STUDY OF BEHAVIOR OF TWO WHEELERS DRIVERS TOWARDS HELMET WEARING, TALKING ON CELL PHONE WHILE DRIVING AND DRIVING WITH MANY PILLION RIDERS

Dr. Poonam Mittal¹
e-mail: poonam.mittal@utu.ac.in

Dr. Renuka Garg²
e-mail: dbimsgu@yahoo.com

ABSTRACT

Background and Objective:
Road fatalities are highest in India across the world. In India motorcyclists comprise highest number of road traffic victims. Gujarat State owns highest numbers of two wheelers and accounts for nearly 5% of road accidents in the country. Surat—the diamond and silk city of Gujarat has more than 75% two wheelers in its registered vehicular fleet. Percentage share of motorcyclists in road accident deaths in Surat city in the year 2007, 2008 and 2009 has been 28.6%, 29.4% and 28.6% respectively. The purpose of this paper is to study the risky behaviours of two wheeler drivers on roads and its causes.

Approach and Methodology:
Qualitative approach comprising World Health Organization’s (WHO) frame work for observational study with modifications according to local constraints, focus group and in depth interviews has been used. Observation of two wheeler drivers on highways, rural roads and city roads were carried out in Surat district for one month. Observations pertained to wearing helmet, talking on cell phone and driving with more than one as pillion. Photographic evidences of risky behaviour of two wheeler drivers have also been collected.

Major Results:
A total of 101,444 observations were made. It was found that 80% motorcyclists did not wear helmet and many drove with more than one pillion. Motorcyclists of all age groups were seen talking on cell phone while driving. It was not restricted to youngsters or college goers as is generally thought of. City roads witnessed higher violation of traffic safety norms than highways. Also, two wheelers were used as a carriage vehicle for transporting gas cylinders, cloths, grains, milk containers, children, poultry, PVC pipes etc.

¹ Dean, Department of Management & Commerce, Uka Tarsadia University, Bardoli.
² Dean & Head, Department of Industrial and Business Management, VNSGU, Surat.
Focus group saw a consensus on two key issues (i) peer pressures and (ii) youth related life style being responsible for risky behaviour. Similarly, four key issues emerged from in depth interviews with stakeholders: (i) unsafe practices displayed by other road users, (ii) environmental conditions and road characteristics, (iii) optimistic bias that ‘accidents happen to others’ and (iv) ignorance of outcome of their unsafe behavior- promoted risky behaviour among motorcyclists.

Conclusions:
Interventions in the form of planned social change, communication and education is suggested for promoting safe road behaviour among two wheeler drivers.

Key Words: Risky Behaviour, Motorcyclists, Observational Analysis, Focus Group
1 INTRODUCTION

Motorcycles being a highly convenient and economic mode of travelling on the road are popular among different sections of society alike. In recent years escalating growth of two wheeler riders in driving population in India is evident from its increased sales from 5.3 million in 2003-04 to 9.3 million in 2009-10. According to literature review factors responsible for mammoth growth of two wheelers are as follows:

![Figure: 1 Demand Drivers for Two Wheelers in India](image)

- **Enhanced Need**
  - Need for ownership of Vehicle
    - Increased urbanization and semi-urbanization
    - Inadequate mass transport system and poor public utility services
    - Need to be independent
    - Vast difference in prices of two wheelers and car for entry level
  - Demographic changes
    - Increased no. of salaried employee
    - Entry of female commuters
    - More youngsters from middle class.
    - Increased student force
    - Increased number of engineering students

- **Enhanced Affordability**
  - Discounts offered at entry level
  - Increase in disposable income in cities and rural area.
  - Rising industrial and agricultural output
  - High salary jobs provided by MNCs
  - Easy finance schemes
    - Increased credit and financing for auto vehicles
    - Higher loan tenure.
    - Low interest rates.

- **Enhanced Availability**
  - Robust Production
    - Favorable Govt. Policies
      - Liberalization
      - Low Excise duty
    - Availability of steel at cheap prices
  - Technical Advancement and Enhanced Product Options
    - Variety of attractive vehicle models
    - Improved features catering to diverse needs and preferences of customers
    - Economical Models
      - Introduction of Efficient and low maintenance models
Unfortunately, the growth of motorcycles / motorized two wheelers has been accompanied by growing number of fatal crashes in the country. The chart below describes the gravity of the situation.

