STUDY ON REAR SEAT-BELT USAGE AND CHILD ROAD SAFETY IN INDIA

11TH JANUARY, 2019

Based on a National Survey Conducted for SaveLIFE Foundation by Marketing and Development Research Associates (MDRA)

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IMPROVING ROAD SAFETY AND EMERGENCY CARE ACROSS INDIA

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EXECUTIVE SUMMARY

Road traffic injuries claim more than 1.35 million lives each year globally. However, the burden of road crash deaths is disproportionately high among low and middle-income countries. The current scenario in India is nothing short of an epidemic. 13 lakh people lost their lives and another 50 lakh were injured in road crashes over the last decade. Road crashes impact not only the society but also the economy of a country in multiple ways. According to the WHO Global Status Report on Road Safety 2018[1], road crashes, are the leading cause of death amongst children and young adults between the age group of 5-29 years, creating a hole in our demographic dividend.

This study explores two crucial aspects of securing lives in transit- the status of use of rear seat-belts and the status of safety of children during commute. With an aim to understand Knowledge, Attitude, Behaviour, and Practices (KABP) of road users with regard to usage of Rear Seat Belts and Child Road Safety in India, SaveLIFE Foundation. (SLF), an independent, non-governmental organization committed to improving road safety and emergency medical care in India & Nissan Motor India Private Limited, entered into a partnership. A multi-city nationwide study was conducted to understand both these aspects.

Marketing and Development Research Associates (MDRA) was engaged to conduct a detailed mixed-methodology study. The study uses quantitative research to survey children and adults including parents, cab drivers and school bus/van drivers in 11 cities across India. These cities include Delhi-NCR, Mumbai, Bengaluru, Jaipur, Lucknow, Kolkata, Guwahati, Patna, Panaji, Chennai, and Kochi. Qualitative tools including in-depth interviews with road safety experts, medical practitioners, traffic personnel and school transport managers, among others were also used. Focus-group discussions with parents who use two wheelers and four wheelers to commute with their children were also conducted. Finally, the study includes observations to assess the real-time usage of rear seat-belts and adherence to safety standards in school buses.

In the United Nations General Assembly Resolution of 2005 and 2008[2], "Non-use of Seat-belt" has been acknowledged as a

1. Global Status Report on Road Safety, (2018) , World Health Organization (https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/)
2. https://undocs.org/A/RES/60/5 https://undocs.org/A/RES/62/244
3. https://www.who.int/violence_injury_prevention/road_traffic/Brasilia_Declaration/en/

key risk factor for road crash injuries and deaths. The Brasilia Declaration of 2015[3], of which India is a signatory, also talks about the importance of using seat-belts as well as regulations to ensure all vehicles are equipped with seat-belts.

Although India has a law on the use of seat-belt[4], implementation is a challenge due to lack of awareness and weak enforcement of the laws. In 2017, 26,896 people died due to non-usage of seat-belts in India. This is an exponential increase over last years' number.[5] In 2016, 5,638[6] road crash deaths were reported due to non-use of seat-belts. This 377% increase implies underreporting of deaths due to non-usage of seat-belts until now. In 2017, 16,876 passengers were killed, and 61,942 passengers were injured due to non-use of seat-belts according to Government data.

Rear seat-belts are an important safety device. According to WHO, use of rear seat-belt reduces the probability of being killed by 25% and injuries by 75%.[7] When examining the use of rear seat-belts in India, the study reveals that while a majority of the people surveyed are aware of the presence of rear seat-belts in their vehicles, only a portion of the population actually uses it. While there is a law mandating the use of rear seat-belts for all vehicles, awareness, and enforcement around it is negligible. It was also found that only 10% school buses have seat belts for children.

This report also examines the status of child road safety in India. In 2017, 25 children below the age of 18 were killed every day on Indian roads. Currently, there is no law to protect children on road.

The study reveals that two-thirds of parents find city roads unsafe for children. It also reveals low awareness about the use of Child Restraint Systems and even lower usage rates in India. In terms of use of helmets, while the majority of respondents were aware of its safety benefits, only a small portion actually owns and uses child helmets. The study also reveals an overwhelming demand for a child-specific road safety law to prevent deaths of children on Indian roads.

4. Central Motor Vehicles Rules (http://morth.nic.in/index2.asp?slid=99&sublinkid=58&lang=1)
5. Road Accidents in India, 2017 (http://morth.nic.in/showfile.asp?lid=3369)
6. Road Accidents in India, 2016 (http://morth.nic.in/showfile.asp?lid=2904)
7. https://www.who.int/roadsafety/publications/Seat-beltsManual_EN.pdf

LOW USAGE AND LOW AWARENESS OF LAW

While **70.5%** respondents affirmed to the presence of rear seat-belts in their car, only **7%** said that they use it regularly.

Two main reasons for the non-usage of rear seat-belts: people think its usage is not mandatory **(37.8%)** and low awareness about rear seat-belts **(23.9%)**.

USE OF REAR

While the law mandates use of rear seat-belts, only **27.7%** of the respondents were aware of the law.

Of the parents surveyed who reported that their child sits on the rear seat, **77%** reported that they sit without a rear seat-belt.

As per our observations in strategic locations of 6 cities- Mumbai, Delhi, Jaipur, Kolkata, Lucknow and Bengaluru- it was found that **98.2%** people did not use rear seat-belts. In Lucknow, Jaipur and Kolkata no one used rear seat-belts.

WEAK ENFORCEMENT

91% people surveyed reported that they had never been stopped by the police for non-use of rear seat-belts.

SEAT-BELTS IN INDIA

VERY LOW AVAILABILITY OF SEAT-BELTS FOR ALL SEATS IN SCHOOL BUSES/VANS

Only **11.2%** school bus/van drivers reported that school buses/vans have seat-belts for all passengers.

Only **15.1%** parents reported that school buses had seat-belts for all passengers.

CHILD ROAD SAFETY IN INDIA

OVERWHELMING SUPPORT FOR A CHILD SAFETY LAW TO PREVENT CHILD ROAD FATALITIES

91.4% people surveyed feel the need for a strong child road safety law to prevent child road fatalities.

LOW AWARENESS AND LOW USAGE OF CHILD RESTRAINT SYSTEM

75.7% surveyed parents were not aware of the Child Restraint System.

Of those who were aware, only **3.5%** have used CRS including Booster Seats at some point.

HIGH AWARENESS OF SAFETY BENEFITS OF HELMETS, LOW OWNERSHIP OF CHILD HELMETS

Only **20.1%** parent respondents own Child Helmets even though **92.8%** were aware of the safety benefits of Child Helmet.

MAJORITY OF ADOLESCENTS WHO DRIVE HAVE LEARNT IT AT AN EARLY AGE

63.3% of the children who admitted to under-age driving further admitted that they started learning how to drive between the ages 9 and 14.

