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Association of Cervical Pain Along with Forward Head Posture among Tailors in Faisalabad

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Abstract

The aim of this study was to find the association between cervical pain along with forward head posture among tailors in Faisalabad. Neck pain is a prevalent occupational health concern, especially in professions involving prolonged sitting and repetitive movements, such as tailoring. Forward Head Posture (FHP), characterized by the anterior positioning of the head relative to the spine, is commonly observed among tailors due to poor ergonomic conditions. **Methods:** A cross-sectional study was conducted among 109 tailors aged 30–60 years from three textile industries in Faisalabad. Data were collected using the Neck Disability Index (NDI), Visual Analog Scale (VAS), and Reedco Posture Assessment. SPSS version 27 was used for statistical analysis, including Chi-square tests for associations. **Results:** 62.4% of participants reported neck pain, and 73.4% exhibited some level of FHP. A significant association was found between neck pain and FHP ($p = 0.005$). Participants with severe FHP also reported higher VAS scores. NDI scores indicated varying levels of disability among those with FHP. **Conclusion:** There is a strong association between cervical pain and forward head posture among tailors. Improvement in workstation ergonomics and posture awareness can potentially reduce neck pain and related disabilities.

INTRODUCTION

Neck pain is a common musculoskeletal disorder particularly among tailors due to long hours of sitting and repetitive upper limb movements [1], [2]. Neck pain is also known as cervicalgia. Neck pain is of two types on the basis of duration I.e. Acute neck pain (pain extends up to 6 weeks) and Chronic neck pain (pain extends for more than 3 months) [3]. A normal body alignment is called posture [4]. Forward Head Posture (FHP) is a common postural deviation in this profession. It results from prolonged leaning forward while stitching, leading to stress on cervical structures [5]. The prevalence of cervical disorders in such populations poses significant concern for occupational health and quality of life [6]. Neck become stiff and shoulder become rounded in FHP while sometimes the spine also becomes kyphotic [7]. This is evidently prove that the poor posture is the leading cause of musculoskeletal problems like neck pain and forward head posture [1]. Forward head posture and muscular dysfunction are the contributing factors of chronic neck pain while neck pain also effects the individual physical and mental health as well as behavior in society [8], [9]. For the past ten years, musculoskeletal disorders (MSDs) are caused by work related / occupational related factors which leads to huge burden on individual. Due to specific posture related to occupational individual experience frequent pain with severe intensity in the neck region leading to stiffness and tightness of cervical area [10].

A person whose occupation is making fitted clothes such as suits, trousers and jackets to fit individual customers is called tailor. While The tailoring is manual method in which user must achieve tailor physically, choose material for clothing , give measurements and pick it up from the tailor shop thus using more time and resources [11], [12]. Tailor experience the most common issue related to musculoskeletal due to working hours are cervical pain and cervical ache, a lot of tension and eye focusing and Myofascial trigger points leads to radiating pain to the surrounding areas. Trigger points formed on trapezius muscle will cause pain in that area which can radiate into the region of neck and the shoulder in the tailors while neck pain is a major public health problem among sewing machine operators [2], [13], [14].A study was conducted in 2025 in Sri Lankan on work related musculoskeletal disorders like neck pain in sewing machine operators / tailors in textile industry. Total 1534 participants were selected from different textile industries through non probability sampling technique. Data collection was done by using the extended Nordic Musculoskeletal Questionnaire. This study showed that about 58.24% of participants suffered from work related pain, and least reported pain was 52.7% in the participants using dynamic postures. Most of female participants complaint of pain due to working activities[15].

METHODOLOGY

This was a cross sectional study. A sample size of 109 participants were collected from 2 different textile mills of Faisalabad (which were Beacon Impex Pvt. Ltd., Masood Textile Mills, Interloop Ltd.). Convenient sampling technique was use for data collection. Neck disability index (NDI) was used for the screening of cervical pain, visual analog scale (VAS) was use for the assessment of pain while Reedco posture assessment and craniovertebral angle (CVA) were used as the screening tools for the assessment of forward head posture (FHP).

