

Prevalence of Work Related Fatigue in Cab Drivers of Pune City

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A B S T R A C T

Background: Fatigue is a critical yet often overlooked issue affecting the safety, health, and productivity of drivers in the informal transport sector. Cab drivers, who form a vital part of urban transportation networks in many developing countries, are particularly vulnerable due to long working hours, irregular sleep patterns, and poor working conditions. Prolonged exposure to traffic congestion, noise, pollution, and physical strain contributes to both physical and mental exhaustion. This study aimed to explore the risk of fatigue among cab drivers, and its effects in improving overall road safety and driver welfare. Fatigue is a significant health and safety concern, especially among individuals engaged in occupations that demand prolonged attention, physical exertion, and irregular working hours. Fatigue assessment scale was used for the fatigue assessment, It was seen that 55.20% participants were having fatigue. The results of the assessment can contribute to the development of targeted interventions and policy recommendations to improve driver health, enhance occupational safety, and reduce the risk of fatigue-related accidents on the road.

Methods: Total 96 participants were included in this study, they were evaluated by using Fatigue Assessment scale.

Conclusion: More than half of the participants were affected by fatigue.

Key words: Fatigue, cab drivers, fatigue assessment scale, occupational health.

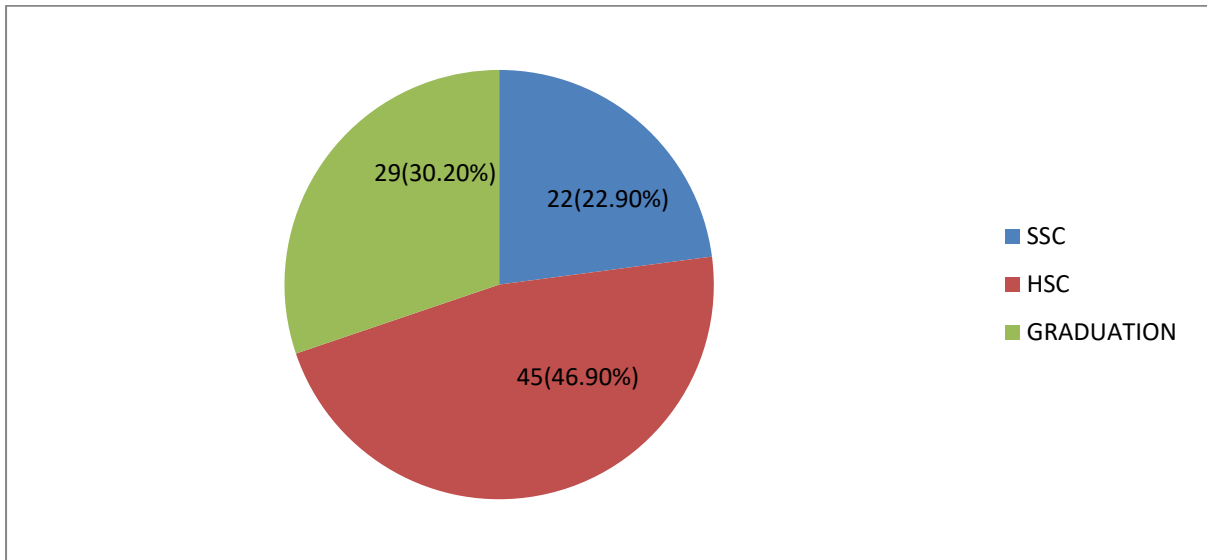
INTRODUCTION: Fatigue is one of the most important issues in road transport sector with respect to safety and other aspects of human life. Fatigue, a feeling of tiredness or lack of energy, can be a symptom of various underlying physical conditions, impacting physical health and conditioning. Fatigue not only compromises the well-being of drivers but also increases the risk of road accidents, endangering passengers and other road users. This study aimed to explore the risk of fatigue among cab drivers, and its effects in improving overall road safety and driver welfare. Fatigue is a significant health and safety concern, especially among individuals engaged in occupations that demand prolonged attention, physical exertion, and irregular working hours. Cabs are a widely used mode of transport in many developing countries, particularly in India. These four-wheeled vehicles form a vital part of the urban public transportation network, providing last-mile connectivity and affordable mobility to millions. Fatigue leads to decreased alertness, slower reaction times, and impaired cognitive functioning—all of which are critical to safe driving. This study aims to assess the levels of fatigue among cab drivers and to identify the various contributing factors, such as work schedule, sleep patterns, nutritional status, ergonomic factors, and stress levels. It is important to study prevalence of fatigue as fatigue has an impact on safety, musculoskeletal health and productivity. Cab drivers driving for longer duration, physical fatigue and lack of sleep were major causes of road crashes. Prolonged driving and irregular sleep patterns contribute to chronic fatigue. Work extended hours, face erratic schedules, and experience high levels of stress. These factors contribute significantly to both physical and mental fatigue, which can impair cognitive functions, reduce reaction time, and increase the likelihood of road accidents. Despite its known consequences, fatigue is frequently under-recognized and under-assessed in this workforce. The study was done by using fatigue assessment scale; The FAS is a simple, validated tool that effectively captures both physical and mental aspects of fatigue. Utilizing this scale in the cab driver population allows for early identification of fatigue levels and provides evidence-based data to guide interventions.

