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## **Sensitivity of Bus Drivers of Various State Transport Corporations towards the Safety of Passengers**

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### ***Abstract:***

*The purpose of this study was to investigate the sensitivity of bus drivers towards the safety of passengers of various transport corporations plying to and from Uttarakhand state capital Dehradun. A sample of 132 bus drivers was selected through Random Sampling Technique. Following an Ex post facto survey design a questionnaire was developed and administered to examine the Sensitivity of bus drivers. The study concluded that bus drivers were found to be sensitive towards the safety of passengers as they pay extra attention on the kids, women and senior citizens while boarding and deboarding them on and from the bus .They always keep an eye on the road to foresee the potential hazards and they believed in reaching safely.*

***Keywords:*** Sensitivity, Safety of passengers

### **1. Introduction**

India is a vast country divided into 29 states and 7 union territories. Each State has its own Transport Corporation and these corporations are responsible for carrying the passengers across intra- state and inter-state, through Buses. Passengers Commute from one place to the other through these buses as they are the cheapest, safest and comfortable mode of transportation. Nowadays with the increase in population the no of vehicles have also increased tremendously, this has resulted in several times increase in the no. of accidents per year occurring on the roads. The data available on accidents (Govt. Source) revealed that 13472 people have been killed in road accidents in the year 2012, out of which Uttarakhand, Uttarpradesh and Himachal Pradesh accounts for 130, 1383 & 601 respectively. This includes a percentage of bus accidents as well. Buses are involved in 12-20 percent of fatal crashes in Indian cities (P. S. Kharola, Geetam Tiwari, and Dinesh Mohan; 2010). Previous research has also linked road accidents with the road safety as Manisha Desai & A.K.Patel (2011) found out that strict implementation of road safety measures reduces road accident injuries and fatality.

Further Sanjay Singh & Ashish Mishra(2010) added to the road safety and found out that as the total no. of fatal accidents have been rising therefore there is a need to implement road safety audit system. Previous researches have also shown relationship between road accidents and traffic volume. The study reported that with the increase in traffic volume the accident rate in terms of number of accidents per km-year increases (Rakesh Kumar Singh & S.K.Suman; 2012).

A study conducted on the traffic system of five nations namely India, Tanzania, Nepal, Zimbabwe & Thailand revealed that Human errors are the principal contributory cause of road accidents (Tim Pearce et al.,). The available literature also indicates that a driver plays an important role in the prevention of accidents as they are the people on whom the whole responsibility lies for the safety of the passengers. Impact of high speed, breaking the traffic signals and lane violation leads to very destructive results.

The various researches have focused on the human errors, lapses in safety and traffic rules, congestion in traffic but few researches have attempted to investigate the sensitivity of bus drivers towards the safety of passengers. By Sensitivity we mean that how much a driver is empathetic towards the passengers i.e., whether he analyze the situation from the passengers point of view or not. It further means that how much a driver is sensitive towards the human life. A driver is considered as sensitive when he closely monitor and analyze all the hazards, observe the traffic c rules, completely stop the vehicle while boarding and deboarding the passengers, tolerate the risk and drive safely, learns from mistakes, gives special attention to kids, women and senior citizens etc. These are the issues which are considered as an important aspect while driving as they are the behavior related issues and needs special attention while driving.

## 2. Research Methodology

The main objective was to examine the sensitivity of bus drivers of various transport corporations towards the safety of passengers.

### 2.1. Research Design

This study employed the ex-post-facto survey design. This design is suitable for the study as it sought to examine the sensitivity of bus drivers towards the safety of passengers.

### 2.2. Sample and Sampling Technique

A sample of 132 bus drivers of various State Transport Corporations was selected from a list of 300 drivers from ISBT, Dehradun by using Random Sampling Technique

### 2.3. Instrument

In order to collect the data a questionnaire on Sensitivity was developed and validated.

The instrument consisted of 15 items. The scale employed 3 point Likert scale ranging from 1=Disagree to 3= Agree

The internal reliability of the scale was measured by Cronbach's Alpha method. For the whole scale Cronbach's alpha  $\alpha = 0.77$

### 2.4. Administration

The Questionnaire was administered to measure the variables of the study on bus drivers of various State Transport Corporation mainly of Uttarakhand, Uttar Pradesh, Himachal Pradesh, Haryana & Rajasthan. A total of 150 questionnaires were distributed out of which 132 were found to be useable giving a return rate of 88 percent

### 2.5. Data Analysis & Findings

The data collected was analyzed using percentages, frequencies.

