WORK RELATED MUSCULOSKELETAL SYMPTOMS AMONG THE TAILORS IN BAGERHAT DISTRICT, BANGLADESH

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WORK RELATED MUSCULOSKELETAL SYMPTOMS AMONG THE TAILORS IN BAGERHAT DISTRICT, BANGLADESH

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DECLARATION

I am **Uzzwal Rana,** I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistake or inaccuracies are my own. I also declare that for any publication, presentation, or dissemination of the study. I would be bound to take written consent from my supervisor.

Signature:
Uzzwal Rana   Date: 28-11-2023

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ACKNOWLEDGEMENT

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ACRONYMS

SCMST - Saic college of medical science and technology.

WRMSD - Work-related musculoskeletal disorders.

MSD - Musculoskeletal disorders.

MSK - Musculoskeletal.

OMSD - Occupational related musculoskeletal disorder.

MSK-HQ - Musculoskeletal Health Questionnaire.

WHO - World health organization.

BMI- Body mass index.

ROM - Range of motion.

EQ - Euro Questionnaire.

HRQOL - Health related quality of life.

ARUK - Arthritis research of United Kingdom.

SPSS - Statistical Package for social science.

SD - Standard deviation.

P value - Probability value.

IRB - Institutional review board.

SSC - Secondary school certificate.

HSC - Higher secondary certificate.

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Abstract

Background: The prevalence of MSK diseases is higher in occupations that demand routine, monotonous work performed in poor posture with seat-and-table adjustments that are poorly built, heavy manual lifting, daily lengthy work, and vibration exposure. The amount and length of employment can also affect the likelihood of developing MSK diseases.

Methods: Cross sectional type of descriptive study design was selected. Total 201 tailors were participated purposive sampling from Bagerhat district, Bangladesh. Data was collected by the self-developed and Structured Questionnaire. Descriptive statistics using SPSS software version-25 were used for data analysis and the results were showed in pie chart, bar chart, and table.

Results: The study revealed that, the mean age and Standard deviation of the respondents (N=201) was 42.48 ± 10.953. 92% were male and 8% were female In this study. This study showed that, 2 (1.0%) people were less than 5 months in this profession, 2 (1.0%) people were greater than 5 months in this profession and 197 (98.0%) people were More than 1 year in this profession. This study showed that the mean and SD of MSK-HQ total Score was 38.07 and ($\pm$7.31).

Conclusion: There is no genuine data in Bangladesh on the prevalence of musculoskeletal problems among tailors. In this study researcher found that, 1.0% people were less than 5 months in this profession, 1.0% people were greater than 5 months in this profession and 98.0% people were More than 1 year in this profession.

Key words: *Work-related musculoskeletal symptoms, musculoskeletal disorders, Tailors.*

CHAPTER-I	INTRODUCTION

1.1 BACKGROUND:

Author said that, when it comes to their onset, symptoms, and long-term effects, musculoskeletal problems (MSDs) are among the body's most stressful situations. The human musculoskeletal system, which includes the joints, ligaments, muscles, nerves, tendons, and structures that support the neck and back, is impacted by MSDs when it sustains damage or pain (Dowell et al., 2016).

Researcher said that, according to the reports, the types of injuries sustained when playing cricket vary depending on the circumstance. It goes without saying that a direct correlation exists between the increased rate of injury among young crickets and the increased number of playing hours (Milsom., 2003).

Researchers have issued that, the knee, lower back, and shoulder are the three anatomical regions that experience musculoskeletal discomfort and injuries the most frequently, according to statistics, while the batsman accounts for the bulk of MSD victims (30%) within adolescent cricketers (Noorbhai et al., 2012).

According to author, through excellent physical and mental counseling and early rehabilitation programming, coaches and physiotherapists can play a major role in lowering the incidence of MSDs (Adiele et al., 2018).

Adolescent cricket players benefit from exercise therapy that is properly designed. Various joints may be stretched and strengthened as part of the design, which can be both active and resistive. Passive stretching is recommended by coaches and physicians to assist people improve since it increases range of motion (ROM), particularly for the hip joint (Selvan et al., 2015).

The author noticed that, the prevalence of MSK diseases is higher in occupations that demand routine, monotonous work performed in poor posture with seat-and-table adjustments that are poorly built, heavy manual lifting, daily lengthy work, and vibration exposure. The amount and length of employment can also affect the likelihood of developing MSK diseases (Choobineh et al., 2004).

Some researchers also noticed that, Tailors are creative workers with good manual and mechanical skills that stitch clothes that fit their clients effectively. They execute repeated tasks with poor body postures while sitting for extended periods of time in a chair or on the floor. This results in back and neck pain for tailors as well as MSK

discomfort. When sewing a garment, the posture they adopt involves bending their neck forward, raising their elbows above or below the shoulders, bending their wrist downward and inward, and bending their back forward. This posture results in postural discomfort, which gets worse over time as they work longer hours (Dianat et al., 2015).

According to author state that, Typically, tailors are not aware of ergonomic standards. It's crucial to comprehend the potential and limitations of each worker. It is crucial to mentor them so they may operate safely, productively, and comfortably. The worker's productivity and safety are increased when suitable ergonomic concepts are applied (Fereydoon et al., 2017).

According to some other researchers, Tailoring entails repeated, monotonous operations including cuing, assembling, pressing, and finishing that must be completed while hunched over a sewing machine with the upper back curved. Working in this unenviable spot for a longer length of time raises the risk of WRMSDs in them (Jahan et al., 2015).

As an illustration, back pain as an OMSD may result from a number of factors, including physical stress from improper lifting techniques, poor posture, and forceful or repetitive movements involving the back (Vieira and Costa, 2010); psychosocial stress from a high perceived workload and time pressure, low control, and a lack of social support at work (Soares et al., 2019).

Back pain is an example of an OMSD that can have a variety of causes, including physical stress from improper lifting techniques, bad posture, and forceful or repetitive movements of the back (Vieira and Costa, 2010).

Some studies have assessed the musculoskeletal disorders of manual material handlers such as carpenters, miners, drivers, typist, etc. However, there appear to be a death of published literatures on the ergonomic evaluation of tailor's workstation, as well as (Tawiah et al., 2015).

These symptoms can arise when the same muscles are utilized repeatedly or for an extended period of time without rest (Pain Management Health Center 2013). If the force is high and/or the task involves an unusual posture, the likelihood of this sort of injury increases. Back discomfort, carpal tunnel syndrome, tendinitis, and tenosynovitis are all examples of musculoskeletal problems (Canadian Centre for Occupational Health and Safety 2013).

1.2 JUSTIFICATION Of THIS STUDY

A tailor is a person whop stich the cloth for others. They are responsible for constructing, altering, repairing or modifying garments for customers based on their specification, needs, and preference by taking their measurement. The tailors in our study are employed by a company that places a high priority on standardized processes and outcomes. This is the essence of what make tailoring is all about. Tailors creates a description for either a novice or an expert using one of the two discourse styles noted in texts. Without the need for an a priori set of user stereotypes, it may automatically combine the methods to provide a broad variety of various descriptions for users who fall between the extremes of novice and expert.

Instead of anarchistic technology research by individuals or groups, such a real-life organization" computer enabled cooperative work is preferred. Accordingly, tailoring, which is typically thought of as enabling an ever-increasing variety of use patterns, can play an equally essential part in organizational-wide efforts to standardize, so limiting the variety that the technology in theory makes available. They are very familiar to us. They play an important role in our life. They are well trained in their hand job. They are hard working person. They are very careful about work. Now a days work related musculoskeletal disorder among the tailors is the common problem in Bangladesh. Among few studies that were found in locally not sufficient due to shortage of information and study were conducted couple of year back which does not represent the present situation on this regard and had no any previous research in this topic. It had not been done on tailors in our Country. It would be beneficial to know about them from my work for research. It was also help to find out the prevalence of musculoskeletal morbidity amongst tailor in the area of Bagerhat. It was also help to assess their ergonomics factors in their workplace. The research was also help to find out the working position and environment of the tailors. So, I was doing these studies. I think that if someone wants to research this topic in the future. My research will inspire them more and they will be able to take a lot of information from that research.

So, I was focus on tailors with their problems. In this case, our physiotherapy profession will be expanded.

1.3 RESEARCH QUESTION

What are the work-related musculoskeletal Symptoms among the tailors in Bagerhat District, Bangladesh?

1.4 OBJECTIVES OF THE STUDY

1.4.1 General Objective:

❖ To find out the work-related musculoskeletal symptoms among the tailors in Bagerhat district, Bangladesh.

1.4.2 Specific Objectives:

❖ To determine the different type of musculoskeletal symptoms by using musculoskeletal health questionnaire.

❖ To assess the severity of pain by using musculoskeletal health questionnaire.

❖ To explore the sociodemographic information of the participants.

1.5 Conceptual frame work:

Independent variable	Dependent variable

Sociodemographic factor:
Age, Gender, Education level,
Marital status, Religion,
Family types.

Physical activities- Walking,
Washing dress, Daily work
routine, Sleeping.

WORK RELATED
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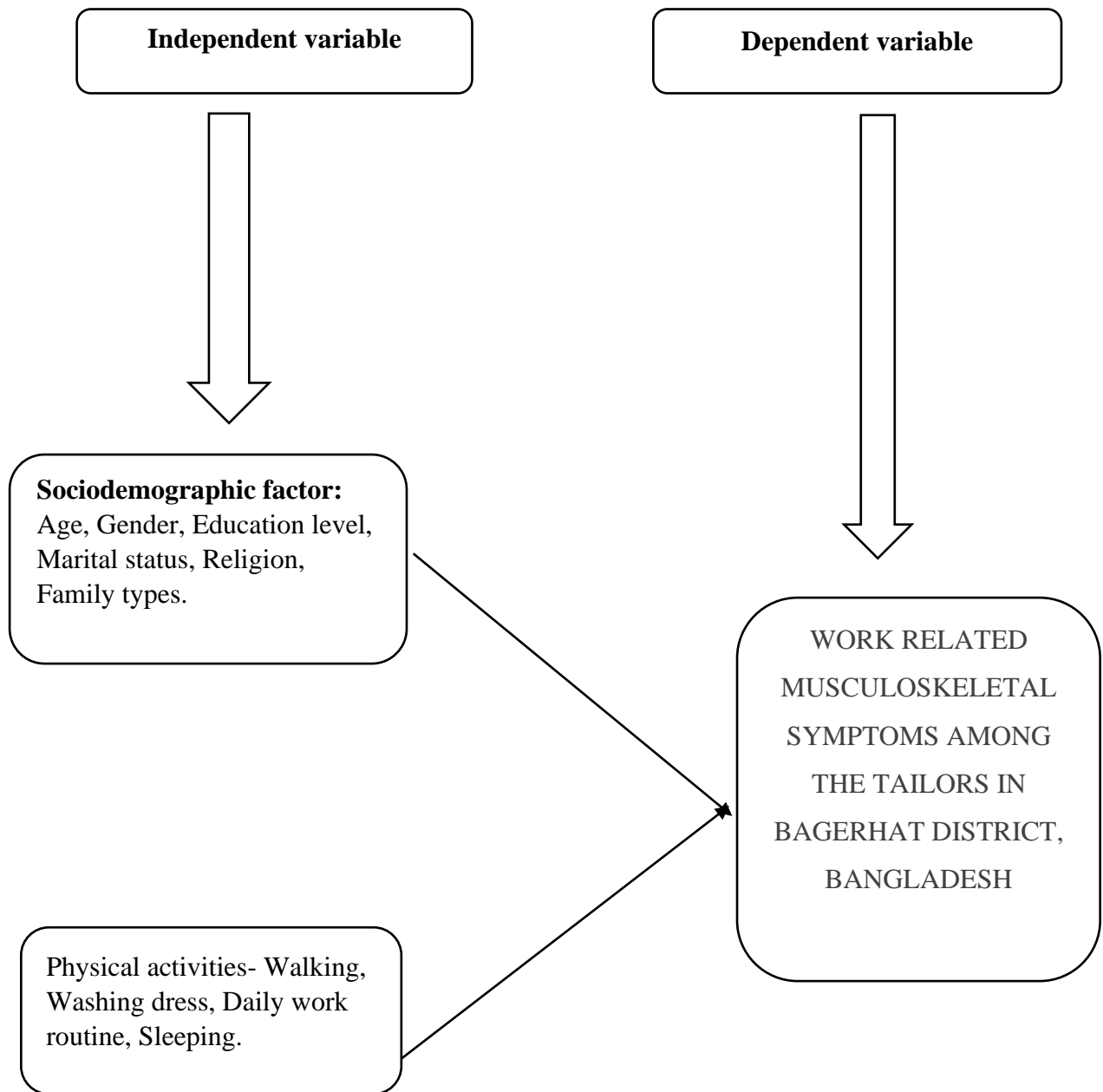
1.6 Operational definitions of the variables:

Musculoskeletal symptoms: Musculoskeletal disorders are a group of painful disorders of muscles, tendons, and nerves.

Tailors: A person whose occupation is making fitted clothes such as suits, trousers, and jackets to fit individual customers.

Socio-demographic: Socio-demographics refer to a combination of social and demographic factors that define people in a specific group or population.

MSK-HQ scale: The MSK-HQ is a short questionnaire that allows people with musculoskeletal conditions (such as arthritis or back pain) to report their symptoms and quality of life in a standardized way.

Health issues with the locomotor apparatus, including the muscles, joints, tendons, bones, cartilage, vascular system, ligaments, nerves, and localized blood circulation system, are referred to as musculoskeletal disorders (Kumar et al., 2011).

Due to their substantial impact on impairment, human suffering, missed work, handicap, and their direct and indirect costs to the healthcare system, musculoskeletal diseases (MSD) are a serious public health issue. Musculoskeletal disorders (MSDs) are a significant health issue for the general public that influence their quality of life and call for more intensive medical attention and organization. The incidence of musculoskeletal issues ranges from 29% to 74.5%, according to reports from Canada and the Netherlands, respectively. But only 20% of medical professionals have annual consultations for musculoskeletal issues (Rima et al., 2005).

