

Road Traffic Accidents in Kathmandu Valley

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ABSTRACT

This article presents the information received from documents available in the Police Head-Quarters, Operation Department, Traffic Directorate, Naxal, Kathmandu and Metropolitan Traffic Police Division, Kathmandu along with some journals and websites covering five years from 2069 to 2074. The main aim of carrying out this research was to shed light on the road traffic accidents of Kathmandu valley. The data have been presented through document analysis and analyzed here using both quantitative and qualitative techniques. The major findings include that Road Traffic Accidents are the outcomes of many factors ranging from the negligence of the driver to the weather condition and the condition of road. Despite the dense presence of government and its bodies, the study showed that maximum number of road traffic accidents occur in Kathmandu valley. Youngsters riding bikes and driving cars involved in accident are found maximum in number. Because of the immediate rescue and hospitalization, the number of deaths in Kathmandu valley was found to be decreasing in comparison to the other parts of Nepal.

Keywords: road traffic accident, traffic rule, mortality, injury, RTA rate

Introduction

Road transport has been a very easy and popular service in Nepal, despite the poor and vulnerable condition of roads. According to the CBS report 2016, the total road network in Nepal covers 26900 kilometers, where as many as 1995400 vehicles ply along the road network. Hundreds of people lose their lives every year in Nepal in road traffic accidents. There is a very negligible chance to be completely safe in an accident. Maximum number of people die, and many of them remain physically injured while some of them are compelled to suffer the whole life as they cannot be brought into normal life. Handicapped life is really a burden not only to the victim of the accident but also the dependent family members. The rate of road accidents and fatality is getting higher and higher day by day. On one side the quality of road is getting poorer and poorer; and on the other side the number of vehicles plying on the road are unexpectedly increasing leading to fatal accidents across the country. The government has failed to regulate road transportation as it should have. Gopalakrishnan (2012) opines, "Road Traffic Accidents (RTA)

survivors, their families, friends, and other care givers often suffer adverse social, physical, and psychological effects. According to the report published by WHO in 2013, more than three thousand people die daily due to road traffic accidents. And around 1.3 million people die in a road traffic accident every year across the world. Chaulagain et.al (2015) claim that, "more than nine in every ten (91%) of the world's RTA fatalities were from low and middle income countries such as Nepal". It proves that the rate of road accidents is increasing overwhelmingly. WHO report 2013 indicates that death and injury caused by traffic accidents are arising dramatically and alarmingly. It says every hour 40 people in the South East-Asia region die in road accidents.

The death rate of per hundred thousand population in RTA in SAARC nations, according to WHO report 2014, is also quite depressing. Nepal has the rate of 22.32, India 20.74, Pakistan 20.22, Bhutan 14.53, Srilanka 13.05, Bangladesh 12.87, Afghanistan 27.82, and Maldives 1.05 RTA death rate per 100000 population. It shows that Maldives has the lowest death rate and Afghanistan has the

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highest RTA death rate. The trend of RTA in Nepal is really horrible in comparison to other countries in the sense that the number of casualties is increasing unexpectedly. In Adhikari's (2016) view, Nepalese roads are the ones that are among the most dangerous roads in the world; and chances of vehicle crash are more than 100 times higher than in Japan and 10 times higher than in India.

Radhakrishnan (2012) opines, "A wide range of effective road safety interventions exist and a scientific system approach to road safety is essential to tackle the problem. This approach should address the traffic system as a whole and look into interactions between vehicle, road users, and road infrastructure to identify solution." Traffic police conducts regular awareness and training programs that have somehow made positive impact in reducing the number of casualties. However, such programs should be conducted intensively; and those violating traffic rules and regulations should be punished and penalized heavily so that the same mistake will not be repeated by the same person in the future.

