



Risk Level Of Physical Factors Associated With Work Related Musculoskeletal Disorders (Wmsds) By Performing Task Analysis Among Textile Mill Workers – A Cross Sectional Study

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Abstract –

Aim :To Identify Risk level of Physical Factors Associated with Work Related Musculoskeletal Disorder by performing task analysis among Textile Mill Workers. **Methodology and analysis:** A cross sectional study was conducted that 54 participants both male and female using purposive sampling technique. Workers other than textile mills were excluded .The Workplace Ergonomic Risk Assessment (WERA), which is an observational tool was developed to provide a method of screening the working task quickly for exposure physical risk factor associated with Work-related Musculoskeletal Disorders (WMSDs) **Results:** Study showed that the socio-demographic factors that were examined are age and gender. The average age of study participants was 44.44%.Maximum number of workers were at medium risk level according to Workplace Ergonomic Risk Assessment Tool. **Conclusion:** The study concluded that there is medium risk level of physical factors associated with work related musculoskeletal disorder by performing task analysis among textile mill workers.

keywords - WERA; observational tool ; ergonomic risk assessment; physical risk factor; work related musculoskeletal disorder

INTRODUCTION

“Work-related musculoskeletal disorders” (WMSDs) is a term used to describe a painful or disabling injury to the muscles, tendons or nerves caused or aggravated by work ⁽¹⁾. WMSDs are preventable or at least can be delayed ⁽²⁾. These work-related disorders of the neck, shoulder, lower back, upper limbs and locomotor organs continue to be of the interest to workers, researchers and companies due to the significant temporary or permanent disability of workers; symptoms such as pain, numbness and tingling; time off from work; reduced productivity; increased worker’s compensable costs; and the increasing number of associated cases coming before the courts ⁽³⁾

Work-related musculoskeletal disorders have become a major problem in many industrialized countries ⁽⁴⁾. These disorders are widespread in many countries, with substantial costs and impacts on the workers’ quality of life. They also constitute a major proportion of all registered and/or compensation-eligible, work-related diseases in many countries ^(5,6)

In Britain, musculoskeletal disorders are believed to represent the largest category of work-related illness ⁽⁷⁾ In Europe, WMSDs are the most common work-related health problem, affecting millions of workers. Across the EU 27, 25% of workers complain of backaches and 23% report muscular pains ⁽⁸⁾

Upper extremity musculoskeletal disorders are highly prevalent in manual-intensive occupations such as clerical work, postal services, cleaning, industrial inspections and packaging ^(5,6)

In India, 20 million workers are involved in the manufacturing of textiles. Worldwide, India is the second largest producer of textile goods, which account for 20% of the national industrial output. Twenty million workers are employed in 1175 cotton mills across the country⁽⁹⁾

The textiles workers have to perform many tasks ranging from exposure to noise and dangerous substances, to manual handling and working with dangerous machinery ⁽¹⁰⁾ Especially the spinning process in medium and small-scale industries involves a lot of work with the hands with the worker bent over for prolonged duration of time. It involves lifting bundles of cotton, separating them from the bigger bundle and setting them up for spinning ⁽¹¹⁾

Many of the industries employ laborers who are involved in all these works. Especially in the small and middle scale industries, large parts of these works involve workers using their hands, lifting weights, bending, standing and sitting in the same posture for prolonged periods of time ⁽¹¹⁾

NEED OF THE STUDY

In developing countries, especially those with high rates of unemployment, it is tempting for employers who build up small and middle-sized industries to disregard safety and health. In the private sector in the United States, nearly six million workers experience non-fatal injuries or illnesses.

In India, many studies have reported prevalence of pain and work-related musculoskeletal disorders amongst different job profile including textile industry workers, the exact causative factors for the work-related musculoskeletal disorders is not well documented. Physical risk factors contributing to WMSDs are complex & remains poorly explored.

Therefore, Finding Risk Level of these physical factors associated with Work related Musculoskeletal Disorders will help in designing work station modification, ergonomics and interventions to prevent severe work-related disability among textile mill workers.

AIM

- To Identify Risk level of Physical Factors Associated with Work Related Musculoskeletal Disorder by performing task analysis among Textile Mill Workers.

OBJECTIVE

- To Find Risk level of Physical Factors Associated with Work Related Musculoskeletal Disorder by Performing Task Analysis Using Workplace Ergonomics Risk Assessment Tool among Textile Mill Workers.

Methodology

1. Study Type - Observational study
2. Study Design - Cross sectional study
3. Study Duration – 6 months
4. Sample Size – 54 (Calculated on G power software)
5. Sampling Technique – Purposive
6. Study Setting - Work places (Textile mill)
7. Study Population – Textile mill workers
8. Selection criteria

- Inclusion criteria

1. Textile mill workers.
2. Both male and female.
3. Co-operative and willing to participate.

- Exclusion criteria

1. Workers other than textile mills.

Materials

1. Pen/pencil
2. Eraser
3. Consent form
4. Case record form
5. Workplace Ergonomic Risk Assessment Tool (WERA)

Review of literature

1. Vinod H Krishnamoorthy, Deivasigamani Kuberan, Vijayaprasad Gopichandran conducted a study in 2019 to study the prevalence, Patterns and Disability Due to Musculoskeletal Disorders among Cotton Textile Industry Workers in Tamil Nadu. They included 100 participants of textile mill workers. The Nordic musculoskeletal Questionnaire was used to collect information of pain in different areas of the body. They concluded that workers had predominantly upper limb, upper back and shoulder musculoskeletal morbidity and disability, which needs to be addressed by appropriate ergonomic measures in the factories.
2. Vivi Anisa Putri, Leli Hesti and Nurfitri Bustamam conducted a cross sectional study in 2017 to study the risk Factors of Low Back Pain Among Tailors in Kramat Jati. Those who have been diagnosed by a physician have a disease with LBP complaints, such as osteoporosis, lumbar osteoarthritis, kidney stones, malignancy or infection of the lower back, have a history of trauma or surgery on the lower back or woman with second or third trimester pregnancy, were excluded. 139 actively worked as tailor between 17-65 years old were randomly included. Most of them (65%) had aged more than 35 years and 23% females subjects. Face to face interviewed using body discomfort map and Nordic questionnaire as well as questionnaire containing subject characteristics

and smoking habit data. Physical risk factors associated with work related musculoskeletal disorder were investigated using Work Ergonomic Risk Assessment. Body weight, body height and waist circumference of the tailors were also measured. They concluded that a total of 92 out of 139 (66.2%) subjects experienced LBP that had no association with duration of work and years spent working. Smoking habit, working posture, waist circumference, and age were risk factors and BMI is a protective factor for the occurrence of LBP. They also stated that, it is necessary to undertake a number of efforts to reduce the risk of LBP among the tailors, such as making back chair and foot rest, providing education on how to stop smoking, how to achieve normal weight and waist circumference and also working with ergonomic posture.