A wide variety of inflammatory and degenerative conditions affecting the muscles, tendons, ligaments, joints, peripheral nerves, and supporting blood vessels are categorized as musculoskeletal disorders (MSD). Work-related MSDs (WRMSDs) typically arise when there is an imbalance between the physical demands of the job and the physical capabilities of the human body, depending on the mechanics, ergonomics, and physical movement characteristics of the work duties (Chyuan et al., 2004).

There is little information about physical exercise as a factor in avoiding musculoskeletal diseases (MSD), despite significant understanding about these disorders and its physical, psychological, and individual risk factors. Additionally, research on physical activity frequently only include physical activity that occurs during leisure time or during work. There aren't many studies among military people on the relationship between job and leisure-time physical exercise and MSD. The purpose of this study was to determine the prevalence of MSD among Royal Norwegian Navy personnel and to evaluate the relationship between physical activity during work and leisure time and MSD (Morken et al., 2007).

World Health Organization (WHO) states that work-related musculoskeletal disorders (WMSDs) are a significant occupational health issue on a global scale (Sealetsa and Thatcher, 2011).

The prevalence of MSK diseases is higher in occupations that demand routine, monotonous work performed in poor posture with seat-and-table adjustments that are poorly built, heavy manual lifting, daily lengthy work, and vibration exposure. The amount and length of employment can also affect the likelihood of developing MSK diseases (Choobineh et al., 2004).

In emerging nations, the single largest category of occupational ailments is musculoskeletal problems. Long-term incorrect posture while working sedentarily is regarded as a significant risk factor that is largely modifiable. Musculoskeletal morbidity was more prevalent in women than in men (69.4% vs. 62.3%), illiterate workers than in literate workers (73.1% vs. 63.1%), unmarried people than in people who are currently married (68.4% vs. 58.7%), workers living in nuclear families than in joint families (70.9% vs. 60%), and substance abusers than in people with no history of substance abuse (66.2% When compared to other occupations, embroidery work was shown to have a greater prevalence of musculoskeletal disorders (75%) employees cuing (63.6%) or sewing (64.4%) garments; obese and pre-obese workers (85.7% and 66.7%, respectively) compared to those with a normal BMI (62.2%); and those who weigh more than 60 kg (74.2% vs. 60%) (Banerjee et al., 2016).

Workplace hazards such as dangerous working conditions have been linked to the possibility of serious public health issues, including work-related musculoskeletal diseases (WRMSDs). Sewing industry workers frequently encounter (WMSDs), and many of them are at risk of doing so. According to T R Allison et al., there are more musculoskeletal issues in Asians, including Bangladeshis, Indians, and Pakistanis (75% of them), compared to African- and Caribbean-Americans (47%) (Allison et al., 2002).

Musculoskeletal conditions, particularly those affecting the back and upper limbs, are the leading cause of work incapacity in Europe, with direct expenses equating to 0.5% to 2% of GDP (Coggon and Ntani, 2013).

278 participants were chosen for the study, and all of them responded. And because the study focused on male tailors, all the participants were male (Dhanwani et al., 2022).

Disorders of the muscles, tendons, joints, ligaments, related nerves, and blood vessels are referred to as musculoskeletal disorders (MSD). Work-related MSDs typically arise when a person is physically incapable of handling the work or when poor workstation ergonomics are present. Workers in a wide range of professions,

such as tailors, have been documented to suffer from work-related musculoskeletal problems (Meenaxi and Sudha, 2012).

These musculoskeletal conditions are a significant contributor to pain and disability. The global prevalence of MSDs ranges from 14% to 42%; in India, however, epidemiological studies show a community-based prevalence of 20% and an occupation-specific prevalence of as much as 90%. These risk factors include heavy lifting, twisting and bending, repetitive motions, uncomfortable work positions, exerting excessive force while working, and working for an extended period of time without a break (Jahan et al., 2015).

Gender had a significant impact on Pains in the neck and back that are related to the spine and may be caused by osteoporosis after menopause or other gender-specific biological changes, such as variances in muscle size and distribution. This has been ascribed to their physiological makeup and how their menstrual cycles and menopause cause the skeletal system to become porous and weak. In our study, the majority of the female workers were also responsible for taking care of domestic duties, which left them with less time to rest and take care of personal health issues. This may have rendered them more vulnerable to MSD than the male tailors. According to our study, workstation ergonomics was strongly related with MSD (Habib, 2015).

The prevalence of MSD symptoms in the neck and shoulders was found to be 17–73% and 20–65% in dentists, 54–83% and 27–76% in dental hygienists, and 62% and 62% in dental assistants in a prior review article (Morse et al., 2010). Chronic non-communicable diseases have a significant influence on global and Brazilian health systems. The musculoskeletal ailments, a category of diseases that affect people's physical status, quality of life, and functional capacity, are among the most prevalent. There epidemiological research in Brazil looking at the prevalence of these illnesses among adults. This study provides an estimation of the prevalence of chronic musculoskeletal diseases and the correlation between these conditions and clinical, behavioral, socioeconomic, and demographic characteristics (Bezerra et al., 2018).

Workers who are exposed to physical labor, work in odd and limited postures, repetitive and static work, vibrations, and poor psychological and social situations have a high prevalence of the WMSDs (Waters et al., 2007).

Hairdressers run small businesses in Nigeria that employ one to ten people.

They hire apprentices, who are mainly female teens or young people who are not in school. Working conditions are subpar and work exposure is not monitored (Omokhodino et al., 2009).

The WMSDs were responsible for 52.8% of occupational disorders reported in Brazil in 2001, 55.3% in 2002, and 50.1% in 2003, according data from the Social Welfare Ministry. The shoulder, neck, and back are the most often impacted body parts among hairdressers, according to reports from Brazil (Mussi and Gouveia, 2008).

Beginning of the WMSDs between the ages of 26 and 35, 87 (36%) between the ages of 20 and 25, 27 (11.3%) before the age of 20, 9 (3.6%) between the ages of 36 and 40, 2 (0.8%) between the ages of 41 and 45, and 1 (0.4%) participant between the ages of 46 and 50 (Aweto et al., 2015).

Tailors are creative workers with good manual and mechanical skills that stitch clothes that fit their clients effectively. They execute repeated tasks with poor body postures while sitting for extended periods of time in a chair or on the floor (Wang et al., 2007).

According to reports, musculoskeletal conditions are the most well-known and frequent causes of extreme long-term pain and physical disability, which may afflict hundreds of millions of individuals worldwide. They have also been acknowledged as being one of the main factors contributing to serious human misery, lost productivity, and financial costs on society (Glover et al., 2005).

Tailors have back and neck pain as well as MSK discomfort as a result of this. Their posture while stitching a garment involves bending their neck forward, lifting their elbows over or below the shoulders, bending their wrist downward and inward, and bending their back forward. This posture causes postural discomfort, which worsens with time spent working at the job (Dianat et al., 2015).

In the affected area, they also endure muscle rigidity, discomfort, and swelling. This aching and muscle stiffness result in excruciating discomfort, the inability to perform their job, and in some circumstances, the inability to sleep (Haque et al., 2015).

In Pakistan, men and women can find work in the tailoring industry. Most tailors are from lower socioeconomic backgrounds. Their bad health and poverty coexist because they lack access to occupational health and safety services (Laal et al., 2017).

Lower socioeconomic level tailors had a higher risk of developing musculoskeletal problems because they were more likely to operate in a confined space, had more years of experience, had poor lighting and seating arrangements, and put in longer hours (Bandyopadhyay, 2012).

According to this study, having worked for longer than 8 hours a day and being older than 45 were strongly linked to an elevated risk of musculoskeletal condition. The combination of a poor work environment and uncomfortable ergonomic conditions, such as lighting and seating for tailors in their place of employment for extended periods of time throughout the day regularly, contributed to the development of such disorders in people. According to our study, women experience more musculoskeletal ailments than men do (Berberoglu and Tokuc, 2013).

The adoption of restricted postures, repetitive movements, and extended static loads, which have been established as key ergonomic risk factors of OMSDs, are characteristics of a typical tailoring activity in this context. Tailors typically sit with their backs unsupported and their spines flexed forward, especially at the upper and lower lumbar spine, in order to have a good view of their work piece. As is the case with tailors who spend the majority of the day sitting down, bad posture can result in disc injury. The outer fibrous ring may be microtrauma as a result of this disease, if untreated, can lead to disc herniation, protrusion, or rupture. The weights of the back and the head, respectively, subsequently load the muscles of the low back and neck for a considerable amount of time (static loading). Depending on the time of year, job pressure may result in a longer length of this static loading, with the holiday season being the busiest for tailors. Workers who experience cervicalgia, a painful condition marked by muscle tension in the neck that gradually spreads to the shoulders, may be suffering from myofascial pain syndrome or a similar condition (Almeida et al., 2012).

One of Nigeria's small and medium-sized businesses (SME) is the tailoring industry (Oni, 2012).

The Musculoskeletal Health Questionnaire (MSK-HQ) was created to assess the state of the musculoskeletal system in relation to various circumstances and environments. The MSK-HQ has to be further assessed across contexts and languages, nevertheless (Christiansen et al., 2020).

The MSK-HQ attempts to record key outcomes that have been prioritized by

patients and clinicians for a variety of musculoskeletal diseases. The 14-item test includes a range of health-related topics, such as symptoms, physical functioning, daily tasks and employment, physical well-being, confidence in managing symptoms, understanding of conditions, and social activities. On the MSK-HQ, each item is evaluated verbally on a 5-point scale, with responses ranging from "not at all" to "very" (except for items 12 and 13 where the response possibilities are in reverse order for "understanding condition" and "confidence in managing symptoms," respectively). Scores are added together and range from 0 to 56, with 56 being the optimal level of musculoskeletal health (Hill et al., 2016).

Additionally, only the EQ 5D-5L general HRQOL measure and disease-specific instruments were used as reference standards in the majority of MSK-HQ validation studies. While the evaluation of the influence on well-being is garnering more attention in medical decision making, the association between MSK-HQ and well-being measures has not yet been examined (Riva and Pravettoni, 2016).

There were two sections in the survey questionnaire. The MSK health was the primary focus of the first module (described in this research), while the respondents' subjective expectations for their life's duration and quality were evaluated in the second module. The sample's sociodemographic features were noted. Along with typical outcome measures of health status, HRQOL, physical functioning, and well-being, participants completed the MSK-HQ in Hungarian. With the help of pertinent European Health Interview Survey (EHIS) questions, MSK health issues and diagnoses were investigated (Versteegh et al., 2016).

The MSK-HQ was created with significant patient and medical professional input. The 15-item questionnaire includes questions that are typical of such assessments, such as those about pain and function, as well as inquiries about how well respondents believe they understand their disease and how confident they are in their ability to manage symptoms. The UK-based charity Arthritis Research UK (ARUK) funded its creation in the hopes that the new tool will be useful for the broadest range of musculoskeletal issues in order to further the charity's goal of enhancing the quality of life for people with MSK illnesses (Gibbons and Fitzpatrick, 2018).

A standardized musculoskeletal outcomes measure evaluating the health status of individuals with varied musculoskeletal conditions is the Musculoskeletal Health Questionnaire (MSK-HQ) (Baek et al., 2021).

| CHAPTER-III | METHODOLOGY |

3.1 Study design:

It was a cross sectional type of descriptive study.

3.2 Study place:

The Study area was at Bagerhat district, Bangladesh.

3.3 Study period:

July 2022 to June 2023 was the study period of this study.

3.4 Study population:

The study population was the tailors who lived in every Upazilas of Bagerhat district.

3.5 Sample size:

We know that,

$$\mathbf{n} = \frac{z^2 p(1-p)}{d^2}$$

Here,

- n= Required sample size.

- z = Confidence level at 95% (Standard value of 1.96).

- P = P is the prevalence taken 78.4% or 0.784 (Anny, et al., 2022).

- d = Margin of error at 5%.

We know that;

$$n = \frac{z^2 p(1-p)}{d^2}$$

$$n = \frac{z^2 p(1-p)}{d^2}$$

$$n = \frac{(1.96)^2 \times 0.784(1-0.784)}{(0.05)^2}$$

$$= \frac{3.84 \times 0.784 \times 0.216}{0,0025}$$

$$= \frac{0.6502}{0.0025}$$

$$= 260$$

- So, sample size 260.

3.6 Sampling technique:

Convenience sampling technique was used for this study.

3.7 Eligibility criteria:

3.7.1 Inclusion criteria:

- Participants who aged more than 18 years and less than 66 years.

- Who were interested.

- Participants who were mentally stable.

3.7.2 Exclusion criteria:

- Tailors who used electric sewing machine.

- Undergone to any surgery.

- Retired Tailors person.

3.8 Method of data collection:

Data was collected from the participants by face-to-face interview.

3.9 Instruments and tools of data collection management of data:

- Self-structured questionnaire for sociodemographic and work-related information.

- MSK-HQ questionnaire.

- Weighing machine (Bathroom scale) and

- Measuring tape.

3.10 Data collection procedure:

At first researcher took permission from the participants. Before collecting data, the objectives of this study and purpose were explained to all participants. All the participants were given consent form for taking permission from them to participate in this study and they were given opportunity to ask any types of study related question. The participants who could not read the consent form, researcher himself read the consent form in front of the participants. After obtaining written consent form, researcher started to collect data. At first, the researcher collected general information using by self-developed socio-demographic questionnaire and also collected information by using MSK-HQ questionnaire. The interview was conducted in Bengali as though they could understand the questions easily. Face to face interview was conducted because this may provide higher response than other data collection methods. Every interview lasted 10-15 minutes. Each data was collected carefully and confidentiality was maintained. After successfully collecting data, researcher leaves the participants by giving thanks to be a part of this study willingly.

3.11 Data analysis:

Data was analysis by using SPSS (Statistical package for social science) (25 version).

3.12 Ethical consideration:

- The investigator has obtained written permission from ethical review board of saic college of medical science and technology (SCMST).