CHAPTER 1

INTRODUCTION

INTRODUCTION

1.1 BACKGROUND

With around 1.5 lakh people losing their lives in road crashes in the country every year, India has one of the highest road crash injuries and deaths in the world. Road crashes not only lead to loss of life, they also cause debilitating injuries and huge financial losses, both to the victims and to the nation. The public health and development of the country suffers massively as the number of road crash injuries and deaths continue to grow.

In the past decade, India has lost more than 13 lakh people to road crashes, which reflects the epidemiological nature of road crashes. Road crashes have become the eighth leading cause of deaths as per "India: Health of the Nation's States", the first comprehensive assessment by the India State-Level Disease Burden Initiative produced as part of GBD 2016.[8] Road crashes spare no one, be it infants or adults. The sudden loss of a family member causes immense agony and trauma to the victims' family and loved ones.

In the incidents where fatalities had been avoided, several victims were inflicted with serious injuries and permanent disabilities. In 2016, road crashes were ranked the tenth leading cause of death and disability combined. In India, 50 lakh people have been impacted due to morbidity caused by road crashes over the past decade. Not only does this morbidity cause mental and physical trauma to the victims, but it can also cost them their ability to function fully and independently.

Apart from the trauma, in numerous cases, the families of the victims are pushed into financial adversity in the aftermath of road crashes. Moreover, as most victims of road crashes are between the age of 18 and 45, the country loses its productive human resource. Road Crashes cause an annual 3% loss to the GDP of the country.
Road crashes and resultant injuries are a culmination of several factors ranging from, defective road infrastructure; ill-informed and irresponsible road user behaviour; weak laws and enforcement; and lack of efficient emergency care services.

This study explores two crucial aspects of securing lives in transit- the use of rear seat-belts and the safety of children during commute."

1.2 STATUS OF USE OF REAR SEAT-BELTS IN INDIA

As per World Health Organisation, there are three kinds of collisions that may occur if one is unrestrained and not wearing a seat-belt. These are- when a vehicle hits another object such as a tree or another vehicle, the second is when the unrestrained occupant hits the interiors of a car, and the third is when their internal organs hit the skeletal structure or

8 https://www.healthdata.org/sites/default/files/files/policy_report/2017/India_Health_of_the_Nation%27s_States_Report_2017.pdf

chest wall. The second type of collision is the most common cause of road crash injuries and can be prevented if proper restraints are used.[9]

Further, the WHO also points out that the actions of a rear seat passenger can greatly affect the damage they incur. An unrestrained rear seat passenger can also cause peril to the life of a front seat passenger. So, while the use of rear seat-belts can prevent death of a rear seat passenger by 25%, it can also prevent excess injury or death for the front seat passenger.

The Central Motor Vehicles Rules under the Motor Vehicles Act, 1988 mandate manufacturers to produce vehicles which are equipped with rear seat-belts for the driver, front passenger seat as well as front facing rear seats. Under Section 138 (3), Central Motor Vehicles Rules also mandate the use of rear seat-belts.

However, enforcement of the same remains negligible and so does the awareness around the safety benefits it can provide to people. As a result, only a small population in India uses rear seat-belts.

1.3 STATUS OF CHILD ROAD SAFETY IN INDIA

The 'Convention on the Rights of the Child'[10] emphasizes on the right to safe environment and protection from injury and violence for all children. It also stresses on the importance of all relevant institutions and services responsible to take care of children and protect them to follow all established standards, especially in the area of health and safety.

While India is a party to this Convention and has worked considerably in areas of education and nutrition for children, it has failed to protect children commuting on roads. Children are considered to be vulnerable road users, given that their cognitive skills to react to complex traffic situations are not fully developed.

With over 9,400 children below the age of 18 having lost their lives to road crashes in 2017 alone, the need for focused interventions is vital and urgent.

Children in India, the country with one of the highest shares in road crash deaths all over the world, are exposed to the risk of road crashes on multiple occasions- while commuting to schools, or while traveling in private vehicles, in public transport or on foot. Moreover, Indian roads house over 11 million street children,[11] the most vulnerable group in the category. With no data on the number of street children who lose their lives to road crashes, they remain largely invisible.

9 The Need for Safety Belts and Child Restraints, World Health Organization

10 https://www.ohchr.org/en/professionalinterest/pages/crc.aspx

11 https://www.unicef.org/sowc97/download/sow1of2.pdf

1.4 OBJECTIVE

The primary objective of the study is to examine the exposure to risk during commute on Indian roads with focus on usage of rear seat-belts and safety of children on Indian roads.

The research study was divided into the following sub-objectives:

OBJECTIVE 1:

TO EXAMINE PATTERNS IN THE USE OF REAR SEAT-BELTS RELATED KNOWLEDGE, ATTITUDE AND BEHAVIOR

- Incidence of rear seat-belt usage
- Knowledge, behaviour and awareness regarding use of rear seat-belt
- Attitude and behavior regarding the use of rear seat-belts

OBJECTIVE 2:

TO STUDY THE STATUS OF ROAD SAFETY FOR CHILDREN IN INDIA

- To study the status of road safety for children when commuting with parents/ independently
- To study the status of road safety for children when commuting to school
- To study underage driving

CHAPTER 2

SURVEY DESIGN, RESPONDENT PROFILE AND RESEARCH METHODOLOGY

SURVEY DESIGN, RESPONDENT PROFILE AND RESEARCH METHODOLOGY

2.1 SURVEY DESIGN

2.1.1 SAMPLING AND SAMPLE SIZE

A robust sampling design was created to ensure a universally representative coverage, especially in cases where respondent categories were heterogeneous and diverse. A unique sampling criterion was developed where target respondents fell into not one but several categories at once so that results that came from one target segment could be triangulated with responses from another target segment.

Based on the objectives of the study, a unique 3 'S' sampling criteria of Selection, Spread and Size was followed to ensure Representation, Randomness and Robustness – the 3 'R's.

The following approach was adopted to select target respondents on the field:

COMMON CITIZENS

This included people who frequently used four-wheeler vehicles like cars, jeeps and taxis as **drivers and passengers**. Users of four-wheelers were asked about usage of rear seatbelts. During the field survey, they were queried on their knowledge, attitudes, beliefs and practices (KABP) of and about using rear seatbelts.

Respondents of this category were contacted at parking lots, public places, near residential societies, at their homes, at malls and markets, at taxi stands and office complexes, etc. To get a city-wide zonal breakup and to ensure adequate geographical spread, respondents from each zone (North, South, East, West) covering the entire city were selected. They were selected randomly using an Intercept Surveying Technique.

PARENTS (OF CHILDREN OF VARIOUS AGE- GROUPS)

This category included parents[12] with children between the ages of 0 and 17 years. Respondents were contacted at schools, near residential societies, at their homes, in parks, monuments, malls, markets and city attractions, etc. Respondents from all zones within a city were selected to ensure an even geographical spread. They were also selected randomly using the Intercept Surveying Technique.