3. Sandeep Kumar Chauhan, Arohi Chauhan, Aparajita Shukla conducted a study in 2016 to assessed prevalence of MSDs among Textile Mill Workers. The study was carried out for the duration of one year on 889 workers of five textile mills located in and around Ahmedabad city. A pre-designed, pre-tested questionnaire was used to record information which included socio-demographic variables, detailed history of work exposure and work-related injuries and musculoskeletal disorders. They concluded that MSDs are widely prevalent among textile mill workers and it has an important relationship with pre-employment training and BMI. So, more emphasis is needed to train the workers before they start their job to reduce MSDs in order to have a healthy workforce ultimately contributing to high productivity and gains.
4. Nusrat Jahan, et al. conducted a study in 2015 to determine the prevalence and find out the factors associated with musculoskeletal Disorders among the Garments Workers. A total of 150 garment workers (60.7% females) from Dhaka city (mean age - 25.2 ± 4.8 years) were screened out. The age range of the respondents was 18-40 years; all of the respondent's position was sewing machine operator; the respondents who had not any history of MSDs before starting the present job and who had been working for at least 6 months in the same position were selected for the study population. Respondents who had a history of trauma due to any accident, who were pregnant (for female respondents), under gone any operative procedures for at last 3 months ago were excluded from the study. An interviewer administered structured pretested questionnaire and check-list has been used which was consisted 2 sections, the first section was included questions on socio-demographic characteristics and background information of the respondents like; sex, age, occupation, years of work, hours spend in garments per day and week; and the second section was included questions related to work station; like working duration, seat condition, height of the machine etc. In case of dependent variable, musculoskeletal disorders associated musculoskeletal pain, pain severity, treatment seeking behavior and knowledge of preventive measures etc. has been assessed. In case of musculoskeletal problem, only pain of different regions of the body and muscle weakness was assessed. Data collection procedure was face-to-face interview with the interviewers and the respondents and physical examination. The Oxford muscle grading scale and Four-point pain index have been used for the measurement of pain and muscular weakness. They concluded that 6 of

every 10 respondents are suffering from musculoskeletal disorder among the garment workers. This disorder may be associated with age, gender, body weight, marital status and education.

5. Ufuk Berberoğlu, Burcu Tokuç. Conducted a cross sectional study in 2013 to determine the Work-Related Musculoskeletal Disorders and risk levels of these factory workers in Turkey. They involved 381 workers of two factories. The questionnaire used for data collection consisted of two parts. The first part described some socio-demographic features, working conditions and health problems of workers on the previous four weeks. In the second part, a Rapid Upper Limb Assessment (RULA) Employer Assessment worksheet was used. They concluded that Musculoskeletal disorders are a common problem among textile workers. Employers can prevent WMSD hazards by properly designing the jobs or workstations and selecting the appropriate tools or equipment.

6. Procedure

1. Ethical clearance was taken from the ethical committee of Dr. Ulhas Patil College of Physiotherapy, Jalgaon prior to the commencement of the study.
2. Textile mills were targeted in & around city and written permission was obtained from the owner and HOD to administer this study in their premises.
3. Subjects were screened on the basis of inclusion – exclusion criteria. A brief demographic data was obtained and a written consent was taken from all the participants, and the nature and purpose of the study was explained to them.
4. Data was collected using work ergonomics risk assessment tool, data entry was done in MS Excel.
5. After data collection, statistical analysis was done.

Outcome Measure

- The Workplace Ergonomic Risk Assessment (WERA), which is an observational tool was developed to provide a method of screening the working task quickly for exposure physical risk factors associated with Work-related Musculoskeletal Disorders (WMSDs) [1].
- The WERA tool covers the six physical risk factors including posture, repetition, forceful, vibration, contact stress and task duration and it involves the five main body regions (shoulder, wrist, back, neck and leg).
- It has a scoring system and action levels which provide a guide to the level of risk and need for action to conduct more detailed assessments.

- This tool has been tested on its reliability, validity and usability during the development process [1-2].
- As the WERA tool is a pen and paper technique that can be used without any special equipment, it also can be done in any space of workplaces without disruption to the workforce.

The procedure for using WERA is explained in five steps:

1. Observe the task/job.

- Observe the task/job to formulate a general ergonomic workplace assessment, including the impact of work layout and environment, use of equipment, and behavior of the worker with respect to risk taking. If possible, record data using photograph or a video camera.

2. Select the task/ job for assessment.

- Decide which task/job to analyze from the observation in step one. The following criteria can be used: -
- Most frequently repetitive work of task/job.
- Extreme, unstable, or awkward posture
- The task/job known to cause discomfort by worker.

Required the greatest forces, contact stress and use of vibration tool

3. Score the task/job.

- Using the WERA tool, score for each items of risk factor include Part A and B (Item No. 1-9).
- Part A (Item No. 1-5) consist five main body areas include the shoulder, wrists, back, neck and legs. This part cover two physical risk factor for each body parts include posture and repetition.
- Part B (Item No. 6-9) consists a four physical risk factors include forceful, vibration, contact stress and task duration.

4. Calculation of exposure scores.

- Calculate the score for each item (Part A and B) and the total final score. Mark the numbers at the crossing point of every pair of circled number (columns vs. rows).
- In part A, for the Item No. 1-5 based on pair of the posture and repetition. For example: Item No. 1 - Shoulder Posture (1a) vs. Shoulder Repetition (1b)
- In part B, for the Item no 6-8, the rows side based on the posture following in part A. For example: Item No. 6 – Forceful (6) vs. Shoulder Posture (3a). And for the Item No. 9, the rows side based on the Forceful (6). After score for each items of risk factor (Item No. 1-9), calculate the total final score.

5. *Consideration of actions level:* The total final score will be indicated whether the task is accepted –

- Final score of 18 - 27 indicates low risk level: Still accepted.
- Final score of 28 - 44 indicates medium risk level: Further investigate & required change.
- Final score of 45 – 54 indicates high risk level: Not accepted in which need to immediately change.