- Ethical review board was informed by written document about aims and objectives of the study and was ensured that the participants of the study was not harmed.

- Personal information was be kept confidential by the investigator strictly and the data was not be shared with others.

CHAPTER-IV   **RESULTS**

This was a cross sectional study. The main objective of this study was to find out the work-related musculoskeletal symptoms among the tailors in Bagerhat district, Bangladesh. Total 201 data were collected from all over the Bangladesh. Data were numerically coded and chaptered in Microsoft Excel and calculated as percentage and presented by using bar chart, pie chart and table and using an SPSS 25.0 version software program.

4.1- Socio Demographic Profile:

4.1.1 Age group of the Participants-

A total of 201 tailors were participate. The mean age of the respondents (N=201) was 42.48 ± 10.953. In here highest age of the participants 66 and lowest age was 20. Most vulnerable age group was 36-51 years 92 (45.8%).

Table-1: Age group of the participants-

Age group	Frequency (n)	Percentage (%)	Mean ± Standard deviation
20-35	60	29.9	
36-51	92	45.8	42.48
52-66	49	24.4	± 10.953
Total	201	100	

4.1.2 Gender of the participants-

This study was conducted on 201 participants among them 92% (185) were male and 8% (16) were female.
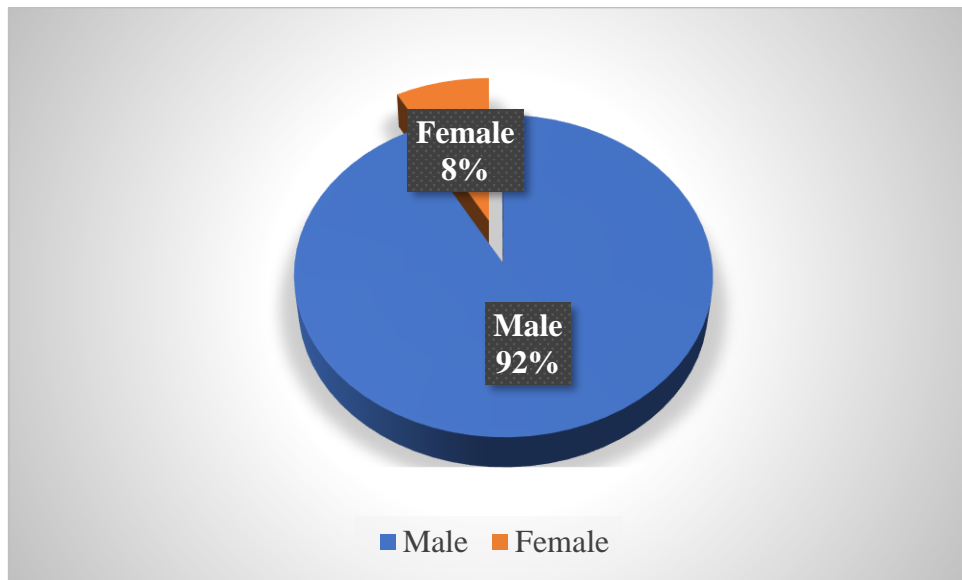
Figure no.- 1 Gender of the participants

4.1.3 BMI group of the participants-

A total of 201 tailors were participants. It was revealed that 133 (66.2%) tailors had normal weight. It was also found that 13 (6.5%) tailors were underweight and 49 (24.4%) tailors were overweight and 6 (3%) tailors were obese. The mean BMI was 23.020 and SD was 3.141.

Table-2: Frequency distribution of the participants by BMI-

BMI group	Frequency (n)	Percentage (%)	Mean ± Standard deviation
Under weight (<18.5)	13	6.5	
Normal (18.6-24.9)	133	66.2	23.020 ± 3.141
Over weight (25.0-29.9)	49	24.4	
Obese (>30)	6	3.0	
Total	201	100	

4.1.4 Living area of the participants-

A total of 201 tailors were participate. In this study 20 (10.0%) people live in the Urban, 1(0.5%) people live in the Semi urban and 180 (89.6%) people live in the Rural area. Most vulnerable people were 180 (89.6%).
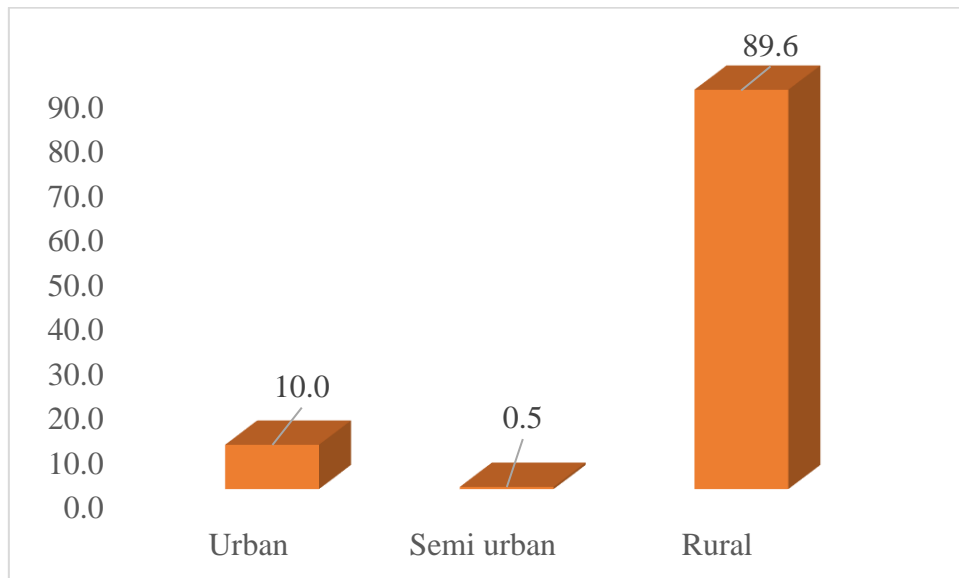
Figure no.-2 Living area of the participants

4.1.5 Education level of the participants-

In this study 201 tailors were participants. In this study 4 (2.0%) people were illiterate, 150 (74.6%) people were primary level, 32 (15.9%) people were Secondary School Certificate level, 9 (4.5%) people were complete Higher Secondary level and 6 (3.0%) people were complete others levels.
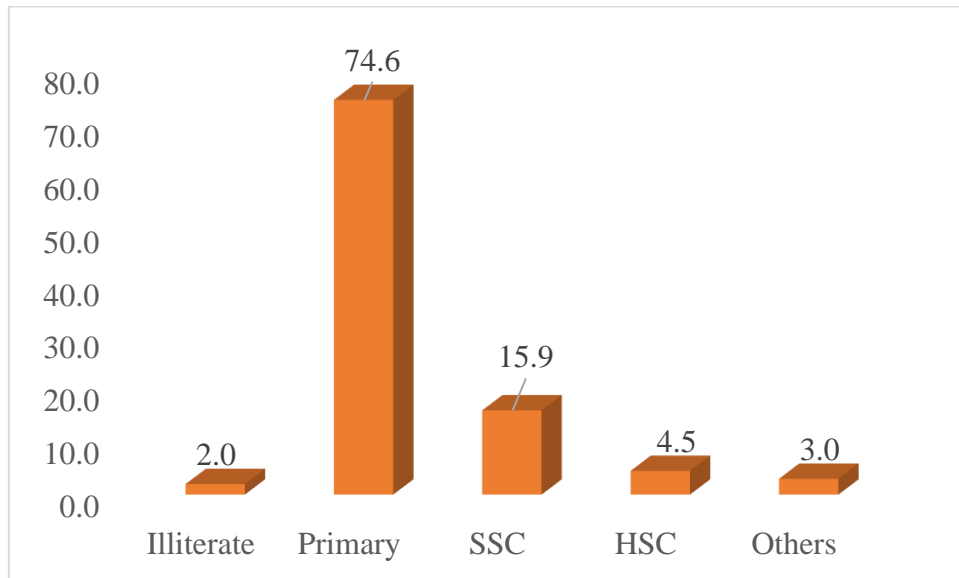
Figure no.-3 Education level of the participants

4.1.6 Family type of the participants-

A total of 201 participants in this study. Among them 180 (89.6%) people were living with nuclear family and 21 (10.4%) people were living with extended family.
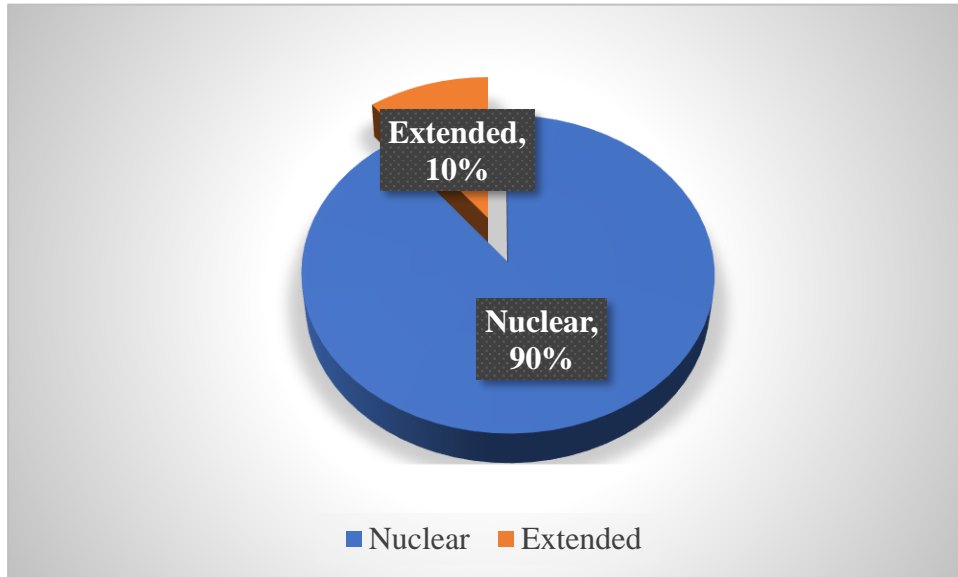
Figure no.- 4 Family type of the participants

4.1.7 Religion of the participants-

In this study 201 tailors were participants among them 94 (46.8%) were Islam and 107 (53.2%) were Sanatan.
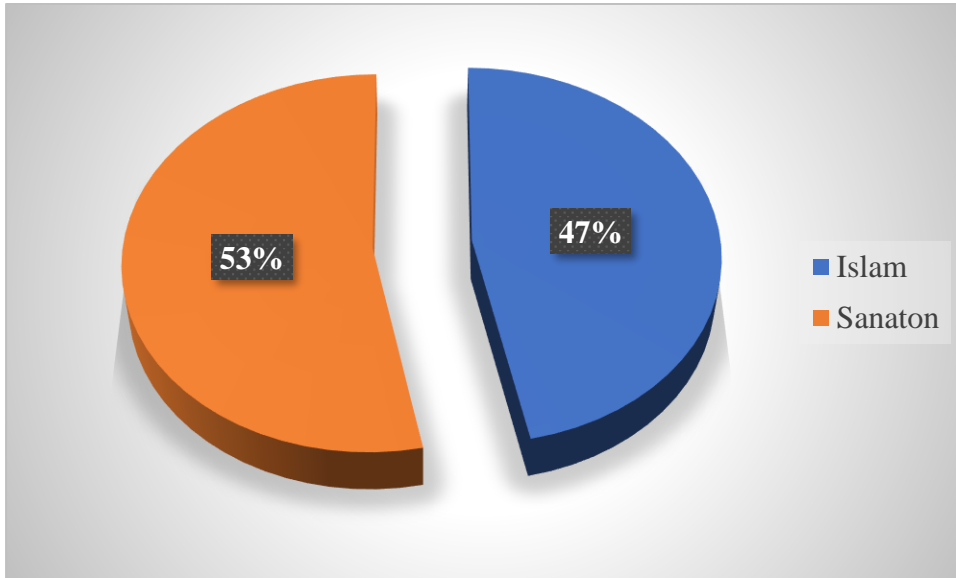
Figure no.- 5 Religion of the participants

4.1.8 Marital status of the particpants-

In this study 201 tailors were participated among them 189 (94.0%) people were married and 12 (6.0%) people were unmarried.
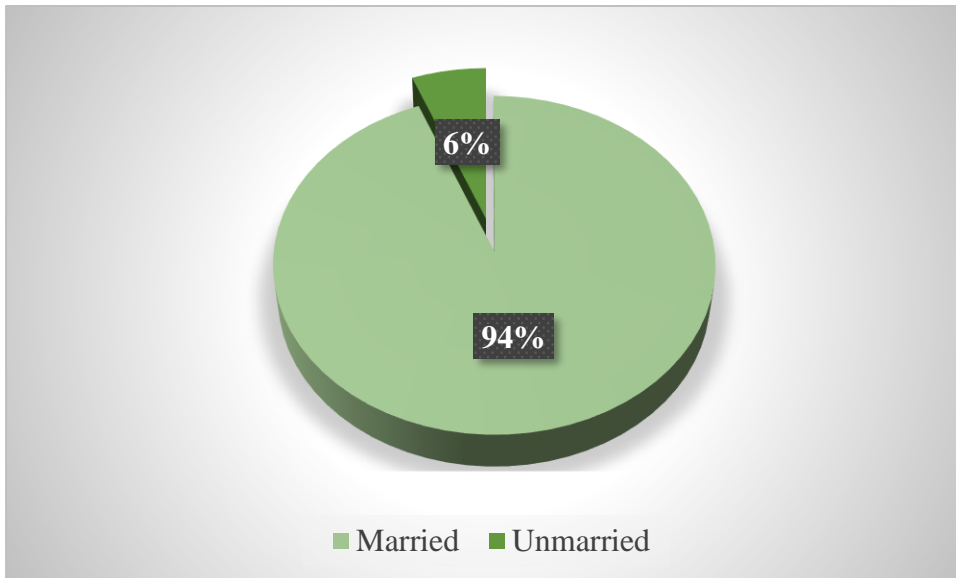
Figure no.- 6 Marital status of the participants

