

## Research Article

# A study on stress among government city bus drivers in Hubli

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### Abstract

**Introduction:** Bus drivers always need to show concern for passengers in spite of the fact that they must be concentrating on bus driving. This is because this job is part of public service industry. The physical and psychological health of the bus driver is a critical factor in the driving performance. Any impairment could lead to undesirable consequences for the passengers. Hence, study was taken to know the stress among the bus drivers.

**Objectives:** 1) To evaluate stress among bus drivers. 2) To verify relation between job stressors and stress reaction 3) To verify relation between job stressors and bus accidents.

**Materials and methodology:** A cross sectional study was conducted among government bus drivers in Hubli. Frequency of bus passenger accident by each bus drivers, concern for driving, confirming safe conditions for drive observed by the drivers during their work were asked. Then depression among bus drivers was assessed by self rating depression scale.

**Results:** More than 80 per cent of the bus drivers were under varying amount of stress. There was significant positive correlation between job stressors and stress reactions. There was significant positive correlation between performing a safe driving job and stress reaction. There was significant positive correlation between job stressors and bus passengers' accidents.

**Keywords:** Stress, job stressors, stress reaction, bus drivers.

## 1. Introduction

India's passenger transport for small and medium distances is bus oriented. Buses even compete with railways on certain long distance routes by offering night services. Like many other transport industries the safety of travelers and other road users is of prime importance. Bus drivers successfully balance the competing demands of safety, customer focused service and company operating regulations.<sup>1</sup>

The physical and psychological health of the bus driver is a critical factor in the driving performance. Any impairment could lead to undesirable consequences for the passengers. This could be due to the lack of drivers' decision making authority, fatigue, fear of assault, social isolation, tight running schedule, vehicle mechanical faults, reduced rest breaks, poor cabin comfort, continuously rotating shift patterns, adverse weather condition, traffic congestion, the sedentary nature of job, noxious exhaust from other vehicles, pressure of ensuring safety of passengers and demanding passengers<sup>5,6,7,8,9,10,11</sup>.

Bus drivers frequently report tension, mental overload, fatigue and sleeping problems. Bus drivers also have more frequent absences from work and of longer duration than workers in other occupations<sup>3</sup>.

As they believe it is also an important view that every driver has a possibility of causing accidents due to unstable mental conditions, including mood or emotions which occur in a specific situation. Therefore, the measures to prevent accidents should be discussed after searching for psychological factors of instability that have a close relationship with bus accidents and then by verifying the variable factors involved<sup>2</sup>. Acknowledging that bus is one of the most popular modes of public transport worldwide, and, that the strong likelihood of this transport enduring for the foreseeable future there is clearly a need to actively address the psychosocial environment of the bus drivers.<sup>1</sup> Hence, study was taken to know the stress among the bus drivers.

## 2. Material and methods

A study was conducted on stress among government city bus drivers in Hubli from 4<sup>th</sup> June to 3<sup>rd</sup> July 2013

**2.1 Sample size:** Study sample was collected of 100 bus drivers.

**2.2 Inclusion criteria:** The bus drivers who were plying within the city limits were taken in the study.

**2.3 Exclusion criteria:** The bus drivers plying outside city limits were excluded.

**2.4 Study method:**

Structured, preformed and pretested questionnaire was prepared. Permission was taken from CPM, NWKRTC, Gokul road, Hubli. Data was collected by using the questionnaire regarding the socio-demographic profile which contained name, age, education status, socio-economic status, marital status etc. General information about the bus drivers regarding number of years of service, no. of hours of sleep and work, bad habits etc. were collected.

Frequency of bus passenger accident by each bus drivers, concern for driving, confirming safe conditions for drive observed by the drivers during their work were asked. Then depression among bus drivers was assessed by self rating depression scale<sup>4</sup>. Various job stressors like aptitude for job, bad environment in bus and among colleagues, complaints from passenger were taken. Lastly details regarding recognition from others about their job were collected. The data was then tabulated in MS excel, correlation tests were applied to the suitable tabulated data and the same was analysed in SPSS 17.0.

### 3. Results

It is observed that 47% of the drivers were in the age group of 24-34 years followed by 29% in the age group of 35-44 years. About 97% bus drivers were married indicating that there are people dependent on them.. 36% of bus drivers are educated till matriculation followed by post matriculation (34%). 78% of bus drivers had more than 4 years of experience. This shows that the NWKRTC prefers those who have more experience. Most of the drivers 77% had working hours between 9-12 hours. Majority (51%) of bus drivers work more than 25 days in a month. 33% of the bus drivers had tobacco chewing habits, 13 % had the habit of consuming alcohol These habits may affect the driving skills. Most of the drivers (60%) sleep 6-8 hrs. per day, followed by 33 % who sleep less than 6 hours. 61 % of the drivers had medium number frequencies of bus passengers' accidents followed by 23 % of drivers who had low frequency of bus passengers' accident. 83% of the bus drivers had medium concern about the conditions of the bus before and during the drive.. 56% of the bus drivers are mildly depressed followed by 19 % who are moderately depressed due to their occupation.