Parents who regularly used four-wheelers or/and two-wheelers as the chief mode of transport as well as public transport (along with their children) were selected. Further, respondents from diverse socio-economic backgrounds, gender, age group (child's age), education, etc. were selected.

12 Parents category include either father or mother.

CHILDREN (OF VARIOUS AGE GROUPS)

Children above the age of nine years were selected for self-reporting. Parent's consent was taken before conducting interviews with children below 14 years (as per the guidelines of Institutional Ethics Review Board, IERB). The survey was conducted in the presence of parents; however, it was ensured that it was conducted in an unbiased manner. Children were selected randomly from each city zone (North, South, East, West) in order to ensure a diverse geographic coverage. Children/ adolescents above the age of 14 years were interviewed in the absence of their parents.

Further, respondents were selected from varied socio-economic demographics, and diverse class, gender, types of school (private, public, government-aided, etc.), etc.

SCHOOL AUTHORITIES

School authorities included key school officials such as transport manager, admin manager, principal, etc. who oversee commute and safety of children traveling in school buses, vans, etc. In-depth interviews (IDI) were conducted with these respondents after taking prior appointments. The interviews mostly took place at their workplace. Efforts were made to ensure that officials from various categories of schools across the city were chosen, i.e. private, public , government-aided

SCHOOL BUS/VAN DRIVERS

This category of respondents includes drivers of school buses and vans that carry students to and from schools on a regular basis. These respondents were interviewed outside the school in between pick-ups and drops.

TAXI DRIVERS

This category includes respondents who drive taxis and were employed with cab-hailing services such as Ola, Uber or local taxi services. The survey included their experiences with passengers using or not using rear seat-belts.

ROAD SAFETY EXPERTS

This category includes Road Safety Experts and Doctors who deal with trauma cases related to road crashes. Respondents also included traffic police officials and state transport department officials who were interviewed in order to note their knowledge, attitudes, beliefs, and practices about adherence to laws on child road safety, penalties for underage driving, penalties for not wearing rear seatbelts, etc.

SURVEY DESIGN, RESPONDENT PROFILE AND RESEARCH METHODOLOGY

2.1.2 SAMPLE COVERED

A total sample of 6,306 face-to-face interviews, 100 in-depth interviews (IDIs), two focus group discussions (FGDs) and observations (100 buses/vans and 1,077 vehicles for rear seatbelt usage in six cities) was collected across selected cities. A city-wise and category-wise breakup of the sample size is given below.

TABLE 2.1: CITY-WISE SAMPLE SIZE ACHIEVED

Sample Size	Total	Delhi NCR	Mumbai	Bengaluru	Kolkata	Chennai	Jaipur	Guwahati	Lucknow	Panaji	Patna	Kochi
Sample Target	**6160**	560	560	560	560	560	560	560	560	560	560	560
Sample Achieved	**6306**	566	584	561	581	578	561	574	565	581	578	577
4-Wheeler Users [4-Wheeler as primary transport]												
Parents (of 0-9 Y.O) (0-5 and 6-9)	**447**	41	41	41	42	40	41	40	41	40	40	40
Parents (of 9-14 Y.O)	**440**	40	40	40	40	40	40	40	40	40	40	40
Parents (of 11-17 Y.O)	**441**	41	40	40	40	40	40	40	40	40	40	40
Child (9-14 Y.O)	**344**	30	32	30	34	33	30	34	30	31	30	30
Adolescents (11-17 Y.O)	**351**	31	34	30	30	34	30	34	31	33	31	33
General/Others	**450**	40	41	40	41	40	40	40	40	40	48	40
Cab Drivers (Ola, Uber, etc.)	**444**	40	40	40	44	40	40	40	40	40	40	40
2-Wheeler Users [2-W as primary mode of transport]												
Parents (of 0-9, 9-14 Y.O)	**453**	41	41	40	41	41	40	40	42	41	43	43
Parents (of 11-17 Y.O)	**443**	40	42	40	40	40	40	40	40	40	41	40
Child (9-14 Y.O)	**357**	31	36	30	34	36	30	34	30	34	32	30
Adolescents (11-17 Y.O)	**337**	30	31	30	30	30	30	30	30	33	32	31
Public Transport Users [Public Buses, School Buses, NMT, etc.]												
Parents (School Bus Users)	**670**	60	60	60	60	61	60	60	60	64	61	64
Parents (MPT users)	**448**	40	42	40	43	42	40	40	40	41	40	40
Children (9-14 Y.O)	**351**	31	34	30	32	31	30	32	31	34	30	36
School Cabs/ Vans												
School Cab Drivers	**330**	30	30	30	30	30	30	30	30	30	30	30

Y.O = Years Old

[Note: All 11 cities with a sample of 6306 respondents yielded a + 1.23 percent margin of error at 95 percent confidence level at overall level (total sample).]

Apart from quantitative surveys, qualitative surveys were also conducted with the following sample:

TABLE 2.2: QUALITATIVE SAMPLE OF THE SURVEY

S.N	Respondent group	Mode of survey	Sample
1	School Principals/Vice-Principals/Transport Managers	IDIs	33
2	Road Safety Experts/Scholars	IDIs	10
3	Doctors/Pediatricians/ER Doctors	IDIs	8
4	Traffic Cops/Police Personnel	IDIs	11
5	Cab Drivers	IDIs	8
6	Parents for Underage Driving	IDIs	11
7	School Bus/Van Drivers	IDIs	11
8	State Transport Department Officials	IDIs	8
9	Observation of school buses/ vans	Observations	100
10	Users of 4-W and 2-W (One FGD with each group) - One FGD in Delhi, One in Chennai	FGDs	2 FGDs

TABLE 2.3: OBSERVATIONS

S.N.	Observations	Mode of survey	Sample
1.	Observation of school buses/ vans	Observations	100 vehicles
2.	Observation of rear seat-belt usage in six cities	Observations	1077 vehicles

Note: 1353 passengers were observed in 1077 vehicles in six cities Cat-1 and Cat-2 cities (New Delhi, Mumbai, Bengaluru, Jaipur, Lucknow and Kolkata)

2.2 RESPONDENT PROFILE

2.2.1 INFORMATION AREAS AND TARGET RESPONDENTS

The study was conducted among the following key categories of respondents:

TARGET GROUP FOR THE STUDY

CHILDREN (9-14, 11-17 YRS.)

