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## Postural analysis of the tailors of Allahabad district

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### Abstract

The present study aimed to assess Postural analysis of the tailors of Allahabad district. Tailors involved in tailoring activities such as cutting drafting and hemming may be at risk of developing musculo-skeletal disorder. Hence, the present study was conducted to assess the postural problems by tailors while performing tailoring activity drafting and cutting. The present study was carried out in Allahabad in U.P. purposing random sampling was followed to select 30 subjects between age range of 25-40.

In the present investigation, work on postural examination of the tailors in the ergonomic background was taken into consideration with intent to determine the magnitude of postural strain of the tailors in actual situation of work. This study has undertaken to evaluate the work and machine handling tailors with respect to their workload, energy expenditure rate and postural disorders (MSDs), discomfort resulting out of work practice. The subjective assessment of respondents showed that mild to moderate pain was experienced by Tailors in upper and lower extremities. The result also revealed that selected respondents adopting sitting alters the normal curvature of the spine and puts pressure on the discs. With prolonged sitting this pressure can cause compression of the discs. These resulting chronic back pain and possible nerve damage can impact on tailors ability degeneration of the cervical spine, sometimes known as cervical spondylitis, can have serious consequences. This may the lower limbs. High percentages were suffered from MSDs commonly associated with poor ergonomic design in the workplace. The result revealed that in traditional method that all the selected tailors who performed the tailoring activities drafting, cutting experienced pain in neck, shoulder joints and lumber region. Whereas in improved method, all the tailors expressed that they did not experienced any kind of pain at neck and shoulder parts while performing drafting and cutting activities by improved methods. It can be concluded from the data that postural disorder were less experienced when the work was performed by improved methods.

**Keywords:** Postural problem, Analysis, Tailoring, Drafting, Cutting.

### Introduction

Tailoring environment is considered as a stressful atmosphere that often put forth a negative effect on the tailor's performance, mental and Physical health of the people. Stress has become an imperative issue in studies spher as well as in our civilization. work pressure, strain, Anxiety, constant worry, nervous tension, depression, social dysfunctions, trauma and even suicidal intention are the common term that Tailors is have equal to represent their stress. Stress has been widely recognised in the tailoring work. The crucial intention of this investigation is to explore the basic stress and is pressure among the male and female Trailers in word that the degree of stress that day full with reference to non academic level.

Stress affects individuals at the emotional physiological and behavioural levels. When under stress, people tend to experience unpleasant emotions, including annoyance, anger, anxiety, fear, dejection, and grief (writer, 1998). Chronic and prolonged everyday stress contributes to psychological problems and mental disorders such as depression, schizopheria and anxiety disorder.

Stress may also cause psychosomatic diseases such as hypertension, ulcer, asthma, skin disorders and headache. Research identifies heart disease, stroke, tuberculosis, arthritics, diabetes leukaemia, cancer, various types of infectious diseases, and common cold have also been related to stress. Besides this, poor work pattern and working environment gives un necessorry physical efforts, which reduce efficiency and productivity also.

Sustaining many static posture such as sitting increases the demand on the muscles, ligaments, and other soft tissues of the musculoskeletal system.

The physical burdens lead to problems at the shoulder, neck and in the lower extremities of trailers. These problems either arise from or become more pronounced when lifting the arm, bending the head and body forward, and by the less optimum ankle and knee anglar while working for extended periods in a seated position. The position leads mental and physical stress to Tailors while performing various activities.

This study will help to generate knowledge and insights that may contribute to the increased

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understanding of the dynamic of stress management among tailors. Knowledge of the ergonomically designed tailoring environment may serve as a useful reference in identifying and designing Strategies for work practices in any organization. So that the production loss incurred due to occupational health hazards may be minimized and once adequate information is available on these aspects, ergonomic awareness training can be organized for the Welfare of the tailors.

Keeping the above issue in mind, the purpose of combining ergonomics with tailors is to produce appropriate working environment which reduce the stress and enhance the work capacity and productivity of trailers.

## Research Methods

The present study was carried out in Allahabad district Uttar

Pradesh with the main objective to study to calculate the physiological stress of various tailoring operations. Total 144 respondents were purposively selected for the collection of subjective data where as 57 male Tailors and 57 female tailors were randomly selected for the ergonomic assessment. The working hours were prolonged. The findings of level of postural discomfort showed that more than 108.7 percent of the respondents from male and female Tailors were suffering from severe problem of upper back pain during stitching clothes. Postural problem encounter by tailor were recorded by using body map. The incidence of pain was recorded after the completion of the activity. the intensity of pain in the above stated Parts of the body was recorded by using the following scale having five points very severe(5), severe (4), moderate (3), light (2) and very light (1) Ranjwan (2000).

