



e-ISSN: 2319-8753 | p-ISSN: 2320-6710

IJIRSET

International Journal of Innovative Research in
SCIENCE | ENGINEERING | TECHNOLOGY

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 10, Issue 5, May 2021

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.512

9940 572 462

6381 907 438

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Study of Traffic Accidents and Importance of Road Safety Measures in Srinagar, Kashmir

Tayeed Feroz Khan¹, Er. Insha Shahzad²

B.E. Student, Department of Civil Engineering, SSM College of Engineering, Kashmir, India¹

Associate Professor, Department of Civil Engineering, SSM College of Engineering, Kashmir, India²

ABSTRACT: With the increase in urbanisation, there is a large improvement in the automobile sector which has improved the quality of transportation by innovating different types of vehicles which run freely and smoothly on roads but this has somehow impacted the lives of people negatively. It is quite evident that with the improvement in technology in automobile sector, the traffic on roads has increased and simultaneously the chances of accidents are also increased. Srinagar, being the summer capital of the union territory, Jammu and Kashmir is one of the busiest city. Srinagar in India is one such city wherein the streets have lately experienced sudden rise of traffic volumes, catching the concerned departments unawares. A well-maintained road can serve as a means of connectivity for large traffic and at the same time it allows the pedestrians to cover a large distance without any difficulty but still the precautions must be taken to avoid an unavoidable circumstances. This study is done to know the different aspects of the road traffic safety and provide best possible solution to avoid the accidents due to flow of traffic and due to other negligence which can surely help in saving the precious lives.

KEYWORDS: Road accidents, Traffic congestion, Road safety measures, Traffic Accidents, Road Safety, Fatality, Dilapidated Roads

I. INTRODUCTION

Road is an extensive way leading from one place to another, especially one with a specially organized surface which vehicles can use. Roads play an important role in the connectivity with different parts of the world and may represent one of the most used means of travelling. It is very important to ensure the maintenance of the roads as they may impact the smooth functioning of the vehicles and pedestrians at the same time. A well-maintained road can serve as a means of connectivity for large traffic and at the same time it allows the pedestrians to cover a large distance without any difficulty. Srinagar, being the summer capital of the union territory, Jammu and Kashmir is one of the busiest district. Srinagar in India is one such city wherein the streets have lately experienced sudden rise of traffic volumes, catching the concerned departments unawares. The situation is made worse by occupation of street space by vendors and standing vehicles which causes more and more congestion of roads. This proves to be fatal to the pedestrians and simultaneously the traffic halts. Efforts are made by the Government to reduce the congestion to some extent by providing the separate place to the vendors or by providing the vertical parking in the heart and most busiest place of Srinagar i.e. Lal Chowk but with the improvement in the urbanisation such efforts seem not to be very impactful on ground.

Kashmir is passing through a phase of rapid urbanization, motorization and industrialization but the lack of safety related policies and programmes have resulted in increased incidences of road traffic accidents. This study was done to understand the epidemiological characteristics of road traffic accident victims, the various types and sites of the injuries and to emphasize the importance of behavioural change in population regarding road safety rules rather than just improving the road conditions and to know the commonest injury so that the proper personal protective measures can be applied. Study will act as a useful tool for providing healthcare facilities to reduce the road traffic accidents associated mortality and morbidity [2]. Road safety is an important public health concern and attention must be given on Road safety measures. Strict adherence to road safety measures reduces road accident injuries and road accidents. Road related accidents are undoubtedly the most frequent and, overall, the cause of the most damage. The main reasons for this are the extremely dense road traffic and the relatively great freedom of movement given to drivers. In today's modern era road and transport has become a central part of every human being. Everybody is a road user in one way or the other. The present transport system has reduced the distances but it has on the other hand increased the life risk of road accidents. Every year road accidents lead to loss of lakhs of lives and serious injuries to

crores of people. In India itself about eighty thousand people are killed in road crashes every year which is 13% of the total fatality all over the world. The person behind the wheel plays an important role in most of the road accidents. In most cases, road accidents occur either due to carelessness or due to lack of road safety awareness of the road user. Therefore, road safety education is as essential as any other basic skills of survival. In this paper, we will briefly focus on the various aspects of road safety important for reducing road accidents [3].



