



A Mixed Method Study to Analyze Substance Abuse Among Government Bus Drivers of Greater Noida and to Assess Their Knowledge Regarding Risk Factors Associated with Substance Abuse.

Dr. Sakchhi Tiwari¹, Dr. Swati Sharma², ³Dr. Fiza Alam

¹(Assistant Professor, Public Health Dentistry, School of dental sciences, Sharda University, Gr. Noida)

²(Head of the Department, Public Health Dentistry, , School of dental sciences, Sharda University, Gr. Noida)

³(Intern, Public Health Dentistry, School of dental sciences, Sharda University, Gr. Noida)

Corresponding Author- Dr. Sakchhi Tiwari

(Received: 16 January 2025

Revised: 20 April 2025

Accepted: 01 May2025)

KEYWORDS

Government bus drivers, substance abuse, stress, occupational hazards

ABSTRACT:

Substance abuse among government bus drivers is a pressing concern, given the high-stress nature of their work and its potential implications for public safety. This mixed-methods study aimed to assess the prevalence of substance abuse among bus drivers in Greater Noida and evaluate their knowledge regarding associated risk factors. Semi-structured interviews with 10 bus drivers revealed high levels of substance use, predominantly in the form of gutkha and beedi. Key themes emerged regarding workplace-related triggers, peer influence, health impacts, and challenges in cessation efforts. While most drivers were aware of the adverse effects, most found quitting difficult due to ingrained habits, social normalization, and the perceived benefits of increased concentration and stress relief. The findings underscore the urgent need for targeted interventions, including educational programs, counseling, and alternative coping mechanisms, to mitigate substance abuse in this vulnerable occupational group.

The present study aims to analyze the prevalence and patterns of substance abuse among government bus drivers in Greater Noida and assess their knowledge of the associated risk factors using both qualitative and quantitative methods.

Introduction

Substance abuse is a significant public health issue, especially among occupational groups exposed to stressful work environments, long hours, and repetitive tasks. Government bus drivers, responsible for the safety of passengers, are particularly susceptible to stress-induced behaviors, including tobacco, alcohol, and other substance use. Substance abuse among bus drivers poses risks to their health and endangers road safety.

Substance abuse is a health issue with far-reaching consequences for individuals and communities. Among various occupational groups, government bus drivers are particularly vulnerable due to the high-stress nature of their job, long working hours, and the demanding conditions they often face. In Greater Noida, the issue of substance abuse among government bus drivers warrants

special attention given the critical role these individuals play in ensuring public safety and transportation efficiency.

The primary aim of this study is to analyze the prevalence of substance abuse among government bus drivers in Greater Noida and to assess their knowledge regarding the risk factors associated with substance abuse. Understanding the extent of substance use within this demographic, along with their awareness of its risks, can inform targeted interventions and policies to mitigate this issue, ultimately enhancing driver health and public safety.

By investigating both the behavioral patterns and knowledge levels of these drivers, the study seeks to provide a comprehensive overview that can aid stakeholders in developing effective prevention and



education programs. The findings of this research could serve as a valuable resource for government agencies, health professionals, and policymakers in their efforts to address and reduce substance abuse in this critical sector.

The present study aims to analyze the prevalence and patterns of substance abuse among government bus drivers in Greater Noida and assess their knowledge of the associated risk factors. Through this, we aim to provide insights into the socio-environmental triggers and the need for awareness and cessation programs.

Materials and Methods

Study Design

A mixed-method study design was employed to explore substance abuse prevalence and associated risk factors qualitatively and quantitatively among government bus drivers in Greater Noida.

Participants

Fourteen government-employed bus drivers and conductors aged 25–59 years participated in the study.

Inclusion criteria were:

Active service as a bus driver or conductor.

Voluntary participation.

History of substance use.