**Table 1:** Prevalence of tailors postural discomfort due to the activity performed by the tailors.

S. No.	Pain discomfort during tailoring work			
	Body Part	Male	Female	Total
1.	Neck	16 (28.07%)	26 (45.6%)	42 (73.68%)
2.	<b>Shoulder</b>			
	Right	9 (15.78%)	8 (14.03%)	17 (29.82%)
	Left	5 (0.08%)	3 (5.26%)	8 (14.03%)
	Both	6 (10.52%)	11 (19.29%)	17 (29.82%)
3.	<b>Elbow</b>			
	Right	8 (14.03%)	6 (10.52%)	14 (24.56%)
	Left	2 (3.50%)	1 (1.75%)	3 (5.26%)
	Both	4 (7.01%)	4 (7.01%)	8 (14.03%)
4.	<b>Wrist/hands</b>			
	Right	1 (1.75%)	4 (7.01%)	5 (0.08%)
	Left	4 (7.01%)	4 (7.01%)	8 (14.03%)
	Both	0 (0%)	0 (0%)	0 (0%)
5.	Upper back	30 (52.63%)	32 (56.14%)	62 (108.7%)
6.	Lower back	36 (36.15%)	44 (77.19%)	80 (140.35%)
7.	Hips/thighs	28 (49.12%)	23 (40.35%)	51 (89.47%)
8.	Knees	21 (36.84%)	23 (40.35%)	44 (77.19%)
9.	Anklets/feet	24 (42.10%)	31 (54.38%)	55 (96.49%)

## Result

The results depict (table 1.0) the prevalence of postural problem among the selected respondents of tailors. The work related musculoskeletal problems and the body pain perceived by the workers were determined by administering of standardized nurdic questionnaire. All the selected respondents had given their responses, which were analyzed. Respondents were asked few questions about perceived pain/discomfort. Majority of the respondents feeling pain and discomfort in different body parts. Principally, the Indian tailor's workers usually adopt standing, bending and twisting, seating, stooping and overhead working postures in awkward working condition.

Table 1.0 clearly envisager that 28.07 percent male workers and 45.61 percent female workers were involved in tailoring operation had pain and discomfort in neck. This study is also supported by Gangopadhyya *et al.*, (2007) <sup>[1]</sup> that due to occupational exposure such as highly repetitive hand exertions had risk facts for MSD. When asked about pain in right shoulder 15.78 percent of male workers and 14.03 percent female respondents reported discomfort during the activity whereas, regarding pain and discomfort in left shoulder, total 0.08 percent male and 5.26 percent female workers respectively reported pain and discomfort during tailoring tasks. Besides this, when asked about pain in both shoulder 10.52 percent of male Tailors and 19.29 percent

female tailors reported discomfort while performing the activities which shows that female workers face more exertion and pain during performing tailoring activities.

Total 14.03 percent male workers and 10.52 percent female population reported pain in right elbow and 3.50 percent of the total male Tailors and 1.75 percent female respondents were suffering from pain and discomfort in left elbow. when asked about the pain in both elbow total 7.01 percent male workers and 7.01 percent female workers reported discomfort whereas, 1.75 percent male tailoring workers and 7.01 percent female workers reported pain and discomfort in right wrist/hand and total 7.01 percent male Tailors and 7.01 percent female trailers reported pain and discomfort in left wrist/hand. The study indicates that both male and female Tailors have to undergo pain and discomfort in wrist/hand in tailoring activities.

The studies calculated by melchoir (2006), also supported as it was predicted that among manual workers 11.3 percent of men and 15.1 percent of women suffered from a clinically significant upper limb musculoskeletal disorders.

When asked about the pain in upper back total 52.63 percent male Tailors and 56.14 percent female workers reported discomfort whereas 36.15 percent male Tailors and 77.19 percent female trailers reported pain and discomfort in lower back. Majority of male tailoring workers (49.12 percent) reported pain in hip/thigh but only 40.35 percent female

workers were suffering from pain and discomfort in the same region.

Total 77.19 percent of male and female trailers reported pain in knee whereas 96.49 percent male and female Tailors had pain and discomfort in ankles/feet. The study reveals that due to work in sitting posture both male and female tailors suffered pain in upper back, lower back and knee.

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