MATERIAL AND METHODS: The study was carried out and the results were drawn by using fatigue assessment scale as the outcome measure, Total 96 participants were included. Fatigue assessment scale was used for evaluating fatigue in cab drivers. The scale contains 10

questions based on scoring the participants were divided in two groups that is cab drivers having or having no fatigue. All the data was analyzed.

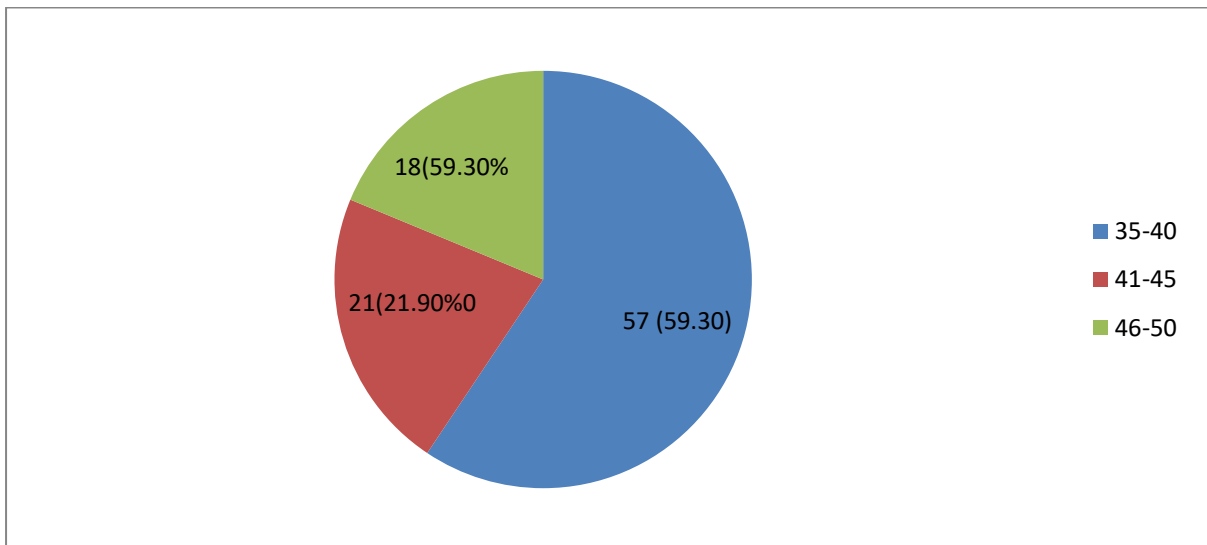
RESULTS:

Education level



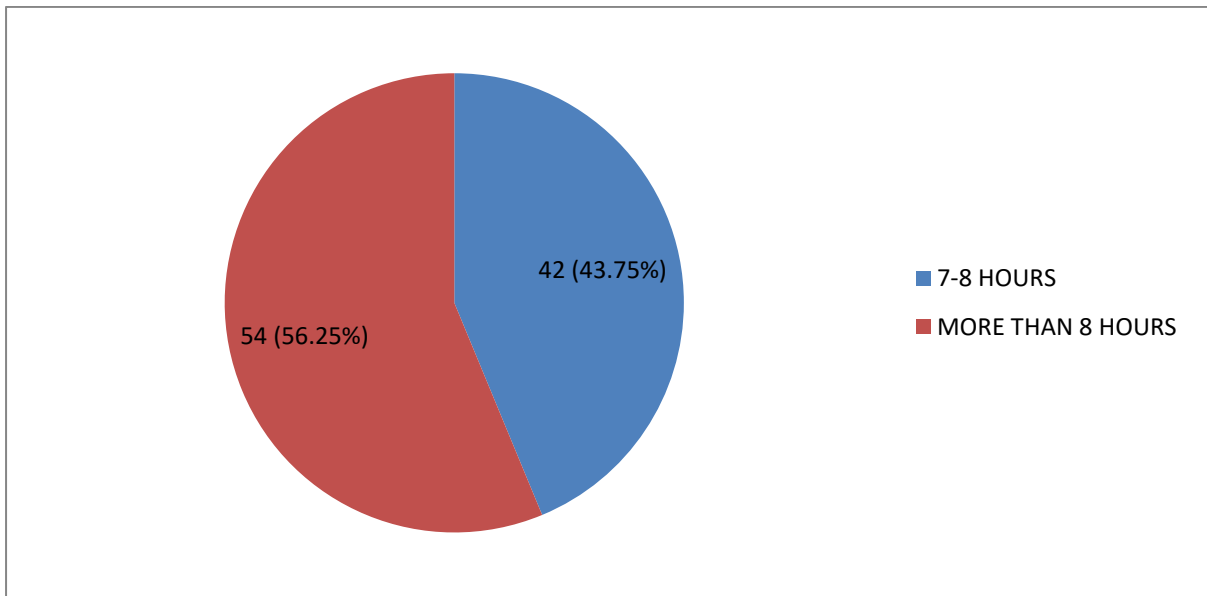
Out of 96 participants 22 were SSC level educated, 29 were HSC level educated and 45 were graduated

