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Availability of Preventive Measures Regarding Sports Injuries in Boys' Colleges Dir Lower

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ABSTRACT

Musculoskeletal problems associated with the workplace result in long-term discomfort, functional impairment, significant expenditures to society, and decreased productivity. The incidence and prevalence of work-related musculoskeletal illnesses are highest among workers who are subjected to vibrations, repetitive and static tasks, manual handling, and unfavourable psychological and social environments. Many risk variables, including as organizational, psychological, physical, and sociodemographic elements, have been linked to the emergence of MSDs in a variety of occupational groups. **Aims and objectives**: The purpose of the study is to ascertain the prevalence of musculoskeletal pain at work among employees in domestic clothing set-ups. **Material and methodology**:200 people were included in a non-experimental study based on inclusion and exclusion criteria. The NORDIC QUESTIONNAIRE and RULA evaluation instrument have been used to analyze musculoskeletal pain.

Keywords: Musculoskeletal Pain, Work-Related Risk Factors, Sewing Machine Operators, Domestic Setups

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Introduction

Disorders affecting the body's muscles, tendons, ligaments, joints, peripheral nerves, and supporting blood arteries are together referred to as musculoskeletal disorders. Cutting, assembling, pressing, and finishing are just a few of the constant, repetitive operations involved with sewing machines. The person performing these tasks is seated, with their head inclined toward the sewing machine and their upper back bowed forward. Long-term employment in this incorrect posture raises the risk of developing musculoskeletal disorders or pain related to the workplace.(Kanniappan and Palani 2020).For sewing machine operators, musculoskeletal diseases (MSD) are a prevalent and frequently incapacitating issue that are linked to work-related variables.(Merisalu, Männaste et al. 2016).

Sewing machinists typically work on piece-work projects, putting together the constituent pieces of a finished product or garment. This kind of job fragmentation results in tasks that are frequently extremely repetitious, potentially hazardous, and complex, requiring the coordination of both hands. These tasks are typically completed while seated for extended periods of time. To focus and have superior visual control over the task, the operator typically needs to lean forward during the operation, bending their head and trunk forward. Because sewing machines are immovable devices, machinists must adjust their posture and viewing position in different ways in order to perform this type of "precision work".(Dianat, Kord et al. 2015)

People typically suffer from musculoskeletal disorders (MSDs) as a result of poorly designed workplaces. Sewing operators in the apparel manufacturing industries are susceptible to ergonomic issues like WRMSDs because of the repetitive nature of their work and their uncomfortable workstations. Research revealed that sewing workers frequently experience WRMSDs, respiratory conditions, mishaps, injuries, and stress. Occupational disorders are frequently detected in workers at garment workstations due to high psycho-physical loads, awkward postures, short work cycles, and highly repetitive actions. WRMSDs are more common because of a combination of organizational, personal, sociodemographic, and working environment characteristics.(Abate and Hailemariam 2023)

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They frequently perform boring, long-term tasks like sewing, ironing, packing, and lifting big objects. Prolonged periods of labor without rest, a lack of personal protection equipment, and a lack of ergonomic workplace amenities can cause serious health problems for employee.(Lillypet, Jain et al. 2017).MSDs are a highly prevalent health hazard that are documented in many different industries worldwide, not just the textile industry. These impact people's and organizations' performance as well as the quality of their work-life balance. Long periods of sitting or standing, repeated hand and arm motions, awkward postures, and poorly designed workspaces are all part of the garment manufacturing job description. Operators of sewing machines perform repetitive tasks with both hands while bending forward to obtain a focus, which can result in MSDs in the neck, back, and upper limb.(Ahmad, Javed et al. 2021)

Material and Methods

The study design of this research was "observational study" (cross sectional) which was aimed to evaluate the prevalence of Work-related Musculoskeletal illness in sewing machine operators of domestic setups.The setting of this included sewing machine operators from different domestics set-ups of Faisalabad, Rawalpindi and Gujranwala on small scale. Data was collected from domestic sewing machine operators of different areas of Gujranwala, Faisalabad and Rawalpindi.Duration of this study was 4 months including data collection and analysis.The tools or questionnaires used in the study was: Nordic questionnaire and RULA assessment worksheet. The sample size was 200 female sewing machine operators of domestic level.Convenience sampling technique is used to evaluate study units.Screening of study population have done by selected inclusions and exclusion criteria.Inclusion criteria are Age between 25 to 40, working from last 2 years, Working hours 6-8 hours, Females, No medical history. While Exclusion criteria areRecent trauma, fracture, surgery, Any Co-morbidity i.e HTN, DM, MI etc, Cervical Radiculopathy.

The research work was done by using NORDIC questionnaire and RULA assessment worksheet which included the trouble information of the sewing machine operators. Nordic questionnaire was used to inquire about the discomfort of different body regions due to their occupation which includes the parameters like:

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1. Discomfort at work during last 12 months?

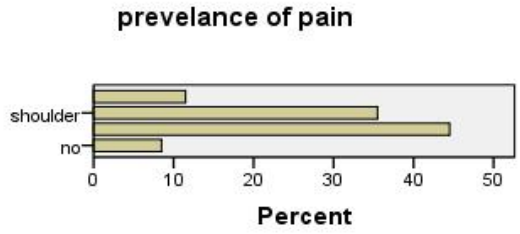


Fig.1 showing that how many participants were suffering from pain or not in different regions of the body.