- Type of transport used
- KABP - Road safety when commuting with parents, commuting alone or to school
- Knowledge of guidelines of road safety
- Attitude towards underage driving

PARENTS (OF CHILDREN AGED 0-5, 6-9, 9-14, 11-17)

- KABP - Road safety of children including infants
- Driving habits of parents while traveling with children - use of seat-belt, helmet, etc.
- Status of safety during commute to school, commuting independently
- Knowledge of existing guidelines of road safety
- Attitude and behavior towards underage driving

SCHOOL AUTHORITIES (GOVT, PVT, GOVT-AIDED)

- Adherence to CBSE guidelines for child safety
- Measures taken by school to ensure child safety in commute
- Mode of transport used by children to commute to school
- Training of staff, drivers and attendants

DRIVERS (SCHOOL BUS/ VAN & CAB DRIVERS LIKE UBER, OLA, ETC.)

- Awareness about eligibility criteria for drivers
- Knowledge w.r.t guidelines for safety in school buses
- Feedback on adherence of schools on CBSE guidelines
- Usage of rear seat-belt by commuters/ passengers
- Getting training, refresher training, and presence of attendant during commute, etc.

ROAD SAFETY EXPERTS (SPECIALIST, TRAFFIC POLICE)

- Best practices for child road safety
- Child road safety do's and don'ts
- Feedback on status of child road safety
- Nature and causes of trauma injuries w.r.t. road crashes among children

COMMON CITIZENS (USERS OF 4 WHEELERS)

Use of rear seat-belt

- KABP – rear seat-belt use
- Rationale behind (not) using rear seat-belt
- Motivation and barriers towards rear seat-belt use

2.2.2 CITY-WISE BREAKUP

Following is the profile of the respondent categories i.e. adults, children, drivers, with granularity of cities, socio-economic background and occupation.

TABLE 2.4: RESPONDENT PROFILE – CITY-WISE BREAKUP

City	Adult/ Parents	Children	Driver
N	4236	1740	330
Bengaluru	9.0%	8.6%	9.1%
Chennai	9.1%	9.4%	9.1%
Delhi NCR	9.0%	8.8%	9.1%
Guwahati	9.0%	9.4%	9.1%
Jaipur	9.0%	8.6%	9.1%
Kochi	9.1%	9.2%	9.1%
Kolkata	9.2%	9.2%	9.1%
Lucknow	9.0%	8.7%	9.1%
Mumbai	9.1%	9.6%	9.1%
Panaji	9.1%	9.5%	9.1%
Patna	9.3%	8.9%	9.1%
Total	**100.0%**	**100.0%**	**100.0%**

2.2.3 BREAKUP BASED ON SOCIO-ECONOMIC CLASSIFICATION [13]

TABLE 2.5: RESPONDENT PROFILE – BREAKUP BASED ON SOCIO-ECONOMIC CLASSIFICATION

SEC Wise	Adult/Parents	Children
N	4236	1740
A1	27.2%	30.6%
A2	26.2%	24.7%
A3	24.4%	24.7%
B1	13.1%	12.5%
B2	5.6%	5.3%
C1	2.5%	1.6%
C2	0.6%	0.5%
D1	0.3%	--
D2	0.1%	--
Total	**100.0%**	**100.0%**

13 The socio-economic classification (SEC) is a measure used to classify and target consumers based on certain parameters, as defined by Market Research Society of India (MRSI) in 2011. It is based on two variables i.e. Education of chief earner and number of 'consumer durables' owned by family (from a predefined list of 11 durables).

2.2.4 OCCUPATION-WISE BREAKUP

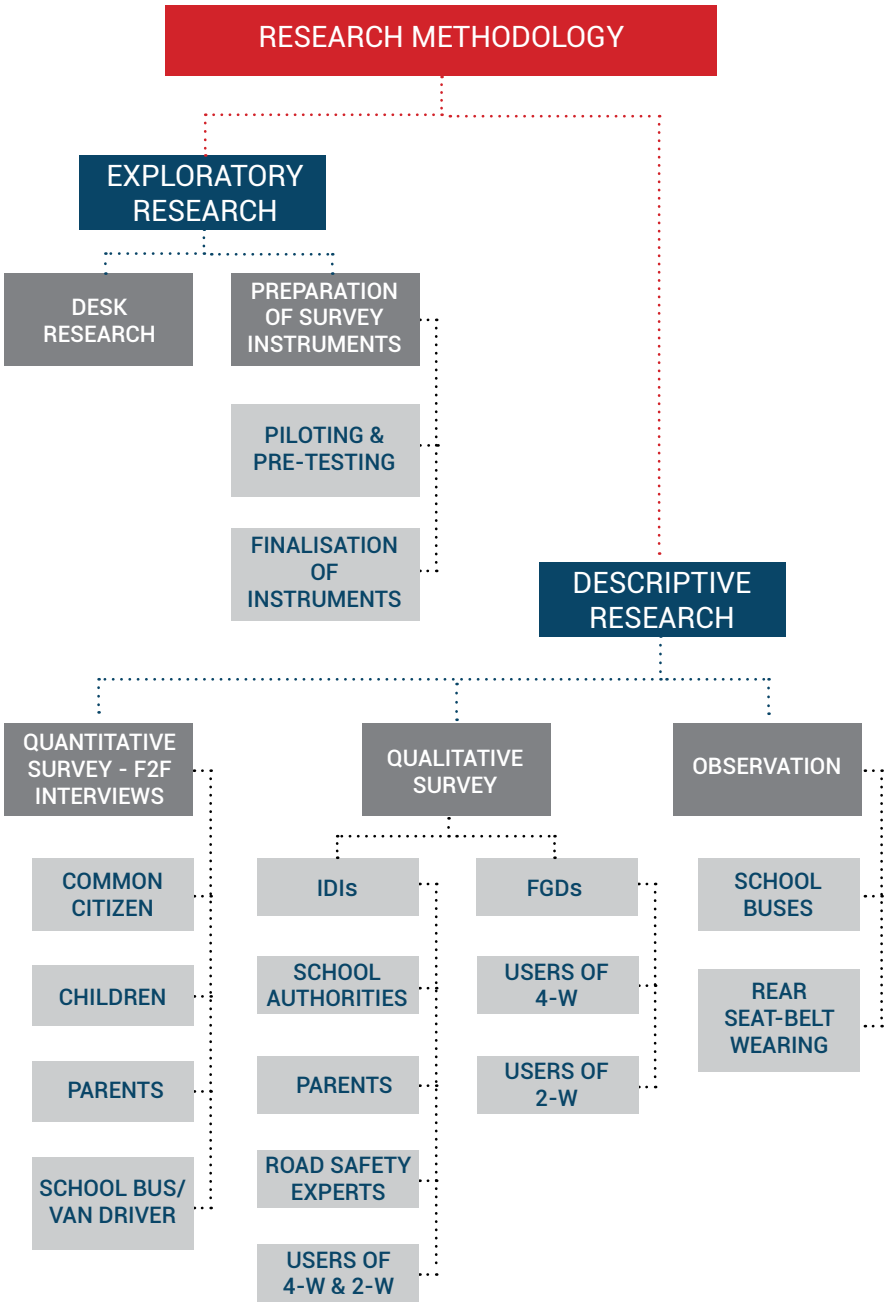
TABLE 2.6: RESPONDENT PROFILE – OCCUPATION-WISE BREAKUP (ADULT/PARENT)