The above observations show that maximum number of accidents occur due to the lack of traffic knowledge, negligence of drivers, and the vulnerable condition of roads. Distribution of driving license has not been transparent and traffic rules and regulations have not been made effective. Maximum bus accidents occur due to being overloaded. Lack of proper coordination among the stake-holders and boozing habit of drivers are also the possible causes of accidents. Drivers drink and even take drugs; and police authority pays no attention in bringing them to legal frame. However, their consequences may last longer than we expect. Accidents leave people seriously injured with a negligible chance of recovery. Some of the victims are never recovered fully and have permanent physical and mental disability. Accident

brings family disaster and financial burden to the survivors and dependents. Pedestrians are most affected by road traffic accidents. Cases of head and abdomen injury are common.

Methods

In course of data collection, the researcher himself visited to the Police Headquarters, Operation Department, Traffic Directorate, Naxal, Kathmandu and Metropolitan Traffic Police Division, Kathmandu. Then documented records of five years were collected from 2069 to 2074 B.S. So the sources of data were the documents provided by the traffic offices which were presented and analyzed both quantitatively and qualitatively. So, this study is based on the secondary sources of data published by Metropolitan Traffic Office, Kathmandu and the data available in related journals and websites. The study sheds light on road traffic accidents that occurred only in Kathmandu valley (Kathmandu, Lalitpur, and Bhaktapur district).

Results

The data collected from available documents have been presented and analyzed under several themes like: road traffic accident of Kathmandu Valley in 2072/73, types of vehicles involved in traffic accidents in Kathmandu Valley, traffic accidents and its effects, trend of road traffic accidents of five years.

Table 1. *Road traffic accidents of Kathmandu valley in 2072/73*

Cities	No. of Accident	Injured		Death	No. of affected people
		Serious	Minor		
Across Nepal	10,013	4182	8226	2006	16502
M.T.P. Kathmandu	5668	275	3901	166	10103

Source: Source: Police Headquarters, Operation Department, Traffic Directorate, Naxal, Kathmandu, 2072/2073

Kathmandu valley comprises of Kathmandu, Bhaktapur, and Lalitpur districts. Data shows that maximum road accidents occur in the valley in comparison to other parts of Nepal. More than 5500 accidents occur every year in the valley leading to more than 180 deaths. The number of vehicles plying in Kathmandu is horribly increasing day by day. The government is not able to formulate fixed vehicular policies and build roads. It will be a surprising fact to

speculate on what Kathmandu Post (2016) quotes , "Total length of vehicles operating in the Kathmandu Valley is greater than the length of roads, traffic police said. The length of the roads is 4.8 million feet whereas length of vehicles is 7.2 million feet". How can the valley be safer and a more comfortable place in terms of transportation unless we seriously ponder into the above mentioned statement?

Table 2. *Types of vehicles involved in traffic accidents in Kathmandu valley*

Fiscal Year	Truck	Bus	Micro-bus	Car/van/Jeep	Tempo/Tractor	Motor cycle or scooter	Manually driven means of transportation	Total
2069/2070	699	872	489	2653	203	3218	157	8291
2070/2071	892	962	538	2510	141	30224	136	8203
2071/2072	947	1006	565	2857	193	3252	138	89568
2072/073	1210	1164	500	3231	157	3671	170	10103

Source: Metropolitan Traffic Police Division, Kathmandu

Bus, truck, motor bike, bicycle, scooter, jeep, van, car, taxi, rickshaw, tempo, lorry, etc. ply on the roads of Kathmandu valley. The analysis of the data available regarding the vehicular variations involved in the accident and death of the passengers shows that maximum bike riders die when they encounter accident. More than 3000 motorbike accidents occur every year in Kathmandu; valley and there are increasing numbers of motorcycle casualties in the valley in comparison to the other means of transportation. Car and jeep accidents occupy the second position in terms of accidents in the valley.

The following bar diagram shows the number of road traffic accidents nation-wide from fiscal year 2069/070 to fiscal year 2072/2073. Accidents are increasing day by day and the number of casualties is also going up

simultaneously. 3986 people were seriously injured in the fiscal year 2069/070 due to road traffic accident, whereas 4182 people were seriously injured in fiscal year 2072/073. Similarly, 1816 people died in fiscal year 2069/070 and 2006 people died in fiscal year 2072/073. However, the number of RTAs caused by manual means of transportation is lower than the accidents caused by other means in Kathmandu. The trend is quite horrible and unless effective measures are taken to control road traffic accidents the rate of accidents and its adverse impacts will keep on increasing. The given data shows that the rate of RTAs has increased by 2.83 percent within the four years. Despite the increase and change brought in the level of awareness among people, the rate of RTAs is still increasing which has been a serious matter for the concerned authority.