![Figure: 2 Percentage Share of Two Wheelers in Road Accident Deaths in India](chart.png)

*Source: National Crime Report Bureau years 2001 -2009*

Human factors, Vehicle factors and environmental factors are the three important components of road safety. The physical characteristics of the vehicle coupled with unsafe behavioral factors of the driver exposes the two wheeler riders to high risks.

### Table 1 Risk exposure due to Vehicle and Human factors

<table>
<thead>
<tr>
<th>Vehicle Factors</th>
<th>Behavioral Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Two wheelers are relatively unstable on the road as they rest and move on two points only.</td>
<td>- Failure to wear helmets</td>
</tr>
<tr>
<td>- Two wheelers require continuous maneuvering and balancing by the driver.</td>
<td>- Not fastening helmet properly even if worn.</td>
</tr>
<tr>
<td>- Being small in size these vehicles are not highly visible on the roads.</td>
<td>- Talking on cell phone while driving.</td>
</tr>
<tr>
<td>- The rider being directly exposed to environment hits his head to mobile or stationary objects on road in case of a crash.</td>
<td>- Carrying more than one pillion rider.</td>
</tr>
<tr>
<td></td>
<td>- Driving at a very high speed.</td>
</tr>
<tr>
<td></td>
<td>- Drunken driving.</td>
</tr>
<tr>
<td></td>
<td>- Transporting huge amount of luggage.</td>
</tr>
</tbody>
</table>

2 BACKGROUND AND OBJECTIVE

Road fatalities are highest in India across the world. In India motorcyclists comprise highest number of road traffic victims. Gujarat State owns highest numbers of two wheelers and accounts for nearly 5% of road accidents in the country. Surat-the diamond and silk city of Gujarat has more than 75% two wheelers in its registered vehicular fleet. Surat city has seen a phenomenal growth in traffic population in the last decade as total numbers of registered vehicles increased by 114% during 2001-10. In the year 2010 out of 1625964 total registered vehicles, 78% were two wheelers. In Surat region, on highways and city roads everyday one comes across a large number of two wheeler drivers displaying blatant disregard for traffic safety rules.

Approximately 5% of road accident deaths by Two Wheelers occur in Gujarat. In Surat city too road accident deaths by two wheelers fluctuated between 5%-8% during 2001-2009.

Table 2 Share of Two-Wheelers in Total Accidental Deaths in Gujarat and Surat City

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gujarat Total Accidents</td>
<td>4471</td>
<td>4715</td>
<td>4813</td>
<td>4948</td>
<td>5264</td>
<td>5599</td>
<td>12258</td>
<td>6386</td>
<td>6914</td>
</tr>
<tr>
<td>Two-Wheelers</td>
<td>615</td>
<td>651</td>
<td>646</td>
<td>814</td>
<td>901</td>
<td>950</td>
<td>1057</td>
<td>1102</td>
<td>1260</td>
</tr>
<tr>
<td>Surat Total Accidents</td>
<td>118</td>
<td>148</td>
<td>147</td>
<td>160</td>
<td>230</td>
<td>140</td>
<td>259</td>
<td>245</td>
<td>217</td>
</tr>
<tr>
<td>Two-Wheelers</td>
<td>22</td>
<td>54</td>
<td>52</td>
<td>62</td>
<td>79</td>
<td>51</td>
<td>74</td>
<td>72</td>
<td>62</td>
</tr>
</tbody>
</table>


Therefore a three studies were conducted Surat city and four talukas (Bardoli, Mahuva, Mandvi and Palsana) of Surat district to study the risky behaviours of two wheeler drivers on roads and its causes.

4 Data obtained from Regional Traffic Office, Surat.
3 UNSAFE / RISKY BEHAVIOUR

Three common unsafe and risky behaviours of two wheeler driver’s are:

- **Not Wearing Helmet**

  Despite established benefits of wearing helmet majority of two wheeler riders abstain from them. Female drivers mostly cover their faces with ‘dupatta’ instead of wearing a helmet. Photos below substantiate the fact.

  ![Image](Times of India 11-1-2011 Photograph by researcher 15-4-2011)

- **Driving with Two or more as Pillion**

  In Surat region many youngsters and elderly travel with more than one pillion rider on two wheelers. Often three or four friends are seen travelling together on a single two wheeler and playing pranks with each other.

  Similarly family consisting husband, wife along with one or more child and some luggage are also seen on this ‘family two wheeler’.