4.2 Work- Related Information-

4.2.1 Working duration in a day of the participants-

In this study 82 (40.8%) people were working greater than 10 hours in a day and 119 (59.2%) people were working less than 10 hours in a day.
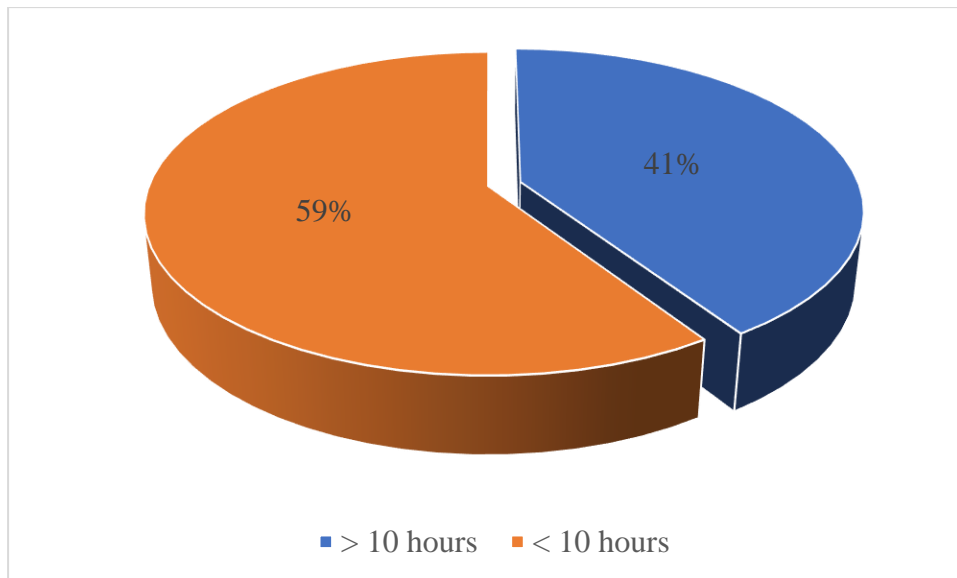
Figure no. 7 - Working duration of the participants in a day

4.2.2 Profession years of the participants-

In this study 201 tailors were participated among them 2 (1.0%) people were less than 5 months in this profession, 2 (1.0%) people were greater than 5 months in this profession and 197 (98.0%) people were More than 1 year in this profession.
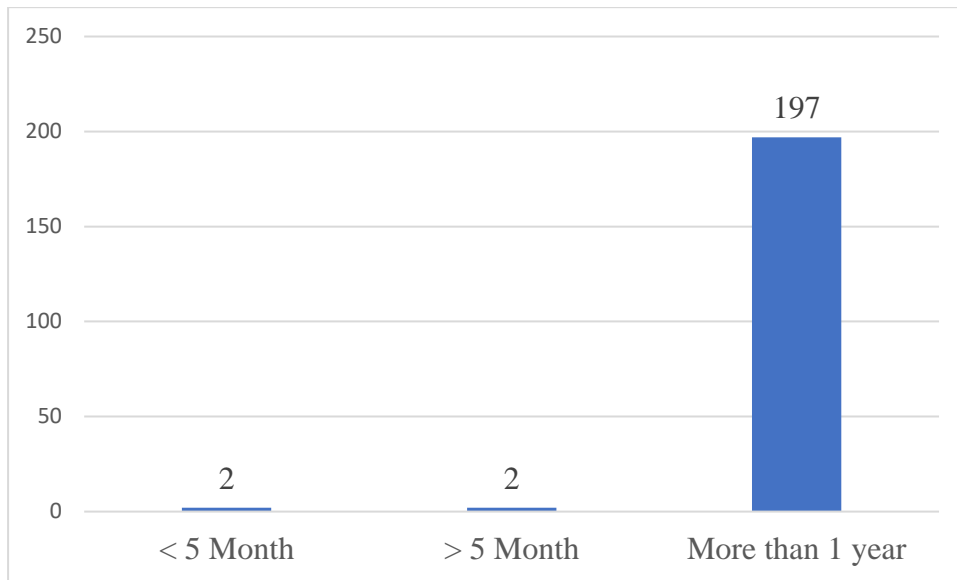
Figure no. 8 - Profession years of the participants

4.2.3 Smoking group of the participants-

In this study total 201 tailors were participated among them 39 (19.4%) involving with smoking and 162 (80.6%) were not involve smoking.

Table no. 3 – Frequency distribution of the Smoking group of the participants

Smoking Group	Frequency (n)	Percent (%)
No	162	80.6
Yes	39	19.4
Total	201	100

4.3 Musculoskeletal Health Related Information (Based on MSK-HQ scale)-

4.3.1 Pain/Stiffness during the day of the participants-

In this study 201 tailors were participated among them 4 (2.0%) people were suffering from pain/stiffness very severe in the day, 35 (17.4%) fairly severe in the day, 56 (27.9%) people were moderately in the day, 100 (49.8%) people were slightly and 6 (3.0%) people were not at all suffering from pain/stiffness in the day.
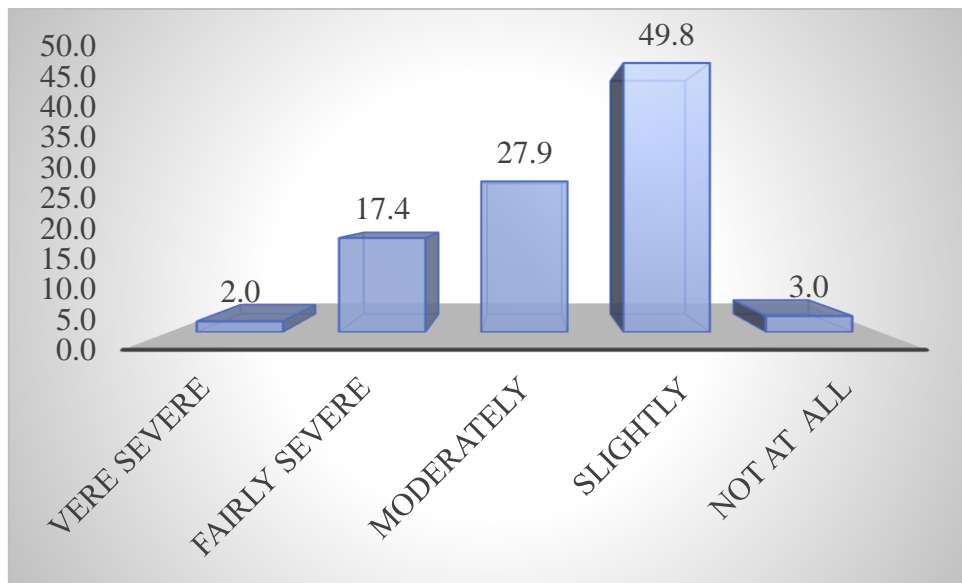
Figure no. 9 – Pain/Stiffness during the day

4.3.2 Pain/Stiffness during night of the participants-

In this study 2 (1.0%) people were suffering from pain/stiffness very severe in the night, 32 (15.9%) people were fairly severe in the night, 55 (27.4%) people were moderately in the night, 101 (50.2%) slightly and 11 (5.5%) people were not at all suffering from pain/stiffness in the night.
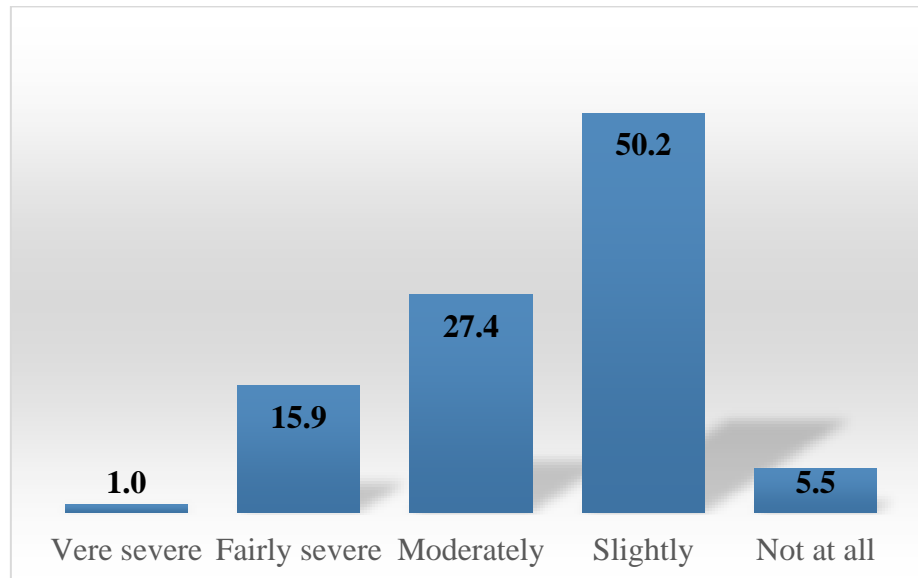
Figure no. 10 – Pain/Stiffness during the night

4.3.3 Walking symptoms interfered in the last 2 weeks of the participants-

A total 201 tailors were participated in this study among them 1 (5%) were severely, 31 (15.4%) moderately, 80 (39.8%), slightly and 89 (44.3%) people were not at all walking symptoms interfered in the last 2 weeks.
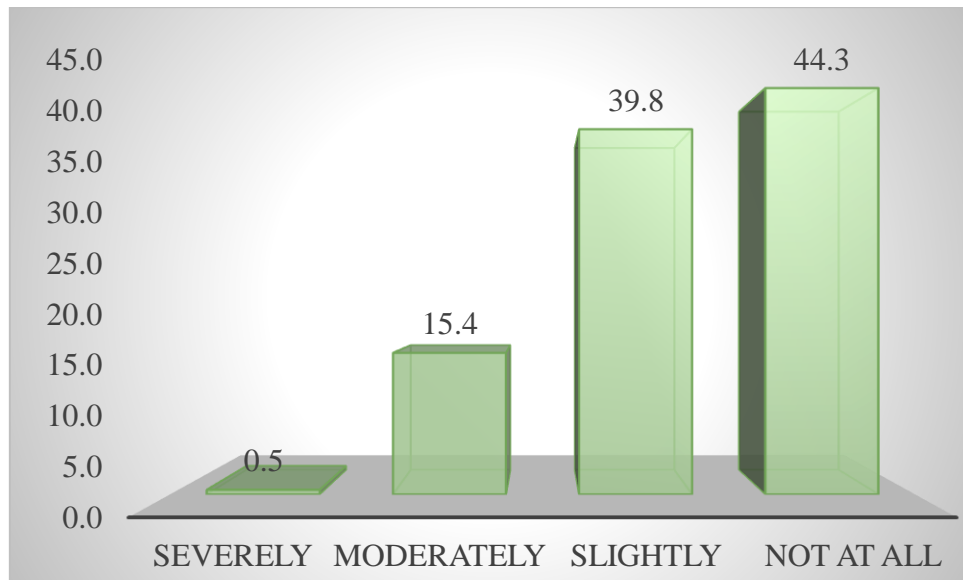
Figure no. 11 – Walking symptoms interfered in the last 2 weeks

4.3.4 Washing/Dressing symptoms interfered in the last 2 weeks-

Among the participants 22 (10.9%) moderately, 79 (39.3%) slightly and 100 (49.8%) people were not at all washing/dressing symptoms interfered in the last 2 weeks.

Table no. 4 – Frequency distribution of washing/Dressing symptoms interfered in the last 2 weeks-

Value	Frequency (n)	Percent (%)
Not at all	100	49.8
Slightly	79	39.3
Moderately	22	10.9
Total	201	100

4.3.5 Problems for the participants to do physical activities for the symptoms in the last 2 weeks-

All of 201 participants 3 (1.5%) Very much, 30 (14.9%) Moderately, 89 (44.3%) Slightly and 79 (39.3%) people were Not at all facing problems to do physical activities for the symptoms in the last 2 weeks.

Table no. 5 – Frequency distribution of respondent problems in physical activities for the symptoms in the last 2 weeks

Value	Frequency (n)	Percent (%)
Slightly	89	44.3
Not at all	79	39.3
Moderately	30	14.9
Very much	3	1.5
Total	201	100

4.3.6 Symptoms interfered with work/daily routine in the last 2 weeks-

A total 201 tailors were participated among them 5 (2.5%) Severely, 38 (18.9%) Moderately, 127 (63.2%) Slightly and 31 (15.2%) people were Not at all symptoms interfered with work/daily routine in the last 2 weeks.

Table no. 6 – Frequency distribution of symptoms interfered with work/daily routine in the last 2 weeks-

Value	Frequency (n)	Percent (%)
Slightly	127	63.2
Moderately	38	18.9
Not at all	31	15.2
Severely	5	2.5
Total	201	100

4.3.7 Symptoms interfered with social activities and hobbies in the last 2 weeks-

Among this study 3 (1.5%) people were Severely, 35 (17.4%) Moderately, 114 (56.7%) Slightly and 49 (24.4%) people were Not at all symptoms interfered with social activities and hobbies in the last 2 weeks.

Table no. 7 – Frequency distribution of respondent symptoms interfered with social activities and hobbies -

Value	Frequency (n)	Percent (%)
Slightly	114	56.7
Not at all	49	24.4
Moderately	35	17.5
Severely	3	1.5
Total	201	100

4.3.8 Needing help of the participants-

In this study 201 tailors were participated among them 3 (1.5%) people were Frequently, 42 (20.9%) Sometimes, 50 (24.9%) Rarely and 106 (52.7%) people were Not at all needing help of the participants.