## 3. Results

Demographic Variables		Frequency	Percentage
Age	21-30	5	3.8
	31-40	63	47.7
	41-50	56	42.4
	51-60	8	6.1
Marital Status	Unmarried	2	1.5
	Married	130	98.5
STC	UP	29	22
	UK	40	30.3 36.5
	Himachal	39	29.5
	Haryana	21	15.9
	Rajasthan	3	2.3
Education	8 <sup>th</sup>	77	58.3
	High School	48	36.4
	Intermediate	6	4.5
	Graduate	1	0.8
Experience	1-10	50	37.9
	11-20	49	37.1
	21-30	30	22.7
	31-40	3	2.3

Table 1: Profile of the Respondents

Table 1 presents the demographic profile of the respondents. The profile shows that majority of the respondents (90.1%) lies in the age group of 31-50 years, 98.5% of the respondents were married. Majority of the respondents were either 8<sup>th</sup> pass (58.3%) or high school (36.4%). 97.7% of the drivers had an experience between 1-30years. The profile also shows that respondents belonged to 5 State Transport Corporation namely Uttar Pradesh(22%); Uttarakhand(30.3%); Himachal Pradesh(29.5%); Haryana(15.9%) & Rajasthan(2.3%).

#### 4. Analysis

The results of the study show that 74.2% of the respondents that they are responsible for the safety of passengers. Further when asked whether they completely stop the vehicle while boarding and deboarding the passengers in order to reduce any mishap then 92.4% respondents had a positive response. Majority (68.2%) of the respondents agreed that they often try to anticipate the potential hazards while driving. They disclosed that in plain areas potential hazards could be in the form of cyclists, rural carts loaded with sugar cane, tractors, stacking vehicles, military trucks etc while in hilly areas hazards may be in the form animals, land slide, rock falling, sharp cuts etc. while 25.8% respondents reported that they do not try to foresee the hazards and 6.1 % of the respondents were indecisive on this aspect. 60.6% of the respondents positively agreed that they believe in reaching safely, while 35.6% respondents had an opposing view as they believe in reaching before time rather than reaching safely. This shows that majority of the drivers of STC are very much concerned with safety of passengers while a small no. of drivers were reluctant towards it.

When asked about their confidence in their ability to avoid an accident, 85.6% of the respondents positively complied with this and reported that while driving they remain confident enough to avoid any accident. When the drivers were asked whether they make extra effort to see what's happening on the road a long way ahead 72% consented positively and reported that they often keep an eye on the road to monitor each activity minutely. In response to another question whether they learn from their mistakes, 83.3% of the respondents had a positive answer as they revealed that they learn from their mistakes because this make them cautious for the next driving. 80.3% agreed that they make special effort to be alert even on roads they know well. The respondents further told that in order to avoid any kind of unforeseen contingency they remain alert on the roads.

72.7% of the respondents agreed with the statement that they don't come across any vision problem while driving in night on the other hand 19.7% respondents accepted that they come across vision related problem. Further, 72% of the respondents go along positively and reported that they pay special attention to women, kids, senior citizens while boarding as well as deboarding them on and from the bus as they are the most sensitive passengers, while 23.5% respondents disapproved this. 89.4% of the respondents disagreed that they ever crossed red light even if no one is crossing from any of the sides which shows that they usually observe the traffic rules. However a small percentage agreed that they sometimes cross the red light. 89.4% of the respondents consented that while driving in the night as they feel sleepy, they come under stress of meeting with an accident. Therefore in order to avoid the potential mishap they often take short breaks for refreshments. When inquired about whether they break the safety rules in order to reach their destination on time, 80.3% agreed that in some exceptional conditions they break the rules and regulations. When drivers were asked that whether the behavior of passengers influence their driving ability then 88.6% of the respondents agreed and revealed that because of the impelled behavior of the passengers their driving ability get influenced and due to this they either drive extraordinarily fast or cross a flooded river or drive away from the prescribed route. 65.2% of the respondents agreed that drivers as well as conductor need specific training for Sensitivity towards the safety passengers while a 22.7% of the respondents denied from conducting any training.

Table 2 shows the data regarding the no. of accidents drivers have met with, factors responsible for accidents and people prone to accidents.