Occupation	Adult/ Parent
N	4236
Housewife	28.7%
Employee (Pvt. Sector)	27.9%
Businessman/trader/self-employed	23.5%
Taxi Driver	11.0%
Employee (Govt. Sector)	5.6%
Laborer/Daily wage earner	2.0%
Unemployed	0.4%
Student	0.4%
Farmer	0.3%
Retired	0.2%
Total	**100.0%**

2.3 RESEARCH METHODOLOGY

2.3.1 RESEARCH APPROACH

The key objective of the study was to examine the status of road safety in India with particular emphasis on usage of rear seatbelts, road safety of children and underage driving. Based on the objectives of the study, the research methodology for this study was divided into two phases:



PHASE I: EXPLORATORY RESEARCH

A) DESK RESEARCH

Latest reported crash cases were reviewed to build a thorough understanding of on-ground law enforcements related to usage (or non-usage) of rear seat-belts and road safety of children in India. The desk research also included review of Supreme Court guidelines for safety of children when traveling in school buses, vans or other vehicles as well as those issued by the Central Board of Secondary Education (CBSE) and other related laws and guidelines. An extensive research of published literature on the subject was also done.

B) PREPARATION OF SURVEY INSTRUMENTS

Draft survey instruments were prepared for each respondent category. Some in-depth interviews were conducted with select target respondents at this stage to get a deeper insight into the matter. The insights from the interviews were helpful in making the survey instruments more comprehensive.

C) PILOTING AND PRE-TESTING

The survey mechanisms, sampling design and survey instruments were piloted and pre-tested on a small sample of target group made up of actual respondents based in Delhi. This was done to ensure that the mechanisms, designs and instruments were effective in gathering the information required to match the goals and objectives of the study in the most succinct manner.

Draft survey instruments were fine-tuned based on the outcomes and learnings from the pilot survey and practical aspects of the pilot were incorporated, such as conducting interviews with children, taking consent of parents, ease of administering the questionnaire, correct sequence of questions, relevance of questions, etc.

D) TRANSLATION OF SURVEY INSTRUMENTS

The survey instruments were translated into the regional languages of the survey locations to enhance their comprehensibility for respondents in those cities.

PHASE II: DESCRIPTIVE APPROACH

This phase was conducted with the view to understand the pattern of usage of rear seatbelt and of road safety of children among the respondents. The following steps were taken in this phase of study:

A) QUANTITATIVE – FACE-TO-FACE INTERVIEWS

A quantitative survey was used to collect and analyze primary information. The survey was conducted among various respondent categories through face-to-face structured interviews.

The key categories for conducting quantitative survey were:

- Common citizens;

SURVEY DESIGN, RESPONDENT PROFILE AND RESEARCH METHODOLOGY

- Children of various age groups;
- Parents (of children from various age groups);
- School bus/van drivers;
- Cab drivers(of Ola, Uber, local taxi services,etc.)

B) QUALITATIVE – IN-DEPTH INTERVIEWS AND FOCUS GROUP DISCUSSIONS

A qualitative survey enabled in gaining an in-depth understanding of the perspectives of school authorities, road safety experts and parents who use two-wheelers or four-wheelers (for travel along with their children) regarding the usage of rear seatbelts and child road safety.

The qualitative survey was conducted through:

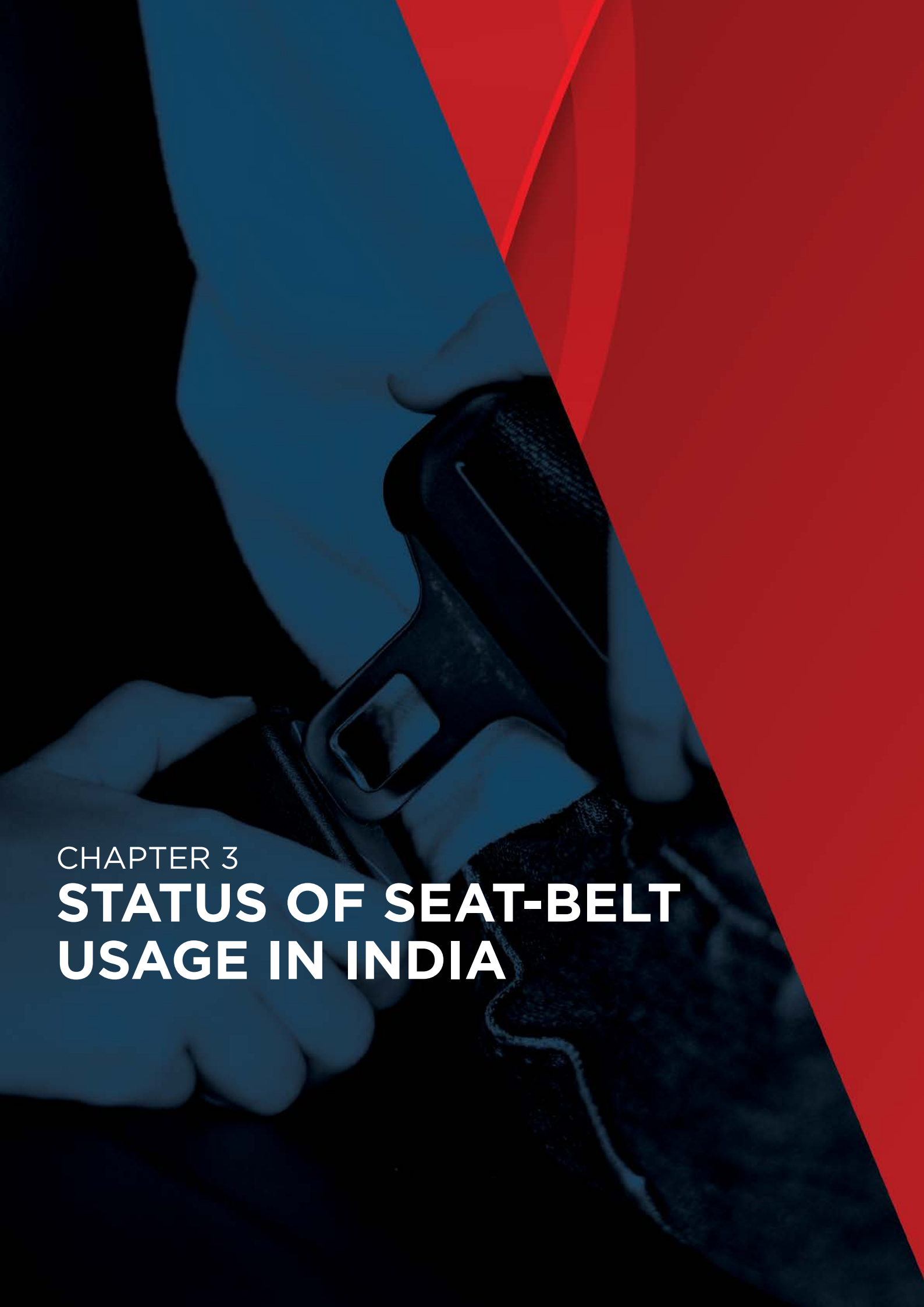
- Focus Group Discussions
- In-depth Interviews

C) OBSERVATION (SCHOOL BUSES AND REAR SEAT-BELT USAGE AT STRATEGIC LOCATIONS)

As per Supreme Court of India guidelines (1997) and CBSE guidelines (2017) for school buses and vans, schools must ensure the safety of children when traveling to school.