Age



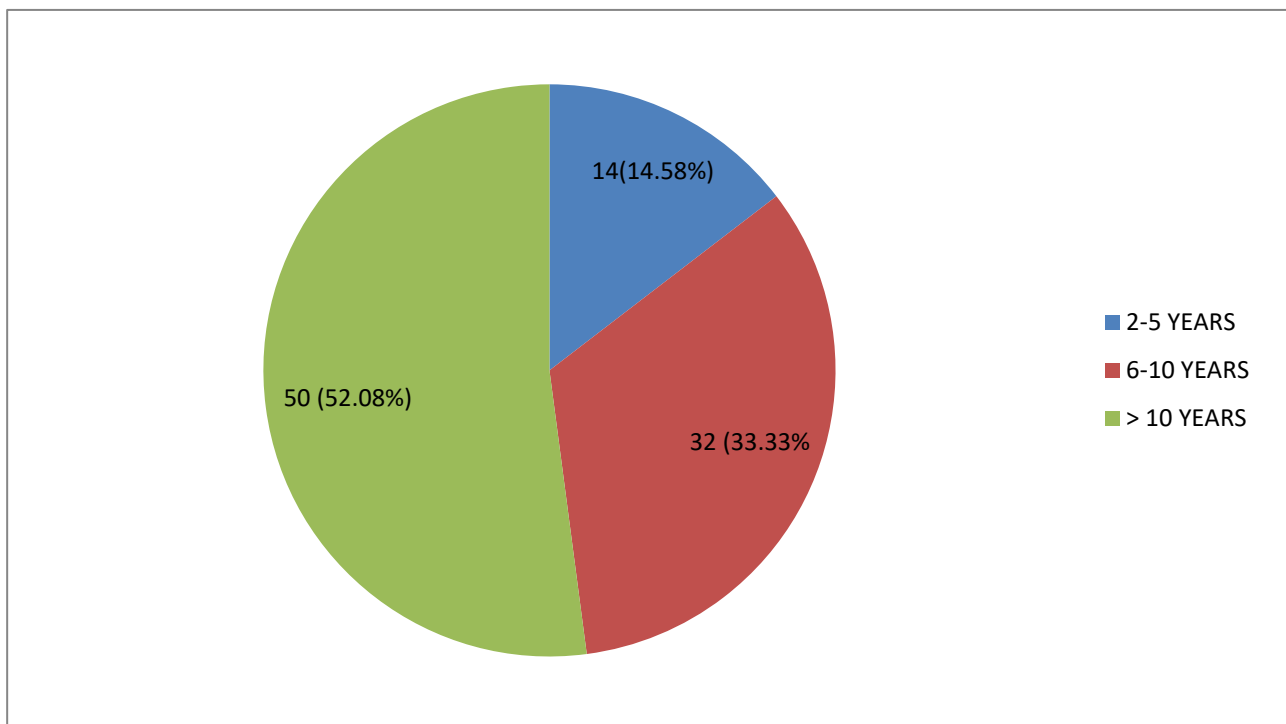
Out of 96 participants 57 were aged between 35 to 40 yrs age group, 21 were in between 41 to 45 yrs age group and 18 were in between 46 to 50 yrs age group

Working Hours



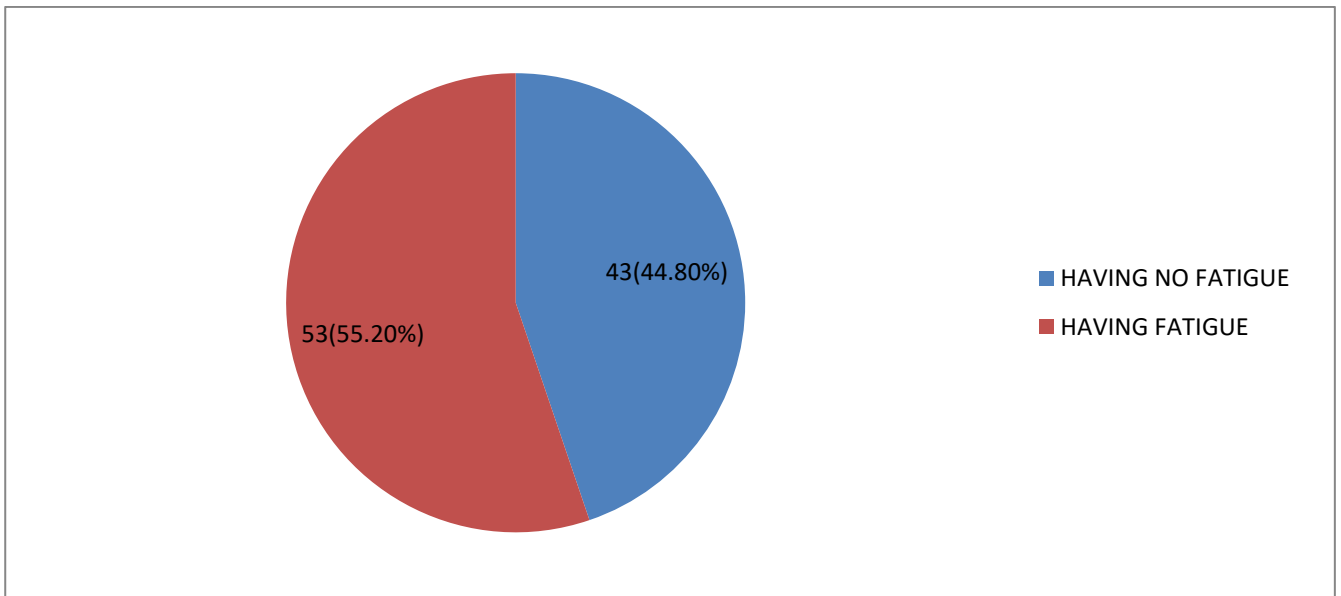
Out of 96 participants 42 were working for between 7 to 8 hours and 54 were working for more than 8 hours.