**Table No.1: Correlation between recognition and stress reactions**

Recognition	Melancholy	Fatigue	Irritation	Trouble with sleep
Boss	-0.273**	-0.014	-0.133	0.138
Family	-0.091	-0.061	-0.273**	-0.075
Co-workers	-0.247*	0.019	-0.110	0.043
Passengers	-0.112	-0.006	-0.192	-0.050

\*=significant at  $P < 0.05$ , \*\*= significant at  $p < 0.01$

Melancholy showed negative correlations with recognition from boss, co-workers. Irritation showed negative correlations with family.

**Table No. 2: Correlation between job stressors and stress reaction.**

Job stressors	Melancholic	Fatigue	Irritation	Trouble with sleep
Declining aptitude	0.288**	0.244*	0.387**	0.051
Bad environment in bus	-0.025	0.411**	0.387**	0.137
Bad environment among colleagues	0.050	0.188	0.166	0.151
Difficulty in getting holidays	-0.097	0.412**	0.164	0.158
Paid less	0.117	0.487**	0.243*	0.289**
Passengers complain	0.359**	-0.006	-0.069	-0.263**

\*=significant at  $P < 0.05$ , \*\*= significant at  $p < 0.01$

Melancholy showed a positive correlation with declining aptitude toward their job, and passengers complaining against them. Fatigue showed positive correlations with declining aptitude, bad environment in bus, difficulty in getting holidays and getting paid less. Irritation showed a positive correlation with declining aptitude, bad environment in bus and getting paid less. Trouble with sleep showed a positive correlation with getting paid less and passengers complaining against them.

**Table No.3: Correlations between performing safe driving job and stress**

Safe driving job	Melancholy	Fatigue	Irritation	Trouble with sleep
concern for driving	0.148	0.097	0.215*	-0.083
confirming safe conditions	-0.094	-0.021	0.039	-0.042

\*=significant at  $P < 0.05$

Correlation analysis was carried out between safe driving and stress reaction in order to clarify the psychological conditions that could disturb a safe driving job. Significant positive correlation was confirmed between Irritation and concern for driving.

**Table no.4: Correlations between bus passengers' accidents and other variables**

Process of verification model	Variables in each process	Incident	accident
Stress reaction	Melancholy	0.102	0.121
	Fatigue	0.049	-0.026
	Irritation	0.245*	-0.024
	Trouble with sleep	0.053	0.014
Safe driving job	Concern for driving	0.033	-0.068
	Confirming safe conditions	-0.102	0.028
Job stressors	Declining aptitude	0.029	-0.152
	Bad environment in bus	-0.014	-0.068
	Bad environment in colleagues	0.303**	0.075
	Difficulty in getting holidays	0.056	0.064
	Paid less	-0.050	0.052
	Passengers complain	-0.131	-0.109
Recognition from others	Boss	-0.011	-0.040
	Family	-0.284**	0.140
	Co-workers	-0.111	0.105
	Passengers	-0.273**	0.223*

\* = significant at  $p < 0.05$  \*\* = significant at  $p < 0.01$

Analysis was carried out in order to verify how much a safe driving job was related to other process variables directly. Incident showed significant positive correlation with irritation, bad environment among colleagues. Incident showed significant negative correlation with recognition from family and recognition from passenger's accidents showed significant positive correlations with recognition from passengers.

### 4. Discussion

Fundamentally the results of this study support another study Bus drivers' mental conditions and their relation to bus passengers' accident with the focus on psychological stress concept Yamada *et al*<sup>2</sup>.

The results of the study showed that majority of the bus drivers don't spend sufficient time with their family due to their hectic job schedule which affects their psycho-social behaviour and may contribute largely to the stress they experience. It was seen that major amount of drivers had bad habits like consumption of alcohol and tobacco which may hamper their sense during driving hours and may contribute to the causing of bus passengers' accident. It was seen that significant amount of drivers didn't get enough sleep on average per day which directly contributes to the amount of stress they suffer. In this study it was found that there was significant negative correlation between melancholy and recognition from boss, co-workers, and family these findings were similar to Yamada *et al*<sup>2</sup>, study which showed significant negative correlation between melancholy and recognition from the boss.

The study established a positive correlation between melancholy and declining aptitude towards their job, and passengers complaining against them. These findings were similar to Yamada *et al*<sup>2</sup>, study .there was significant relationship between fatigue, irritation and declining aptitude towards their job and bad environment in bus, difficulty in getting holiday, paid less for their job, which were not similar to the study Yamada *et al*, these findings were not similar to the study of Yamada *et al*, which showed significant positive correlation between irritation and complains from passengers. The results did confirm the positive relation between job stressors and bus passenger's accident. Some findings were similar to the study, Yamada *et al*, which showed significant correlation between stress reactions and bus passenger's accident.

## 5. Conclusion

More than 80 per cent of the bus drivers were under varying amount of stress. There was significant positive correlation between job stressors and stress reactions. There was significant positive correlation between performing a safe driving job and stress reaction. There was significant negative correlation between recognition from others and stress reaction. There was significant relation between stress reaction and bus passengers' accidents. There was significant positive correlation between job stressors and bus passenger's accidents. There was significant negative correlation between recognition from others and bus passenger' accidents.

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