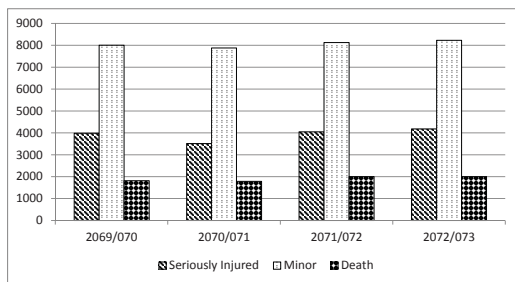


Figure 1. Road traffic accident and their effect in four years

Source: Police Headquarters, Operation Department, Traffic Directorate, Naxal, Kathmandu

Road traffic accidents are increasing with the growing number of vehicles plying on the

road. It is obvious that the condition of roads in Kathmandu valley is not good enough to accommodate the vehicles. Public vehicles are always full and traffic congestion and jam always disorder people's normal routine. If we compare the number of RTAs in fiscal year 2069/070 with the same in fiscal year 2070/071 the number has slightly decreased by 1.54 percent and the RTAs in fiscal year 071/072 increased by 1.83%, whereas in fiscal year 2072/073 the same increased by 2.83%. No one can reach the destination in targeted time. The system of license issuance has not been transparent. As a result, an unskilled person also gets driving license.

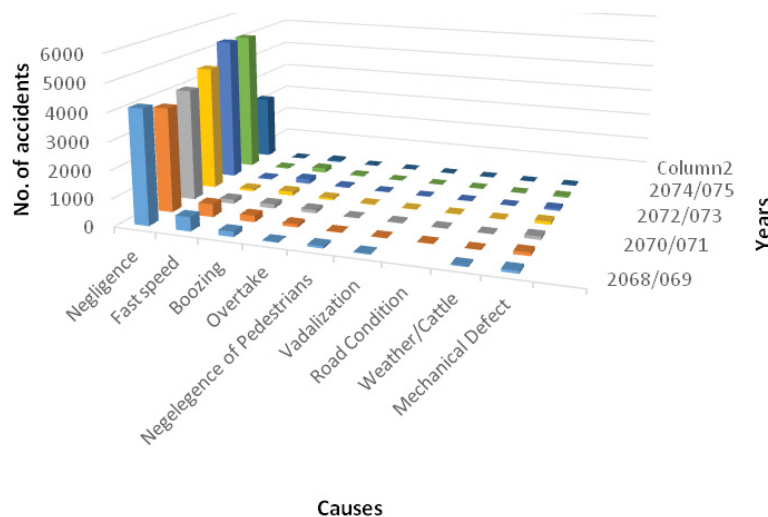


Fig. 2. Causes of road traffic accidents

Source: Police Headquarters, Operation Department, Traffic Directorate, Naxal, Kathmandu

There are many reasons of RTA in Nepal. Negligence of the driver, fast pace, consumption of alcohol during driving and before driving, overtaking, pedestrians' carelessness, vandalizations of local people, deteriorating road condition, obstruction from the cattles, weather condition and mechanical defects of the vehicles are the leading causes of RTA in Nepal. According to Traffic Directorate, maximum RTAs occur due to the extreme

negligence of the driver. They pay no attention to their driving speed, blind turnings, and their health condition. In the fiscal year 2072/073 the number of RTAs was 4119 whereas in the fiscal year 2073/074 it reached up to 5205. The ratio is increasing every year. High speed is the second cause of RTAs and driving vehicles after drinking alcohol is the third cause. These three are basically related to the driver's fault or negligence.

The following figure highlights the trend of road accidents and human casualties within five fiscal years from 2068/069 to 2072/073. Altogether, 8892 accidents occurred in the fiscal year 2068/069 whereas it reached 10013

in fiscal year 2072/073. Likewise, 1837 people died in fiscal year 2068/069 and it reached 2006 in fiscal year 2072/073. The trend of road traffic accidents has ups and downs.

