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TO FIND THE PREVALENCE OF CHRONIC NECK PAIN IN OLA/UBER DRIVER OF GUJARAT"

Physiotherapy

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ABSTRACT

Introduction: Chronic neck pain is a prevalent issue among Ola/Uber drivers in Gujarat, adversely impacting their daily functioning and overall well-being. Despite its significance, research focusing on the prevalence and impact of chronic neck pain in this occupational group remains limited. This study aims to address this gap by examining the prevalence, severity, and associated factors of chronic neck pain among Ola/Uber drivers in Gujarat. **Participants:** A total of 300 Ola/Uber drivers from various regions of Gujarat participated in the study, providing valuable insights into the prevalence and impact of chronic neck pain in this population. **Results:** Analysis of the data revealed that a significant proportion of Ola/Uber drivers experienced chronic neck pain, with 66% of the participants reporting some degree of disability according to the Neck Disability Index (NDI). Additionally, varying levels of pain intensity were observed, highlighting the considerable burden of chronic neck pain on the drivers' well-being and work performance. **Conclusion:** The findings underscore the urgent need for targeted interventions and ergonomic improvements to alleviate the burden of chronic neck pain among Ola/Uber drivers in Gujarat. By addressing the underlying factors contributing to neck pain and implementing strategies to improve driver well-being, we can enhance the overall quality of life and safety for Ola/Uber drivers in Gujarat.

KEYWORDS

Chronic Neck Pain, Ola/uber Drivers, Prevalence, Impact, Interventions.

INTRODUCTION:

About Anatomy Of Neck

The neck serves as a crucial anatomical region connecting the head to the trunk, housing vital structures responsible for various physiological functions. Understanding the intricate anatomy of the neck is fundamental for medical practitioners across multiple specialties.

The neck comprises several layers, including skin, superficial fascia, platysma muscle, deep cervical fascia, and numerous structures such as blood vessels, nerves, lymph nodes, and viscera. The cervical vertebrae provide structural support while facilitating movement of the head and neck.

Muscles:

Key muscles in the neck include the sternocleidomastoid, scalene, trapezius, and suprahyoid muscles. These muscles play crucial roles in head movement, respiration, swallowing, and speech.1

Blood Supply:

The neck receives arterial blood supply primarily from the common carotid arteries, which bifurcate into internal and external carotid arteries. The vertebral arteries also contribute to cerebral circulation, branching off from the subclavian arteries.

Nerves:

Nerves of the neck include the cervical plexus, brachial plexus, vagus nerve, phrenic nerve, and sympathetic chain. These nerves innervate various structures in the neck and regulate autonomic functions.2

Lymphatics:

The neck contains an extensive network of lymph nodes organized into chains, including the superficial and deep cervical lymph nodes. These nodes play a crucial role in immune surveillance and lymphatic drainage from the head and neck region.

Clinical Significance:

An understanding of neck anatomy is essential for diagnosing and treating various conditions, including neck trauma, infections, tumors, and neurological disorders. Surgical procedures in the neck region require precise knowledge of anatomy to minimize complications. 3951

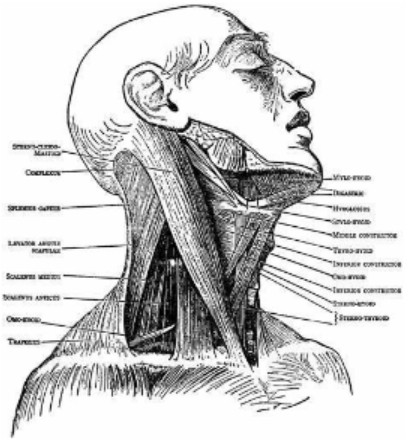


Fig: 1 Anatomy Of Neck

About Neck Pain

Neck pain is a common complaint encountered in clinical practice, affecting individuals of all ages and backgrounds. Understanding the various types of neck pain is essential for accurate diagnosis and appropriate management.