Data Collection-

Interviews were conducted to gather information on substance use habits, reasons for consumption attempts to quit, and knowledge of associated risks. Proper interviews were taken of all the participants using a questionnaire and the entire interview was recorded. Interview was taken by a doctor and a trained intern who recorded all the answers.

Quantitative data, including average consumption levels and demographic characteristics, were analyzed to identify patterns.

The main theme based on which questionnaire was prepared are-

1. Personal Information: Data regarding age, gender, education level, work experience, and daily work hours were collected.

2. Substance Use Patterns: Participants were asked about the type, frequency, and duration of tobacco and alcohol consumption.

3. Factors Influencing Use: Drivers were queried about stress, peer pressure, and reasons for substance use.

4. Workplace Environment: Questions explored workplace norms, attitudes, and the provision of smoking areas.

5. Awareness and Cessation Efforts: Drivers were asked about their knowledge of health risks and interest in quitting.

Data Analysis

Qualitative data were thematically analyzed, focusing on drivers' perceptions and experiences with substance use. Quantitative data were summarized using descriptive statistics, including mean age, educational qualifications, and consumption patterns.

Results-

There were 10 participants who were interviewed. All of the participants were Male. The respondent's age ranged from 30 to 53. All the participants were government bus drivers of greater Noida.

Demographics-

Participants were predominantly male (100%), aged between 25 and 59 years, the mean age of participants was 42.9 years with education levels ranging from 5th grade to post-graduate. Work experience varied from 1 month to 35 years, with daily work hours ranging from 8 to 40 hours.

All participants reported substance use, predominantly gutkha (90%) and beedi (40%). Consumption levels varied, with some consuming over 10 packets of gutkha or 20 beedis per day.

**Table 1**

Characteristics of interview participants (N=10)

Characteristics	n(%)
Gender	
Male	10(100)
Age (Years)	
Mean +-SD	42.9+_9.52
Age range (years)	30 to 53
Educational Qualification	
Primary education	3(30)
Completed High school(10 th pass)	4(40)
Graduated school (12 th pass)	2(20)
Postgraduate	1(10)
Products used	
Gutka	9(90)
Average consumption	
1-5 Packets	4
5-10 packets	1
>10 Packets	4
Beedi	4(40)
1-2	1
10-20	1
>20	2
Khaini	1(10)
Chuna	1(10)

SD-Standard deviation

The interviewees were asked about their Tobacco, Alcohol and other substance use to understand their habits better and if having the habit assisted them in driving better. They were also asked if they had ever tried to get rid of their habit and how they managed to do it. The focus was on the attitude and perception of the drivers towards substance abuse and the factors that influenced their behavior.

A few basic highlights of the answers of the research participants were-

1. Substance Use Patterns-

Prevalence: All participants reported current use of tobacco products; alcohol use was less frequently reported.

2. Type of Substances:

Gutkha was the most commonly used smokeless tobacco product (71%).

Beedis were frequently used by older participants.

Continuous use (e.g., chewing tobacco or smoking) was common during driving hours.

3. Reasons for Use: Stress (64%), long hours of work (86%), habit (50%), and peer influence (14%).

4. Awareness of Health Risks:

71% of participants were aware of the harmful effects of tobacco use.

Despite awareness, 57% expressed difficulty in quitting due to addiction.

5. Cessation Efforts-

42% attempted to quit at least once but failed due to withdrawal symptoms and stress.

Only 14% received some form of education on cessation.

6. Workplace Environment:

Lack of designated smoking areas was reported by all participants. Peer normalization of tobacco use was prevalent, with 57% feeling peer pressure during breaks.

7. Factors Influencing Use:

Stress and long working hours were the most commonly cited triggers (86%).

43% believed that tobacco use helped them stay awake and focused during late-night shifts.



Emerging Themes-

The data was categorized into three major themes that emerged related to the risk factors of tobacco use and not being able to quit the habit.