MDRA observers examined school buses for the various safety features required according to the guidelines e.g. provision of a well-stocked first aid box, prominent display of the name and contact details of the transport manager, installation and condition of speed governors, regular training of drivers, etc.

In addition, observations about usage or non-usage of rear seatbelt were conducted at strategic locations (such as near State Assemblies, Secretariat, District Courts, offices of the District Magistrate, etc.) for one day in each of the six selected cities.



CHAPTER 3

STATUS OF SEAT-BELT USAGE IN INDIA

STATUS OF REAR SEAT-BELT USAGE IN INDIA

REAR SEAT-BELT USAGE- KABP IN ADULTS

The rapid urbanisation and motorisation in India has led to higher density of movement of commuters both within cities, and between neighbouring cities. Due to the increase in mobility, the number of road crashes has increased over the years. The number of road crash deaths has increased by 23.4% in last ten years from 2008-2017. In the year 2001, the number of people who lost their lives due to road crashes was around 80,000. In 2017, the figures almost doubled at 1, 47,913. The high rate of road crash mortality lays emphasis on certain contributing key risk factors for road crashes. The non-use of seat-belts being one such factor.

In 2017, 26,896 people died in India due to non-use of seat-belts. This is an exponential increase over the previous year's number. In 2016, 5,638 road crash deaths were reported due to non-use of seat-belts. In 2017, 16,876 passengers were killed, and 31,421 passengers were injured due to non-use of seatbelts according to Government data. A state-wise look at the latest data shows that the total number of drivers killed due to not wearing seat-belts is 10,020 in 2017. Tamil Nadu being the highest at 1,666 deaths, followed by Uttar Pradesh (1,464 deaths), Karnataka (1,078 deaths), Maharashtra (828 deaths) and West Bengal (824 deaths). The total number of passengers killed for not wearing seat-belts in 2017 is 16,876. Karnataka has the highest number of passenger deaths at 2,957, followed by Tamil Nadu (1,831 deaths), Rajasthan (1,482 deaths), Uttar Pradesh- (1,433) and Madhya Pradesh (1,368 deaths).

Bearing this in mind, this chapter explores the awareness and incidence of rear seat-belt usage by passengers of four wheelers. This chapter also explores the patterns of use of rear seat-belts among children in India- one of the biggest chunks of population travelling as passengers.

CARS EQUIPPED WITH REAR SEAT-BELTS

According to the survey findings, seven out of ten direct users (drivers or passengers) surveyed confirmed the availability of rear seat-belts in their vehicle or in the vehicle they usually travelled in. The rest 30 percent claimed either the unavailability or ignorance of its availability.

The most number of respondents who confirmed the availability of rear seat-belt in four-wheelers are residents of Chennai, Guwahati, Mumbai and Bengaluru. In the cities of Patna, Kolkata and Delhi, most respondents said either "no" or "not sure" about its availability – in Patna less than one-third respondents surveyed said their four-wheelers were equipped with rear seat-belts.

More men than women confirmed the availability of rear seat-belts in four-wheelers – 76 percent and 59 percent, respectively. Also, a downward trend for awareness around availability of a rear seat-belt was observed with increasing age-groups.

More than 80 percent drivers surveyed confirmed the availability of rear seat-belts in their car compared to passengers, at 58 percent.

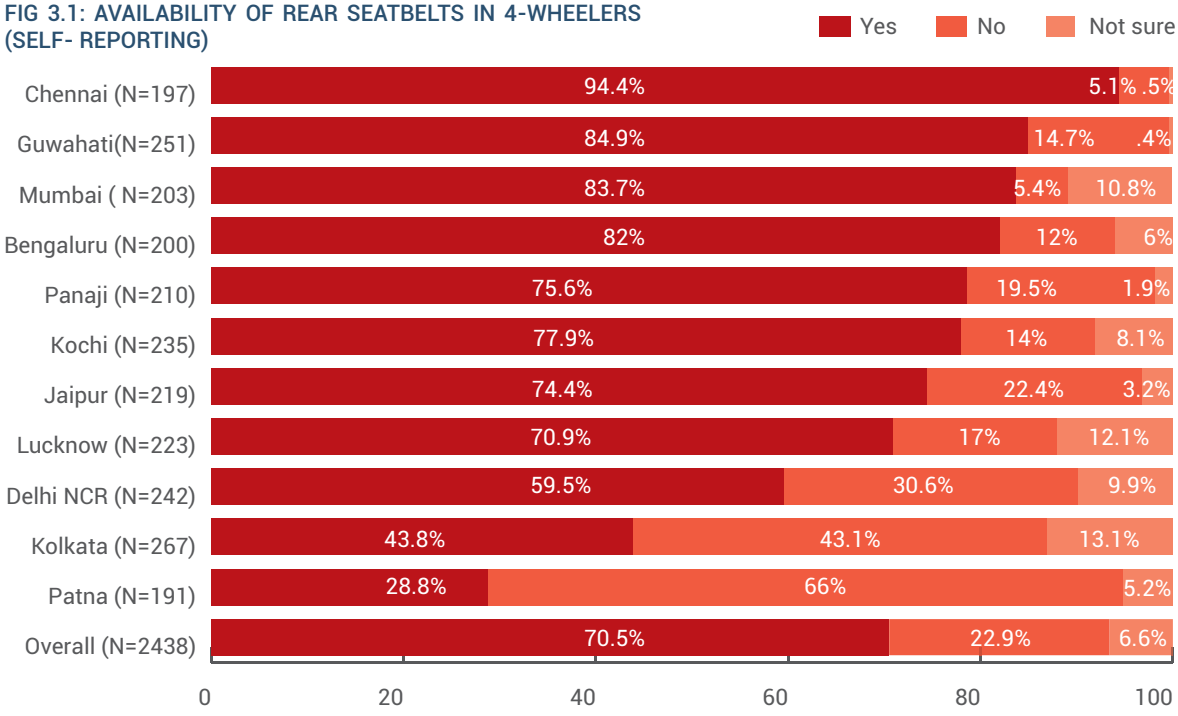
FREQUENCY AND REASONS FOR USING REAR SEAT-BELT

The 1, 718 respondents who confirmed that their four-wheeler or the one they generally travelled in was equipped with rear seat-belts were questioned further about whether or not they use rear seat-belts. As many as 67 percent admitted they had never used it, while 26 percent claimed they wore it sometimes and the rest said they used it all the time if sitting in the rear cabin of the vehicle.