  ![Image](Times of India, Ahmedabad, July 19, 2010 Monday pp-4)

- **Talking on Cell Phone**

  Two wheeler drivers are commonly seen using cell phone by one hand and handling the vehicle only by the other hand or balancing the cell phone between ears and shoulder blades by leaning on one side. This not only imbalances them but also divides their attention from the main task of driving. It virtually becomes impossible for the driver to respond quickly to any sudden swerve in the movement of his own vehicle or that of the oncoming vehicles. The use of cell phone while driving can create most dangerous situation for the driver as well as for the other people on the road.
4 IMPACT OF UNSAFE BEHAVIOR

Indulgence in above risky behaviours by motorcyclists/motorized two wheeler riders pose dangers on themselves and to other road users in different intensity in case of a crash.

Table 3 Impact of Unsafe Behaviour of Motorized Two Wheeler Drivers in Case of a Crash

<table>
<thead>
<tr>
<th>Unsafe Behaviour</th>
<th>Intensity of Danger Posed on Self</th>
<th>Intensity of Danger Posed on other Road Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non use of helmet</td>
<td>Highly unsafe and dangerous</td>
<td>Moderately unsafe and dangerous</td>
</tr>
<tr>
<td>Talking on cell phone</td>
<td>Highly unsafe and dangerous</td>
<td>Highly unsafe and dangerous</td>
</tr>
<tr>
<td>Driving with two or more passengers as pillion</td>
<td>Highly unsafe and dangerous</td>
<td>Moderately unsafe and dangerous</td>
</tr>
</tbody>
</table>

5 LEGAL PROVISIONS

Driving without wearing helmet, talking on cell phone while driving and driving with two or more pillion is an offence as per Motor Vehicle Act 1988.

Table 4 Offences under Motor Vehicles Act 1988

<table>
<thead>
<tr>
<th>Offence</th>
<th>Legal Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving without wearing helmet</td>
<td>Not wearing helmet by the driver and rider of motorized a two wheeler is an offence as per MV Act 1988 (sec. 129 r/w s 177).</td>
</tr>
<tr>
<td>Driving and talking on cell phone</td>
<td>Using mobile phone while driving a vehicle is an offence as under Rule 21 (25) of the Central Motor Vehicles Rules read with Section 177 of the MV Act.</td>
</tr>
<tr>
<td>Driving with two or more passengers as pillion</td>
<td>Driving motorized two wheeler with two or more passengers on it is an offence under Motor Vehicle act 1988(sec. 128 (1) r/w s. 177).</td>
</tr>
<tr>
<td>Punishment</td>
<td>All the three offences attract a fine of Rs. 100 for first offence and Rs. 300 for second or subsequent offences.</td>
</tr>
</tbody>
</table>
6 STUDY: 1 OBSERVATIONAL STUDY

In the first phase of a study observation of two wheeler drivers on highways, rural roads and city roads were carried out in Surat district for one month as per World Health Organisation’s WHO\(^5\) framework for observation with modifications according to local constraints.

Table 5 Observation Method

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Motorized two-wheeler drivers on roads in Surat District</th>
</tr>
</thead>
</table>
| **Observation Sites** | • Bardoli Surat national highway no 6.  
• Mahuva Bardoli state highway no. 165.  
• Mandvi Bardoli state highway no.88.  
• Bardoli Palsana State highway no167.  
• Local city roads of Mandvi, Bardoli, Mahuva and Surat city. |
| **Data Collection** | Manual recording of data in specifically designed form.  
15\(^{th}\) April 2010 to 15\(^{th}\) May 2010  
44 |
| **Protocol** | **Local City Roads** |
| **No. of observers** | 4 per site. |
| **Observers Job** | • Counted number of motorized 2 wheeler drivers on the site.  
• Counted drivers and pillion rider who wore helmet.  
• Counted the number of motorized two wheeler drivers talking on cell phone while driving and those who took their vehicle to a side on the road and then talked on cell phone.  
• Counted those driving with two or more passengers as pillion.  
Standing at safe place near the particular site. Traffic passing from both sides was observed.  
1 hour each in the morning and evening.  
6:30 am to 7:00 pm as per the convenience of observers. |
| **Mode of Observation** | **Local City Roads** |
| **Duration of Observation** |  |
| **Time of Observation** |  |