Inclusion Criteria:

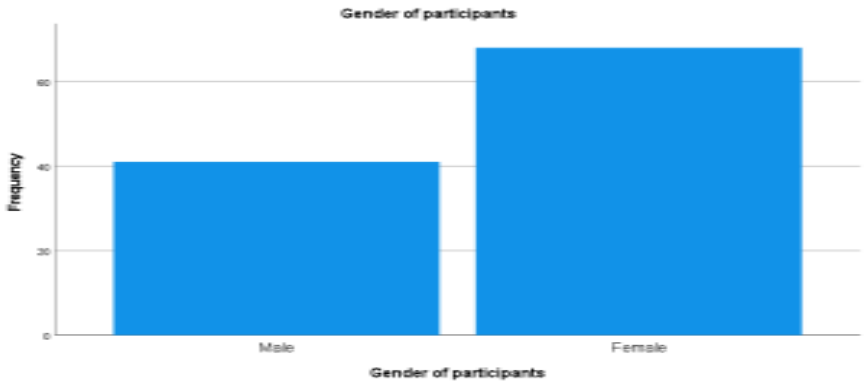
Tailors aged 30–60 years[10]
Minimum 12 months work experience[16]
Working ≥6 hours/day[14]
Pain rated positive on VAS[10]

Exclusion Criteria
Neurological or orthopedic conditions
History of cervical trauma, fractures, arthritis, or disc herniation
Ethical Consideration: Approval obtained from institute; written informed consent from all participants.
Data Analysis: Data were analyzed using SPSS version 27. Chi-square tests were used to examine associations between variables.

Data Collection Procedure
The data was personally collected from the 3 different textile industries of Faisalabad, by filling the screening forms and questionnaire after signing the consent form. Out of total 109 participants who filled the questionnaire 41 participants were males and 68 were females. While the positive number of forward head posture were 80 participants out of which 64 participants had slight forward head with Craniovertebral angle ranging from 48-53 degree while 16 participants had severe forward head posture with craniovertebral angle < 43 degree.

