

Occupational profile of taxi drivers from three metropolitan cities in India

Arushi Baluja, Amrita Ghosh¹, Ranabir Pal², Geetha R. Menon³, Sanjeev Bhoi⁴, Sagar C. Galwankar⁵, Ajai Singh⁶, Amit Agrawal⁷

Department of Driver Training and International Affairs Institute of Road Traffic Education, Faridabad, Haryana, ¹Department of Biochemistry, Calcutta Medical College, Kolkata, West Bengal, ²Department of Community Medicine, MGM Medical College and LSK Hospital, Kishanganj, Bihar, ³Department of Health Research, ICMR-National Institute of Medical Statistics, ⁴Department of Emergency Medicine, JPN Apex Trauma Centre, AIIMS, New Delhi, ⁵Department of Orthopedics, King George Medical University, Lucknow, Uttar Pradesh, ⁶Department of Neurosurgery, Narayana Medical College Hospital, Nellore, Andhra Pradesh, India, ⁷Department of Emergency Medicine, University of Florida, Jacksonville, Florida

Abstract

Background: Taxi drivers play a crucial role in the social and economic function of the modern society and significantly contribute to the business world and tourism.

Objective: The objective of this study was to find the occupational profile of taxi drivers in the metropolitan cities in India.

Materials and Methods: This cross-sectional, community-based study used a pretested questionnaire, comprising sociodemographic, working, and personal variables, and was administered by interview technique on the taxi drivers, attending the training program at the Institute of Road Traffic and Education, Faridabad.

Results: Majority of the taxi drivers in our study were married (94.01%), staying in joint families (61.31%), were driving > 10 years (66.56%), and working full time (96.72%) and in shifts (92.17%) when employed in organized sectors. Majority enjoyed adequate night sleep (94.43%); neither had systemic comorbidity (95.08%) nor problem of vision (84.92) with reported nonaddiction to alcohol (69.84%), smoking (74.75%), or chewing tobacco (85.57%). Formal training was received by three-fourths (77.38%), yet nearly all were consistently using seat belts and pursued front-seat passengers to use seat belts. The participants of our study admitted their avoidable risky behavior on roads during driving, namely used to talk in speaker mode (73.44%), calling (87.21%), and hearing music (49.84%), while minority (4.92%) confessed watching video and using Bluetooth headphone (11.80%); all these risky behaviors culminated in missing road signs by 71.80%.

Conclusions: It appears from this study that we need to understand the sociodemographic, work environment, and personality details of the taxi drivers in the metropolitan cities.

The following core competencies are addressed in this article: Interpersonal and communication skills, Patient care, Practice-based learning and improvement, and Systems-based practice.

Keywords: Occupational environment, personality, predictive factors, stress, taxi drivers

Address for correspondence:

Dr. Amit Agrawal, Department of Neurosurgery, Narayana Medical College Hospital, Chinthareddypalem, Nellore - 524 003, Andhra Pradesh, India.
E-mail: dramitagrawal@gmail.com

Received: 06.03.2018, Accepted: 10.05.2018

Access this article online

Quick Response Code:



Website:

www.ijam-web.org

DOI:

10.4103/IJAM.IJAM_9_18

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Baluja A, Ghosh A, Pal R, Menon GR, Bhoi S, Galwankar SC, *et al.* Occupational profile of taxi drivers from three metropolitan cities in India. *Int J Acad Med* 2018;4:119-23.