Occupational Tool:
1) Pincher
2) cutter



Statistical Analysis

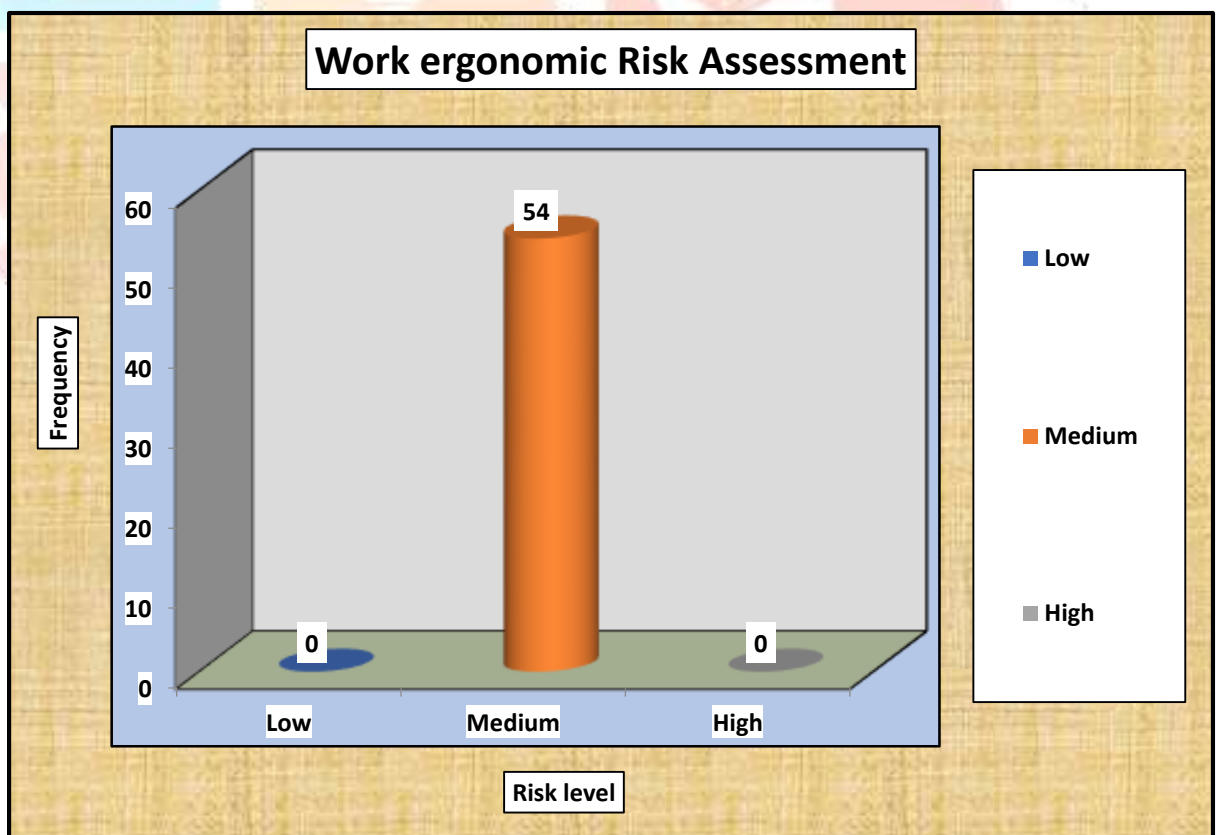
- All data was collected and entered into Microsoft excel.
- Descriptive statistics were applied to categorical variables where frequency (n) and percentage was expressed in %. Frequency and percentage were computed.
- All the results are shown in tabular as well as graphical format to visualize the statistically significant difference more clearly.

Results

- Total 54 samples were collected for the study and analysis was carried out.
- In our study, the mean age of participants was 44.44 ± 12.96
- Other variables such as experience in years and BMI by their frequency and percentage are shown below:

Variable	Groups	Frequency	Percentage
Age (in years)	21-30	10	18.52
	31-40	24	44.44
	41-50	13	24.07
	above 50	7	12.96
Gender	Male	45	83.33
	Female	9	16.67
Experience (in years)	Below 5	5	9.26
	5-10	48	88.89
	Above 10	1	1.85
BMI	Underweight	1	1.85
	Normal	39	72.22
	Overweight	13	24.07
	Obesity	1	1.85

Work ergonomic Risk Assessment



Discussion

- The present study aimed to find risk level of physical factors associated with Work related Musculoskeletal Disorders (WMSDs) Performing task analysis among textile mill workers.
- The socio-demographic factors that were examined in this study were age and gender. The average age of study participants was 44.44%. More than half were male participants.
- After taking the whole assessment, maximum number of workers were at medium risk level according to Workplace Ergonomic Risk Assessment Tool.
- Vivi Anisa Putri, Leli Hesti and Nurfitri Bustamam in 2017 found that ergonomic risk assessment using WERA showed the subjects had high and moderate risk including contact stress, work duration, neck posture, wrist repetition, posture and repetition of the shoulder.¹¹
- This is the study where workers with low back pain were taken and their results are 110 subjects have moderate risk level and rest of the 29 subjects having low risk level. The result of ergonomic risk measurements using WERA found that the most dominant assessment component with high ergonomic risk was contact stress. It was caused by a movement that requires tailors to turn the wheel that is not adjusted to facilitate the tailor's grip¹¹.
- In addition, the rotating motion of the wheel is done repeatedly. Tailors also did not wear protective gloves while using a sewing machine. Prolonged and repeated contact between soft tissues, e.g. on the fingers, palms, thighs, and soles of the feet, with objects or hard surfaces of a work device can cause contact stress.¹¹
- Such contacts may cause localized emphasis on certain areas that may inhibit blood flow, nerve function, tendon, and muscle movement as well as a local irritation (United States Department of Labor, 2016). Based on working posture, 79.1% of the subjects have a moderate ergonomic risk. An awkward posture, especially in sitting position, will increase the pressure on the spine¹¹
- Our study involves the five main body regions (shoulder, wrist, back, neck and leg) and six physical risk factors including posture, repetition, forceful, vibration, contact stress, and task duration. And we found that half of the workers have medium risk level.
- The relationship of the individual WERA body part scores to the development of pain or discomfort is statistically significant for the wrist, shoulder, neck, wrist and back regions. They were more physical exhausted & were having decreased strength due to less physical activity.
- In spinning and weaving section there is a loud noise because of machines and operators which can cause ear pain due to noise pollution. It causes painful inflammation of the tympanic membrane as well as pain from increased middle ear pressure (causing bulging of the tympanic membrane).²⁰
- Hearing starts with the outer ear. When a sound is made outside the outer ear, the sound waves or vibrations, travel down the external auditory canal and strike the eardrum (tympanic membrane).¹⁹
- At Raymond Company, the ambient noise levels are approximately 90 decibels (dB), posing a significant risk of noise pollution for workers. In response, some employees have taken preventive measures by wearing earplugs, effectively reducing the noise exposure by 40-45%.

- The risk level for **shoulder** posture and repetition is assessed as medium. This is because the shoulder is moderately bent and stretched beyond its usual position, resulting in a medium score.
- Moreover, there is moderate repetition in movements with occasional pauses during work. While there are pauses, adjustments to the tasks are required to reduce the risk. Therefore, the overall score for repetition risk level remains at a medium level.
- The risk level for **wrist** joint posture and repetition is evaluated as high for posture and moderate for repetition. Workers are observed to have their wrists excessively bent upwards or downwards with twisting during the weaving process, posing a high risk to their wrist posture.
- In mending section, they using the pincher and cutter to remove unwanted threads from the cloth (rim), the wrist position is rated at a medium risk level, which is still considered very high in terms of the overall working risk position.
- Furthermore, the repetitions occur frequently, with over 20 repetitions per minute, contributing to the moderate risk level for repetition.¹⁴
- The risk level for **back** component posture and repetition is deemed medium. The back is observed to be moderately bent forward within the range of 0 to 20⁰ degrees and 20⁰ to 60⁰ degrees. This posture is sustained for a duration of 4 to 8 minutes, leading to its classification as medium risk.¹⁴
- The risk level for **neck** component posture and repetition is assessed as medium. The neck is moderately bent forward, exceeding 20⁰ degrees,¹⁴ with movement interspersed with some pauses. As a result, this posture is classified as moderate risk.
- In the **leg** component, workers are observed to have their legs moderately bent forward or to be seated with their feet bent on the floor. This position is sustained for a duration of 2 ½ hours, leading to its classification as moderate working risk.
- The **Forceful** component presents a high-risk level in the spinning and weaving section due to the requirement for workers to lift heavy loads, with weights exceeding 10 kg.
- Forceful exertions are the amount of muscular effort expended to perform work. Exerting large amounts of force can result in fatigue and physical damage to the body. The amount of force exerted when moving or handling materials, tools, or objects depends on a combination of factors i.e. 3-4 times load is handled per day during work shift.¹⁷
- In the **vibration** component, the risk level is considered high due to prolonged exposure to vibration tools for over 4 hours per day.
- Vibration exposure is of concern when it is continuous or of very high intensity. Using vibrating tools such as sanders, grinders, chippers, routers, impact guns, drills, chain saws, and circular saws can cause exposure to hand arm vibration. These exposures may result in fatigue, pain, numbness,

tingling, increased sensitivity to cold and decreased sensitivity to touch in the fingers, hands and arms.¹⁷