Types of Neck Pain:

1. Mechanical Neck Pain:

- Mechanical neck pain typically results from musculoskeletal causes such as poor posture, muscle strain, or degenerative changes in the cervical spine.
- It is often exacerbated by certain activities or positions and may improve with rest, activity modification, and physical therapy.4

2. Cervical Radiculopathy:

- Cervical radiculopathy occurs when a nerve root in the cervical spine becomes compressed or irritated, leading to pain, weakness, and sensory changes along the distribution of the affected nerve.
- Common causes include herniated discs, spinal stenosis, or foraminal narrowing.

3. Cervical Myelopathy:

- Cervical myelopathy refers to compression or injury to the spinal cord in the cervical region, resulting in motor, sensory, and reflex abnormalities.
- Causes include degenerative disc disease, cervical spondylosis, or spinal cord tumors.

4. Whiplash-Associated Disorder (WAD):
- WAD occurs following sudden acceleration-deceleration forces on the neck, commonly seen in motor vehicle accidents.
- Symptoms may include neck pain, stiffness, headache, and sometimes neurological deficits.5

5. Non-Specific Neck Pain:
- Non-specific neck pain refers to pain in the neck region without a specific identifiable cause.
- It may result from a combination of factors including poor posture, stress, muscle tension, and psychosocial factors.

Clinical Considerations:
- A thorough history and physical examination are essential for evaluating neck pain and determining its underlying cause.
- Diagnostic imaging studies such as X-rays, MRI, or CT scans may be indicated to further evaluate the cervical spine and surrounding structures.
- Treatment options for neck pain vary depending on the underlying cause and may include medications, physical therapy, injections, or surgical intervention in severe 6

Neck Pain Due To Bad Posture And Stress

Neck pain attributed to bad posture and stress is a common complaint encountered in clinical practice, affecting individuals of all ages and occupations. Understanding the underlying mechanisms and management strategies for this type of neck pain is essential for healthcare professionals.

Etiology:

1. Bad Posture:
- Prolonged periods of sitting or standing with poor posture can lead to excessive strain on the muscles, ligaments, and joints of the neck.
- Common postural deviations contributing to neck pain include forward head posture, rounded shoulders, and excessive cervical lordosis.

2. Over Stress:
- Psychological stress and tension can manifest physically as muscle tightness and increased muscle tone in the neck and shoulder region.
- Chronic stress can lead to the development of trigger points, muscle imbalances, and reduced pain threshold, exacerbating neck pain symptoms.

Pathophysiology:
- Poor posture and stress can result in muscular imbalances, leading to altered biomechanics of the cervical spine and surrounding structures.
- Chronic tension and strain on the neck muscles can cause microtrauma, inflammation, and decreased blood flow, contributing to the development of neck pain.7

Neck Disability Index

The Neck Disability Index (NDI) is a validated tool used to assess the impact of neck pain on daily functioning and quality of life. It consists of 10 items covering various aspects of physical and functional impairment related to neck pain. 8

Numeric Pain Rating Scale (NPRS)

The Numeric Pain Rating Scale (NPRS) is a commonly used tool for quantifying pain intensity on a numerical scale from 0 to 10, where 0 represents no pain and 10 represents the worst pain imaginable. It provides a quick and simple method for patients to communicate their pain levels to healthcare providers.9

AIM OF THE STUDY

The aim of this study is to investigate the prevalence and factors associated with chronic neck pain among Ola/Uber drivers in Gujarat, India.

Specifically, the study seeks to:
1. Determine the prevalence of chronic neck pain among Ola/Uber drivers in Gujarat.
2. Identify demographic, occupational, and psychosocial factors contributing to chronic neck pain in this population.
3. Assess the impact of chronic neck pain on the quality of life, work performance, and driving safety of Ola/Uber drivers.
4. Explore potential interventions and preventive strategies to alleviate neck pain and improve the overall well-being of Ola/Uber drivers in Gujarat.

This study aims to provide valuable insights into the burden of chronic neck pain among Ola/Uber drivers and inform the development of targeted interventions to address this occupational health issue.

