

Study of risk taking behaviors and practices long route drivers in Dharan Municipality of Eastern Nepal

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Abstract

Background: Due to its perception as a disease of development, road traffic accident and related injuries tend to be under recognized as a major health problem in developing countries. However, majority of the world's fatalities on the roads occur in low income and middle income countries. Since the main cause of road traffic accident is attributed to human risky behaviors, it is important to identify significant factors for risky behaviors of drivers. **Objective:** To know the risk taking behavior among drivers and practices of driving. **Methods:** This population based cross-sectional study. The study was conducted in Dharan, a township in Eastern Nepal. The study population includes of all long route drivers who are registered in membership of vehicle organization. Modified semi structured questionnaire was used for data collection. SPSS version 11.5 computer software was used for data entry and analysis. **Results:** Majority of study population belong to 25-29 years group. Majority of the drivers had valid license (98%) and about 68.9% drivers didn't had any formal driving training school prior starting driving vehicle. Most of them drive in high speed at highways but majority ignored that they take alcohol while driving. with growing age, years of driving had correlation of accidents among drivers population. **Conclusion:** Study population comprises of youth drivers and most they had valid license. With the growing age drivers are neglecting traffic rules and signs and young driver are driving vehicles with overconfidently

Keywords: Alcohol, Dharan, road accident, risk behavior.

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Introduction

The human factors commonly contribute to accident involvement in traffic¹. A study of 2041 traffic accidents² showed that human factors were contributing 95% of the accidents. In particular, driving behavior was identified as the most central of these factors. Consequently, a variety of studies have been carried out in order to identify variables which may influence accident involvement and risk-taking behavior in traffic, meaning behavior that indicate the possibility of a negative health outcome for the individual as well as for others. Within psychology, the different perspectives of cognitive, personality and social psychology have all attempted to explain individual differences in risk-taking and traffic accident involvement^{3, 4}. Different studies have shown that risky driving behavior plays a major role in the occurrence of road traffic accident^{5, 6, 7,8,9,10,11}.

According to the Government of Nepal¹², nepal road sector assessment study 2013 reports expressed that registration of vechiles in Nepal has increasaed by 65% since 2008 to 1.2 million in 2011,giving the density of 38 motor vechiles per 1000 people.An analysis of accidents showed that the numbers of road accidents and related fatality is very high in Nepal,with over 1,700 death 2009-10.The majority of fatalities occur outside Kathmandu vally and involved truks and busses, with many fatalities beigh pedestrians.These

accidents is caused by risky taking behaviours of the drivers.

Carelessness on the part of the drivers is a major cause of accidents. Buses and minibuses plying on the narrow roads can be seen carrying passengers exceeding their capacities. Especially drivers who drives long route are venerable to have accidents due to their risky behavior, such as speeding, drunk driving and failure to fasten seat belts. There are limited studies on the risky behavior amongst driver in context of Nepal

Methods

This is cross-sectional study, conducted in Dharan, a township in Eastern Nepal. The study population includes of all long route drivers who are registered in membership of vehicle organization i.e. Vehicle Sang or Vehicles organization and used to drive bus, truck, van. Local distances car taxis are not included for the study. For the study Purpose, the long route drivers define as “the Drivers who drives more than 250 KM per day”. According to the vehicle sang and organization there are 300 drivers (Approx.) registered in their organization who are currently driving long rout. The total sample size is estimated as 300 long route drivers who are currently working in the field. Semi - structural questionnaire used as tools for data collection.. For the asses the valid lenience, driver was asked to show their license paper.

Inform written consent was taken from all the study subjects. Confidentiality was maintained. The data was entered in Microsoft Excel and analyzed by using SPSS version 11.5 and application of the test of significance, student t test for numerical data

to see the association between variables was applied.

Results

The sample sizes were 300 long route vehicle drivers but only 280 were interview 20 denied to participate, with 90% response rate.

Table 1: Scio-demographic profile of study population (N=280)

Characteristics	Frequency	Percentage
1. Age		
20-24 yrs.	12	4.3
25-29 yrs.	92	32.9
30-34 yrs.	75	26.8
35-39 yrs.	44	15.7
40-44 yrs.	28	10.0
45 and above	29	10.4
2. Religion		
Hindu	195	69.6
Kirat	51	18.2
Buddish	20	7.1
Others	14	5.0
3. Ethnicity		
Brahmin	45	16.1
Chhetri	50	17.9
Dalit	41	14.6
Hill Janjati	122	43.6
Terai Caste	22	7.9
4. Literacy status		
Illiterate	28	10.0
Primary Level	117	41.8
Secondary Level	84	30.0
Higher secondary and above	51	18.2

5. Place of residence		
Sunsari	205	73.2
Morang	37	13.2
Jhapa	13	4.6
Dhankuta	7	2.5
Others	18	6.4
6. Geographical area		
Terai	264	94.3
Hill	16	5.7
7. Years of driving Experiences		
Less than 20 years	259	92.5
Above 20 years	21	7.5
8. Age of Driving stated		
16-19 yrs	30	10.7
20-24 yrs	151	53.9
25-29 yrs	68	24.3
30-34 yrs	26	9.3
35 and above yrs	5	1.8
9. Types of Vehicles		
Bus	120	42.9
Van	73	26.1
Jeep	26	9.3
Truck	61	21.8