INTRODUCTION

Researchers suggest that “man drives as he lives” and those have difficulties in their personal, financial, and social demands of living are more prone to accidents and commit repeated driving errors. In the new world order, the taxi drivers play a crucial role in the socioeconomic function for the development of community lives and they meaningfully guarantee to the ever-growing world of business, tourism, and commerce. Taxi drivers are an important group for road safety research because of their role in pivotal transport systems and due to controls inherent in the nature of their jobs. Drivers are exposed to a number of health problems as a direct result of the occupational environment in the form of unbalanced stressful nature of work, erratic working hours and duration, shift work, poor posture, inadequate as well as irregular dietary patterns, and lack of rest and sleep. Stress factors at work are aggravated by personality traits of drivers complicating the situation further and in turn adversely affect the health of professional drivers. In general, the long-term repeaters of accidents are characterized by aggressiveness, work-related stress, depression, anxiety, fatigue, and extraversion. The theory of “accident proneness” assumes that the moment of an accident is not an independent event but has a history. A preaccident behavioral study showed that depression, stress, anxiety, aggressions, and alcoholism are somehow linked to the accident proneness.^[1] In the above scenario, the researchers of the present study hypothesized that to save more lives on road we need to promote a philosophy of safer driving among taxi drivers as a pivotal issue. In this motive, we need to delineate a situational analysis of the profession of taxi drivers operating in the roads of India. The objective of the study was to understand the sociodemographic, work environment, and personality details of the taxi drivers in three metropolitan cities in India who attended a driver training program in NCR Delhi.

MATERIALS AND METHODS

Study design

A pretested questionnaire on variables related to the sociodemographic profile, behavioral and personal habits, and adherence to road safety rules was administered on the taxi drivers who attended a 3-day training program for taxi drivers conducted by the Institute of Road Traffic and Education (IRTE), Faridabad (Haryana). The data collectors were trained

by the principal investigator and co-investigators on the interviewing techniques and administration of the study instrument to ensure consistency and data completeness. The study tool comprised sociodemographic variables, namely age, gender, education, monthly income, weight, height, job profile, driving-related information, adherence to road safety, driving hours/day, type of vehicle: own/rented, year of start of driving, usual time of driving, area of driving, night sleeping hours, usage of seat belt, driving alone, observation of warning signals while driving, usage of cell phones, attending calls, listening to music, usage of Bluetooth device/head phones while driving, possessing video screen, and also personal habits and medications. All the taxi drivers who attended the training program and were willing to participate in the study were recruited as the study participants.

Informed consent process and ethical approval

The protocol was approved by the Institutional Ethics Committee of IRTE and permission was obtained from concerned authority before the commencement of study. Informed consent was obtained from all participants individually after counseling regarding purpose of the study before participating in the study.

Statistical analysis

Data were entered on Excel and were analyzed using IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp USA. For categorical variables, frequencies and percentages were determined and Chi-square test was used for testing associations and, for continuous variables, descriptive statistics such as mean and standard deviations were computed followed by the *t*-test for comparisons.

RESULTS

Three hundred and five taxi drivers participated in this study; of these, 17.4% were below 30 years, 36.7% were in the age group of 30–40 years, 30.8% were in the age group of 40–49 years, and 15.1% were above 50 years. Majority (94.01%) were married; all unmarried were <40 years of age. About 62% were staying in joint families.

Among the participants, 92 drivers reported driving only in city areas. All the Mumbai participants reported driving only within the city. In Mumbai, all the passengers were reported to be sitting in back

seats; while in Delhi, 70%–80% of the passengers reported to be sitting at the back.

In our study population, 171 (56.07%) were working privately and 115 (37.70%) were in organized sector. Majority ($n = 106$, 34.8%) worked in shifts. More than 95% of the taxi drivers were working full time ($n = 295$), nearly half ($n = 152$, 49.84%) were driving round the clock (morning, evening, and night) followed closely by 131 (42.95%) drivers working either in the morning or in the evening only. More than 65% ($n = 203$, 66.56%) had >10 years of driving experience. Nearly 94.4% of the drivers reported having adequate sleep at night; 288 participants (95%) did not report any systemic comorbidity and 259 (84.92%) had no impairment of vision [Table 1].

Among the participants, 213 (69.84%) reported not consuming alcohol, while 228 (74.75%) reported smoking tobacco and 85.57% reported chewing tobacco ($n = 261$). Though 236 drivers (77.38%)

reported receiving formal training, almost all of them reported using seat belt. Phone use in speaker mode was reported by 224 (73.44%); call during driving was reported by 266 (87.21%) and hearing music was reported by half, i.e., 152 (49.84%), while only 15 (4.92%) watched video and used Bluetooth headphone, i.e., 36 (11.80%). Nearly 28.2% of the drivers reported not seeing the signboards although use of electronic devices was not associated with this distraction [Table 2].