Need Of The Study

The need for investigating the prevalence of chronic neck pain among Ola/Uber drivers in Gujarat arises from several key factors:
1. Occupational Health Concerns: Ola/Uber drivers spend prolonged periods driving, often in non-ergonomic positions, which may predispose them to musculoskeletal disorders such as chronic neck pain. Understanding the extent of this issue is crucial for addressing their occupational health needs.
2. Lack of Research: Despite the growing reliance on ridesharing services like Ola and Uber, there is limited research focusing on the musculoskeletal health of drivers, particularly regarding chronic neck pain. This study will fill a critical gap in the literature.
3. Impact on Quality of Life: Chronic neck pain can significantly impact the quality of life, work productivity, and overall well-being of individuals. Assessing the prevalence of neck pain among Ola/Uber drivers will shed light on the magnitude of this problem and its implications.
4. Driver Safety: Neck pain can impair mobility and concentration, potentially compromising driver safety and increasing the risk of accidents. Understanding the association between neck pain and driving performance is essential for ensuring road safety.
5. Intervention Development: By identifying the factors contributing to chronic neck pain among Ola/Uber drivers, this study will inform the development of targeted interventions and preventive measures to alleviate pain and improve the health outcomes of drivers.

In summary, there is a pressing need to investigate the prevalence of chronic neck pain among Ola/Uber drivers in Gujarat to address their occupational health concerns, improve their quality of life, ensure driver safety, and inform the development of effective interventions.

Objective Of The Study

The objective of this study is to determine the prevalence of chronic neck pain among Ola/Uber drivers in Gujarat, India, and to explore associated risk factors and impact on drivers' quality of life and work performance. Specifically, the study aims to:
1. Assess the prevalence of chronic neck pain among Ola/Uber drivers in Gujarat through a cross-sectional survey.
2. Identify demographic, occupational, and psychosocial factors associated with chronic neck pain in this population.
3. Evaluate the impact of chronic neck pain on drivers' quality of life, work productivity, and driving safety.
4. Investigate coping strategies and healthcare-seeking behaviors adopted by Ola/Uber drivers in response to chronic neck pain.
5. Provide recommendations for interventions and preventive measures to alleviate neck pain and improve the overall well-being of Ola/Uber drivers in Gujarat.

Study Design And Study Setting

Study Design:

The study will employ a cross-sectional design to investigate the prevalence of chronic neck pain among Ola/Uber drivers in Gujarat.

Study Duration:

The study will be conducted over a period of 6 months, from [10 October, 2023] to [12 March, 2024].

Population:

The target population will consist of Ola and Uber drivers operating in various cities and towns across Gujarat.

Selection Criteria:

a. Inclusion Criteria:

1. Licensed Ola/Uber drivers.
2. Currently active in driving for Ola/Uber services.
3. Willing to participate in the study.
4. Able to understand and respond to the questionnaire in Gujarati or English.

b. Exclusion Criteria:

1. Drivers with a history of traumatic neck injury in the past 6 months.
2. Drivers currently undergoing treatment for neck-related disorders.
3. Drivers with pre-existing chronic conditions affecting the neck, such as cervical spondylosis or rheumatoid arthritis.

Sampling Method:

A convenience sampling method will be employed to recruit participants. Researchers will approach Ola/Uber drivers at various pick-up and drop-off points, rest areas, and driver hubs across different cities in Gujarat.

Sampling Size:

Based on previous studies and considering an estimated prevalence rate of chronic neck pain among Ola/Uber drivers in Gujarat, a sample size of 300 drivers will be targeted to achieve a sufficient level of statistical power and precision in estimating the prevalence rate with a 95% confidence interval and a 5% margin of error.

Outcome Measures:

Numeric Pain Rating Scale (NPRS)
Neck Disability Index (NDI)

METHODOLOGY

Table: 1 Flow Chart Of Procedure

1. Participant Recruitment:

- Identify and approach Ola/Uber drivers at various locations such as taxi stands, transportation hubs, and rest areas across different cities in Gujarat.
- Provide a brief explanation of the study aims, procedures, and benefits to potential participants.
- Obtain informed consent from eligible drivers willing to participate in the study.