- In the weaving and spinning section, we observed that workers are experiencing whole-body vibrations.
- Whole body vibration commonly results from sitting or standing on work surfaces that vibrate. Examples of such surfaces include vibrating vehicles, equipment and platforms. Whole body vibration may be associated with general discomfort and lower back pain.¹⁷
- In **Contact stress** component the risk level is medium because of hard and sharp shape of tool handle. i.e. cutter and pincher.
- Pressure points result from the body pressing against hard or sharp surfaces. Certain areas of the body are more susceptible because nerves, tendons, and blood vessels are close to the skin and underlying bones. These areas include the sides of the fingers, palms, wrists, and forearms, elbows, and the knees.¹⁷
- In **task duration** the task lasted for more than 4 hours per day which is categorized as high-risk level. They work for 8 hours.
- According to workplace ergonomic risk assessment tool, we found that workers have medium risk level. So, the present study accept hypothesis.

Limitations

- The major limitation is small sample size.
- Findings of the study cannot be generalised because female participants are lesser than the male participants.

Future scope

- Further research should also include individuals with other industrial workers.
- Management should be planned to reduce harms of occupational tools in textile mill workers.

Conclusion

The study concluded that there is medium risk level of physical factors associated with work related musculoskeletal disorder by performing task analysis among textile mill workers.

Clinical Implication

- This study will help in planning intervention strategies for designing work station modification, ergonomics and to prevent severe work-related disabilities.
- These workers should perform stretching of main physical body regions.
- Clinical fitness programme for workers must include cardiovascular fitness and strengthening.

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ANNEXURE I – Case record form

Study Title- Risk level of Physical Factors Associated with Work Related Musculoskeletal Disorders (WMSDs) by Performing Task Analysis Among Textile Mill Workers – A Cross Sectional study

Demographic data

<u>Study site</u>	:	
<u>Subject's name</u>	:	
<u>Age /Gender</u>	:	
<u>Address</u>	:	
<u>Occupation</u>	:	
<u>Work experience in years</u>	:	
<u>No of working hours</u>	:	
<u>No of breaks</u>	:	
<u>Duration of breaks</u>	:	
<u>Weight</u>	:	
<u>Height</u>	:	
<u>BMI</u>	:	

I am confident that the information supplied in this case record form is complete and accurate data. I confirm that the study was conducted in accordance with the protocol and any protocol amendments and that written informed consent was obtained prior to the study

Investigator's Signature

Date of Signature

INFORMED CONSENT		YES	NO
Has the subject freely given written informed consent?			

INCLUSION CRITERIA		YES	NO
1	Textile mill workers		
2	Both male and female		
3	Co-operative and willing to participate		

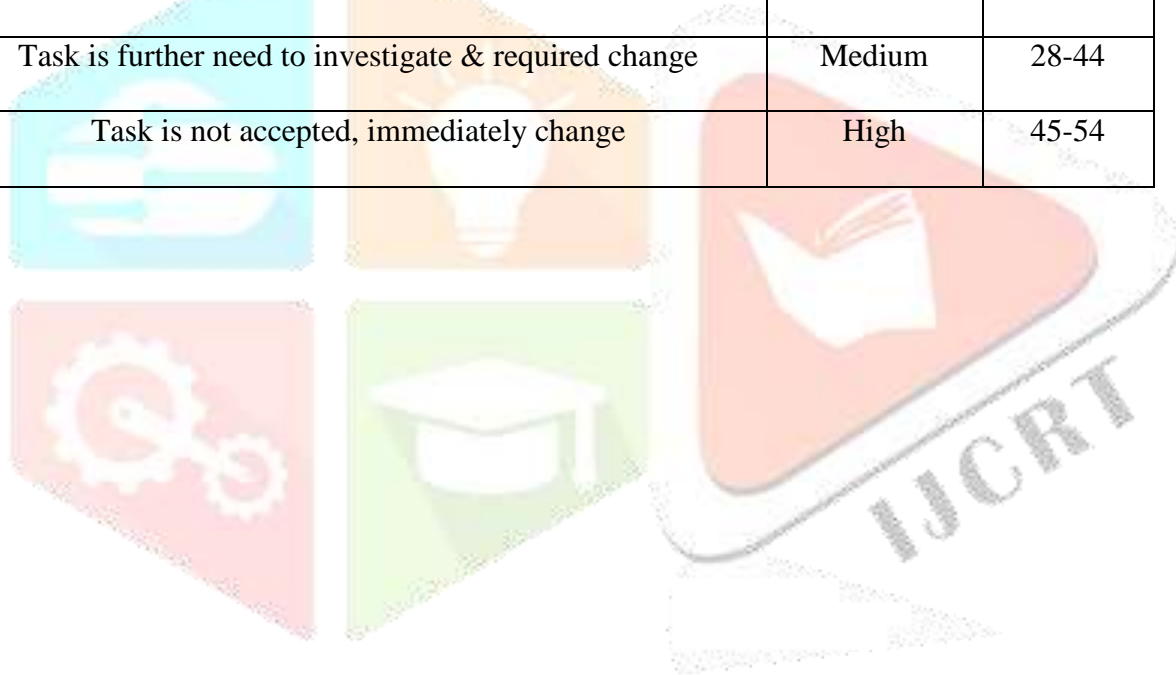
*If any inclusion criteria are ticked “no” then the patient is not eligible for the study.

EXCLUSION CRITERIA		YES	NO
1	Workers Other Than Textile Mills		

*If any exclusion criteria are ticked “yes” then the patient is not eligible for the study.