DISCUSSION

The goal of this study was to evaluate the occupational profile of taxi drivers operating in the roads of India. The decision to practice safe driving to reduce casualties on road needs paradigm shift of the mindset from the person in the control of wheels of the automobiles. With best of our effort, we are yet to find sufficient numbers of relevant published literatures or national-level discourse regarding physical, psychological, and mental morbidities of taxi drivers from Indian subcontinent.

Table 1: Sociodemographic and morbidity profiles of taxi drivers

Parameters	Age group (years)				Total (n=305)	Pearson's χ^2
	<30 (n=61)	31-40 (n=116)	41-50 (n=85)	>50 (n=43)		
Employment						
Organized	19	45	38	13	115	0.187
Private	36	61	44	30	171	
Unorganized	6	10	3	0	19	
Job profile						
Full time	57	111	84	43	295	0.000
Part time	4	5	1	0	10	
Driving hours						
All	34	66	41	11	152	0.120
Morning	3	4	1	0	8	
Morning + evening	21	38	40	32	131	
Morning + night	0	2	1	0	3	
Evening	0	1	0	0	1	
Evening+night	1	3	1	0	5	
Night	2	2	0	0	4	
Unemployed now	0	0	1	0	2	
Years of driving						
≤5	24	13	2	1	40	0.000
6-10	30	24	7	1	62	
11-20	7	70	32	7	116	
>20	0	9	44	34	87	
Adequate night sleep						
Yes	56	106	83	43	288	0.208
No	4	10	2	0	16	
Systemic comorbidities						
Hypertension	0	0	0	1	1	0.029
Diabetes	0	2	6	4	12	
Heart problem	0	0	0	2	12	
No such	61	114	79	36	290	
Problem of vision						
Both eye	11	14	14	4	43	0.249
Either left/right	1	2	0	0	3	
None	49	100	71	39	259	

Table 2: Pathophysiological profile of taxi drivers in Delhi-NCR-Mumbai

Parameters	Age group (years)				Total (n=305)	Pearson's χ^2
	<30 (n=61)	31-40 (n=116)	41-50 (n=85)	>50 (n=43)		
Alcohol intake						
Yes	15	40	26	11	92	0.617
No	46	76	59	32	213	
Smoking						
Yes	14	29	26	8	77	0.601
No	46	87	59	35	228	
Chewing tobacco						
Yes	11	20	9	4	44	0.465
No	49	96	76	39	261	
Formal training						
Yes	14	24	23	8	69	0.282
No	47	92	62	35	236	
Seatbelt use						
Yes	61	115	85	42	303	0.578
No	0	1	0	1	2	
Phone use in speaker mode						
Yes	19	35	22	5	81	0.143
No	41	81	63	38	224	
Call while driving						
Yes	12	19	6	2	39	0.053
No	49	97	79	41	266	
Road sign observation						
Yes	52	89	59	19	219	0.000
No	9	27	26	24	86	
Hearing music while driving						
Yes	39	65	37	11	152	0.001
No	22	51	48	32	153	
Watching video while driving						
Yes	3	8	4	0	15	0.516
No	58	108	81	43	290	
Bluetooth and headphone use while driving						
Yes	7	18	11	0	36	0.110
No	54	98	74	43	269	

In the study done by Facey in Canada, it was noted that the remarkable low socioeconomic status was present among the taxi drivers. The reasons provided were economic exploitation by leasers of taxi permits and economic uncertainty of the occupation.^[2] The study of Anthony and Jillian had given perception that working hours of taxi driving are similar across countries such as India and Australia. The researchers hold reasons such as hazards in the work environment, individual factors, and the organizational factor together responsible for lower levels of emotional well-being in taxi drivers.^[3] It has been found that studies by Miyamoto *et al.* have similar findings.^[4] The report on health of professional drivers by Whitelegg showed the relation between irregular timing of diet, sleep pattern of <6 h, irregular bowel habits, and addiction to smoking and tobacco chewing.^[5]