2. Discomfort at work during last week?

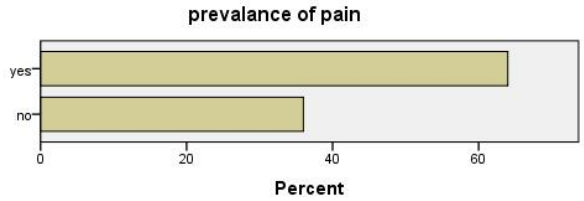


Fig.2showing the percentage of participants that were prevented from doing normal work and percentage of those who were doing work normally.

3. Discomfort prevented your normal work?

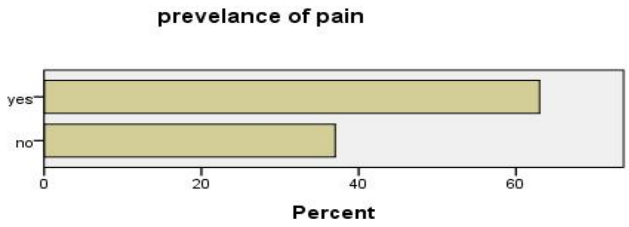


Fig .3 showing the percentage of participants having trouble at any time during last 7 days.

4. RULA work assessment sheet

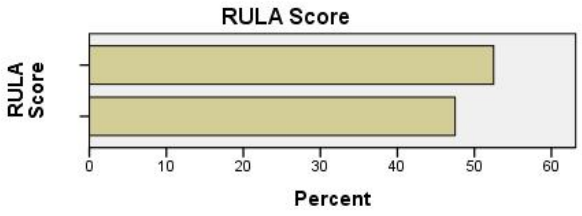


Fig.4showing the percentage of participants needed further investigations and changes in posture according to RULA assessment worksheet.

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Results

Fig .1 shows that 17 participants out of 200 were not suffering from pain. While 89 participants were having trouble in neck region while 71 participants were having trouble in shoulder region. Only 23 participants out of 200 were having trouble in wrist.

Fig 2 showing that 128 participants out of 200 were prevented from doing normal work during last 12 months. While 72 were doing their work normally.

Fig 3 showing that 126 participants out of 200 were having trouble from last 7 days and 74 were having no trouble from last 7 days.

Fig 4 showing that 95 participants out of 200 needed further investigation and change may be needed according to RULA assessment worksheet. While 105 out of 200 participants needed further investigation and change soon.

Discussion

The objective of this study is to analyze the work related MSK pain in sewing machine operators at domestic level. According to many studies Work related musculoskeletal disorders have been described as the most notorious and common cause of severe long term pain and physical disability affecting hundreds of millions of people across the world. The present study was conducted to investigate the prevalence of pain and the most frequently affected region of the body among sewing machine operators of domestic setups. The study design was a cross sectional descriptive survey design.

Two hundred women participated in the study. On the basis of inclusion and exclusion criteria, participants were chosen. Every female was surveyed one at a time to gather data. The data was examined using SPSS 22. For this study, the RULA Employee Assessment Worksheet and the Standardized Nordic Questionnaire were utilized. The study setting was done in Pakistan by selecting the domestic set-ups covering the study sample size. Their age was 25 to 40, working experiences were 2 years or more than 2 years, works minimum 6-8 hours in a day as manual type of sewing machine workers. Participants who were willing to participate in was included in the study. Recent injury, diabetes mellitus, recent fracture and any fixed deformities were excluded in the study. The subjects were select based upon the inclusion and exclusion criteria. their, address, height, weight, were not mentioned

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because of their respective decision. The consent form was explained in the subjects and acceptance were obtain.Subjects were explained with about the Nordic questionnaire and the importance of it.

In this study, approximately 44.5% of sewing machine operators reported having neck pain in the previous 12 months, which was a highly reported discomfort. Shoulder pain came in second with 35.5% of respondents, while wrist pain came in third with 11.5%. A mere 8.5% of them reported having no discomfort during the previous year. These complaints were brought on by the fact that sewing machine operators' incorrect posture during work causes musculoskeletal disorders.

During the previous 12 months, 64% of females were unable to perform their regular jobs, and63% were experiencing difficulties as of the previous week. A worker's RULA score of 95 fell within 4-5, indicating that additional research is necessary and that adjustments may be necessary, per the RULA Assessment document. On the other hand, 105 workers' scores fell between 5 and 6, indicating that participants required further research and quick adjustments to their posture. Long work hours, frequent arm motions, and awkward neck and back position all increase the risk of musculoskeletal disorders.

Ageing, years of work experience, number of hours worked in a day, and nonstop work without a break all raise the risk of musculoskeletal disorders. According to a study, work experiences and length of labor may contribute to a high incidence of musculoskeletal illnesses. It also found that ergonomic elements like force and repetition play a significant influence in musculoskeletal disorders. Musculoskeletal disorders are a common health problem in the general population that have a direct impact on quality of life and place a significant burden on health care organizations. During working hours, workers may be forced to sit for extended periods of time with their spines flexed, causing frequent motions of their shoulders and wrists.

Some writers claim that uncomfortable working postures increase the risk of neck and upper extremity pain, which is linked to prolonged job exposure.

Conclusion

This study concluded that 44.5% females had experienced neck pain during last 12 months 64% were unable to perform their regular jobs and 63% were experiencing

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