Table no. 8 – Frequency distribution of needing help of the participants-

Value	Frequency (n)	Percent (%)
Not at all	106	52.7
Rarely	50	24.9
Sometimes	42	20.9
Frequently	3	1.5
Total	201	100

4.3.9 Sleep trouble for the symptoms of the participants-

A total 201 participants among them 4 (2.0%) Frequently, 39 (19.4%) Sometimes, 56 (27.9%) Rarely and 102 (50.7%) people were Not at all sleeping trouble because of their symptoms in the last 2 weeks.
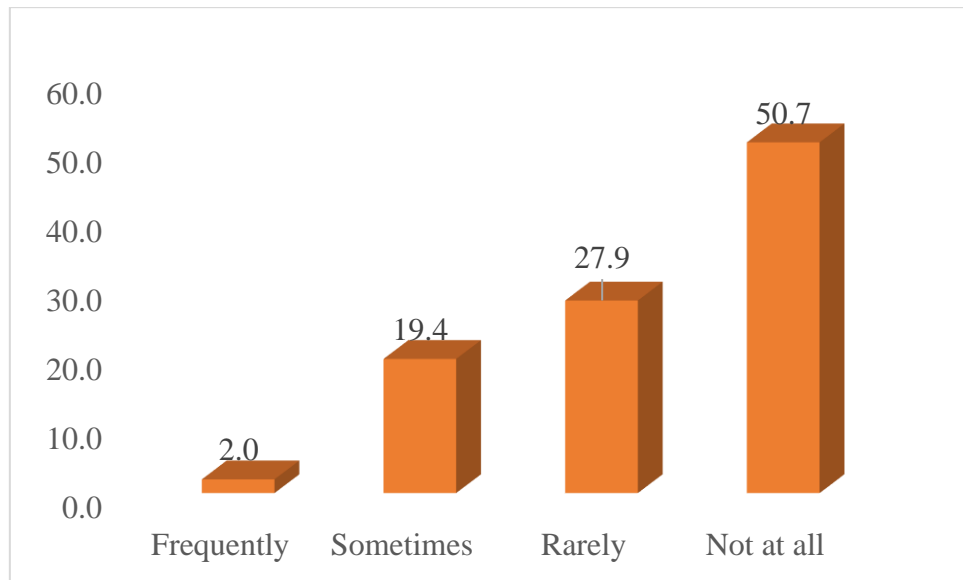
Figure no. 12 – Sleep trouble due to symptoms in the last 2 weeks

4.3.10 Fatigue or low energy of the participants-

From 201 participants 1 (0.5%) Severe, 29 (14.4%) Moderately, 149 (74.1%) Slight and 22 (10.9%) people were Not at all fatigue or low energy of the participants in the last 2 weeks.
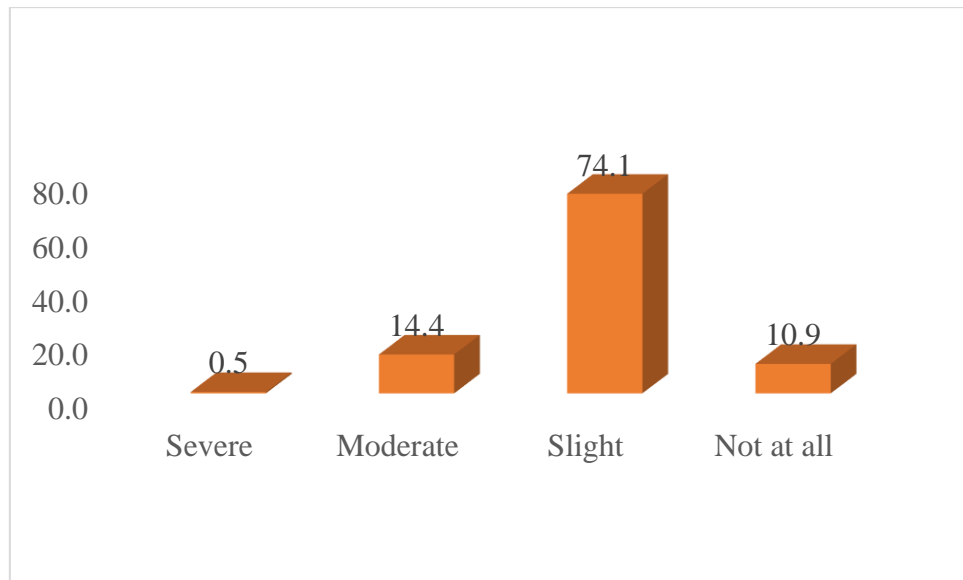
Figure no. 13 – Fatigue or low energy of the participant in the last 2 weeks

4.3.11 Emotional well-being of the participants-

From all 201 participants 6 (3.0%) Severely, 31 (15.4%) Moderately, 151 (75.1%) Slightly and 13 (6.5%) people were Not at all of the participants emotional well-being due to symptoms in the last 2 weeks.
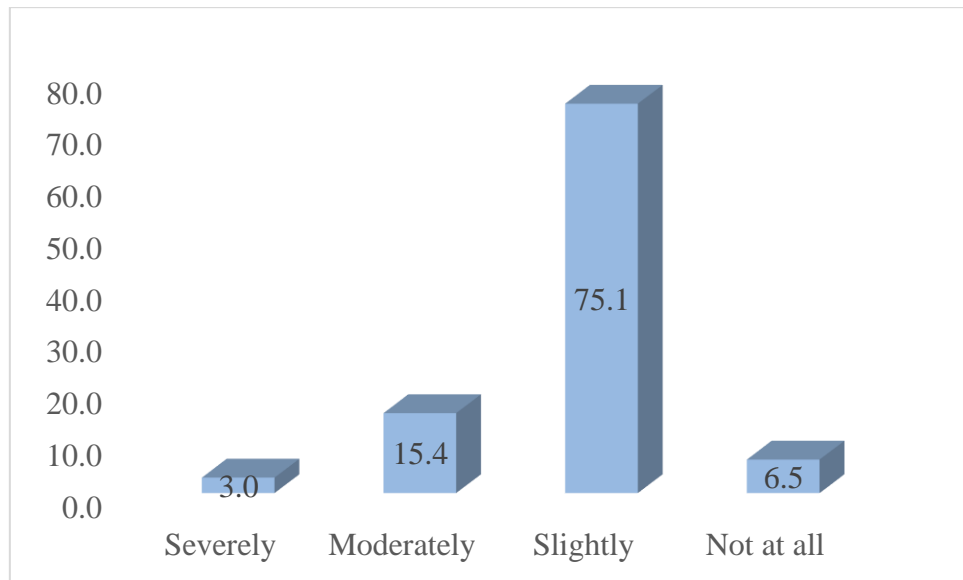
Figure no. 14 – Emotional well-being of the participants in the last 2 weeks

4.3.12 Understanding of the condition and any current treatment of the participants-

In this study 201 tailors were participated among them 13 (6.5%) Not at all, 124 (61.7%) Slightly, 56 (27.9%) Moderately, 2 (1.0%) Very well and 6 (3.0%) people were Completely understanding of their condition and any treatment in the last 2 weeks.
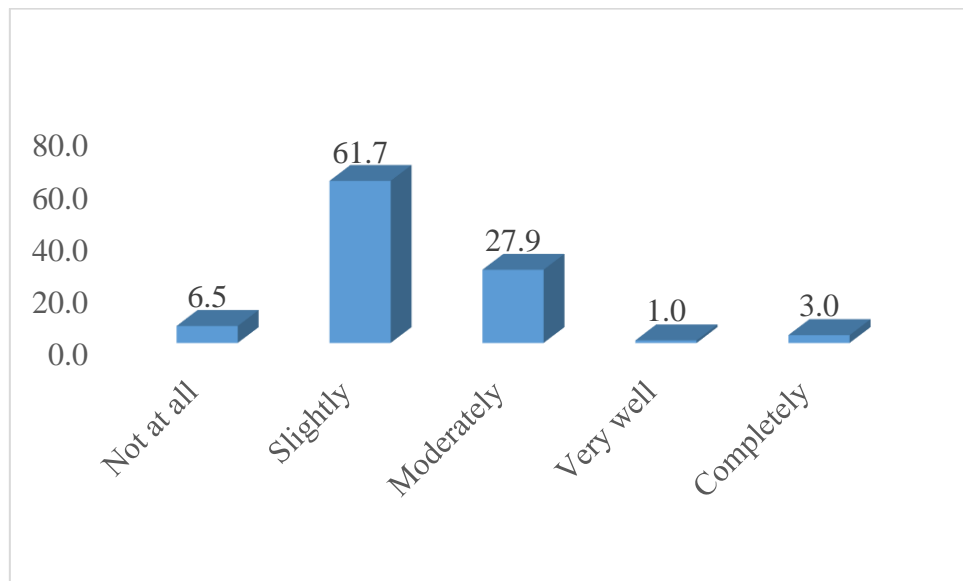
Figure no. 15 – Understanding of the conditions and any current treatment in the last 2 weeks

4.3.13 Confidence in being able to manage their symptoms of the participants-

A total 201 participants were participated among them 7 (3.5%) Not at all, 135 (67.2%) Slightly, 51 (25.4%) Moderately, 7 (3.5%) Very and 1 (0.5%) Extremely confidence in being able to manage the symptoms in the last 2 weeks of the participants.
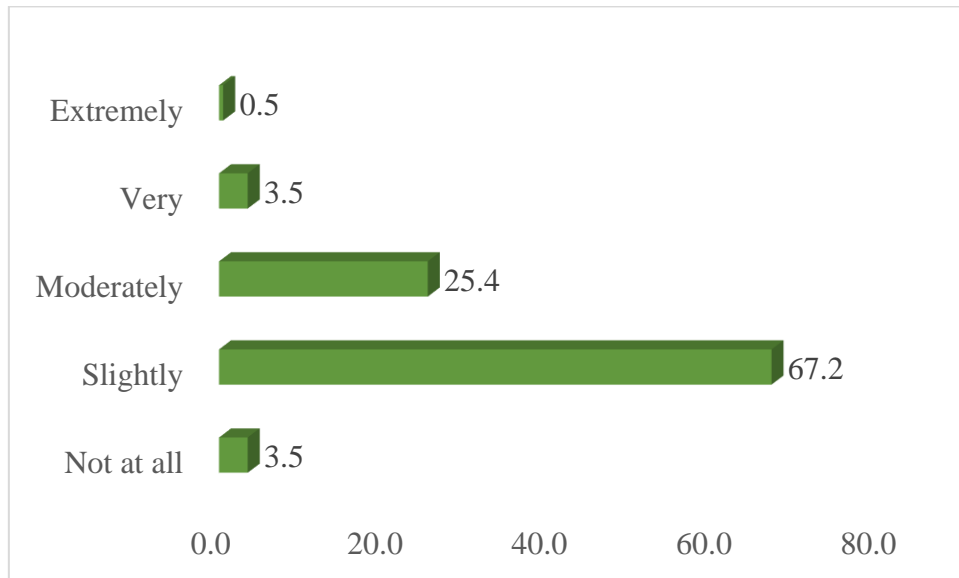
Figure no. 16 – Confidence in being able to manage the symptoms in the last 2 weeks

4.3.14 Overall impact of the participants-

Among the participants 29 (14.4%) Very much, 57 (28.4%) Moderately, 109 (54.2%) Slightly and 6 (3.0%) Not at all of the participant overall impact in the last 2 weeks.
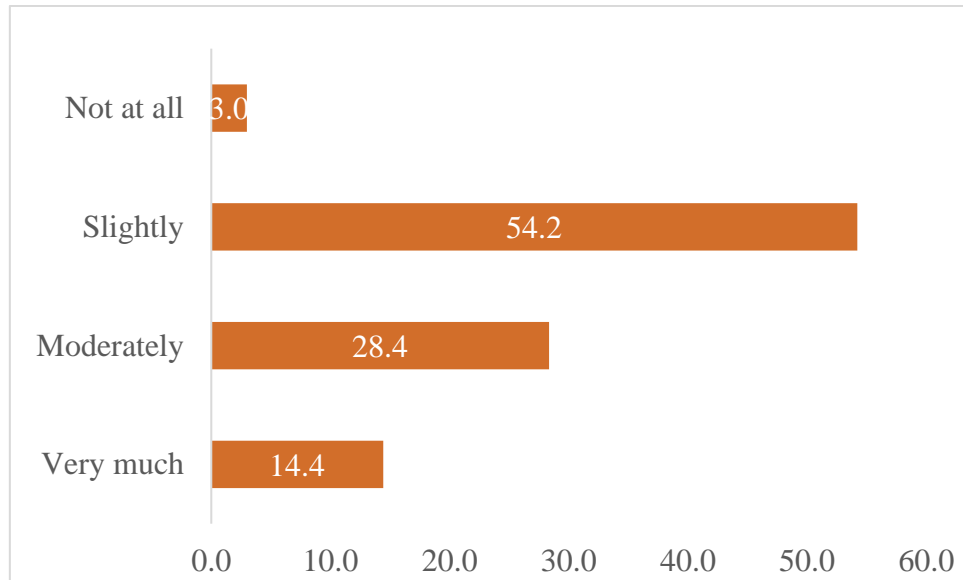
Figure no. 17 – Overall impact in the last 2 weeks

4.3.15 Physical activity levels of the participants-

In this study 201 tailors were participated among them 35 (17.4%) None, 65 (32.3%) 2 days, 56 (27.9%) 3 days, 34 (16.9%) 4 days, 10 (5.0%) 5 days and 1 (0.5%) 6 days had done a total of 30 minutes or more physical activity in the last week.

Table no. 9 – Frequency distribution of the Physical activity levels in the last week-

Value	Frequency (n)	Percent (%)
None	35	17.4
2 days	65	32.3
3 days	56	27.9
4 days	34	16.9
5 days	10	5.0
6 days	1	0.5
Total	201	100

4.3.16 Result of MSK-HQ score:

This study found that the MSK-HQ score mean was 38.07 and standard deviation was ± 7.31.

Table no. 10 – Frequency distribution of the result of MSK-HQ score

Score	Frequency (n)	Percentage (%)	Mean ± Standard deviation
<38	101	50.2	38.07 ± 7.31
>39	100	49.8	
Total	201	100	

4.4. Association-

4.4.1 Association between Professional experience and Pain/stiffness in the day-

The association between professional experience and level of pain/stiffness in the day are displayed in the table -11. Here researcher was found a significant association between both variables.

