patients and counseling.

Public awareness raising programmed should be arranged using electronic and print media. This programmed should particularly address the myths and various misconceptions regarding transmission of musculoskeletal disorder and its cure.

Further research is needed to improve knowledge to identify the barriers and to determine the reasons for delay in diagnosis.

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CHAPTER-VIII APPENDIX-A

Assalamualykum. My name is **Moasena Akter** I am a student public Health Department. I come from the SCMST. I am now conducting a study on **"prevalence of musculoskeletal disorder among traditional farmer."** I would very much appreciate your participation in this study. I would like to ask you some questions about caesarian section. This interview usually takes between 20 to 30 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to another person. Participation of the study is voluntary, and you can choose not to answer any individual question or all of the questions. However, I hope that you will participate in this study science your views are important.

At this time, do you want to ask me anything about the study?

May I begin the interview now?

Signature of the interviewer……. Date……

Respondent agrees or disagree to be interviewed if……1. Agree…….2. Disagree

I understand that all information will be kept strictly confidential that I can contract study personnel if I have any question. I further understand that I can withdraw from the study at any time and I will not get any financial benefit for attending this study.

I am willing to participate in the study.

Participants signature……...……..Date……

APPENDIX- B	QUESTIONNAIRE

Musculoskeletal disorder among traditional farmer

Section A: Socio-demographic variables

SL. NO	QUESTIONS	RESPOANES
01	Age	…….. Years.
02	Sex	1. Male 2. Female 3. Troas Gender
03	Religion:	1. Muslim 2. Hindu 3. Christian 4. Buddhist
04	Marital status:	1. Married 2. Unmarried 3. Divorce 4. widow
05	Educational background?	1. No formal education 2. Primary 3. Secondary 4. Higher secondary 5. Graduate & above
06	Monthly family Income:	----------BDT
07	Height	……cm
08	Body weight	……kg
09	BMI	……

Section B: Risk factors related variables

SL. NO	QUESTIONS	RESPOANES
10	House	1. Tin shed 2. Semi building 3. Building 4. Kacha bari 5. Others……
11	Type of toilet	1. Traditional / Unsanitary 2. Sanitary
12	Damp environment	1. Yes 2. No
13	Source of drinking water	1. Pond 2. River 3. Tube well 4. Supply
14	Overcrowding	1. Yes 2. No
15	Diabetic Mellitus	1. Yes 2. No
16	If yes How long are you suffering?	----------Years
17	Treatment with corticosteroids,	1. Yes 2. No
18	Smoking	1. Yes 2. No
19	How long are you smoking?	----------Years
20	How many times a day	----------Sticks

Section C: Diagnosis and treatment related variables

SL. NO	QUESTIONS	RESPOANES
21	Investigation	a) X-ray b) MRI c) CT scan d) Others……
22	Any deformity	a) No b) Kyphosis c) Scoliosis d) Lordosis e) Others…….
23	Affected region	a. Upper limb b. Lower limb c. Neck d. Back e. Dorsal f. Other…..
24	Affected joint	a) Shoulder b) Elbow c) Wrist d) Hip e) Knee f) Ankle g) Other….
25	Duration of back pain	----------Month
26	Nerve rote compression	a) Femoral b) Sciatica c) Perennial d) Redial e) Ulnar f) Medial g) Others……..
27	Muscle wasting	1. Yes 2. No

Section D: Treatment related variables

SL.NO	QUESTIONS	RESPONSES
28	Physician consultation	1. Yes 2. No
29	Type of treatment	a) Neural mobilization b) Myofascial release c) Medication d) Physiotherapy e) Other……
30	Complete full course	1. Yes 2. No
31	Treatment duration	…….Month
32	Severity of pain (Before treatment)	0…1..2..3…....4..5..6…..7..8..9..…10
33	Severity of pain (After treatment)	0…1..2..3…….4..5..6…..7..8...9…..10
34	Who bear your treatment cost?	1. Self 2. NGO (BRAC) 3. Government

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Signature of respondents Signature of researcher

Time line of study

Activities	Months	September 2016				October 2016				November 2016				December 2016			
	Weeks	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Proposal writing																	
Literature review																	
Proposal defense																	
Pretest of questionnaire																	
Data collection																	
Data entry																	
Data analysis																	
Report writing																	
Draft submission /Thesis defense																	
Final report submission																	