<b>No. of Accidents</b>	No Accident	48	36.4
	1 Accident	64	48.5
	2 Accident	17	12.9
	3 Accident	3	2.3
	4 Accident	00	00
	5 Accident	00	00
<b>Factors Responsible for accidents</b>	Speed	30	22.7
	Sleep	16	12.1
	Alcohol	86	65.2
<b>People Prone to Accidents</b>	Pedestrians	3	2.3
	Bullock Carts	00	00
	Car/Taxi Drivers	35	26.5 26.5
	Bicycle	10	7.6
	Scooter/Bike Drivers	74	56.1
	Bus/Truck	00	00
	Others	10	7.6

Table 2

When asked about the no. of accidents they have met with while driving then 36.4% reported that they never come across any accident, while 48.5% accepted that they have met with 1 accident next 12.9% accepted for 2 accidents rest 2.3% were involved in 3 accidents throughout their career as a bus driver. 65.2% respondents rated alcohol as the most important factor responsible for the accidents. Only 22.7% respondents held speed responsible for accidents. Respondents when asked about the people who are

accident prone for the buses then 56.1% held scooter/bike drivers responsible while 26.5% held car/taxi drivers responsible for increasing the chances of accidents.

## 5. Findings

The Findings of the study are as follows:

- Majority of the respondents feel themselves responsible for the safety of passengers.
- Majority of the respondents accepted that they completely stop the vehicle while boarding and deboarding the passengers in order to reduce any mishap.
- Bus Drivers often try to anticipate the potential hazards while driving.
- Bus Drivers believe in reaching safely.
- Majority of the respondents reported that while driving they remain confident enough to avoid any accident
- Most of the respondents reported that they often keep an eye on the road to monitor each activity minutely.
- Majority revealed that they learn from their mistakes because this make them cautious for the next driving
- Respondents revealed that they make special effort to be alert even on roads they know well
- Majority of the drivers don't come across any vision problem while driving in night
- Most of the respondents pay special attention to women, kids and senior citizens while boarding as well as deboarding them on and from the bus considering them as the most sensitive passengers.
- Most of the respondents disagreed that they ever crossed red light even if no one is crossing from any of the sides.
- Bus Drivers accepted that they come under stress of meeting with an accident while driving in the night.
- Respondents accepted that they break the safety rules in certain exceptional conditions in order to reach their destination.
- Majority of the drivers accepted that the behavior of passengers influence their driving ability because of this either they drive extraordinarily fast or cross a flooded river, drive away from the prescribed route.
- Majority of the bus drivers accepted that they as well as conductor need specific training for Sensitivity towards the safety passengers.

## 6. Discussion

The study which was conducted to examine the sensitivity of bus drivers towards the safety of passengers revealed that drivers were found to be sensitive towards the safety of passengers as they pay extra attention on the kids, women and senior citizens while boarding and deboarding them on and from the bus. Further the results revealed that bus drivers always keep an eye on the road to foresee the potential hazards and they believe in reaching safely, and this shows that they value the life of passengers. Bus drivers also reported that they experienced stress while driving in night. Previous studies also support this finding which indicated that stress caused by fatigue and drowsiness during driving leads to road traffic accidents (G. Kondala Rao, 2013; Desai & Patel, 2011). The study also revealed that drivers break the safety rules in some exceptional conditions. Previous studies were also in tune with this as they reported that drivers want to reach to their destinations too quickly under time pressure irrespective of road condition and traffic density (Desai & Patel, 2011). Further it was found in the study that driving ability of drivers get influenced by the behavior of passengers. The findings of previous studies were also in line with the results of the study, which indicated that drivers are often encouraged by passengers to cross flooded bridges and as a result make errors in judgement resulting in the bus being washed away (Tim Pearce 1999). Results also shows that majority of the bus drivers held alcohol responsible for the road accidents. Earlier researches confirm this finding which reported that drug and alcohol leads to fatal accidents. The results of the study shows that generally the drivers were sensitive towards the safety of passengers but these findings are in contradiction with the previous study which reported that there is a general lack of sensitivity to the value of life in India as compared to other countries (G. Kondala Rao, 2013).

## 7. Implications of the Findings

The findings of the study have implications in certain areas. The results of the study indicated that in exceptional cases the drivers break the safety rules, it implies that there is a need for sensitivity training for bus drivers and therefore, top management should pay attention to this aspect. Further, the results also revealed that the most important factor behind the accidents is the consumption of alcohol while driving, so the transport corporations must provide for random checking of drivers those who are on duty. It was also reported that driving ability of bus drivers is often influenced by the behavior of passengers. Therefore, the drivers should be provided with behavioural training so that they can cope up with the passengers. Besides this notice boards should also be displayed inside the bus indicating passengers not to unnecessarily disturb the bus drivers.

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