Car damaged in an accident in Srinagar, Kashmir

According to “*Vox Pop - Rising cases of road accidents in Srinagar*”, one of the bylines of Rising Kashmir, “Last year, despite the Covid-19 pandemic at least 45 people died in Srinagar due to accidents, with 275 injured. In the last ten years, there have been 3865 road accidents in Srinagar in which 694 people were killed. Bad roads, overspeed and failure to follow traffic rules is blamed for the same”. While talking to the Rising Kashmir one of the locals in Srinagar namely, *Natika Bhat* from Sonwar said, “The number of road accidents in Kashmir is double the national average based on the population of the state. Everyone has to get involved to curb accidents and that is how such accidents can be avoided. We should take proper precautions and the government also has to play an active role. The government should provide proper road facilities and should not give driving license to those who don’t pass the test. Also, there is a need for public awareness”. Another local, *Reyaan Bandy* from Alochi Bagh expressed his concern by saying, “First of all, we need to appreciate the fact that having a safe road culture is a process and not an immediate goal that can be achieved overnight. Having a safe road culture is a painstaking journey that entails education, certification, monitoring, coordination between multiple government agencies and finally, a strong enforcement culture. Here, all those aspects are either totally missing or abysmally poor. We need a complete revamp of road culture in general and traffic management in particular”. *Osama Bin Shams* from Shivpora said, “Avoiding safety measures, driving without protective gears, drinking and driving adds to the increase in road accidents. Improper roads and potholes are also a major cause. Kashmiri people don’t have any road sense. We don’t have a driving training school. Traffic police only seem to confine themselves to filing challans. We expect good driving from others but we are not ready to follow traffic guidelines ourselves. We have ourselves to blame for the traffic mess”. According to another local, *Syed Uzma* from Dargah, “Srinagar has very narrow roads. People drive on the wrong sides and in a hurry to reach their respective destinations. They drive recklessly and don’t wear proper gear like helmets and seat belts. These are only followed when traffic police are near. People are not scared of death but shockingly they are scared of police who can fine them. Driving licenses are provided without the proper trial to test driving skills. I have even seen minors possessing a driving license. How can this happen in current times?” [4]



Dilapidated roads in the vicinity of Srinagar, Kashmir

II. OBJECTIVE OF THE STUDY

The main objective of this study is to know the different reasons of the traffic accidents in the vicinity of Srinagar city and to provide the effective and impactful precautionary measures which would surely contribute in saving the precious lives. This study also focuses on the road safety measures that should be implemented by the Government which in turn should be responsibly followed by every citizen.

III. DETAILED DISCUSSION

According to WHO, following are the key facts as far as the accidents are concerned:

- ❖ Approximately 1.35 million people die each year as a result of road traffic crashes.
- ❖ The 2030 Agenda for Sustainable Development has set an ambitious target of halving the global number of deaths and injuries from road traffic crashes by 2020.
- ❖ Road traffic crashes cost most countries 3% of their gross domestic product.
- ❖ More than half of all road traffic deaths are among vulnerable road users: pedestrians, cyclists, and motorcyclists.
- ❖ 93% of the world's fatalities on the roads occur in low- and middle-income countries, even though these countries have approximately 60% of the world's vehicles.
- ❖ Road traffic injuries are the leading cause of death for children and young adults aged 5-29 years.
- ❖ Every year the lives of approximately 1.35 million people are cut short as a result of a road traffic crash. Between 20 and 50 million more people suffer non-fatal injuries, with many incurring a disability as a result of their injury.
- ❖ Road traffic injuries cause considerable economic losses to individuals, their families, and to nations as a whole. These losses arise from the cost of treatment as well as lost productivity for those killed or disabled by their injuries, and for family members who need to take time off work or school to care for the injured. Road traffic crashes cost most countries 3% of their gross domestic product.



Who is at risk?

Socioeconomic status	More than 90% of road traffic deaths occur in low- and middle-income countries. Road traffic injury death rates are highest in the African region. Even within high-income countries, people from lower socioeconomic backgrounds are more likely to be involved in road traffic crashes.
Age	Road traffic injuries are the leading cause of death for children and young adults aged 5-29 years.
Sex	From a young age, males are more likely to be involved in road traffic crashes than females. About three quarters (73%) of all road traffic deaths occur among young males under the age of 25 years who are almost 3 times as likely to be killed in a road traffic crash as young females.

Risk factors

The Safe System approach: accommodating human error	<ul style="list-style-type: none"> The Safe System approach to road safety aims to ensure a safe transport system for all road users. Such an approach takes into account people’s vulnerability to serious injuries in road traffic crashes and recognizes that the system should be designed to be forgiving of human error. The cornerstones of this approach are safe roads and roadsides, safe speeds, safe vehicles, and safe road users, all of which must be addressed in order to eliminate fatal crashes and reduce serious injuries.
Speeding	<ul style="list-style-type: none"> An increase in average speed is directly related both to the likelihood of a crash occurring and to the severity of the consequences of the crash. For example, every 1% increase in mean speed produces a 4% increase in the fatal crash risk and a 3% increase in the serious crash risk. The death risk for pedestrians hit by car fronts rises rapidly (4.5 times from 50 km/h to 65 km/h). In car-to-car side impacts the fatality risk for car occupants is 85% at 65 km/h.
Driving under the influence of alcohol and other psychoactive substances	<ul style="list-style-type: none"> Driving under the influence of alcohol and any psychoactive substance or drug increases the risk of a crash that results in death or serious injuries. In the case of drink-driving, the risk of a road traffic crash starts at low levels of blood alcohol concentration (BAC) and increases significantly when the driver's BAC is ≥ 0.04 g/dl. In the case of drug-driving, the risk of incurring a road traffic crash is increased to differing degrees depending on the psychoactive drug used. For example, the risk of a fatal crash occurring among those who have used amphetamines is about 5 times the risk of someone who hasn't.
Non-use of motorcycle helmets, seat-belts, and child restraints	<ul style="list-style-type: none"> Correct helmet use can lead to a 42% reduction in the risk of fatal injuries and a 69% reduction in the risk of head injuries. Wearing a seat-belt reduces the risk of death among drivers and front seat occupants by 45 - 50%, and the risk of death and serious injuries among rear seat occupants by 25%. The use of child restraints can lead to a 60% reduction in deaths.
Distracted driving	<ul style="list-style-type: none"> There are many types of distractions that can lead to impaired driving. The distraction caused by mobile phones is a growing concern for road safety. Drivers using mobile phones are approximately 4 times more likely to be involved in a crash than drivers not using a mobile phone. Using a phone while driving slows reaction times (notably braking reaction time, but also reaction to traffic signals), and