WORK ERGONOMIC RISK ASSESMENT TOOL

Final score		
Action level	Risk level	Range
Task is acceptable	Low	18-27
Task is further need to investigate & required change	Medium	28-44
Task is not accepted, immediatly change	High	45-54


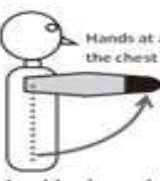
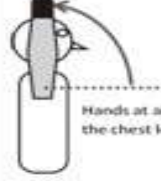







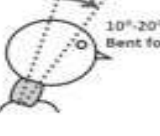
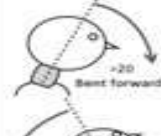





ANNEXURE II


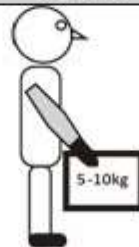
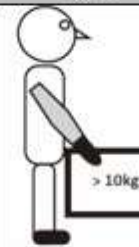









OUTCOME MEASURE -Work Ergonomic Risk Assesment Tool(WERA)

WORKPLACE ERGONOMIC RISK ASSESSMENT (WERA)

VERSION 1

PHYSICAL RISK FACTOR		RISK LEVEL			SCORING SYSTEM																						
		LOW	MEDIUM	HIGH																							
1. Shoulder	1a. Posture	 <p>Hands at about the waist level</p> <p>Shoulders in neutral position</p>	 <p>Hands at about the chest level</p> <p>Shoulder is moderate bent up</p>	 <p>Hands at above the chest level</p> <p>Shoulder is extreme bent up</p>	<table border="1"> <thead> <tr> <th colspan="5">1a. POSTURE</th> </tr> <tr> <th rowspan="3">1b. REPETITION</th> <th>Risk Level</th> <th>LOW</th> <th>MED</th> <th>HIGH</th> </tr> </thead> <tbody> <tr> <td>LOW</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>MED</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>HIGH</td> <td>4</td> <td>5</td> <td>6</td> </tr> </tbody> </table> <p>Score 1 <input type="text"/></p>	1a. POSTURE					1b. REPETITION	Risk Level	LOW	MED	HIGH	LOW	2	3	4	MED	3	4	5	HIGH	4	5	6
	1a. POSTURE																										
1b. REPETITION	Risk Level	LOW	MED	HIGH																							
	LOW	2	3	4																							
	MED	3	4	5																							
HIGH	4	5	6																								
1b. Repetition	Light movement with more pauses	Moderate movement with some pauses	Heavy movement with no rest																								
2. Wrist	2a. Posture	 <p>Wrists in a neutral position</p>	 <p>Wrists are moderate bent up or bent down</p>	 <p>Wrists are extreme bent up or bent down with twisting</p>	<table border="1"> <thead> <tr> <th colspan="5">2a. POSTURE</th> </tr> <tr> <th rowspan="3">2b. REPETITION</th> <th>Risk Level</th> <th>LOW</th> <th>MED</th> <th>HIGH</th> </tr> </thead> <tbody> <tr> <td>LOW</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>MED</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>HIGH</td> <td>4</td> <td>5</td> <td>6</td> </tr> </tbody> </table> <p>Score 2 <input type="text"/></p>	2a. POSTURE					2b. REPETITION	Risk Level	LOW	MED	HIGH	LOW	2	3	4	MED	3	4	5	HIGH	4	5	6
	2a. POSTURE																										
2b. REPETITION	Risk Level	LOW	MED	HIGH																							
	LOW	2	3	4																							
	MED	3	4	5																							
HIGH	4	5	6																								
2b. Repetition	0-10 times per minute	11-20 times per minute	Over 20 times per minute																								
3. Back	3a. Posture	 <p>Back in neutral position</p>	 <p>Back is moderate bent forward</p>	 <p>Back is extreme bent forward</p>	<table border="1"> <thead> <tr> <th colspan="5">3a. POSTURE</th> </tr> <tr> <th rowspan="3">3b. REPETITION</th> <th>Risk Level</th> <th>LOW</th> <th>MED</th> <th>HIGH</th> </tr> </thead> <tbody> <tr> <td>LOW</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>MED</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>HIGH</td> <td>4</td> <td>5</td> <td>6</td> </tr> </tbody> </table> <p>Score 3 <input type="text"/></p>	3a. POSTURE					3b. REPETITION	Risk Level	LOW	MED	HIGH	LOW	2	3	4	MED	3	4	5	HIGH	4	5	6
	3a. POSTURE																										
3b. REPETITION	Risk Level	LOW	MED	HIGH																							
	LOW	2	3	4																							
	MED	3	4	5																							
HIGH	4	5	6																								
3b. Repetition	0-3 times per minute	4-8 times per minute	9-12 times per minute																								
4. Neck	4a. Posture	 <p>Neck in neutral position with little bent forward</p>	 <p>Neck is moderate bent forward</p>	 <p>Neck is extreme bent forward or bent back</p>	<table border="1"> <thead> <tr> <th colspan="5">4a. POSTURE</th> </tr> <tr> <th rowspan="3">4b. REPETITION</th> <th>Risk Level</th> <th>LOW</th> <th>MED</th> <th>HIGH</th> </tr> </thead> <tbody> <tr> <td>LOW</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>MED</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>HIGH</td> <td>4</td> <td>5</td> <td>6</td> </tr> </tbody> </table> <p>Score 4 <input type="text"/></p>	4a. POSTURE					4b. REPETITION	Risk Level	LOW	MED	HIGH	LOW	2	3	4	MED	3	4	5	HIGH	4	5	6
	4a. POSTURE																										
4b. REPETITION	Risk Level	LOW	MED	HIGH																							
	LOW	2	3	4																							
	MED	3	4	5																							
HIGH	4	5	6																								
4b. Repetition	Light movement with more pauses	Moderate movement with some pauses	Heavy movement with no rest																								
5. Leg	5a. Posture	 <p>Legs in neutral position OR sitting with feet are flat on floor / foot rest.</p>	 <p>Legs are moderate bent forward OR sitting with feet are bent on floor</p>	 <p>Legs are extreme bent forward OR sitting with feet do not touch floor.</p>	<table border="1"> <thead> <tr> <th colspan="5">5a. POSTURE</th> </tr> <tr> <th rowspan="3">9. DURATION</th> <th>Risk Level</th> <th>LOW</th> <th>MED</th> <th>HIGH</th> </tr> </thead> <tbody> <tr> <td>LOW</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>MED</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>HIGH</td> <td>4</td> <td>5</td> <td>6</td> </tr> </tbody> </table> <p>Score 5 <input type="text"/></p>	5a. POSTURE					9. DURATION	Risk Level	LOW	MED	HIGH	LOW	2	3	4	MED	3	4	5	HIGH	4	5	6
	5a. POSTURE																										
9. DURATION	Risk Level	LOW	MED	HIGH																							
	LOW	2	3	4																							
	MED	3	4	5																							
HIGH	4	5	6																								