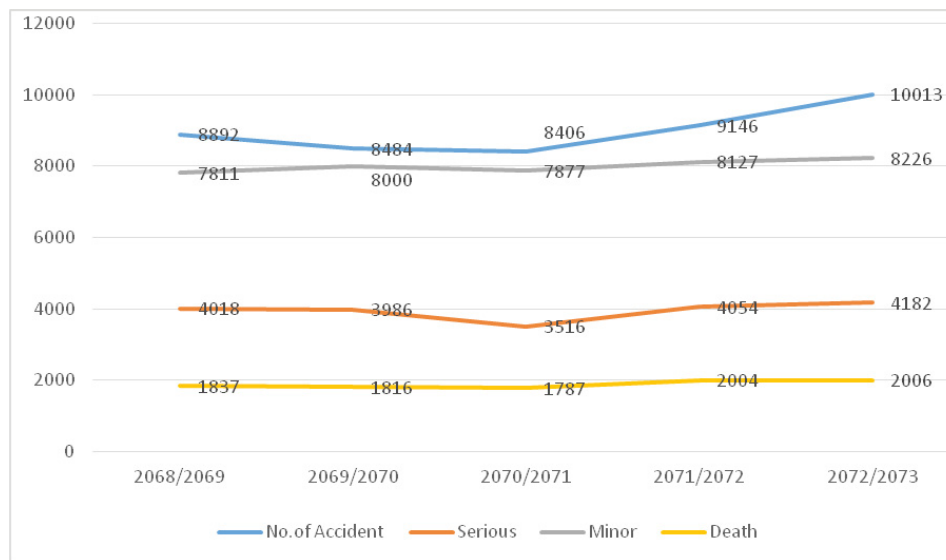


Fig. 3. Trend of road traffic accidents within five years

Source: Police Headquarters, Operation Department, Traffic Directorate, Naxal, Kathmandu

Despite the continuous public pressure, government's initiation, road department's effort, and traffic police's active role, we find the number of accidents increasing during the last five fiscal years. The number of casualties is also increasing. The stakeholders concern is hopelessly squeezing day by day. The trend shows that there is a fluctuation in the occurrence of RTAs. It is expected that the increased level of consciousness among the vehicle users may bring down the rate of RTAs. But it cannot be seen as the rate is slightly increasing. It might be due to the traffic congestions, degrading quality of the road and increasing number of vehicles. Seriously injured people are facing a lot of problems as they do not get compensation and other insurance- related benefits.

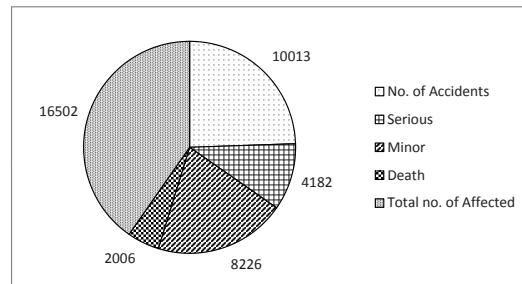


Fig. 4. Effects of RTA in human health in fiscal year 2072/073

Source: Police Headquarters, Operation Department, Traffic Directorate, Naxal, Kathmandu

Out of the total of 16502 accidents, 24427 people were directly affected in RTAs. Among them 8.21 percent people died in RTAs and 17 percent of them became seriously injured.

The number of seriously injured people was 4182; and 2006 people succumbed to death. Likewise, 8226 people had minor injury in fiscal year 2071/072 in different road traffic accidents.

The results on the different themes discussed above have the findings very similar to the findings of researches carried out by different scholars like Chaulagain et.al (2015) whose view is that more than nine in every ten of the world's RTA fatalities were from low and middle income countries; Adhikari (2016) who says that Nepalese roads are most dangerous in the world; WHO report (2014) which claims the death rate of per hundred thousand population is quite depressing; Gopalkrishnan (2012) who says that survivors, their families, friends and other caregivers often suffer from adverse social, physical and psychological effects and Radhakrishnan (2012) who has the opinion that a wide range of effective road safety interventions exist and a scientific system approach to road safety is essential to tackle the problem.