So, while 71 percent four-wheeler users had confirmed the availability of rear seat-belt in their vehicles, only 7 percent use it regularly. To add to this, as per a Road Safety expert interviewed in this study, less than 1 percent people use rear seat-belts in India.

The maximum cases of non-usage of rear seat-belts was found in Guwahati, where 77 percent of the respondents acknowledged never having used a rear seat-belt in their four-wheelers, closely followed by Kochi and Patna at 73 percent.

FIG 3.1: AVAILABILITY OF REAR SEATBELTS IN 4-WHEELERS (SELF- REPORTING)



STATUS OF SEAT-BELT USAGE IN INDIA

Respondents in Chennai led in terms of awareness (94 percent) while those in Bengaluru led in terms of usage of rear seat-belts (45 percent). Drivers and passengers in Patna were among the least aware about the availability of rear seat-belt; this also reflected in their low usage figure of 27 percent.

Interestingly, higher income groups showed a greater tendency towards using a rear seat-belt. A similar tendency was exhibited by those who are more educated.Taxi drivers were among the top non-users of rear seat-belts and 72 percent of those surveyed said they have never seen it being used by their rear-seat occupants.

Further, the 1,598 respondents who answered that they had never used a rear seat-belt or used it only sometimes were questioned further in order to explore the reasons for non-usage.

Around four out of ten respondents said that as per the law, wearing the rear seat-belt was not mandatory in India. One-fourth said they were not aware whether or not the four-wheeler they use had rear seat-belts, while more than one-sixth of the respondents said they were not comfortable wearing them. Some said wearing a seat-belt in the rear seat does not add to their safety, while a small percentage said rear seat-belts are difficult to buckle and unbuckle.

The city wise breakup reveals that respondents in Jaipur (60.5 percent) and Kochi (54.9 percent) don't use rear seat-belts since it is not mandatory.

Nearly 28 percent of respondents from Bengaluru and 24 percent from Guwahati said rear seat-belts were not comfortable and around 23 percent of those surveyed in Patna did not think wearing rear seat-belts would make them safe in a road crash.

FIG 3.2: USAGE OF REAR SEATBELTS BY FREQUENT 4-WHEELER USERS

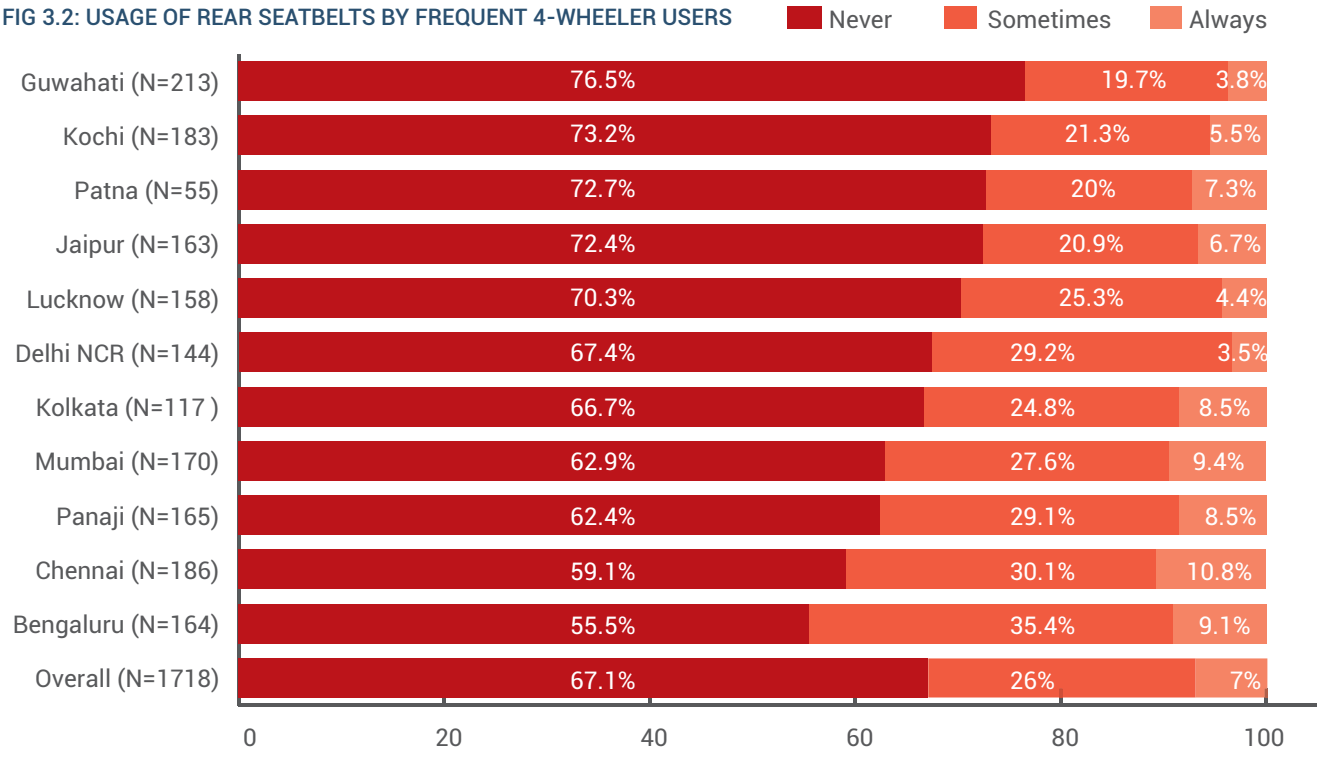


FIG 3.3: MAJOR REASONS FOR NON-USE OF REAR SEAT-BELT ON A REGULAR BASIS

[N=1598, Open-ended, Multiple response]