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PHYSICAL RISK FACTOR		RISK LEVEL			SCORING SYSTEM																									
		LOW	MEDIUM	HIGH																										
6. Forceful	Lifting the load				<table border="1"> <tr><th colspan="5">6. FORCEFUL</th></tr> <tr><th>Risk Level</th><th>LOW</th><th>MED</th><th>HIGH</th><th></th></tr> <tr><th>LOW</th><td>2</td><td>3</td><td>4</td><td></td></tr> <tr><th>MED</th><td>3</td><td>4</td><td>5</td><td></td></tr> <tr><th>HIGH</th><td>4</td><td>5</td><td>6</td><td></td></tr> </table> <p>Score 6 <input type="text"/></p>	6. FORCEFUL					Risk Level	LOW	MED	HIGH		LOW	2	3	4		MED	3	4	5		HIGH	4	5	6	
		6. FORCEFUL																												
Risk Level	LOW	MED	HIGH																											
LOW	2	3	4																											
MED	3	4	5																											
HIGH	4	5	6																											
Lifting the load 0-5kg	Lifting the load 5-10kg	Lifting the load more than 10kg																												
7. Vibration	Using of vibration tool				<table border="1"> <tr><th colspan="5">7. VIBRATION</th></tr> <tr><th>Risk Level</th><th>LOW</th><th>MED</th><th>HIGH</th><th></th></tr> <tr><th>LOW</th><td>2</td><td>3</td><td>4</td><td></td></tr> <tr><th>MED</th><td>3</td><td>4</td><td>5</td><td></td></tr> <tr><th>HIGH</th><td>4</td><td>5</td><td>6</td><td></td></tr> </table> <p>Score 7 <input type="text"/></p>	7. VIBRATION					Risk Level	LOW	MED	HIGH		LOW	2	3	4		MED	3	4	5		HIGH	4	5	6	
		7. VIBRATION																												
Risk Level	LOW	MED	HIGH																											
LOW	2	3	4																											
MED	3	4	5																											
HIGH	4	5	6																											
Never used of vibration tool OR Used vibration tool < 1hrs per day	Occasional used of vibration tool WITH 1-4hrs per day	Constant used of vibration tool WITH >4hrs per day																												
8. Contact stress	Using of tool handle Or wearing hand gloves				<table border="1"> <tr><th colspan="5">8. CONTACT STRESS</th></tr> <tr><th>Risk Level</th><th>LOW</th><th>MED</th><th>HIGH</th><th></th></tr> <tr><th>LOW</th><td>2</td><td>3</td><td>4</td><td></td></tr> <tr><th>MED</th><td>3</td><td>4</td><td>5</td><td></td></tr> <tr><th>HIGH</th><td>4</td><td>5</td><td>6</td><td></td></tr> </table> <p>Score 8 <input type="text"/></p>	8. CONTACT STRESS					Risk Level	LOW	MED	HIGH		LOW	2	3	4		MED	3	4	5		HIGH	4	5	6	
		8. CONTACT STRESS																												
Risk Level	LOW	MED	HIGH																											
LOW	2	3	4																											
MED	3	4	5																											
HIGH	4	5	6																											
Soft/round shape of tool handle OR Using a full cover of hand gloves	Hard/sharp shape of tool handle OR Using a half cover of hand gloves	No/Without of tool handle OR Never used hand gloves																												
9. Task duration	Task-hr/day				<table border="1"> <tr><th colspan="5">9. TASK DURATION</th></tr> <tr><th>Risk Level</th><th>LOW</th><th>MED</th><th>HIGH</th><th></th></tr> <tr><th>LOW</th><td>2</td><td>3</td><td>4</td><td></td></tr> <tr><th>MED</th><td>3</td><td>4</td><td>5</td><td></td></tr> <tr><th>HIGH</th><td>4</td><td>5</td><td>6</td><td></td></tr> </table> <p>Score 9 <input type="text"/></p>	9. TASK DURATION					Risk Level	LOW	MED	HIGH		LOW	2	3	4		MED	3	4	5		HIGH	4	5	6	
		9. TASK DURATION																												
Risk Level	LOW	MED	HIGH																											
LOW	2	3	4																											
MED	3	4	5																											
HIGH	4	5	6																											
< 2hrs per day	2-4hrs per day	> 4hrs per day																												
FINAL SCORE <input type="text"/>																														
Job/Task : _____ Date : _____ Observer : _____		<table border="1"> <tr><th colspan="4">Action Level</th></tr> <tr><th>Risk Level</th><th>Final Score</th><th>Action</th><th>Tick (v)</th></tr> <tr><td>LOW</td><td>18-27</td><td>Task is acceptable</td><td><input type="checkbox"/></td></tr> <tr><td>MED</td><td>28-44</td><td>Task is need to further investigate & required change</td><td><input type="checkbox"/></td></tr> <tr><td>HIGH</td><td>45-54</td><td>Task is not accepted, immediately change</td><td><input type="checkbox"/></td></tr> </table>			Action Level				Risk Level	Final Score	Action	Tick (v)	LOW	18-27	Task is acceptable	<input type="checkbox"/>	MED	28-44	Task is need to further investigate & required change	<input type="checkbox"/>	HIGH	45-54	Task is not accepted, immediately change	<input type="checkbox"/>						
Action Level																														
Risk Level	Final Score	Action	Tick (v)																											
LOW	18-27	Task is acceptable	<input type="checkbox"/>																											
MED	28-44	Task is need to further investigate & required change	<input type="checkbox"/>																											
HIGH	45-54	Task is not accepted, immediately change	<input type="checkbox"/>																											

Final score		
Action level	Risk level	Range
Task is acceptable	Low	18-27
Task is further need to investigate & required change	Medium	28-44
Task is not accepted, immediately change	High	45-54

ANNEXURE III

INFORMED CONSENT DOCUMENT (ENGLISH)

Project Title

Risk level of Physical Factors Associated with Work Related Musculoskeletal Disorders (WMSDs) by Performing Task Analysis Among Textile Mill Workers – A Cross Sectional study

Introduction:

You are invited to participate in a research study. It is important that you read this description of the study and understand your role in it including the nature and risks of participation. Please give your consent to participate in this clinical study only if you have completely understood the nature and course of this study and if you are aware of your rights as a participant.

Study procedures to be followed -

- If you agree to participate in this study, your details such as name, age/gender, occupation, work experience in years, no of working hours, no of breaks, duration of breaks, etc. will be documented.
- Your weight, height and BMI will be calculated.
- Your work ergonomic risk assessment will be checked by performing task analysis using work ergonomic risk assessment tool. It is an observational test in which I will observe your posture while you perform your work and identify physical risk factors which may cause or may have caused work related musculoskeletal disorder.

Possible benefits of the study:

By participating in this study, you may be helped in knowing your risk level of physical factors associated with work related musculoskeletal disorders, it will help in designing work station modification, postural risk, ergonomics and interventions to prevent severe work-related disability

Compensation for participation

The assessment will be preferred free of charge. No compensation will be provided for your participation as the study is not funded.

Right to withdraw from the study:

Participation in this study is entirely voluntary. You may choose not to take part or you may leave the study at any point of study. If you decide to leave the study, you will be free to do so.

Confidentiality:

All study records will be kept confidential at all times. Your identity will not be revealed except as required by law. The results of your test and the questions you answered may be published for scientific reasons.