Years of Experience



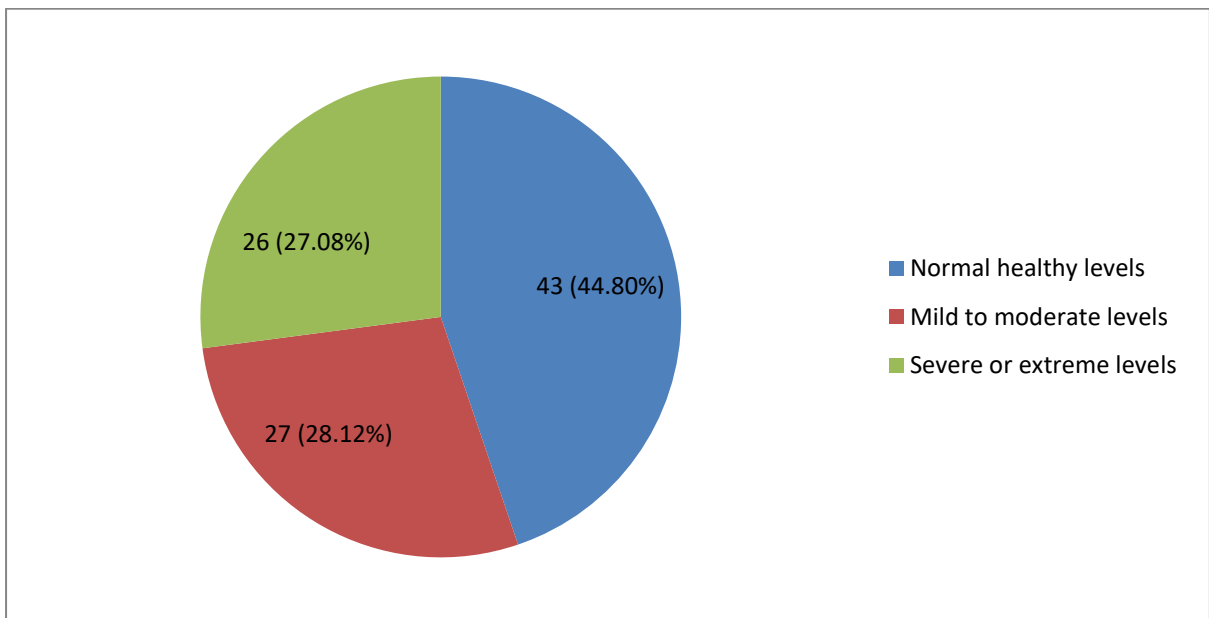
Out of 96 participants 14 were having experience between 2 to 5 years, 32 were having a experience between 6 to 10 years and 50 were having experience more than 10 years

PREVALENCE



Prevalence percentage was 43 participants that is 44.80% were having no fatigue, whereas 53 participants that is 55.20% were having fatigue.

Scale interpretation



Out of 96 participants 43 were scoring a score less than 22 which means they were having a normal healthy level fatigue, 27 were scoring a score between 22 to 34 which means they were having mild to moderate level of fatigue and 26 were scoring equal to or more than 35 which means they were having severe or extreme level of fatigue

DISCUSSION

This study aimed to determine the Prevalence of Fatigue in Cab Drivers of Pune City. Fatigue is increasingly recognized as a major occupational health concern, particularly in professions requiring sustained attention and vigilance such as commercial driving. Fatigue among professional drivers is a growing public health concern due to its association with reduced alertness, impaired reaction time, decreased concentration, and increased risk of road traffic accidents. The findings of this study demonstrate a substantial burden of fatigue within the study population, highlighting the occupational health challenges faced by cab drivers.