1. Workplace requirement:

Increases concentration and reduces boredom

In most of the interviews this was an extremely important part of their job. One user commented that “I mainly consume tobacco to avoid sleep during my long hours of driving at night, what else can I do it helps me maintain my concentration on driving.”

Another interviewee commented “If beedi is not there I cannot do my daily work properly I have been having it for the past 27-28 years. I had an accident some years back and after waking up the first thing I asked for is my daily puff.”

An interviewee who stopped driving and became a bus conductor said “I feel lazy and bored during the bus journeys and having a packet of gutka is my usual morning routine. It would feel incomplete without it.”

Common among peers

In the driver community this is an extremely common thing, and every other person does this an interviewee commented “It is very common between drivers and most drivers smoke it will be difficult to find a driver who doesn’t do it.”

“All of my friends smoke beedi and I also started from a young age after that it was like a daily routine with friends.”

“I tried to quit it but lasted only a month ,everyone around me was smoking”

An interviewee also emphasized that this was his way of feeling at ease he said “After driving for some time we usually stop for a beedi and tea.”

“It is a normal thing in the Bus driver community”

2. Health Impact and quitting

Impact on Quality of life and dental problems.

“All my teeth have rotten and I can’t open my mouth properly my mouth also burns sometimes but I have to take it, I have tried to quit many times but it doesn’t last.”

Another user said “I know my mouth doesn’t open much now and I am trying to stop taking it but it a very difficult thing, taking a puff reduces my stress and tension.”

Alternatives used to quit tobacco

An interviewee said that “gutka has spoiled all of my teeth but what to do.....I tried to quit once and started using fennel and reduced my consumption...but fennel can’t replace gutka.....Now I cant even chew properly so I am trying hard to quit it.”

“I tried using toffee and chewing gum to quit it, but it only lasted for a few days it has become a habit and everyone does it.”

3. Reasons for addiction

Morning ritual

“I usually take my first puff around 7-8 am after waking up it makes me feel tension free and active.”

“I take a beedi every day and then I go about my everyday tasks. If I don’t take it I feel something missing”

“I take gutka everyday after waking up there is no reason sometimes, I take it to pass time it is just a normal habit.”

Feeling of being relaxed and at ease.

“I like taking a beedi with my friends it makes me feel relaxed when I am in some tension.”

“Gutka reduces my toothache, so I have stared having it more nowadays, I have it the whole day it makes me feel better.”

Increases concentration while driving.

“I started taking gutka because I couldn’t smoke beedi in the bus due to CNG. Keeping gutka in my mouth helps me drive.”



“I take gutka to be awake during driving and sometimes for time pass.”

“I don’t consume it at home but while driving I have to otherwise I will feel lazy and sleepy.”

Discussion-

The study highlights a high prevalence of substance abuse among government bus drivers in Greater Noida, with stress and long working hours identified as key drivers

Peer pressure and inadequate workplace policies further exacerbate the issue. These findings align with previous research indicating that occupational stress is a significant contributor to substance abuse in transport workers. Despite awareness of the health risks, most drivers found it challenging to quit due to social normalization and lack of effective cessation support.

Comparison with Similar Studies:

1. Karnataka State Road Transport Corporation (KSRTC) Bus Drivers:

Occupational Stress and Health Status: A study focusing on KSRTC bus drivers identified prolonged shifts and exposure to environmental pollutants as primary stressors, leading to increased absenteeism and health issues.

Stress and Co-morbidities: Research in Dakshina Kannada district reported high stress levels among KSRTC workers, correlating with various health disorders.

2. Chennai Government Bus Drivers:

Psychosocial Life and Substance Use: A cross-sectional study among Chennai bus drivers revealed high rates of alcohol abuse, major depressive episodes, anxiety symptoms, and burnout syndrome, all contributing to occupational stress.

3. Hubli City Bus Drivers:

Stress Levels: Research in Hubli indicated that over 80% of bus drivers experienced varying levels of stress, with a significant positive correlation between job stressors and overall stress levels.