Discussion

The present study carried out in Kathmandu valley mainly focuses on the road traffic accidents occurred in Kathmandu, Bhaktapur and Lalitpur district. In fiscal year 2072/2073, there were 10,013 vehicular accidents in Nepal. Out of the 16,502 affected people, 4182 were seriously injured, 8226 suffered from minor injuries, and 2006 died. Remaining 88 people did not have any injury. Kathmandu valley has the maximum number of accidents in comparison to major places of Nepal. However, it has less number of seriously injured people that counted only 275, whereas Itahari has the highest number of seriously injured persons. Only 166 people died in Kathmandu valley whereas 525 people died in Road Traffic Accident in fiscal year 2072/073.

It suggests that human casualties due to RTAs in Kathmandu valley are less than other parts of the country. However, Kathmandu has the largest population of people with minor injuries (3901) whereas in Attariya only 104 people sustained minor injuries.

There are many factors leading road traffic accidents world-wide. The condition of road, negligence of driver, condition of the weather, condition of vehicles, traffic rules and regulations, legal prosecution, and role of traffic police are some key components that may somehow create a conducive circumstance leading to Road Traffic Accidents. Based on the available data in concerned government authority, the author of this study found that the number of accidents and casualties are horribly increasing despite the efforts made by the government and non-governmental sector. RTA related data from the fiscal year 2068/069 to the end of Mangsir 2074 showed a very gloomy picture in terms of the increasing number of seriously injured and dead people. The number of RTAs in the fiscal year 2068/069 was 8892 whereas the number of accidents reached 10013 in the fiscal year 2072/073. RTA is maintaining similar trend despite many efforts and measures to avert road accidents. 1837 people died in different RTAs in the fiscal year 2068/069 and the number of deaths reached 2006 in the fiscal year 2072/073 which is 0.1% higher than in the last fiscal year. Kathmandu valley has the highest record of 55.6% out of the total RTAs in comparison to the other regions. Attariya has the lowest RTAs at the same period. The death rate in Kathmandu valley in the fiscal year 2072/073 is 8.3% whereas Pathlaiya has the highest record of death rate which is 22.2%. Comparatively, Kathmandu valley has lower death rate in RTAs because the victims of accident get immediate medical treatment at hospitals in Kathmandu whereas such patients do not get proper treatment outside the valley.

Moreover, serious patients have to be brought to Kathmandu from all over the country for the treatment. However, increase in RTA has become a serious issue in Kathmandu valley too as all the government and private hospitals are full of patients; and they are not being able to handle their patients efficiently. Compared to the previous RTA records, the number of bike accidents has decreased due to the imposition of the strict rules and regulations against those who drive their vehicles in alcoholic condition. If we study the reason behind the increasing number of RTAs in Kathmandu valley, we find that the number of vehicles plying along the roads of the valley is unexpectedly increasing. Youths compel their parents to buy them modern motor-bikes of new fashion and modify their height, sound and looks. As a result, they encounter maximum accidents. Narrow roads that are not black-topped, negligence of drivers, deteriorating condition of vehicles and unnecessary and untimely checkups by the traffic police, and denial to obey traffic rules and regulations are also the pertinent factors leading to accidents in Kathmandu valley.

Despite the government's focus to minimize RTAs in Kathmandu valley, the number of casualties is increasing incredibly. Although the number of accidents are higher in Kathmandu in comparison to the other regions of Nepal, the number of deaths and injuries is comparatively lower due to the availability of immediate rescue service and treatment. Seriously injured people cannot get immediate treatment in most of the districts of Nepal; and there is no option to bring such patients to Kathmandu for further treatment. And even carrying seriously injured people to Kathmandu is out of the reach for general public as they cannot afford helicopter's fare. As a result, even the people with minor injury are compelled to come to Kathmandu for their final check-ups. The government of Nepal has deployed maximum number of traffic police staffs in Kathmandu valley in

comparison to the other parts of Nepal.