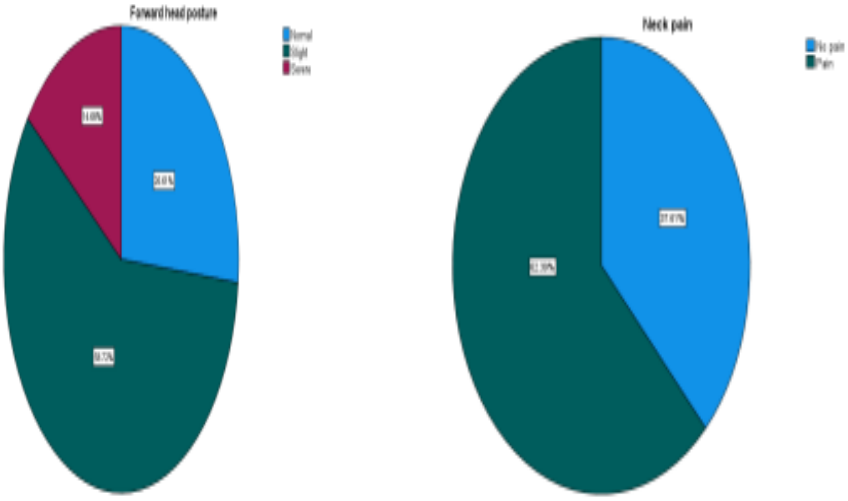
RESULT

Gender Distribution	
Gender	**Percentages**
Females	62.4%
Males	37.6%



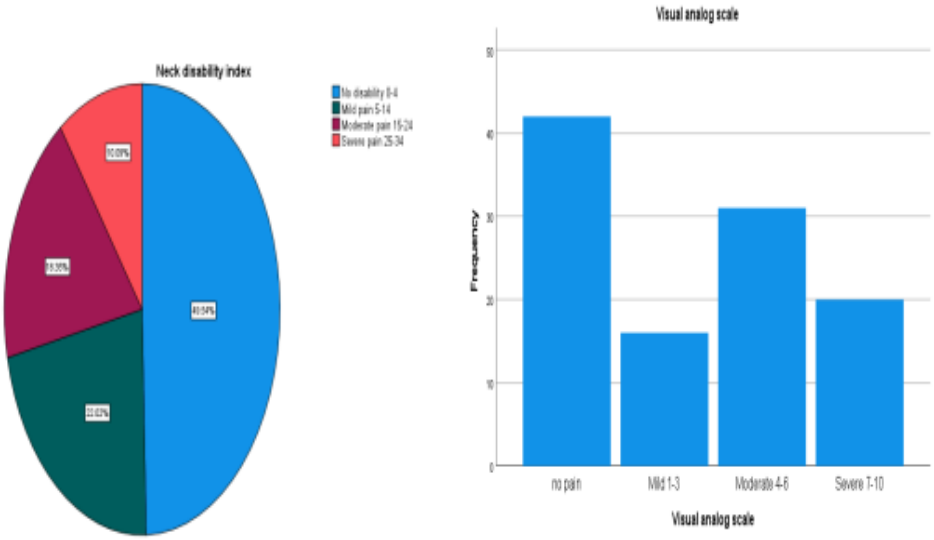
Bar chart showing gender distribution

Prevalence of FHP and Neck Pain			
FHP		**Neck Pain**	
Posture	**Percent-age**	**Pain**	**Percent-age**
Normal	26.6%	Yes	62.4%
Slight FHP	58.7%	No	37.6%
Severe FHP	14.7%		



Pie charts showing the distribution of FHP and Neck pain

Scoring of NDI and VAS			
NDI		**VAS**	
Disability	**%**	**Intensity**	**%**
No disability(0–4)	49.5 %	No pain	38.5 %
Mild disability(5–14)	22%	Mild pain (1–3)	14.7 %
Moderate disability (15-24)	18.3 %	Moderate pain (4–6)	28.4 %
Severe disability (25–34)	10.1 %	Severe pain (7–10)	18.3 %



Scoring of NDI in pie chart while Bar chart showing the scoring of VAS

Significant Associations (Chi-square test)

Factors	P- value
FHP and Neck Pain	p = 0.005
FHP and NDI	p = 0.001
VAS and FHP	p = 0.008
VAS and NDI	p = 0.000
NDI and Neck Pain	p = 0.000

DISCUSSION

This study shows a strong association between neck pain and forward head posture among tailors, aligning with previous research indicating poor workplace ergonomics as a risk factor for musculoskeletal disorders. Female dominance in the sample reflects the workforce composition in textile industries. The significant correlations suggest that prolonged sitting, lack of breaks, and poor posture contribute directly to cervical dysfunction.

Findings are consistent with studies from similar populations [17], which reported high levels of shoulder and neck pain among sewing machine operators. The widespread presence of slight to severe FHP and related functional disability reflects the need for targeted ergonomic interventions.

According to Ahmad and Ishtiaq (2023) study, who reported a high prevalence of forward head posture (FHP) and neck pain among sewing machine operators, with 86.1% of participants exhibiting FHP and 89.2% experiencing moderate to severe neck pain according to the Numerical Pain Rating Scale (NPRS) (Ahmad and Ishtiaq 2023). In our study, we also observed a high frequency of FHP, where 73.4% of participants demonstrated slight to severe forward head posture, and 61.5% reported mild to severe neck pain on the Visual Analog Scale.

CONCLUSION

There is a statistically significant association between forward head posture and cervical pain among tailors in Faisalabad. Most tailors presented with some degree of postural abnormality and reported corresponding levels of pain and disability. Postural deviations like FHP are modifiable risk factors that can be addressed through ergonomic and educational programs.

RECOMMENDATIONS

Awareness campaigns to promote correct posture and work habits among tailors.
Periodic ergonomic assessments at textile workplaces
Physiotherapy interventions for symptomatic workers
Workstation redesign to encourage neutral posture
Scheduled breaks and stretching routines to reduce fatigue.

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