Table no. 11 - Professional experience and pain/stiffness in the day crosstabulation-

Count	Very severe	Fairly severe	Moderately	Slightly	Not at all	Total	Person Chi-square	P value
<5 month	0	0	1	1	0	2		
>5 month	0	0	0	1	1	2	16.703	0.033*
More than 1 year	4	35	55	98	5	197		

(* significant at 95% confidence levels)

4.4.2 Association between Gender and pain/stiffness during the day-

The association between gender and level of pain/stiffness during the day are displayed in the table- 12. Here researcher was not found a significant association between both variables.

Table no. 12 - Gender and pain/stiffness during the day crosstabulation-

Gender of the participant	Very severe	Fairly severe	Moderately	Slightly	Not at all	Total	Person Chi-square	P value
Male	4	31	52	94	4	185	6.768	0.149
Female	0	4	4	6	2	16		

The cross-sectional study is being conducted in Bagerhat district, Bangladesh. Tailors were the research population. The study's aims are to evaluate the work-related musculoskeletal symptoms among the tailors. As well as the demographic characteristics of the tailors connected to musculoskeletal disorder pain. A total of 201 tailors were questioned. The primary goal of this study was to collect baseline data on tailors' work-related musculoskeletal complaints. The prevalence of musculoskeletal problems was described in a random sample of 201 tailors in Bagerhat district, Bangladesh, using the standardized MSK-HQ questionnaire, a validated tool.

In this research the researcher found that, A total of 201 tailors were participate. The mean age and Standard deviation of the respondents (N=201) was 42.48 ± 10.953. In here highest age of the participants 66 and lowest age was 20. Most vulnerable age group was 36-51 years 92 (45.8%).

In other study, the study included 110 workers in all. The majority of workers (36.4%) were between the ages of 36 and 45, with a mean age of 42.3 ± 12.2. (Banerjee et al., 2016).

In other showed that, all study participants were between the ages of 18 and 65, with a mean age of 43.6 years (SD 13.6 years) (Algarni, et al., 2020).

This study was conducted on 201 participants among them 92% (185) were male and 8% (16) were female. In other study conduct in Iran, 392 0ffice worker were participate and female was (52.8%) and Male was (47.2%) (Noroozi, et al.,2015).

In this study we found that, the mean and SD of BMI of the Participant (N=201) was 23.020 (± 3.141). In here highest BMI of the participants was 34.0 and lowest BMI was 16.0. In other study showed that, the mean and SD of weight and kg was 69.52 and standard deviation 0.08 (Ayub and Shah., 2018).

In other study showed that, the mean and SD of BMI was 25.68 (± 3.56) (Aghilinejad, et al.,2012).

In this research, researcher found that, 20 (10.0%) people live in the Urban, 1(0.5%) people live in the Semi urban and 180 (89.6%) people live in the rural area.

In this study 4 (2.0%) people were illiterate, 150 (74.6%) people were primary level, 32 (15.9%) people were Secondary School Certificate level, 9 (4.5%) people were complete Higher Secondary level and 6 (3.0%) people were complete others levels.

In other study showed that, according to education level, 7.9% of people had a PhD, 17.9% had a Master of Science degree, 53.1% had a Bachelor of Science degree, and 21.2% had a diploma or above (Noroozi, et al.,2015).

In others study, 23.6% were illiterate, while 30.9% had completed primary school. (Banerjee et al., 2016). In other showed that, Fewer than half of the participants (45%) had a university degree, 24% had a high school education, and only 7% had attended intermediate school (Algarni, et al., 2020).

In this researcher found that, among them 180 (89.6%) people were living with nuclear family and 21 (10.4%) people were living with extended family, and also found that. 94 (46.8%) were Islam and 107 (53.2%) were Sanatan.

In this researcher found that, 189 (94.0%) people were married and 12 (6.0%) people were unmarried. In other study showed that, 109 (77.2%) was married and 34 (22.8%) (Algarni, et al., 2020).

In this study researcher found that, 82 (40.8%) people were working greater than 10 hours in a day and 119 (59.2%) people were working less than 10 hours in a day. In other showed that, The mean and SD of the duration of work per day (in hour) 11 ($\pm$ 2.38), and the mean and SD of the duration of rest per day (in hour) 1.5 ($\pm$ 1.0) (Ali, et al., 2012).

In this study researcher found that, 2 (1.0%) people were less than 5 months in this profession, 2 (1.0%) people were greater than 5 months in this profession and 197 (98.0%) people were More than 1 year in this profession.

In other study conduct in Iran, Participant worked at the company for an average of 56 hours (at least one working shift) every week, with a career duration of 13.58 years (range: 1-40 years) (Aghilinejad, et al., 2012).

In this study, total 201 tailors were participated among them 39 (19.4%) involving with smoking and 162 (80.6%) were not involve smoking.

In other study conduct in 581 workers and showed that, Alcohol was consumed at least once a week by 43% of men and nearly 20% of women. Tobacco use was 7.3% among women, with men smoking at a greater rate (14.3%) (Fernandes, et al., 2011).

MSK-HQ was compared to respondents' health status, MSK difficulties, and standard health-related quality of life, physical functioning, and wellbeing measures. The statistical analyses adhered to international standards. The findings revealed that MSK-HQ is a reliable method for assessing the general public's MSK health-related quality of life (Norton, et al., 2019).

In this study researcher found that, the mean and SD of MSK-HQ total Score was 38.07 and (±7.31). In other study showed that, Mean and SD of MSK-HQ total Score 32.29 and (±10.42) (Algarni, et al., 2020).

In other study showed that, Mean and SD of MSK-HQ total Score 28.62 and (±9.61) (Hill, et al.,2016). In other showed that, Mean and SD of MSK-HQ total Score 32.3 and (± 9.2) (Christiansen, et al., 2020).

In this study researcher showed that, professional experience and level of pain/stiffness in the day was a significant association between both variables. Here P value was 0.033, and Pearson chi-square was 16.703, and also showed that professional experience and level of pain/stiffness during night was not significant association between both variables. Here P value was 0.250 and Pearson chi-square was 10.214.

CHAPTER – VI	LIMITATIONS

This study had several limitations and restrictions that should be noted. Because the study topic was relatively new in Bangladesh, there was little information available about it. The duration of the research endeavor was thought to be limited. Due to time constraints, the most convenient sampling method was chosen. The research Before beginning the research endeavor, the conductor had not completed any pilot studies.

Because data was collected through questionnaire, there may be issues with the questionnaire's validity and reliability. It is a feasible way for gathering data in a questionnaire.

The research study was completed by an undergraduate student, and it was his or her first research project. Because it was only one survey, there were several errors that the supervisor and the respectable teacher disregarded.

CHAPTER – VII   CONCLUSION AND RECOMMENDATION

7.1 Conclusion:

There was no genuine data in Bangladesh on the prevalence of musculoskeletal problems among tailors. As a result, the goal of our study was to investigate musculoskeletal problems among Tailors in the Bagerhat district of Bangladesh. Based on self-report measurements, this study discovered a high frequency of musculoskeletal problems among tailors. The vast majority of all responders reported musculoskeletal discomfort in various regions of the body in the previous two weeks. According to these findings, the lumber region was the most affected, followed by other regions.

In this study researcher found that, 1.0% people were less than 5 months in this profession, 1.0% people were greater than 5 months in this profession and 98.0% people were More than 1 year in this profession.

This study researcher showed that, professional experience and level of pain/stiffness in the day was a significant association between both variables also showed that professional experience and level of pain/stiffness during night was not significant association between both variables.
Work-related musculoskeletal issues cause significant distress to Tailors' physical and mental health, as well as having an impact on people work activities.

7.2 Recommendation:

A large-scale study of the prevalence of musculoskeletal problems among tailors is necessary and may be conducted in the future. It was also necessary to determine what types of musculoskeletal complaints the Tailors reported without pain. Because musculoskeletal symptoms impact a large number of participants in this study, it is critical to prevent or enhance the management of work-related musculoskeletal complaints among Tailors. Because the study was brief, a longer period of time would be required in the future. The sample size for this study was 201 people, although the sample size would be increased in the future.

Adiele, D. and Morgan, G.P., 2018. Prevalence of musculoskeletal injuries in males and females practicing swimming from higher school of Zimbabwe. *American Journal of Sports Science*, 6(1), pp.8-11.

Aghilinejad, M., Choobineh, A.R., Sadeghi, Z., Nouri, M.K. and Ahmadi, A.B., 2012. Prevalence of musculoskeletal disorders among Iranian steel workers. *Iranian Red Crescent Medical* Journal, 14(4), p.198.

Algarni, F.S., Alotaibi, A.N., Altowaijri, A.M. and Al-Sobayel, H., 2020. Cross-cultural adaptation and validation of the Arabic Version of Musculoskeletal Health Questionnaire (MSK-HQ-Ar). *International Journal of Environmental Research and Public Health,* 17(14), p.5168.

Ali, A., Qutubuddin, S.M., Hebbal, S.S. and Kumar, A.C.S., 2012. An ergonomic study of work-related musculoskeletal disorders among the workers working in typical Indian saw mills. *International Journal of Engineering Research and Development*, 3(9), pp.38-45.

Allison, T.R., Symmons, D.P.M., Brammah, T., Haynes, P., Rogers, A., Roxby, M. and Urwin, M., 2002. Musculoskeletal pain is more generalised among people from ethnic minorities than among white people in Greater Manchester. *Annals of the rheumatic diseases*, 61(2), pp.151-156.

Almeida, M.C.V.D., Cezar-Vaz, M.R., Soares, J.F.D.S. and Silva, M.R.S.D., 2012. The prevalence of musculoskeletal diseases among casual dock workers. *Revista latino-americana de enfermagem*, 20, pp.243-250.

Alonso Monteiro Bezerra, M., Hellwig, N., da Rocha Castelar Pinheiro, G. and Souza Lopes, C., 2018. Prevalence of chronic musculoskeletal conditions and associated factors in Brazilian adults–National Health Survey. *BMC Public Health,* 18, pp.1-10.

Aweto, H.A., Tella, B.A. and Johnson, O.Y., 2015. Prevalence of work-related musculoskeletal disorders among hairdressers. *International journal of occupational medicine and environmental health*, 28(3), pp.545-555.

Ayub, Y. and Shah, Z.A., 2018. Assessment of work-related musculoskeletal disorders in manufacturing industry. *J Ergonomics*, 8(3), pp.1-5.

Baek, P., Moran, S. and Simela, A., 2021. Arthritis Research UK Musculoskeletal Health Questionnaire (MSK-HQ) as an indicator of health status and health literacy in an urban setting. *Journal of Orthopaedic Experience & Innovation*.

Bandyopadhyay, L., Baur, B., Basu, G. and Haldar, A., 2012. Musculoskeletal and other health problems in workers of smallscale garment industry–an experience from an urban Slum, Kolkata. *IOSR Journal of Dental and Medical Sciences*, 2(6), pp.23-8.

Banerjee, S., Bandyopadhyay, L., Dasgupta, A., Paul, B. and Chattopadhyay, O., 2016. Work related musculoskeletal morbidity among tailors: A cross sectional study in a Slum of Kolkata. *Kathmandu Univ Med J (KUMJ),* 14(56), pp.305-10.

Berberoğlu, U. and Tokuç, B., 2013. Work-related musculoskeletal disorders at two textile factories in Edirne, Turkey. *Balkan medical journal,* 2013(1), pp.23-27.

Choobineh, A., Lahmi, M., Shahnavaz, H., Khani Jazani, R. and Hosseini, M., 2004. Musculoskeletal symptoms as related to ergonomic factors in Iranian hand-woven carpet industry and general guidelines for workstation design. *International journal of occupational safety and ergonomics*, 10(2), pp.157-168.

Choobineh, A., Rajaeefard, A. and Neghab, M., 2006. Association between perceived demands and musculoskeletal disorders among hospital nurses of Shiraz University of Medical Sciences: a questionnaire survey. *International Journal of Occupational Safety and Ergonomics*, 12(4), pp.409-416.

Christiansen, D.H., McCray, G., Winding, T.N., Andersen, J.H., Nielsen, K.J., Karstens, S. and Hill, J.C., 2020. Measurement properties of the Musculoskeletal Health Questionnaire (MSK-HQ): a between country comparison.

Christiansen, D.H., McCray, G., Winding, T.N., Andersen, J.H., Nielsen, K.J., Karstens, S. and Hill, J.C., 2020. Measurement properties of the Musculoskeletal Health Questionnaire (MSK-HQ): a between country comparison.

Chyuan, J.Y.A., Du, C.L., Yeh, W.Y. and Li, C.Y., 2004. Musculoskeletal disorders in hotel restaurant workers. *Occupational Medicine*, 54(1), pp.55-57.

Coggon, D., Ntani, G., Palmer, K.T., Felli, V.E., Harari, R., Barrero, L.H., Felknor, S.A., Gimeno, D., Cattrell, A., Serra, C. and Bonzini, M., 2013. Disabling musculoskeletal pain in working populations: is it the job, the person, or the culture? *Pain®,* 154(6), pp.856-863.

Dhanwani, A., Bai, S., Shaheen, A., Shams, Z.I., Kumar, H., Jamali, A.A. and Ahmer, A., 2022. Musculoskeletal Disorders among Male Tailors in Clifton Karachi Pakistan. *Journal of Pharmaceutical Research International,* 34(36A), pp.46-54.

Dianat, I., Kord, M., Yahyazade, P., Karimi, M.A. and Stedmon, A.W., 2015. Association of individual and work-related risk factors with musculoskeletal symptoms among Iranian sewing machine operators. *Applied ergonomics*, 51, pp.180-188.

Dianat, I., Kord, M., Yahyazade, P., Karimi, M.A. and Stedmon, A.W., 2015. Association of individual and work-related risk factors with musculoskeletal symptoms among Iranian sewing machine operators. *Applied ergonomics*, 51, pp.180-188.

Dowell, D., Haegerich, T.M. and Chou, R., 2016. CDC guideline for prescribing opioids for chronic pain—United States, 2016. *Jama,* 315(15), pp.1624-1645.