However, your identity will not be revealed in these publications. Contact for further information: Thank you for taking the time to read (or have read to you) the information about this study. Before you sign this document, you should ask questions about anything that you do not understand. The study staff will answer the questions before or after the study

Consent:

- I have read or have had read the information given in the Informed Consent Document for this study entitled "Risk level of Physical Factors Associated with Work Related Musculoskeletal Disorders (WMSDs) by Performing Task Analysis Among Textile Mill Workers A Cross-sectional study" I have received an explanation of the nature, purpose, and risks of the trial and what I will be expected to do.
- I understand that my participation in the trial is voluntary and that I may refuse to participate or may withdraw from the trial at any time, without penalty or loss of benefits to which I am otherwise entitled. Also, I further understand that any information that becomes available during the course of the study that may affect my willingness to take part will be informed to me
- Institutional Ethics Committee Authorities may wish to examine my medical records to verify the information collected. By signing this document, I give permission for this review of my records
- I understand that my identity may not be revealed in any report or publication and agree to take part in the above study

Name of research participant	Signature/ Thumb impression of research participant	Date
Name of legal representative	Relation to research participant and signature	Date
Name of the impartial witness	Signature of the impartial witness	Date

Name of the person administering consent	Signature of the person administering consent	Date
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ANNEXURE IV:**INFORMED CONSENT DOCUMENT (MARATHI)**

माहिती संकलित दस्तऐवज

प्रकल्प शीर्षक

कापड गिरणी कामगारांमध्ये कार्य विश्लेषण करून कामाशी संबंधित मस्क्युलोस्केलेटल डिसऑर्डर (डब्ल्यूएमएसडी) शी संबंधित शारीरिक घटकांची जोखीम पातळी - एक क्रॉस सेक्शनल अभ्यास**परिचय:**

तुम्हाला संशोधन अभ्यासात सहभागी होण्यासाठी आमंत्रित केले आहे. तुम्ही अभ्यासाचे हे वर्णन वाचणे आणि सहभागाचे स्वरूप आणि जोखीम यासह त्यात तुमची भूमिका समजून घेणे महत्वाचे आहे. कृपया या क्लिनिकल अभ्यासात सहभागी होण्यासाठी तुमची संमती द्या. जर तुम्हाला या अभ्यासाचे स्वरूप आणि अभ्यासक्रम पूर्णपणे समजला असेल आणि जर तुम्हाला सहभागी म्हणून तुमच्या अधिकाराची जाणीव असेल.

अभ्यास प्रक्रियेचे पालन करा:

आपण या अभ्यासात सहभागी होण्यास सहमत असल्यास,

- तुमचा तपशील जसे की नाव, वय/लिंग, व्यवसाय, वर्षातील कामाचा अनुभव, कामाच्या तासांची संख्या, विश्रांतीची संख्या, विश्रांतीचा कालावधी इ.
- तुम्हाला तुमचे वजन, उंची आणि तुमचा BMI बदल विचारले जाईल
- तुमच्या कामाचे अर्गोनॉमिक जोखीम मूल्यांकन तुमच्या कापड गिरणी कामगारांमध्ये कार्य विश्लेषण करून कामाशी संबंधित मस्क्युलोस्केलेटल डिसऑर्डरशी संबंधित शारीरिक जोखीम घटकांच्या तीव्रतेसाठी तपासले जाईल.

अभ्यासाचे संभाव्य फायदे:

या अभ्यासात भाग घेतल्याने, तुम्हाला कामाशी संबंधित मस्क्युलोस्केलेटल विकारांशी संबंधित शारीरिक जोखीम घटकांची तीव्रता जाणून घेण्यात मदत केली जाऊ शकते, ते कामाच्या स्थानावरील बदल, पोस्टचरल रिस्क, एर्गोनॉमिक्स आणि कामाशी संबंधित गंभीर अपंगत्व टाळण्यासाठी मदत होईल.

सहभागासाठी भरपाई:

मूल्यमापन विनामूल्य केले जाईल. तुमच्या सहभागासाठी कोणतीही भरपाई दिली जाणार नाही कारण अभ्यासासाठी निधी उपलब्ध नाही.

अभ्यासातून माघार घेण्याचा अधिकार:

या अभ्यासातील सहभाग पूर्णपणे ऐच्छिक आहे. तुम्ही भाग न घेणे निवडू शकता किंवा तुम्ही अभ्यासाच्या कोणत्याही टप्प्यावर अभ्यास सोडू शकता. तुम्ही अभ्यास सोडण्याचा निर्णय घेतल्यास, तुम्ही तसे करण्यास मोकळे व्हाल .

गोपनीयता:

सर्व अभ्यास नोंदी नेहमी गोपनीय ठेवल्या जातील. कायदाने आवश्यक असल्याशिवाय तुमची ओळख उघड केली जाणार नाही. तुमच्या चाचणीचे निकाल आणि तुम्ही दिलेले प्रश्न वैज्ञानिक कारणांसाठी प्रकाशित केले जाऊ शकतात. तथापि, या प्रकाशनांमध्ये तुमची ओळख उघड केली जाणार नाही. अधिक माहितीसाठी संपर्क करा: या अभ्यासाबद्दलची माहिती वाचण्यासाठी (किंवा तुम्हाला वाचायला) वेळ दिल्याबद्दल धन्यवाद. तुम्ही या दस्तऐवजावर स्वाक्षरी करण्यापूर्वी, तुम्हाला समजत नसलेल्या कोणत्याही गोष्टीबद्दल तुम्ही प्रश्न विचारले पाहिजेत. अभ्यास कर्मचारी अभ्यासापूर्वी किंवा नंतर प्रश्नांची उत्तरे देतील

संमती:

- मी या अभ्यासासाठी " कापड गिरणी कामगारांमध्ये कार्य विश्लेषण करून कामाशी संबंधित मस्क्युलोस्केलेटल डिसऑर्डर (डब्ल्यूएमएसडी) शी संबंधित शारीरिक घटकांची जोखीम पातळी - एक क्रॉस सेक्शनल अभ्यास "शीर्षक असलेल्या या अभ्यासासाठी माहितीपूर्ण संमती दस्तऐवजात दिलेली माहिती वाचली आहे . कापड गिरणी कामगारांच्या क्रॉस-सेक्शनल अभ्यासात कार्य विश्लेषण करून "मला चाचणीचे स्वरूप, उद्देश आणि जोखीम आणि माझ्याकडून काय अपेक्षित आहे याचे स्पष्टीकरण मिळाले आहे.
- मी समजतो की चाचणीमध्ये माझा सहभाग ऐच्छिक आहे आणि मी भाग घेण्यास नकार देऊ शकतो किंवा कोणत्याही वेळी चाचणीतून माघार घेऊ शकतो, दंड किंवा फायद्यांचे नुकसान न करता ज्याचा मी अन्यथा पात्र आहे. तसेच, मी पुढे समजतो की अभ्यासादरम्यान उपलब्ध होणारी कोणतीही माहिती जी माझ्या भाग घेण्याच्या इच्छेवर परिणाम करू शकते ती मला कळवली जाईल
- संकलित केलेल्या माहितीची पडताळणी करण्यासाठी संस्थात्मक आचार समितीचे अधिकारी माझ्या वैद्यकीय नोंदींचे परीक्षण करू शकतात. या दस्तऐवजावर स्वाक्षरी करून, मी माझ्या रेकॉर्डच्या या पुनरावलोकनासाठी परवानगी देतो

- मी समजतो की माझी ओळख कोणत्याही अहवालात किंवा प्रकाशनात उघड केली जाऊ शकत नाही आणि वरील अभ्यासात भाग घेण्यास सहमत आहे