2. Demographic Information:

- Collect demographic data including age, gender, educational level, years of driving experience, average daily driving hours, and any previous history of neck pain or related conditions.

3. Numeric Pain Rating Scale (NPRS):

- Explain the NPRS to participants, emphasizing that it is a simple tool used to assess the intensity of their neck pain on a scale from 0 to 10, with 0 representing no pain and 10 representing the worst possible pain.
- Provide a numerical scale to the participants.
- Ask participants to rate their current neck pain intensity by selecting a number on the scale that best represents their level of pain.
- Record the participant's NPRS score.

4. Neck Disability Index (NDI) Scale:

- Introduce the NDI scale to participants, explaining that it is a questionnaire designed to assess the impact of neck pain on their daily activities and functioning.
- Provide a printed or electronic copy of the NDI questionnaire to participants.
- Instruct participants to read each question carefully and select the response that best reflects their current level of disability or limitation due to neck pain.
- Assist participants in completing the questionnaire if necessary, ensuring that they understand each item.
- Collect the completed NDI questionnaire from the participants.

5. Data Collection and Recording:

- Enter the demographic information, NPRS scores, and NDI questionnaire responses into a secure database or electronic spreadsheet.
- Ensure accuracy and consistency in data entry by double-checking entries against the original forms.
- Assign unique identifiers or codes to participants to maintain confidentiality and anonymity of their data.

IMAGE: 2 DATA COLLECTION

IMAGE: 3 DATA COLLECTION

6. Quality Control:

- Periodically review a subset of data entries to identify any errors or inconsistencies.
- Address any discrepancies by verifying the original data sources and making necessary corrections.
- Conduct regular checks to ensure compliance with ethical guidelines and data protection regulations.

7. Data Analysis:

- Analyze the collected data using appropriate statistical methods to determine the prevalence of chronic neck pain among Ola/Uber drivers in Gujarat.
- Calculate descriptive statistics such as mean NPRS scores, NDI scores, and prevalence rates of neck pain severity and disability.
- Explore potential associations between demographic variables, driving characteristics, and neck pain outcomes using inferential statistics if applicable.

8. Reporting and Dissemination:

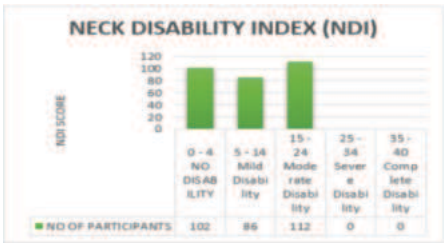
- Prepare a comprehensive report summarizing the study findings, methodology, and conclusions

RESULT

1. Neck Disability Index (NDI) Scores:

- No Disability (0-4 score): 102 participants
- Mild Disability (5-14 score): 86 participants
- Moderate Disability (15-24 score): 112 participants
- Severe Disability (25-34 score): 0 participants
- Complete Disability (35-40 score): 0 participants

Table : 2 Neck Disability Score



2. Numeric Pain Rating Scale (NPRS) Scores:

- Score 1: 0 participants
- Score 2: 66 participants
- Score 3: 36 participants
- Score 4: 86 participants
- Score 5: 60 participants
- Score 6: 52 participants
- Score 7, 8, 9, 10: 0 participants

Table: 3 Numeric Pain Rating Scale Score

3. Individuals with Disability:

- Individuals with disability: 198 participants (66%)
- Individuals without disability: 102 participants (34%)
- Total number of participants: 300

Table: 4 Disability Evaluation

The prevalence of chronic neck pain among Ola/Uber drivers in Gujarat is significant, with a total of 198 participants (66%) reporting some level of disability according to the Neck Disability Index (NDI). Among these, the majority exhibit moderate disability, indicating a considerable impact on daily functioning. Numeric Pain Rating Scale (NPRS) scores reveal varying levels of pain intensity, with a notable proportion of participants reporting scores ranging from 2 to 6. These findings underscore the need for targeted interventions and ergonomic improvements to mitigate the burden of chronic neck pain among Ola/Uber drivers in Gujarat and enhance their overall well-being.