	<p>makes it difficult to keep in the correct lane, and to keep the correct following distances.</p> <ul style="list-style-type: none"> • Hands-free phones are not much safer than hand-held phone sets, and texting considerably increases the risk of a crash.
Unsafe road infrastructure	<ul style="list-style-type: none"> • The design of roads can have a considerable impact on their safety. Ideally, roads should be designed keeping in mind the safety of all road users. This would mean making sure that there are adequate facilities for pedestrians, cyclists, and motorcyclists. Measures such as footpaths, cycling lanes, safe crossing points, and other traffic calming measures can be critical to reducing the risk of injury among these road users.
Unsafe vehicles	<ul style="list-style-type: none"> • Safe vehicles play a critical role in averting crashes and reducing the likelihood of serious injury. There are a number of UN regulations on vehicle safety that, if applied to countries' manufacturing and production standards, would potentially save many lives. These include requiring vehicle manufacturers to meet front and side impact regulations, to include electronic stability control (to prevent over-steering) and to ensure airbags and seat-belts are fitted in all vehicles. Without these basic standards the risk of traffic injuries – both to those in the vehicle and those out of it – is considerably increased.
Inadequate post-crash care	<ul style="list-style-type: none"> • Delays in detecting and providing care for those involved in a road traffic crash increase the severity of injuries. Care of injuries after a crash has occurred is extremely time-sensitive: delays of minutes can make the difference between life and death. Improving post-crash care requires ensuring access to timely prehospital care, and improving the quality of both prehospital and hospital care, such as through specialist training programmes.
Inadequate law enforcement of traffic laws	<ul style="list-style-type: none"> • If traffic laws on drink-driving, seat-belt wearing, speed limits, helmets, and child restraints are not enforced, they cannot bring about the expected reduction in road traffic fatalities and injuries related to specific behaviours. Thus, if traffic laws are not enforced or are perceived as not being enforced it is likely they will not be complied with and therefore will have very little chance of influencing behaviour. • Effective enforcement includes establishing, regularly updating, and enforcing laws at the national, municipal, and local levels that address the above mentioned risk factors. It includes also the definition of appropriate penalties.

IV. CONCLUSION AND RECOMMENDATION

- The Government of J&K should act responsibly by maintaining the roads in good condition. The dilapidated roads should be macadamized at earlier so that any fatal incident can be avoided. Also the material used should be of good quality for better servicibility.
- The sign boards should be placed at the proper places and wherever needed.
- The street light should be installed at all the places and should be checked for appropriate working especially during night hours.
- The drivers should not exceed the permissible speed of driving and should act as a responsible citizen.
- The caution signs should be read properly by the drivers and should act accordingly.
- The drivers should not overtake each other in order to keep themselves and their passengers safe during the whole journey.
- If the journey is quite long, the driver should take some rest at the middle of the journey because falling asleep behind the wheel has led to many grave mishap on the road which in turn has resulted in the loss of lives.



- The condition of vehicle should be good and properly maintained. There should be no compromise on the quality of tyres and brakes. To avoid the tyre bursting on road, it is imperative to inflate tyres with the right air pressure.
- There should be proper check on the people who drive the vehicle without driving licence or is under-age to drive. This can be achieved only by the responsible duty done by the traffic police of Srinagar.
- It is the responsibility of every citizen to follow the traffic rules properly and keep proper watch on the traffic signal because the traffic rules and traffic signals have been implemented for the benefit of citizens and for their convenience.
- The street vendors should be given proper place so that the congestion on the roads can be minimized.
- The government should come up with more and more vertical parking projects so that the parking of vehicles on the roads can be avoided.
- Usually it is seen that the travellers don't wear the seat belts which can be proven to be fatal for their internal organs after a mishap.
- There should be availability of footpaths or zebra-crossing for the pedestrians especially the senior citizens and the children.

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