Highways
No. of observers
Observers Job
1st Observer
2nd Observer

Mode of conducting Observation
Duration of Observation
No. of Observations

Highways
2 per site.
- Counted the number of motorized two wheeler drivers and drivers and pillion riders wearing helmet.
- Counted the number of motorized two wheeler drivers talking on cell phone while driving and those who took their vehicle to a side on the road and then talked on cell phone and driving with two or more passengers as pillion.
Observations were made through moving bus, car and auto rickshaw. Observations were confined to traffic passing from the opposite direction only.
20 minutes to 1 hour depending on the time taken in commutation.
40

Data Analysis
A total of 101,444 motorcyclists/two wheeler drivers were observed during the observation period. Observations pertained to wearing helmet, driving with more than one as pillion, talking on cell phone and talking on phone after parking aside. Their indulgence in risky/safe behaviour is tabulated in table: 7

To determine the relationship between observation sites and unsafe behavior of road users $\chi^2$ test has been conducted and probability values (p-value) at 95% confidence level has been calculated for driving without helmet wearing, driving and talking on cell phone, driving with two or more pillion and talking on phone after parking aside against the recorded observations.

Table 6 Unsafe Behaviour Observed on Highways and City Roads

<table>
<thead>
<tr>
<th>Observation Sites</th>
<th>Total Observations</th>
<th>Driving without Wearing Helmet (p=0.000)</th>
<th>Driving and Talking on Cell Phone (p=0.000)</th>
<th>Driving with two or more pillion (p=0.000)</th>
<th>Talking on Phone after parking aside (p=0.000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Highway Bardoli-Mahuva</td>
<td>10295</td>
<td>9522</td>
<td>92.5%</td>
<td>136</td>
<td>1.32%</td>
</tr>
<tr>
<td>State Highway Bardoli-Palsana</td>
<td>1342</td>
<td>1131</td>
<td>84.3%</td>
<td>20</td>
<td>1.49%</td>
</tr>
<tr>
<td>Road Type</td>
<td>Observation Sites</td>
<td>Behaviours per 10,000</td>
<td>Highways</td>
<td>Local Roads</td>
<td>Highways</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------</td>
<td>-----------------------</td>
<td>----------</td>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Driving without Wearing Helmet (p=0.000)</td>
<td>8918</td>
<td>9704</td>
<td>213</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Driving and Talking on Cell Phone (p=0.000)</td>
<td>9704</td>
<td>8918</td>
<td>431</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Driving with two or more pillion (p=0.000)</td>
<td>1082*</td>
<td>296*</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Talking on Phone after parking aside (p=0.000)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

* Wearing Helmet and Driving (per 10000)
7 FINDINGS

• Driving without Wearing Helmet

H₀: There is no association between wearing helmet and the type of road travelled.

Pearson Chi-Square $\chi^2 = 2.467$, and $p<0.001$ indicates rejection of null hypothesis. Thus, there is an association between wearing helmet and the type of road travelled.

- Driving without wearing helmet is higher on local city roads (97.0%) than on highways (89.2%).
- Overall all helmets wearing behaviour is a meager 6.8% only.
- Lowest wearing helmet rate is at Mahuva (0.2%)

• Driving and Talking on Cell Phone

H₀: There is no association between talking on cell phone while driving a two wheeler and the type of road travelled.

Pearson Chi-Square $\chi^2 = 3.817$, and $p<0.001$ indicates rejection of null hypothesis. Thus, there is an association between talking on cell phone while driving a two wheeler and the type of road travelled.

- This unsafe behaviour is adopted more on city roads (4.30%) than on highways (2.01%).
- Overall behaviour of talking on cell phone while driving is 3.02%, which is extremely dangerous and unsafe for all road users.

• Driving with Two or More Pillion

H₀: There is no association between driving with two / more as pillion and the type of road travelled.

Pearson Chi-Square $\chi^2 = 64.690$, and $p<0.001$ indicates rejection of null hypothesis. Hence, there is an association between driving with two / more as pillion and the type of road travelled.

- Driving behaviour with two or more pillion is higher on city roads (5.03%) than on highways.

• Talking on Cell Phone after Parking Aside

H₀: There is no association between talking on cell phone after parking aside and the type of road travelled.