DISCUSSION

Chronic neck pain is a complex and multifaceted issue that poses significant challenges for Ola/Uber drivers in Gujarat. This comprehensive discussion will delve into the various facets of chronic neck pain among this occupational group, including its prevalence, impact, contributing factors, and potential avenues for intervention.

Prevalence and Impact of Chronic Neck Pain:

The findings of this study underscore the high prevalence and considerable impact of chronic neck pain among Ola/Uber drivers in Gujarat. **With 66% of participants reporting some degree of disability** according to the Neck Disability Index (NDI), it is evident that chronic neck pain significantly affects the daily functioning of these drivers. Moreover, the distribution of NDI scores highlights the diverse spectrum of disability experienced by drivers, ranging from mild to moderate impairment in performing daily activities. This not only impacts their ability to work effectively but also has implications for their overall quality of life and well-being.

Factors Contributing to Chronic Neck Pain:

Several factors contribute to the development and exacerbation of chronic neck pain among Ola/Uber drivers. Prolonged periods of driving, often in non-ergonomic conditions, can lead to muscle fatigue, tension, and poor posture, all of which are known risk factors for neck pain. Additionally, the repetitive nature of driving, combined with frequent use of mobile devices and navigation systems, can further strain the neck muscles and exacerbate existing pain. Furthermore, psychosocial factors such as stress, anxiety, and job dissatisfaction may also play a role in the development and persistence of chronic neck pain among drivers.

Impact on Work Performance and Well-being:

Chronic neck pain not only affects the physical health of Ola/Uber drivers but also has significant implications for their work performance and overall well-being. The moderate to severe pain intensity reported by a substantial proportion of drivers, as indicated by Numeric Pain Rating Scale (NPRS) scores, can impair their ability to concentrate, make quick decisions, and react to changing road conditions, thereby compromising driving safety. Moreover, the discomfort and disability associated with chronic neck pain may lead to decreased job satisfaction, increased absenteeism, and financial strain, further exacerbating the drivers' overall stress and dissatisfaction.

Potential Avenues for Intervention:

Addressing the burden of chronic neck pain among Ola/Uber drivers requires a multifaceted approach that addresses both individual and systemic factors. Ergonomic improvements in vehicle design, including adjustable seats, lumbar support, and headrests, can help alleviate strain on the neck muscles and promote better posture during driving. Additionally, education and training programs on proper ergonomics, stretching exercises, and relaxation techniques can empower drivers to proactively manage their neck pain and prevent its recurrence. Furthermore, access to timely and affordable healthcare services, including physiotherapy, chiropractic care, and pain management interventions, is essential to address the underlying causes of neck pain and improve the drivers' overall musculoskeletal health

CONCLUSION

In conclusion, the findings of this study shed light on the significant prevalence and impact of chronic neck pain among Ola/Uber drivers in Gujarat. The high percentage of drivers reporting some degree of disability underscores the profound burden of neck pain on their daily functioning and overall quality of life. Moreover, the varying levels of pain intensity reported by drivers further emphasize the complexity of this issue and the urgent need for effective interventions to alleviate their suffering. Addressing the multifaceted factors contributing to chronic neck pain, including ergonomic improvements, education on proper posture and stretching techniques, and access to healthcare services, is paramount to improving the musculoskeletal health and well-being of Ola/Uber drivers in Gujarat.

Moving forward, concerted efforts from policymakers, healthcare professionals, and stakeholders in the transportation industry are essential to implement sustainable solutions that prioritize the health and safety of Ola/Uber drivers. By addressing the root causes of chronic neck pain and promoting proactive measures to mitigate its impact, we can create a supportive environment that empowers drivers to manage their pain effectively and continue their vital role in providing transportation services to the community. Ultimately, by prioritizing the musculoskeletal health of Ola/Uber drivers, we can enhance their overall well-being and contribute to a safer and more sustainable transportation system in Gujarat.

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