Fernandes, R.D.C.P., Carvalho, F.M. and Assunção, A.Á., 2011. Prevalence of musculoskeletal disorders among plastics industry workers. *Cadernos de Saúde Pública,* 27, pp.78-86.

Gibbons, E. and Fitzpatrick, R., 2018. An alternative approach to implementing patient-reported outcome measures. Pilot and feasibility studies, 4, pp.1-9.

Glover, W., McGregor, A., Sullivan, C. and Hague, J., 2005. Work-related musculoskeletal disorders affecting members of the Chartered Society of Physiotherapy. *Physiotherapy,* 91(3), pp.138-147.

Habib, M.M., 2015. Ergonomic risk factor identification for sewing machine operators through supervised occupational therapy fieldwork in Bangladesh: A case study. *Work*, 50(3), pp.357-362.

Habib, R.R., Hamdan, M., Nuwayhid, I., Odaymat, F. and Campbell, O.M., 2006. Musculoskeletal disorders among full-time homemakers in poor communities. *Women & health*, 42(2), pp.1-14.

Hill, J.C., Kang, S., Benedetto, E., Myers, H., Blackburn, S., Smith, S., Dunn, K.M., Hay, E., Rees, J., Beard, D. and Glyn-Jones, S., 2016. Development and initial cohort validation of the Arthritis Research UK Musculoskeletal Health Questionnaire (MSK-HQ) for use across musculoskeletal care pathways. *BMJ open,* 6(8), p.e012331.

Hill, J.C., Kang, S., Benedetto, E., Myers, H., Blackburn, S., Smith, S., Dunn, K.M., Hay, E., Rees, J., Beard, D. and Glyn-Jones, S., 2016. Development and initial cohort validation of the Arthritis Research UK Musculoskeletal Health Questionnaire (MSK-HQ) for use across musculoskeletal care pathways. *BMJ open,* 6(8), p.e012331.

Hoque, A.S.M., Ahmed, S.T., Paul, S.K. and Parvez, M.S., 2015. Topsis based ergonomic analysis on work related musculoskeletal disorders of sewing machine operators. *International Journal of Advances in Engineering & Technology*, 8(5), p.728.

Jahan N, Das M, Mondal R, Paul S, SahaT, Akhtar R. Prevalence of Musculoskeletal Disorders among the Bangladeshi Garments Workers. *SMU Medical Journal*. 2015;2(1):102-13.

Jahan, N., Das, M., Mondal, R., Paul, S., Saha, T., Akhtar, R., Khan, M.A.M. and Banik, P.C., 2015. Prevalence of musculoskeletal disorders among the Bangladeshi garment workers. *SMU medical journal*, 2(1), pp.102-13.

Kumar, S., Patel, S., Gohel, N. and Patani, V., 2011. Musculoskeletal Disorders Bibliography. *National Institute of Occupational Health*, 1, pp.3-43.

Laal, F., Mirzaei, R., Behdani, M.S., Mohammadi, M. and Khodami, K., 2017. Evaluation of the influence of ergonomic intervention on the musculoskeletal disorders of Zahedan tailors. *International Journal of Occupational Safety and Ergonomics,* 23(3), pp.380-385.

Laal, F., Mirzaei, R., Behdani, M.S., Mohammadi, M. and Khodami, K., 2017. Evaluation of the influence of ergonomic intervention on the musculoskeletal

disorders of Zahedan tailors. *International Journal of Occupational Safety and Ergonomics,* 23(3), pp.380-385.

Meenaxi, T. and Sudha, B., 2012. Causes of musculoskeletal disorder in textile industry. *Int Res J Soc Sci*, 1(4), pp.48-50.

Milsom, N.M., 2006. The incidence and nature of cricket injuries amongst South African schoolboy cricketers (Doctoral dissertation, Stellenbosch: University of Stellenbosch).

Morken, T., Magerøy, N. and Moen, B.E., 2007. Physical activity is associated with a low prevalence of musculoskeletal disorders in the Royal Norwegian Navy: a cross sectional study. *BMC musculoskeletal disorders*, 8, pp.1-8.

Morse, T., Bruneau, H. and Dussetschleger, J., 2010. Musculoskeletal disorders of the neck and shoulder in the dental professions. *Work,* 35(4), pp.419-429.

Mussi, G. and Gouveia, N., 2008. Prevalence of work-related musculoskeletal disorders in Brazilian hairdressers. *Occupational medicine*, 58(5), pp.367-369.

Noroozi, M.V., Hajibabaei, M., Saki, A. and Memari, Z., 2015. Prevalence of musculoskeletal disorders among office workers. *Jundishapur journal of health sciences*, 7(1).

Norton, S., Ellis, B., Santana Suárez, B., Schwank, S., Fitzpatrick, R., Price, A. and Galloway, J., 2019. Validation of the Musculoskeletal Health Questionnaire in inflammatory arthritis: a psychometric evaluation. Rheumatology, 58(1), pp.45-51.

Omokhodion, F.O., Balogun, M.O. and Ola-Olorun, F.M., 2009. Reported occupational hazards and illnesses among hairdressers in Ibadan, Southwest Nigeria. *West African journal of medicine,* 28(1).

Riva, S. and Pravettoni, G., 2016. Value-based model: a new perspective in medical decision-making. *Frontiers in Public Health*, 4, p.118.

Sealetsa, O.J. and Thatcher, A., 2011. Ergonomics issues among sewing machine operators in the textile manufacturing industry in Botswana. *Work,* 38(3), pp.279-289.

Selvan V, Ramachandran A, Krishna V, Srinivasan N. Brent brotzman protocol for improving hip range of motion in professional fast bowlers with low back pain. *International Journal of Recent Scientific Research*. 2015;6(10):6560-6562.

Soares, C.O., Pereira, B.F., Gomes, M.V.P., Marcondes, L.P., de Campos Gomes, F. and de Melo-Neto, J.S., 2019. Preventive factors against work-related musculoskeletal disorders: narrative review. *Revista Brasileira de Medicina do Trabalho*, 17(3), p.415.

Tawiah, A.K., Oppong-Yeboah, B. and Bello, A.I., 2015. Work-related musculoskeletal disorders among workers at gold mine industry in Ghana: prevalence and patterns of occurrence. *Br J Med Med Res*, 9(8), pp.1-9.

Versteegh, M., Knies, S. and Brouwer, W., 2016. From good to better: new Dutch guidelines for economic evaluations in healthcare. *Pharmacoeconomics*, 34, pp.1071-1074.

Wang, P.C., Rempel, D.M., Harrison, R.J., Chan, J. and Ritz, B.R., 2007. Work-organisational and personal factors associated with upper body musculoskeletal disorders among sewing machine operators. *Occupational and environmental medicine,* 64(12), pp.806-813.

Waters, T.R., Dick, R.B., Davis-Barkley, J. and Krieg, E.F., 2007. A cross-sectional study of risk factors for musculoskeletal symptoms in the workplace using data from the General Social Survey (GSS). *Journal of Occupational and Environmental Medicine*, pp.172-184.

Appendix – A

Institutional Review Board (IRB) Permission Letter

SAIC COLLEGE OF MEDICAL SCIENCE AND TECHNOLOGY
Approved by Ministry of Health and Family Welfare
Affiliated with Dhaka University

Ref : ....   *Date : ....*

Ref.No: *SCMST/PT/ERB-2017-18/1-2023/32*

3rd January'2023

To

Uzzwal Rana

4th Professional B.Sc. in Physiotherapy

Saic College of Medical Science and Technology (SCMST)

Mirpur-14, Dhaka-1216.

Sub: Permission to collect data

Dear Rana,

Ethical review board (ERB) of SCMST pleased to inform you that your proposal has been reviewed by ERB of SCMST and we are giving you the permission to conduct study entitled "Work related musculoskeletal disorders among the tailors in Bangladesh" and for successful completion of this study you can start data collection from now.
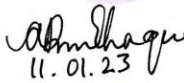
Wishing you all the best.

Thanking You,

11.1.23
Head of ERB

Ethical Review Board

Saic College of Medical Science and Technology

11. 01. 23
Principal

Saic College of Medical Science and Technology

Mirpur-14, Dhaka-1216

Address: Saic Tower, M-1/6, Mirpur-14, Dhaka-1216. Mobile:01936005804
E-mail: simt140@gmail.com, Web:www.saicmedical.edu.bd

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Appendix - B

CONSENT FROM (ENGLISH)

Hello, my name is Uzzwal Rana. I am a student of Saic College of Medical Science and Technology, final year Bachelor of science in physiotherapy department. My Titled on-

WORK RELATED MUSCULOSKELETAL SYMPTOMS AMONG THE TAILORS IN BAGERHAT DISTRICT, BANGLADESH.

From Saic College of Medical Science and Technology (SCMST) under medicine faculty of university of Dhaka. I would like to know some information related to my study. This will take approximately 10-20 minutes. I need to meet you just once to collect entire information. I would like to inform you that this is a purely academic study and obtain information will not be used for any other purpose. All information provided by you will be kept confidential and also source of information will remain anonymous, your participation in this study voluntarily and also the right not to answer a particular question that you don't like or do not want to answer during interview.

Do you have any question before I start?

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

Yes [   ]   [   ] No

Signature of the Participant…………………………. Date……………………………

Signature of the Researcher…………………………. Date……………………………

Mobile Number……………………………………..... ID No………………………….

Address………………………………………………………………………….......

Fingerprint:

সম্মতি পত্র (বাংলা)

হ্যালো, আমার নাম উজ্জ্বল রানা। আমি সাইক কলেজ অফ মেডিকেল সায়েন্স অ্যান্ড টেকনোলজির একজন ছাত্র, ফিজিওথেরাপি বিভাগে স্নাতক শেষ বর্ষের। আমার শিরোনাম হল-

বাগেরহাটের দর্জিদের পেশাগত কাজ করনের ক্ষেত্রে সম্পর্কিত পেশীর ব্যাধি

ঢাকা বিশ্ববিদ্যালয়ের মেডিসিন অনুষদের অধীনে সাইক কলেজ অব মেডিকেল সায়েন্স অ্যান্ড টেকনোলজি (এসসিএমএসটি)। আমি আমার অধ্যয়ন সম্পর্কিত কিছু তথ্য জানতে চাই। এটি প্রায় ১০-২০ মিনিট সময় নেবে। সম্পূর্ণ তথ্য সংগ্রহ করার জন্য আমাকে একবার আপনার সাথে দেখা করতে হবে। আমি আপনাকে জানাতে চাই যে এটি একটি সম্পূর্ণ একাডেমিক অধ্যয়ন এবং তথ্য প্রাপ্ত করা অন্য কোন উদ্দেশ্যে ব্যবহার করা হবে না। আপনার দ্বারা প্রদত্ত সমস্ত তথ্য গোপন রাখা হবে এবং তথ্যের উৎস বেনামী থাকবে, এই গবেষণায় আপনার অংশগ্রহণ স্বেচ্ছায় এবং সেইসাথে সাক্ষাৎকারের সময় আপনি পছন্দ করেন না বা উত্তর দিতে চান না এমন একটি নির্দিষ্ট প্রশ্নের উত্তর না দেওয়ার অধিকার থাকবে। আমি শুরু করার আগে আপনার কোন প্রশ্ন আছে? তাহলে, ইন্টারভিউ নিয়ে এগিয়ে যাওয়ার জন্য আমি কি আপনার সম্মতি পেতে পারি?

হ্যা ☐   না ☐

অংশগ্রহনকারীর স্বাক্ষর..তারিখ..

গবেষকের স্বাক্ষর..তারিখ..

মোবাইল নম্বর..আইডি নম্বর..

ঠিকানা..

আঙ্গুলের ছাপ   _____

Work related musculoskeletal symptoms among the tailors in Bagerhat district, Bangladesh

Code no: | | | |

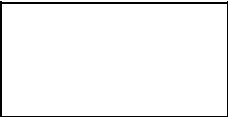Participant:

Name: …………………………………………………………………………….

Address:……………………………………………………………………………..

Date:…………………………………………………………………………………

Mobile No:…………………………………………………………………………..

Section 1: Sociodemographic information:

Q.N	Question	Answer
1	What is your age?	
2	What is your Gender? 1.Male 2.Female 3.Other	
3	BMI-	
	Height of the participate (feet)	
	Weight of the participate (Kg)	
4	Where do you live? 1.urban 2.Semi urban 3.Rural	

5	What is your education level? 1.Illiterate 2.Primary 3.SSC 4.HSC 5.Others	
6	Types of your family? 1.Nucler 2.Extended 3.others	
7	What is your religion? 1.Islam 2.Sanaton 3.Buddhist 4.Christian 5.others	
8	Marital status? 1.Married 2.Unmarried 3.Widow 4.Divorce	

Section-2: Work related information:

1	How long work in a day? 1.>10 hours 2.< 10 hours	
2	How many years have you in this profession? 1.<5 month 2.>5 month 3. More than 1 year	
3	Do you take rest in your workplace? 1.Yes 2.No	
4	Do you smoke? 1.Yes 2.No	

Section 3: MUSCULOSKELETAL HEALTH QUESTIONNAIRE(MSK-HQ):

This questionnaire is about your joint, back, neck, bone and muscle symptoms such as aches, pains and/or stiffness.

Please focus on the particular health problem(s) for which you sought treatment from this service.