Pearson Chi-Square $\chi^2 = 1.267$, and $p<0.001$ indicates rejection of null hypothesis. Hence, there is an association between talking on cell phone after parking aside and the type of road travelled.
8 OTHER RELEVANT OBSERVATIONS

- In a very few cases both the driver and pillion rider were wearing helmet. In 4/5 cases only pillion passenger was wearing helmet while the driver was without helmet.
- In general, girls and ladies covered their faces with cloth only. They were rarely seen wearing helmet.
- In some cases, the rider’s helmet was hanging either on motorcycle’s handle or was tied to the side of the bike or the pillion passenger was holding helmet in his hands. This characteristic of motorbike drivers was also found in observation earlier observational studies carried out in Delhi⁶ and Bangalore.⁷
- Some helmet wearers were seen talking on cell phone by putting their hand inside the helmet. This shows that chin strap was not buckled properly.
- Use of mobile phone by drivers of motorcyclists is prevalent among all age groups. It is not restricted to youngsters or college goers as is generally thought of. In fact, majority were non college goers as per the observation.
- On highways, motorized two wheeler drivers talk on cell phone while driving at a very high speed.
- Travelling with two or more adult persons is very common and a regular feature.
- Small kids sitting in front of the bike were found sleeping without driver’s knowledge in many instances.
- Indulgence in other kinds of unsafe and hazardous behaviour observed are as under:

---

⁷ NIMHANS (2005), “Head Injuries and Helmets: Helmet Legislation and Enforcement in Karnataka and India, National Institute of Mental Health a& Neuro Science, Bangalore pp. 21
Many motorcyclists were seen transporting disproportionately heavy and large luggage e.g. bags/sacks/bales of cloths.

LPG Gas cylinder a potentially hazardous material was seen to be transported frequently on motorcycle. The pillion rider holds it in his lap.

Milkmen were carrying heavy containers of milk for delivery of milk.

A huge amount of empty gunny bags and empty oil canisters Glass fittings, furniture item, computer’s CPU, pedestal fans, vegetable and fruit containers, etc. was being transported on motorcycle.

One motorcycle driver and his pillion companion had encircled a huge round of PVC pipe on his waist for transporting it to the destination.

Transporting chickens and hens upside down tied with strings and carrying a goat in between pillion rider and driver was a routine and common feature.

One motorcyclist was using his motorcycle as a mobile shop of utensils and other household items.

Photographic evidences of unsafe behavior of motorized two-wheeler drivers on road

Times of India 21-03-2012       Times of India- 10-01-2010 Indian Express-23-11-2010
16th Road Safety on Four Continents Conference
Beijing, China 15-17 May 2013

Family riding on Family Two Wheeler
Indian Express 5-8-2010 Times of India June 2009

Indian Express-23-11-2010 Times of India 10-7-2010
April 2010
Photographed by Observers
9 MAJOR FINDINGS OF OBSERVATION
1. City roads witnessed higher violation of traffic safety norms than highways.
   - Driving without wearing helmet is higher on local city roads (97.0%) than on highways (89.2%).
   - The behaviour of talking on cell phone while driving is seen more on city roads (4.30%) than on highways (2.01%).
   - Driving behaviour with two or more pillion is higher on city roads (5.03%) than on highways.
2. Overall helmet wearing behaviour is a meagre 6.8% only.
3. Girls and ladies were rarely seen wearing helmet.

10 STUDY: 2 FOCUS GROUP
The second phase of study comprised four focus groups with graduate and post graduate students having homogeneity within the group in terms of age and educational qualification. Each group comprised 8 to 10 participants. The researcher conducted discussions with four focus groups in three levels.

In the first level, each participant presented his/her viewpoint on ‘risky behavior of two wheeler drivers’. In Level 2, the participants were posed some questions based on their arguments in Level 1 and were allowed to ask questions to each other and counter the viewpoints expressed by other participants. The discussion pertained to merits and de-merits of unsafe behavior of two wheeler drivers on the following key issues.

- Is peer pressure responsible for risky behavior?
- Is youth related life style responsible for risky behavior?
- Is optimistic bias that ‘accidents happen to others’ is a reason for non compliance of traffic rules?
- Is weak implementation of law a reason for unsafe behavior on road?
- Is ignorance of outcome of unsafe behavior - promoted such behaviour among motorcyclists?

A consensus was reached on the key issues in the third level. The group reached a consensus that peer pressures and youth related life styles were mainly responsible for risky behavior of two wheeler drivers on roads.

