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PREVEALANCE OF FORWARD HEAD POSTURE AMONG CIVIL LABOURER IN MUMBAI METROPOLITIAN REGION –A DESCRIPTIVE STUDY

Healthcare

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ABSTRACT

Background: Forward Head Posture (FHP) is common among civil labourers due to repetitive lifting, bending, and poor work postures. It leads to neck pain, muscle imbalance, and reduced efficiency. Limited research in this group highlights the need for early physiotherapy and ergonomic interventions. **Objective:** To determine prevalence of forward head posture in civil labourers using kinovea software. **Methods:** A descriptive study was conducted among 270 civil labourers aged 20–35 years in the Mumbai Metropolitan Region using convenience sampling. Forward Head Posture was assessed by measuring the Craniovertebral Angle (CVA) through Kinovea software from lateral photographs. Participants gave informed consent, and data were analyzed to determine the prevalence and severity of FHP. **Results**: Out of 270 civil labourers, 79% showed a normal craniovertebral angle, 21% had mild Forward Head Posture, and one participant presented with severe FHP. The findings indicate that while most workers maintain normal posture, early postural deviations are emerging among this group. **Conclusion**: The study revealed that the majority of civil labourers maintained normal posture, while a smaller proportion showed mild forward head posture, with one case of severe involvement. Early physiotherapy and ergonomic measures are essential to prevent progression and ensure long-term musculoskeletal health.

KEYWORDS

Forward Head Posture, Craniovertebral Angle, kinovea software ,Civil Labourers, Postural Deviation, Musculoskeletal Disorders, Ergonomics, Physiotherapy, Occupational Health.

INTRODUCTION

Forward Head Posture (FHP) is a common postural deviation where the head moves forward from its normal alignment, increasing strain on cervical muscles and joints. It can cause neck pain, muscle imbalance, and reduced mobility. Civil labourers are at high risk due to repetitive lifting, bending, and awkward postures during work. Prolonged physical stress and poor ergonomics further contribute to postural changes. Unlike sedentary workers, labourers experience dynamic loads that may mask early symptoms. Over time, untreated FHP can lead to chronic pain and decreased productivity. Despite this, little research focuses on postural health among construction workers in India. Assessing FHP in this group is crucial for early intervention. Physiotherapy and ergonomic education can help prevent musculoskeletal complications. This study aims to determine the prevalence and severity of FHP among civil labourers using Kinovea software.

Need Of The Study

Civil labourers often experience neck and back pain due to heavy lifting, long working hours, and poor posture. These issues reduce their work efficiency and quality of life. Identifying and addressing Forward Head Posture (FHP) in this group is essential to prevent long-term musculoskeletal problems. Early physiotherapy and ergonomic measures can help improve posture and overall well-being.

AIM AND OBJECTIVES

AIM: To study the prevalence of forward head posture among civil labourers.

OBJECTIVE: To determine prevalence of forward head posture in civil labourers using kinovea software.

METHODOLOGY

Type of Study: Descriptive study

Study Setting: Mumbai Metropolitian Region

Study Population: Civil labourer

Sampling Method: Convenience Sampling Method

Sample Size and Sample Size Calculation: 270 [12]

Criteria For Selection: Inclusion Criteria: Age: 20-35,Construction labourer working on a construction site more then 6 month,Heavy lifting of labour workers should be more than 3 hours per day(>2kg),Both male and female, Infrastructure site labourers

Exclusion Criteria:

Civil labour not willing to participate, Any previous history of trauma, Any musculoskeletal injuries(sprain,strain,dislocation,soft tissue injury, Any neurological conditions.

Material Used: Kinovea software,Digital camera

Procedure-Participants were photographed in a standing position, and their Craniovertebral Angle (CVA) was measured using Kinovea software to assess Forward Head Posture. Data were analyzed to determine the prevalence and severity of FHP among civil labourers.

RESULTS

A total of 270 labour participants were included
Key Findings:
overall 79% showed a normal craniovertebral angle, 21% had mild Forward Head Posture, and one participant presented with severe FHP.

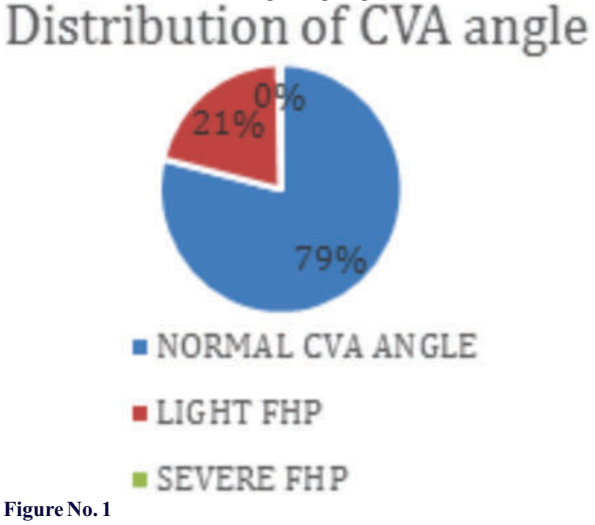

Figure No. 1

DISCUSSION-

This study assessed the prevalence of Forward Head Posture (FHP) among civil labourers in Mumbai using the Craniovertebral Angle (CVA) via Kinovea software. Results showed that 79% had normal posture, 21% had mild FHP, and only one participant had severe FHP.Mild FHP indicates early postural deviations likely caused by repetitive lifting and awkward work positions.Civil labourers' dynamic activities may reduce static cervical strain compared to sedentary workers.The younger age group (20–35 years) may explain fewer severe cases.A gradual decline in normal CVA with increasing age was observed, suggesting cumulative strain.Findings align with previous studies linking FHP and neck pain in physically demanding occupations.Ergonomic awareness and physiotherapy interventions are crucial for prevention.Regular postural screening can help detect early deviations and avoid chronic dysfunction.This study highlights the need for occupational health programs tailored to India's civil labour workforce.

CONCLUSION

The study revealed that the majority of civil labourers maintained normal posture, while a smaller proportion showed mild forward head posture, with one case of severe involvement. Early physiotherapy and ergonomic measures are essential to prevent progression and ensure long-term musculoskeletal health.

Clinical Implications

- Early screening using tools like Kinovea can help detect forward head posture in labourers.
- Preventive physiotherapy with posture correction and cervical strengthening should be introduced. Ergonomic training and correct lifting techniques can minimize musculoskeletal strain.
- Workplace modifications and scheduled rest breaks can improve posture and reduce fatigue
- Collaboration between physiotherapists and construction firms can enhance worker health programs
- Age-specific interventions can help prevent postural decline and maintain productivity

Limitation

- Limited sample reduces generalizability.
- Only young workers were included.
- Static posture assessment, not dynamic.
- Study restricted to Mumbai region.

Future Scope-

Future studies should include larger and more diverse age groups across different regions to improve generalizability. Long-term and intervention-based research can help evaluate the effectiveness of physiotherapy and ergonomic training in preventing forward head posture among civil labourers.

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