The studies conducted by Duffy and McGoldrick and Hennessy and Whitelegg confirmed traffic congestion

as a significant stressor in the life of professional drivers. The other important stressors were related to road conditions and rude gesture and behavior by other drivers on roads.^[5-7] The study by Kurosaka *et al.* confirmed high prevalence of coronary heart disease in the taxi drivers as compared to the control population in the nondriving professions. It can be explained by higher presence of coronary risk factors such as hypertension, smoking, and job stress in taxi drivers. Another common symptom found was headache that may have been traced back to the modifiable risk factors such as stress, lack of sleep, or may be the symptom of hypertension.^[8]

Xiong *et al.* found that the level of drivers' mental health is much lower than that of common people.^[9] The study conducted by Soodabeh *et al.* observed that driving increased systolic, diastolic, and mean arterial blood pressure by about 20 mmHg.^[10] The increased risk of hypertension in taxi drivers was also confirmed by Nasri and Moazenzadeh.^[11]

The study conducted by Bawa and Srivastav concluded that the physical and emotional morbidities in the studied taxi drivers were determined by demographic factors, personal habits, addictions, and personality traits of taxi drivers.^[12]

Strengths of the study

To the horizon of our knowledge, the strength of this study is that this is a pioneering study on the profile of taxi drivers in Indian subcontinent. Further, this study demonstrated that heterogeneity in the taxi drivers is a hurdle to overcome to improve driving behavior. The finding of this study can be extrapolated to improve the workplace-related health issues and safety to the taxi drivers for better outcome of road safety and public health.

Limitations of the study

We had several limitations. One limitation of this study is the convenient sampling where persons motivated for attending training were participants. Another potential limitation was memory recall.

Future directions of the study

An opportunity may exist to render a subset on qualitative study to find out reasons behind violation of practice of safe driving.

CONCLUSIONS

The physical and psychological morbidities of the taxi drivers are influenced by the sociodemographic variables, stressed working environment, and personal emotions and habits. Our study will explore all the correlates of taxi drivers in health and disease. The sociodemographic factors, eternally stressful working environment, and personal emotions and habits of the taxi drivers have influence on their physical and psychological morbidities.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Ethical conduct of research

This study followed ICMR guidelines regarding research on human participants.

REFERENCES

1. Burnham JC. The syndrome of accident proneness (Unfallneigung): Why psychiatrists did not adopt and medicalize it. *Hist Psychiatry* 2008;19:251-74.
2. Facey ME. The health effects of taxi driving: The case of visible minority drivers in Toronto. *Can J Public Health* 2003;94:254-7.
3. Anthony M, Jillian MD. Predicting Health Outcomes and Safety Behaviour Paper Presented in the 5th Australian Industrial and Organizational Psychology Conference. Melbourne. Australia; 26-29 June, 2003.
4. Miyamoto M, Konno S, Gembun Y, Liu X, Minami K, Ito H, *et al.* Epidemiological study of low back pain and occupational risk factors among taxi drivers. *Ind Health* 2008;46:112-7.
5. Whitelegg J. Health of Professional Drivers, a Report for Transport and General Worker's Union. Ecologica Limited, White Cross, Lancaster; 1995; Pp1-9.
6. Duffy CA, McGoldrick AE. Stress and bus drivers in UK transport industry. *Int J Occup Hyg* 1990;4:17-27.
7. Hennessy A. Influence of traffic congestion, daily hassles and traits stress susceptibility on driver's stress. *J Appl Biobehav Res* 2000;5:162-79.
8. Kurosaka K, Daida H, Muto T, Watanabe Y, Kawai S, Yamaguchi H, *et al.* Characteristics of coronary heart disease in Japanese taxi drivers as determined by coronary angiographic analyses. *Ind Health* 2000;38:15-23.
9. Xiong W, Xiong G, Yu W. Influence of sports prescription on taxi drivers mental health in China. *J Beijing Sport Univ* 2009-10 2009;10:2009.
10. Soodabeh N, Mansoor M, Ali M. Driving environment in Iran increases blood pressure even in healthy taxi drivers in Iran. *J Res Med Sci* 2008;13:287-93.
11. Nasri H, Moazenzadeh M. Coronary artery disease risk factors in drivers verses people in other occupation. *ARYA J* 2006;2:75-8.
12. Bawa MS, Srivastav M. Study the epidemiological profile of taxi drivers in the background of occupational environment, stress and personality characteristics. *Indian J Occup Environ Med* 2013;17:108-13.