11 STUDY: 3 IN DEPTH DISCUSSIONS
In the third phase of a study in depth discussions were held to obtain the views of stakeholders such as doctors, police officers, road transport officers, parents, teachers on road safety measures. Following key issues emerged from in depth interviews on the causes of unsafe behavior by two wheeler drivers:
• Road users resist wearing seat belt and helmet.
• Conveniences attached to cell phone propel drivers to talk while driving.
• Youth related life style affects attitude and behaviour of youngsters.
• Road users often imitate unsafe practices displayed by others on road.
• Optimistic bias that ‘accidents happen to others’ promotes unsafe practices

12 SUGGESTED INTERVENTIONS
Interventions in the form of planned social change, communication and education is suggested for promoting safe road behaviour among two wheeler drivers.

Planned social change strategy such as ‘Directed Change Approach’ comprising persuasive, power and re-educative strategies on the target is suggested (Z. Gerald, Philip Kotler and Ira Kaufman (1972), Creating Social Change, pp. 172-186). According to Philip Kotler, one of the approaches to accomplish social change is ‘Directed Change Approach’ where change is sought through application of persuasive, power and re-educative strategies on the target. This three pronged approach uses three different methods to overcome resistance, inertia and indifference of change targets.

![Figure: 2 Directed Change Strategy for Promotion of Safe Road Behaviour](image-url)

Adapted from Chin and Beene (1961)
Power strategy attempts to produce behavioral compliance among individuals. It is realized through watchfulness and threats from authority figures. For their own benefit, the change targets end up cooperating out of fear of punishments.

Persuasion strategy attempts to induce desired behavior in individuals. It is done by convincing the change targets that the alternate behavior serves their own interest.

In re-educative strategy, individuals are confronted and sensitized about the relevance of alternate behavior. Here, the targets internalize the required behavior because it appears advantageous to them.

Stakeholders like, traffic authorities, parents and head of the educational institutes may be involved for execution of these strategies. It is suggested that surgeons, celebrities and survivors of road crashes narrate the impact of unsafe road behavior via news stories and visuals. Also, statistics of fatal crashes and injuries may be made known to masses through the media.

Secondly, a communication system may be developed to facilitate unlearning of preferred unsafe road practices and to disseminate knowledge and information. The researcher suggests a communication strategy to take the form of education, encouragement, enforcement, engagement, emergency care and evaluation.

It is imperative to launch a concerted and sustained campaign to educate the public in road safety and to sensitize them towards harmful effects of bad road behavior. Increased public awareness may help modify belief and attitude of road users. Education and encouragement must be supported by legislation and enforcement. Appropriate actions shall help realize the slogan of World Health Day 2004, that “ROAD SAFETY IS NO ACCIDENT”. The following communication model is suggested for implementation.
16th Road Safety on Four Continents Conference
Beijing, China 15-17 May 2013

References


Following key issues have emerged after a comprehensive analysis of the problem:

• Constant education and re-education of drivers and family members through involvement of all stakeholders.

• Giving priority to road safety in all state programmes.

• Tackling the problem on war footing by combined use of legislation, education and enforcement.

• Application of ‘Seeing is believing’ principle through display of accident statistics on big hoardings at important places in cities, highways and petrol pumps.

Communications Model

**Enforcement**
- **By Traffic Police**
  - Enforce Law
  - Penalize defaulters
- **By Schools/Colleges**
  - Take actions against underage driving and other offences
- **By Media**
  - Abandon and penalize negative advertisements
- **By Parents**
  - Do not provide vehicles to children not entitled
  - Insist helmet wearing
  - Insist not to talk on phone when driving
- **By Organizations**
  - Ensure compliance by employees

**Education**
- **By Traffic Police**
  - That accidents are preventable
  - About scale of problem
  - Benefits of safe habits
  - Organize seminars
  - Create web portals
- **By Media**
  - Display statistics
  - Use icons to impart messages
- **By Schools/Colleges**
  - Conduct class on road rules/safety
  - Show visuals of harmful effects of unsafe behavior
- **By Health Sector**
  - Display impact of unsafe road behavior
  - Cost of an accident to victims family
  - Suffering associated with accidents
- **By Family**
  - Act as role models

**Engage**
- Road Safety is stakeholders' Collective responsibility

**Encouragement**
- **By Traffic Police**
  - Give recognition stickers
  - Accentuate positive behavior
- **By Schools/Colleges**
  - Awards
  - Appreciations
  - Rallies, contests
  - Initiatives
- **By Media**
  - Advertisement with positive messages
- **By Insurance Agencies**
  - Less premiums for law abiders
- **By Parents**
  - Encourage safe habits in children
• Introducing educational modules on road safety in syllabus of all primary and secondary schools.
REFERENCES:

Articles


Book