Table 1 shows socio-demographic profile of study population, majority of study population were belongs to 25-29 years group follow by 30-34 years with mean age 33.55 years (SD±7.86), most of them were Hindu (69.6%) and Kirat (18.2%) by religion. By ethnicity majority were Hill Janjati (Rai, limbu, Gurung, Magar) 43.6%. Majority were literate (90%)

most of them were literate up to secondary level but only 10% were illiterate. Majority dwelling is in Sunsari districts (73.2%) in Terai region. According to their driving experiences, most of them had less than 20 years driving experiences, drive bus. Drivers started their driving at age of 20-24 years (53.9%) with mean age 23.86years,SD ± 4.25

Table 2: Knowledge about driving of study population (n=280)

Characteristics	Frequency	Percentage
1. Do you know speed limit in urban area		
Yes	197	70.4
No	83	29.6
2. Who should carry the injured people from accident site to nearby hospitals		
Same vehicles (if possible)	196	70.0
Next immediate passing vehicles	46	16.4
Ambulance	28	10.0
Police van	10	3.6
3. Who should provide first-aid on the accident spot		
Driver		
Police	231	82.5
Public	22	7.9
	27	9.6
4. Do you heard about traffic park		
Yes	178	63.6
No	102	36.4

Only few of them had good knowledge about traffics rules and signs, 70.4% had knowledge about the speed limit in urban area .About 70% respondents expressed that same vehicle should carry injured people

from the accident site to the nearby hospitals and In vehicle there should basic first kits and basis aid (bandage, cotton) should provide by drivers at spot of the accident. About 36.4% of respondent never heard about traffic park.

Table 3: Attitudes towards driving of study population (n=280)

Characteristics	Frequency	Percentage
1. Do you have valid license		
Yes	275	98.2
No	5	1.8
2. Did you have formal driving training in driving school		
Yes	87	31.1
No	193	68.9
3. Did you have formal test for driving at the time of receiving license	110	39.3
Only driving	170	60.7
Both (written & driving)		
4. Do you have proper medical test		
Yes	161	57.5
No	119	42.5

Majority had valid license (98%) and about 68.9% drivers didn't had any formal driving training school prior starting driving vehicle (Table 3). During the receiving license, most of them (60.7%) had both (Written & driving) exam only few (57.5%) had only driving exam. And only some (42.5%) had proper medical test while receiving license. When asked stopping vehicle if you find accident, most of them (53.2%) expressed that they will not stop at the accident site.

Table 4: Risk taking behaviors among respondents (N=280)

Characteristics	Sometimes		Never	
	Frequency	%	Frequency	%
Overtake any vehicles at turning	266	95	14	5
Park at wrong side	89	31.8	191	68.2
Drive at high speed	175	62.5	105	37.5
Drive after alcohol	15	5.4	265	94.6
Drive with women sitting beside you	236	84.3	44	15.7
Have sexual relation with women on a long route	6	2.1	274	97.8

When asked about the driving practices, about 95% of them frequently overtake the vehicles at turning and 68.2% parks at wrong side of the road. Most of them drive in high speed at highways but majority ignored that they take any alcohol while driving and have sexual relation with women on a long route

and expressed that sometimes drive with women sitting beside them (table 4). Majority of driver expressed that, driving with intake of alcohol and drugs, driving vehicles with carelessly and over confidently were the most reasons from drivers' fault to occur accidents.

Table 5: Opinions of drivers towards causes of accidents due to drivers fault

Characteristics	Frequency	Percentage*
Driving with intake of alcohol and drugs	162	57.9
Driving vehicles carelessly and over confidently	159	56.8
Driving in high speed	90	32.1
Overtaking the vehicles in high speed	65	23.2
Bad condition of vehicles	40	14.3
Overloading passengers & load and parking wrong side	39	13.9
Driving wrong side of the road	37	13.2

*%≠100 because of multiple responses

When asked what are their opinion and suggestion about the prevention of accidents, most of them suggested that, when driving vehicles drive slowly and carefully, while driving don't take alcohol ,update vehicles

regularly .They also expressed utilization of traffic police in heavy traffic places will somehow prevent of major heavy traffic problems.

Table 6: Suggestion on preventions and control of accidents according to respondents*

Characteristics	Frequency	Percentage*
Drive slowly and carefully	201	71.8
Use zebra-crossing for crossing roads	171	61.1
Don't take alcohol while driving and drugs	121	43.2
Don't stop vehicle frequently in the road	143	51.1
Avoid domestics animals in the road	110	39.3

Be careful while overtaking	79	28.2
Update your vehicles regularly	63	22.5
Always follow traffic signals while driving	52	18.6
Drive vehicles after proper driving training center	52	18.6

Majority of the drivers complain that pedestrian didn't use zebra crossing, so they suggest that use zebra-crossing for crossing roads and avoid domestics animals away from the road, not only drivers but pedestrian

also follow the traffic rules. While crossing the road carefully check the vehicle in the road and cross the road, which were the major suggestion given by drivers to prevent accident by pedestrian side.

Table 7: Mean of Outcome variables accident done in life time of driving

Characteristics	Accident done		Test value	P value
	Yes	No		
Age	34.92 ±8.483	32.66± 7.331	2.162	0.031
Years of driving	11.15± 8.124	8.74± 6.41	1.262	0.208
Age at Driving started	23.76± 4.1	23.93±4.358	0.368	0.713

Average age of the respondents was found significantly higher among who had met accidents. The average years of driving was higher among people who had met accident but not significant. The mean age of starting driving was not significant in accident status (Table 7).

Discussion

The objective of the study was to know the risk taking behavior among long route drivers and practices of driving among the drivers of Dharan municipality.

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