Here, Total 96 participants were included. The study was done by using fatigue assessment scale, which is a standardized, validated, and widely used instrument designed to assess fatigue independent of specific medical conditions. It captures both physical and mental components. In this study fatigue assessment scale was used because, it measures general fatigue rather than disease-specific fatigue. For cab drivers, who may experience both physical tiredness and mental exhaustion, FAS provides a comprehensive assessment compared to single-item fatigue measures

The scale contains 3 interpretations

1. Score less than 22: Indicates normal, healthy levels of fatigue.
2. Score 22–34: Indicates mild-to-moderate fatigue (substantial fatigue).
3. Score more than 35: Indicates severe or extreme fatigue.

As the study aimed to determine the prevalence of fatigue, it was seen that 53 subjects that is 55.2% of the study population was indicating the presence of significant fatigue, while 43 subjects that is 44.8% of drivers reported no fatigue.

According to scale the results were 43 subjects that is 44.8% were scoring less than 22 which means normal, 27 subjects that is 28.12% were scoring between 22-34 which means mild to moderate fatigue and 26 subjects that is 27.8% were scoring more than 35 which means severe or extreme fatigue.

These results indicate that more than half of the cab drivers in the study population are affected by fatigue, highlighting it as a significant occupational health concern in this group. This prevalence is considerable and raises concerns regarding both occupational health and public safety.

In rapidly growing metropolitan areas such as Pune, increased urbanization, traffic density, and competitive ride-hailing services may further intensify work pressure on drivers. These factors may explain the relatively high prevalence (55.20%) of fatigue observed in the present study.

The present study demonstrates that fatigue is prevalent among cab drivers in Pune city, with 55.20% of participants experiencing fatigue. This highlights the urgent need for targeted occupational health interventions. Addressing fatigue through awareness, policy implementation, and health promotion strategies is essential to enhance driver safety, occupational well-being, and public road safety

Economic pressure, fluctuating income, and incentive-based earnings may encourage drivers to extend their working hours, thereby increasing cumulative fatigue. Chronic fatigue not only affects physical well-being but also impairs cognitive performance, reaction time, and decision-making ability, thereby increasing the risk of road traffic accidents.

The relatively close distribution between fatigued and non-fatigued drivers suggests that fatigue is influenced by modifiable occupational and personal factors rather than being an inevitable consequence of the profession.

It was observed that 44.8% subjects were having no fatigue because of some factors such as having regular work routine, healthier lifestyle habits, taking adequate rest breaks, good physical health and very good occupational adaptation, while in 55.2% subjects reporting fatigue, factors found influencing were inadequate sleep with irregular sleep patterns, prolonged working hours, irregular shifts, working in night shifts, not maintaining proper posture while driving, no use of ergonomic modifications in car, traffic and environmental stress while driving, absence of physical activity and prolonged usage of gadgets during rest intervals.

The present study emphasizes the importance of regular fatigue assessment among cab drivers. Screening programs, awareness campaigns, and health education initiatives can help drivers recognize early signs of fatigue. Interventions such as promoting adequate sleep hygiene, structured rest intervals, ergonomic seating adjustments, stretching exercises, and stress management techniques may help reduce fatigue levels. Preventive measures and workplace interventions can be recommended to improve driver well-being and enhance road safety

CONCLUSION:

- The prevalence of fatigue among Pune based Cab drivers is 55.2%.
- The scale interpretation revealed that **44.8%** of the Cab drivers fall under **Normal healthy levels**, **28.12%** fall under **Mild to moderate levels** and **27.08%** fall under **Severe or extreme levels**.

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