संशोधन सहभागीचे नाव	स्वाक्षरी/ संशोधनाच्या अंगठ्याचा ठसा सहभागी	तारीख
कायदेशीर प्रतिनिधीचे नाव	संशोधन सहभागी आणि स्वाक्षरीची	तारीख
निष्पक्ष साक्षीदाराचे नाव	निष्पक्ष साक्षीदाराची स्वाक्षरी	तारीख
संमती प्रशासित करणाऱ्या व्यक्तीचे नाव	प्रशासित करणाऱ्या व्यक्तीची स्वाक्षरी	तारीख

ANNEXURE VI:
INFORMED CONSENT DOCUMENT (HINDI)

सूचनात्मक दस्तावेज़

प्रोजेक्ट का शीर्षक:

कपड़ा मिल श्रमिकों में कार्य विश्लेषण करके काम से संबंधित मस्क्युलोस्केलेटल डिसऑर्डर (WMSD) से जुड़े शारीरिक कारकों का जोखिम स्तर - एक क्रॉस-अनुभागीय अध्ययन

परिचय:

आपको एक शोध अध्ययन में भाग लेने के लिए आमंत्रित किया जाता है। आपको अध्ययन के इस विवरण को पढ़ना चाहिए और इसमें शामिल होने की प्रकृति और इसमें शामिल जोखिमों के साथ-साथ इसमें आपकी भूमिका को समझना महत्वपूर्ण है। यदि आप इस अध्ययन की प्रकृति और पाठ्यक्रम को पूरी तरह से समझते हैं और यदि आप एक प्रतिभागी के रूप में अपने अधिकारों के बारे में जानते हैं तो कृपया इस नैदानिक अध्ययन में भाग लेने के लिए अपनी सहमति दें।

अध्ययन प्रक्रिया का पालन करें:

यदि आप इस अध्ययन में भाग लेने के लिए सहमत हैं,

- आपका विवरण जैसे नाम, आयु/लिंग, व्यवसाय, कार्य अनुभव के वर्ष, काम के घंटे की संख्या, ब्रेक की संख्या, ब्रेक की अवधि आदि।
- आपसे आपके वजन, कद और बीएमआई के बारे में पूछा जाएगा
- आपके काम का एर्गोनोमिक जोखिम मूल्यांकन आपके कपड़ा मिल श्रमिकों का कार्य विश्लेषण करके काम से संबंधित मस्क्युलोस्केलेटल विकारों से जुड़े शारीरिक जोखिम कारकों की गंभीरता के लिए मूल्यांकन किया जाएगा।

अध्ययन के संभावित लाभ:

इस अध्ययन में भाग लेकर, आप काम से संबंधित मस्क्युलोस्केलेटल विकारों से जुड़े शारीरिक जोखिम कारकों की गंभीरता को समझने में मदद कर सकते हैं, जो कार्य स्थान, पोस्टुरल जोखिम, एर्गोनॉमिक्स और गंभीर कार्य-संबंधी विकलांगता में परिवर्तन को रोकने के लिए मदद कर सकते हैं।

भागीदारी के लिए मुआवजा

मूल्यांकन निःशुल्क किया जाएगा। आपकी भागीदारी के लिए कोई मुआवजा नहीं दिया जाएगा क्योंकि अध्ययन के लिए धन उपलब्ध नहीं है।

अध्ययन से हटने का अधिकार:

इस अध्ययन में भागीदारी पूरी तरह से स्वैच्छिक है। आप भाग नहीं लेने का विकल्प चुन सकते हैं या आप अध्ययन के किसी भी स्तर पर अध्ययन छोड़ सकते हैं। यदि आप छोड़ने का निर्णय लेते हैं, तो आप ऐसा करने के लिए स्वतंत्र हैं

गोपनीयता:

सभी अध्ययन रिकॉर्ड हर समय गोपनीय रखे जाएंगे। जब तक कानून द्वारा आवश्यक न हो, आपकी पहचान का खुलासा नहीं किया जाएगा। आपके परीक्षा परिणाम और आपके द्वारा सबमिट किए गए प्रश्न वैज्ञानिक उद्देश्यों के लिए प्रकाशित किए जा सकते हैं। हालांकि, इन प्रकाशनों में आपकी पहचान उजागर नहीं की जाएगी। अधिक जानकारी के लिए संपर्क करें: इस अध्ययन के बारे में जानकारी पढ़ने (या आपको पढ़ने) के लिए आपके समय के लिए शुक्रिया। इस दस्तावेज़ पर हस्ताक्षर करने से पहले, आपको जो कुछ भी समझ में नहीं आता है, उसके बारे में आपको प्रश्न पूछना चाहिए। अध्ययन कर्मचारी अध्ययन से पहले या बाद में प्रश्नों के उत्तर देंगे

अनुमति:

- मैंने इस अध्ययन के लिए सूचनात्मक सहमति दस्तावेज़ में दी गई जानकारी को पढ़ा है जिसका शीर्षक है "कपड़ा मिल श्रमिकों में कार्य विश्लेषण करके कार्य-संबंधित मस्क्युलोस्केलेटल डिसऑर्डर (डब्ल्यूएमएसडी) से जुड़े शारीरिक कारकों के जोखिम स्तर - एक पार-अनुभागीय अध्ययन" कपड़ा मिल श्रमिकों के एक पार-अनुभागीय अध्ययन में एक कार्य विश्लेषण करके "मुझे परीक्षण की प्रकृति, उद्देश्य और जोखिमों का स्पष्टीकरण मिला है और मुझसे क्या उम्मीद की जाती है
- मैं समझता हूँ कि परीक्षण में मेरी भागीदारी स्वैच्छिक है और मैं किसी भी समय परीक्षण में भाग लेने या वापस लेने से इनकार कर सकता हूँ, बिना किसी दंड या लाभों के नुकसान के जिसके लिए मैं अन्यथा हकदार हूँ।
- इसके अलावा, मैं यह भी समझता हूँ कि अध्ययन के दौरान उपलब्ध होने वाली कोई भी जानकारी जो भाग लेने की मेरी इच्छा को प्रभावित कर सकती है, मुझे सूचित की जाएगी।
- संस्थागत आचार समिति के अधिकारी एकत्र की गई जानकारी को सत्यापित करने के लिए मेरे मेडिकल रिकॉर्ड की समीक्षा कर सकते हैं। इस दस्तावेज़ पर हस्ताक्षर करके, मैं अपने रिकॉर्ड की इस समीक्षा के लिए सहमति देता/देती हूँ
- मैं समझता हूँ कि मेरी पहचान किसी भी रिपोर्ट या प्रकाशन में प्रकट नहीं की जा सकती है
- उपरोक्त अध्ययन में भाग लेने के लिए सहमत हूँ

अनुसंधान प्रतिभागी का नाम	शोध के हस्ताक्षर/अंगूठे का निशान प्रतिभागी	दिनांक
कानूनी प्रतिनिधि का नाम	अनुसंधान प्रतिभागियों और हस्ताक्षर	दिनांक
निष्पक्ष साक्षी का नाम	निष्पक्ष गवाह के हस्ताक्षर	दिनांक
सहमति देने वाले व्यक्ति का नाम	सहमति देने वाले व्यक्ति का नाम	दिनांक