4. Pune City Bus Drivers:

Perceived Stress Evaluation: A study assessing perceived stress among Pune bus drivers found that occupational stress led to absenteeism, substance abuse, decreased productivity, and increased accident rates.

5. Bangalore Public Transit Workers:

Nicotine Dependence and Oral Health: Research in Bangalore demonstrated an association between occupational stress and nicotine dependence among public transit workers, adversely affecting their oral health status.

6. North Kerala Bus Drivers:

Hypertension and Substance Use: A cross-sectional study in North Kerala identified a prevalence of hypertension among male bus drivers, with substance use being a significant risk factor.

Common Findings Across Studies:

- **Occupational Stress:** Consistently identified as a primary factor contributing to substance use among bus drivers.
- **Long Working Hours:** Extended and irregular shifts exacerbate stress levels, leading to increased substance use as a coping mechanism.
- **Health Implications:** Substance use correlates with various health issues, including hypertension and oral health problems.
- **Workplace Environment:** Lack of support and inadequate workplace policies further exacerbate stress and substance use.

Conclusion:

The Greater Noida study's findings are consistent with national trends, emphasizing the need for targeted interventions addressing occupational stress, substance use, and health education among government bus drivers across India.

The findings align with existing literature, emphasizing the need for targeted interventions, including:

- Educational programs to increase awareness of health risks.



- Counseling services to address addiction and provide alternative coping mechanisms.
- Policy-level interventions, such as workplace restrictions on substance use and access to cessation programs.

The normalization of substance abuse within the driver community presents a significant barrier to change. Efforts to address this issue must consider the socio-cultural context and involve peer-based support systems to encourage behavioral change.

Limitations-

1. The study sample size (n=14) was limited, which may not fully represent the larger population of bus drivers.
2. Self-reported data may be subject to bias or underreporting.
3. The study was restricted to tobacco and alcohol use; other forms of substance abuse were not explored.

Future research should focus on larger, more diverse samples and longitudinal studies to assess the long-term impact of cessation programs.

Validity-

To enhance the validity of the findings, the study employed triangulation by combining qualitative and quantitative data. The thematic analysis ensured a comprehensive understanding of participants' experiences, while the use of structured interviews minimized interviewer bias.

References-

1. World Health Organization (WHO). (2021). Global status report on substance use and health.
2. Ministry of Health and Family Welfare, Government of India. (2022). National Tobacco Control Program: Annual Report.
3. Mishra, A., & Gupta, R. (2020). "Substance abuse among occupational groups: A review." *Indian Journal of Public Health*, 64(3), 205-211.
4. Yadav, S., & Sharma, K. (2019). "Prevalence of tobacco use among bus drivers in urban India." *Journal of Occupational Health*, 61(2), 132-138.
5. Foster, T. Y. (2019). Perceptions of School Bus Drivers and Their Experiences with Student Behavior: A Qualitative Case Study (Thesis, Concordia University, St. Paul).
6. [Mazengia](#) EM , [Ayenew Kassie](#) , [Zewdie A](#) , [Demissie GD](#) A qualitative study of perception related to risky driving behavior in Debre Markos City, North West Ethiopia, 2021 . *BMC Public Health* 2023 May 26;23:977. doi: [10.1186/s12889-023-15862-x](https://doi.org/10.1186/s12889-023-15862-x)
7. Geeta V. Bathija et al. A study on stress among government city bus drivers in Hubli. January 2014 [International Journal of Biomedical Research](#) 5(2) DOI:[10.7439/ijbr.v5i2.503](https://doi.org/10.7439/ijbr.v5i2.503)
8. Occupational Stress and Its Effect on Health Status Among Karnataka State Road Transport Corporation (KSRTC) Bus Drivers: A CrossSectional Study 2024 Rajan et al. *Cureus* 16(9): e70336. DOI [10.7759/cureus.70336](https://doi.org/10.7759/cureus.70336).