If we study sex-based RTAs, females share one-third of the involvement in accident. Police personnel, while talking unofficially, have the opinion that maximum number of girls / women become the victims of the bike and scooter accidents in Kathmandu and outside. Generally, the person sitting on the backside of the driver has greater chances of being killed or seriously injured. Maximum accidents happen due to the negligence of the drivers. They pay no attention to driving and keep on talking or looking here and there instead of concentrating on the steering. Bike riders do not use helmet; nor do they pay attention while driving. Maximum number of casualties are due to high speed of the bike. Maximum number of drivers lack the fundamental knowledge regarding their vehicles. They are unable to handle the nominal problems that emerge during driving. As a result, they encounter accident unexpectedly. Due to the ignorance of fundamental knowledge of the machine, maximum accidents occur. In fiscal year 2068/069, 101 RTAs had occurred due to the mechanical defect; and the number increased by 20 in the fiscal year 2069/070. However, the number of RTAs due to mechanical defect decreased by 70 in fiscal year 2073/074. The number of accidents due to this reason decreased only because of the new buses and vehicles brought into the market.

Old vehicles are discarded and the passengers' choice naturally goes to the new and sophisticated vehicles. Pedestrians too are the cause of RTAs as they defy traffic rules and regulations, and cross the road carelessly. However, the number of accidents due to this cause has been decreasing every year. In the fiscal year 2068/069, the number of RTAs was 85 due to the negligence of the pedestrians which climbed down to 4 in fiscal year 2073/074.

The study of RTAs in Kathmandu valley proved that maximum number of accidents occur due to the negligence of the driver, maximum bike riders become the victims of accidents, around 33 percent females become the victims of accidents, the number of RTAs is increasing every year, the number of deaths due to accident is comparatively lower in Kathmandu valley due to the easy access of hospital and doctors; and despite heavy deployment of traffic police on the roads of Kathmandu valley, no remarkable achievement has been in hand in minimizing accidents and human casualties.

Conclusion

To sum up, Road Traffic Accident (RTA) has been really a serious problem in Kathmandu valley. Every year the number of casualties is increasing. The standard of road should be maintained and there must be coordination among the government bodies, vehicle owners, and civil society for the honest observation of traffic rules and regulations. The government should pay attention to improve the quality of roads by giving emphasis on infrastructure building. Traffic education should be included in school level curriculum so that youths may obey traffic rules and regulations. In most of the countries, long-term impacts of traffic injury are poorly documented and the impact assessment of the accidents is quite insufficient worldwide. Persons involved in road traffic incidents may develop psychological symptoms PTSD (post-traumatic stress disorder). This can lead to impairment in everyday life. The patient may

perceive subjective threat to life in long term. Drivers also face many threats from physical assault to legal persecution when accidents occur.

REFERENCES

- Adhikari, Guru Prasad. (2016). " Road Traffic Accidents (RTAs) Trend on Kathmandu – Bhaktapur Road after addition of lanes". *Open Journal of Civil Engineering*. 2016, 6, 388-396.
- Central Bureau of Statistics. *SAARC in Figures*, 2016.
- Chaulagain et. al. (2015). “ Epidemiology of Road Traffic Accidents in Nepal: Data Review and Qualitative Analysis”. *SM Journal of Public Health and Epidemiology*, 2015;1(3):1014.
- Gopalkrishnan, S. "A Public Health Perspective of Road Traffic Accidents". *Journal of Family Medicine and Primary Care* 149 July 2012 : Volume 1 : Issue 2
- Kathmandu Post. Not enough roads for Valley vehicles: Traffic Police. Jan 9, 2016.
- Majdan et. al. (2012). Traumatic brain injuries caused by traffic accidents in five European countries: outcome and public health consequences. *European Journal of Public Health*, Volume 23, Issue 4, 1 August 2013, Pages 682–687.
- SadakDurghatana*(2017). *Social Statistic*. Kathmandu: Central Bureau of Statistics. Kathmandu. p61.
- Social Statistics. *Vehicular Accident*. Central Bureau of Statistics. Nepal, 2073. P57-58.
- WHO Report 2013.