For each question **tick (√) one box** to indicate which statement best describes you **over the last 2 weeks.**

1.Pain/stiffness during the **day** How severe was your usual joint or muscle pain and/or stiffness overall during the **day** in the last 2 weeks	Not at all ☐4	slightly ☐ 3	Moderately ☐2	Fairly severe ☐ 1	Very severe ☐ 0
2.Pain/stiffness during the **night** How severe was your usual joint or muscle pain and/or stiffness overall during the **night** in the last 2 weeks	Not at all ☐ 4	slightly ☐ 3	Moderately ☐ 2	Fairly severe ☐ 1	Very severe ☐ 0
3.Walking How much have your symptoms interfered with your ability to walk in the last 2 weeks?	Not at all ☐ 4	Slightly ☐ 3	Moderately ☐ 2	Severely ☐ 1	Unable to to walk ☐ 0

4.Washing/Dressing How much have your symptoms interfered with your ability to wash or dress yourself in the last 2 weeks?	Not at all ☐ 4	Slightly ☐ 3	Moderately ☐ 2	Severely ☐ 1	Unable to wash or dress myself ☐ 0
5. Physical activity levels How much has it been a problem for you to do physical activities (e.g. going for a walk or jogging) to the level you want because of your joint or muscle symptoms in two weeks?	Not at all ☐ 4	Slightly ☐ 3	Moderately ☐ 2	Very much ☐ 1	Unable to do physical activities ☐ 0
6. Work / daily routine How much have your joint or muscle symptoms interfered with your work or daily routine in the last 2 weeks (including work & jobs around the house)?	Not at all ☐ 4	Slightly ☐ 3	Moderately ☐ 2	Severely ☐ 1	Extremely ☐0

7. **Social activities and hobbies** How much have your joint or muscle symptoms interfered with your social activities and hobbies in the last 2 weeks?	Not at all ☐ 4	Slightly ☐ 3	Moderately ☐ 2	Severely ☐ 1	Extremely ☐ 0
8.Needing help How often have you needed help from others (including family, friends or carers) because of your joint and muscle symptoms in the last 2 weeks?	Not at all ☐ 4	Rarely ☐ 3	Sometimes ☐ 2	Frequently ☐ 1	All the time ☐ 0
9. Sleep How often have you had trouble with either falling asleep or staying asleep because of your joint and muscle symptoms in the last 2 weeks?	Not at all ☐ 4	Rarely ☐ 3	Sometimes ☐ 2	Frequently ☐ 1	Every night ☐ 0
10. Fatigue or low energy How much fatigue or low energy have you felt in the last 2 weeks	Not at all ☐ 4	Slight ☐ 3	Moderate ☐ 2	Severe ☐ 1	Extreme ☐ 0

11. Emotional well-being How much have you felt anxious or low in your mood because of your joint or muscle symptoms in the last 2 weeks?	Not at all ☐ 4	Slightly ☐ 3	Moderately ☐ 2	Severely ☐ 1	Extremely ☐ 0
12. Understanding of your condition and any current treatment Thinking about your joint or muscle symptoms, how well do you feel you understand your condition and any current treatment (including your diagnosis and medication)?	Completely ☐ 4	Very well ☐ 3	Moderately ☐ 2	Slightly ☐ 1	Not at all ☐ 0
13. Confidence in being able to manage your symptoms How confident have you felt in being able to manage your joint or muscle symptoms by yourself in the last 2 weeks (e.g. medication, changing lifestyle)?	Extremely ☐ 4	Very ☐ 3	Moderately ☐ 2	Slightly ☐ 1	Not at all ☐ 0
14. Overall impact How much have your joint or muscle symptoms bothered you overall in the last 2 weeks	Not at all ☐ 4	Slightly ☐ 3	Moderately ☐ 2	Very much ☐ 1	Extremely ☐ 0

Physical activity levels

In the past week, on how many days have you done a total of 30 minutes or more of physical activity, which was enough to raise your heart rate? This may include sport, exercise and brisk walking or cycling for recreation or to get to and from places, but should not include housework or physical activity that is part of your job.

None	1 Day	2Days	3 days	4 days	5 days	6 days	7 days
☐	☐	☐	☐	☐	☐	☐	☐

প্রশ্নপত্র (বাংলা)

বাগেরহাটের দর্জিদের পেশাগত কাজ করনের ক্ষেত্রে সম্পর্কিত পেশীর ব্যাধি

কোড নংঃ

যোগদানকারী

নামঃ...

....

ঠিকানাঃ...

তারিখঃ..

মোবাইল নম্বরঃ...

বিভাগ ১: সামাজিক জনসংখ্যা সংক্রান্ত তথ্য (দয়া করে ২ থেকে ৭ নম্বরে টিক দিন কোন প্রশ্ন নেই)

ক্রমিক নং	প্রশ্ন	উত্তর
১	আপনার বয়স কত?	
২	আপনার লিঙ্গ কী? ১. পুরুষ ২. নারী ৩. অন্যান্য	
৩	বিএমআই	
	অংশগ্রহনকারীর উচ্চতা (ফিট)	
	অংশগ্রহনকারীর ওজন (কেজি)	
৪	আপনি কোথায় বসবাস করো? ১. শহর ২. আংশিক শহর ৩. গ্রামে	
৫	আপনার শিক্ষগত যোগ্যতা কতটুকু? ১. অশিক্ষিত ২. প্রাথমিক ৩. এস.এস.সি ৪. এইচ.এস.সি ৫. অন্যান্য	
৬	আপনার পরিবারের ধরন? ১. ধ্বংসাত্মক ২. প্রলম্বিত ৩. অন্যান্য	
৭	আপনার ধর্ম কী? ১. মুসলিম ২. হিন্দু ৩. বৌদ্ধ ৪. খ্রিষ্টান	

	৫. অন্যান্য	
৮	বৈবাহিতক অবস্থা? ১. বিবাহিত ২. অবিবাহিত ৩. বিধবা ৪. তালাক প্রাপ্ত	

বিভাগ ২: কাজ সংক্রান্ত তথ্য:

১	একদিনে কতটুকু কাজ করেন? ১. > ১০ ঘণ্টা ২. < ১০ ঘণ্টা	
২	কত বছর যাবৎ আপনি এই পেশায়? ১. < ৫ মাস ২. > ৫ মাস ৩. ১ বছরের অধিক	
৩	আপনি কী বিশ্রাম নেও তোমার কাজের যায়গায়? ১. হ্যা ২. না	
৪	আপনি কী ধূমপান করেন? ১. হ্যা ২. না	

বিভাগ-৩: পেশীবহুল স্বাস্থ্য সম্পর্কে প্রশ্নাবলী

এই প্রশ্নাবলী আপনার জয়েন্ট, পিঠ, ঘাড়, হাড় এবং পেশীর উপসর্গ সম্পর্কে যেমন ব্যাথা, কষ্ট এবং/অথবা শক্ত হওয়া।

অনুগ্রহ করে বিশেষ স্বাস্থ্য সমস্যাগুলির উপর মনযোগ দিন যার জন্য আপনি এই পরিষেবা থেকে চিকিৎসা চেয়েছিলেন

প্রতিটি প্রশ্নের জন্য () একটি বক্সে টিক দিন যাতে গত ২ সপ্তাহের সর্বোত্তম বিবরণটি আপনাকে বর্ণনা করে।

১. ব্যাথা/কঠিনতা দিনের বেলা গত ২ সপ্তাহে আপনার স্বাভাবিক জয়েন্ট বা পেশী ব্যথা এবং/অথবা সামগ্রিকভাবে কঠোরতা কতটা গুরুতর ছিল।	একেবারেই না ☐ 4	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	মোটামুটি গুরতর ☐ ১	খুবই গুরতর ☐ ০
২. ব্যাথা/কঠিনতা রাতের বেলা গত ২ সপ্তাহে আপনার স্বাভাবিক জয়েন্ট বা পেশী ব্যথা এবং/অথবা সামগ্রিকভাবে কঠোরতা কতটা গুরুতর ছিল	একেবারেই না ☐ 4	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	মোটামুটি গুরতর ☐ ১	খুবই গুরতর ☐ ০
৩. হাটাচলায় গত ২ সপ্তাহে আপনার চলাচলের ক্ষমতার সাথে আপনার লক্ষণগুলি কতটা যোগদান করেছে?	একেবারেই না ☐ 4	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	গুরতর ☐ ১	চলা ফেরায় ক্ষমতা ০
৪. ধোয়া বা পোশাক গত ২ সপ্তাহে আপনার নিজের ধোয়া/পোশাক পরার ক্ষমতার সাথে আপনার লক্ষণগুলি কতটা যোগদান করেছে?	একেবারেই না ☐ 4	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	গুরতর ☐ ১	নিজেকে ধোয়া বা পোষাক পরিধানে অক্ষম ☐ ০
৫. শারীরিক ক্রিয়াকলাপের স্তর দুই সপ্তাহে আপনার জয়েন্ট বা পেশীর লক্ষণগুলির কারণে আপনি যে মাত্রায় শারীরিক	একেবারেই না ☐ 4	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	খুব বেশি ☐ ১	শারীরিক কার্যকলাপ করতে অক্ষম ☐ ০

ক্রিয়াকলাপ (যেমন হাঁটা বা জগিং) করতে চান তা করতে আপনার জন্য কতটা কষ্ট হয়েছে?					
৬. কাজ/প্রতিদিনের রুটিন গত ২ সপ্তাহে আপনার জয়েন্ট বা পেশীর উপসর্গগুলি আপনার কাজ বা দৈনন্দিন রুটিনে কতটা ব্যাঘাত ঘটিয়েছে (বাড়ির আশেপাশে কাজ ও চাকরি সহ)?	একেবারেই না ☐ 4	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	কঠোরভাবে ☐ ১	চরমভাবে ☐ ০
৭. সামাজিক কার্যকলাপ এবং ইচ্ছা গত ২ সপ্তাহে আপনার জয়েন্ট বা পেশীর লক্ষণগুলি আপনার সামাজিক কার্যকলাপ এবং শখগুলিতে কতটা হস্তক্ষেপ করেছে?	একেবারেই না ☐ 4	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	কঠোরভাবে ☐ ১	চরমভাবে ☐ ০
৮. সাহায্যের প্রয়োজন কতবার আপনার সাহায্যের প্রয়োজন অন্যদের কাছ থেকে (পরিবার, বন্ধুবান্ধব বা যত্নশীল সহ) আপনার জয়েন্ট বা পেশী উপসর্গের কারণে।	একেবারেই না ☐ 4	খুবই কম ☐ ৩	কখনওকখনও ☐ ২	ঘন ঘন ☐ ১	সব সময় ☐ ০
৯. ঘুম গত ২ সপ্তাহে আপনার জয়েন্ট বা পেশীর উপসর্গের কারণে হয় ঘুমিয়ে পড়া বা ঘুমিয়ে থাকতে আপনার কতবার সমস্যা হয়েছে?	একেবারেই না ☐ 4	খুবই কম ☐ ৩	কখনওকখনও ☐ ২	ঘন ঘন ☐ ১	প্রতি রাতে ☐ ০
১০. ক্লান্তি বা কম শক্তি আপনি গত ২ সপ্তাহে কতটা	একেবারেই না	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	কঠোরভাবে ☐ ১	চরম ☐ ০

ক্লান্তি বা কম শক্তি অনুভব করেছেন?	☐ ৪				
১১. মানসিক সুস্থতা গত ২ সপ্তাহে আপনার জয়েন্ট বা পেশীর লক্ষণগুলির কারণে আপনি কতটা উদ্বিগ্ন বা আপনার মেজাজ খারাপ অনুভব করেননি?	একেবারেই না ☐ ৪	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	কঠোরভাবে ☐ ১	চরমভাবে ☐ ০
১২. আপনার অবস্থা এবং যেকোনো বর্তমান চিকিৎসার বোধগম্য আপনার জয়েন্ট বা পেশীর উপসর্গের কথা চিন্তা করে আপনি কতটা ভালো অনুভব করেন যে আপনি আপনার অবস্থা এবং বর্তমান চিকিৎসা (আপনার রোগ নির্ণয় এবং ওষুধ সহ) বুঝতে পেরেছেন?	একেবারেই না ☐ ৪	খুব ভালো ☐ ৩	পরিমিতভাবে ☐ ২	সামান্য ☐ ১	একেবারেই না ☐ ০
১৩. আপনার উপসর্গগুলি পরিচালনা করতে সক্ষম হওয়ার আত্মবিশ্বাস গত ২ সপ্তাহে (যেমন ওষুধ, জীবনযাত্রার পরিবর্তন) নিজের দ্বারা আপনার জয়েন্ট বা পেশীর লক্ষণগুলি পরিচালনা করতে পেরে আপনি কতটা আত্মবিশ্বাসী বোধ করেছেন?	চরমভাবে ☐ ৪	ভালো ☐ ৩	পরিমিতভাবে ☐ ২	সামান্য ☐ ১	একেবারেই না ☐ ০
১৪. সামগ্রিক প্রভাব গত ২ সপ্তাহে সামগ্রিকভাবে আপনার জয়েন্ট বা পেশী লক্ষণগুলি আপনাকে কতটা বিরক্ত করেছে	একেবারেই না ☐ ৪	সামান্য ☐ ৩	পরিমিতভাবে ☐ ২	খুব বেশী ☐ ১	চরমভাবে ☐ ০

শারীরিক কার্যকলাপের মাত্রা গত সপ্তাহে, আপনি কত দিনে মোট ৩০ মিনিট বা তার বেশি শারীরিক কার্যকলাপ করেছেন, যা আপনার হৃদস্পন্দন বাড়ানোর জন্য যথেষ্ট ছিল? এর মধ্যে খেলাধুলা, ব্যায়াম এবং দ্রুত হাঁটা বা চিত্তবিনোদনের জন্য সাইকেল চালানো বা কোথাও যাওয়া এবং যাওয়া অন্তর্ভুক্ত থাকতে পারে, তবে গৃহকর্ম বা শারীরিক কার্যকলাপ অন্তর্ভুক্ত করা উচিত নয় যা আপনার কাজের অংশ।							
কোনটি নয় ☐	১ দিন ☐	২ দিন ☐	৩ দিন ☐	৪ দিন ☐	৫ দিন ☐	৬ দিন ☐	৭ ☐

Activities/ Month	July 22	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	App 23	May 23	Jun 23
Proposal Presentation	■											
Introduction	■	■										
Literature Review	■	■	■	■	■	■	■	■	■	■	■	■
Methodology			■	■								
Data collection							■	■	■			
Data Analysis										■		
Result										■		
1st progress presentation										■		
Discussion											■	
Conclusion and Recommendation											■	
2nd progress presentation										■		
Communication with supervision	■	■	■	■	■	■	■	■	■	■	■	■
Final Submission												■