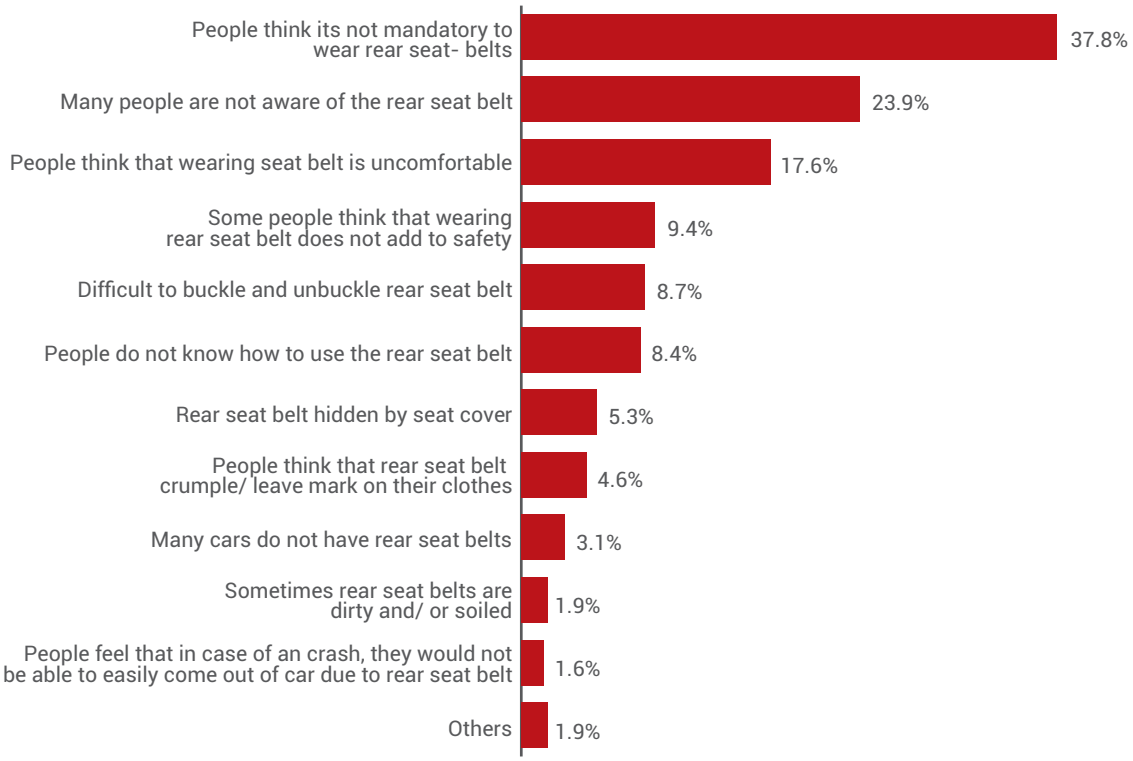


TABLE 3.1: MAJOR REASONS BEHIND NON-USE OF REAR SEAT BELT ON REGULAR BASIS

[Open-ended, Multiple response, All figures in percent]

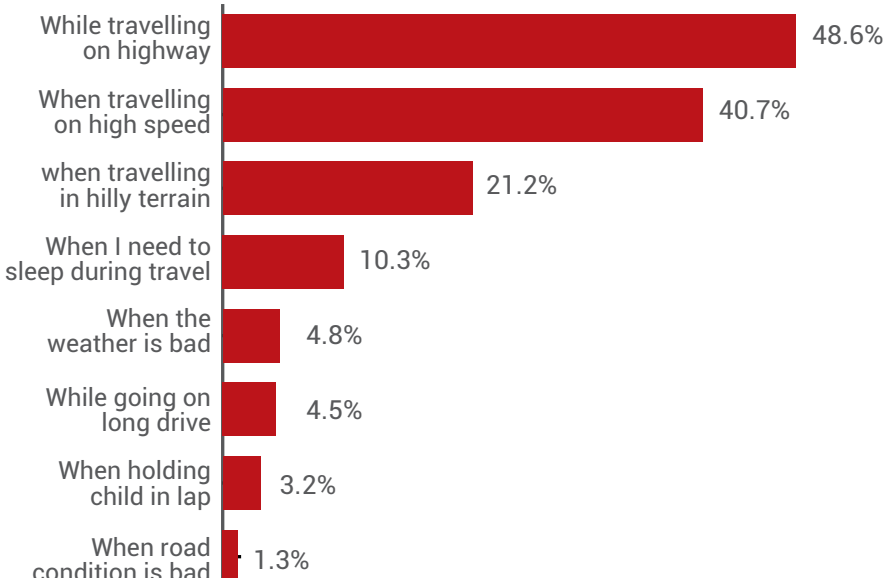
Reasons behind non-use of rear seat belt on regular basis	Overall	Lucknow	Jaipur	Guwahati	Delhi NCR	Kolkata	Mumbai	Chennai	Panaji	Bengaluru	Patna	Kochi
N	**1598**	151	152	205	139	107	154	166	151	149	51	173
People think that is not mandatory to wear	**37.8**	26.5	60.5	22.0	48.9	44.9	37.0	24.7	32.5	36.9	27.5	54.9
Many people are not aware of the rear seat belt	23.9	25.8	3.9	15.6	17.3	28.0	23.4	37.3	41.1	32.9	23.5	17.3
People think that wearing seat belt is uncomfortable	**17.6**	12.6	20.4	24.4	20.1	19.6	11.0	11.4	15.2	28.2	9.8	15.0
Some people think that wearing rear seat belt does not add to safety	**9.4**	1.3	15.1	3.4	11.5	4.7	16.2	13.9	13.9	6.7	23.5	3.5
Difficult to buckle and unbuckle rear seat belt	**8.7**	14.6	13.2	1.5	10.8	2.8	4.5	3.6	14.6	--	11.8	20.2
People do not know how to use the rear seat	**8.4**	16.6	5.3	6.3	12.2	4.7	9.7	15.1	8.6	5.4	5.9	1.7
Rear seat belt is hidden by seat cover	**5.3**	1.3	3.3	14.1	5.0	0.9	11.0	6.6	2.6	0.7	7.8	1.7
People think that rear seat belts crumple / leave mark on their cloth	**4.6**	0.7	3.3	12.2	0.7	3.7	4.5	1.8	13.9	1.3	--	2.9
Many cars do not have rear seat belts	**3.1**	2.0	1.3	4.9	2.2	6.5	3.9	4.8	3.3	2.0	--	1.7
Sometimes rear seat belts are dirty and /or soiled	1.9	0.7	1.3	1.5	1.4	0.9	7.1	1.2	4.0	0.7	2.0	0.6
In case of accident, people would not be able to easily come out of car due to rear seat belt	**1.6**	0.7	2.0	3.9	2.2	--	--	--	2.6	--	2.0	2.9
Others	**1.9**	4.6	0.0	1.5	5.0	1.8	2.5	4.2	0.0	0.0	0.0	0.0

COMMON EVENTS/ OCCASIONS FOR USING REAR SEAT-BELTS

All respondents were asked when, according to them people were most likely to wear rear seat-belts and close to half of them said when traveling on a highway or while traveling at high speeds.

Over one-fifth of respondents said rear seat-belts were most likely to be used while traveling in hilly areas, while 10 percent respondents considered people might wear them while sleeping during a journey.

FIG 3.4: COMMON EVENTS/OCCASIONS FOR USE OF REAR SEAT-BELT
[N=2438, Open-ended, Multiple response]

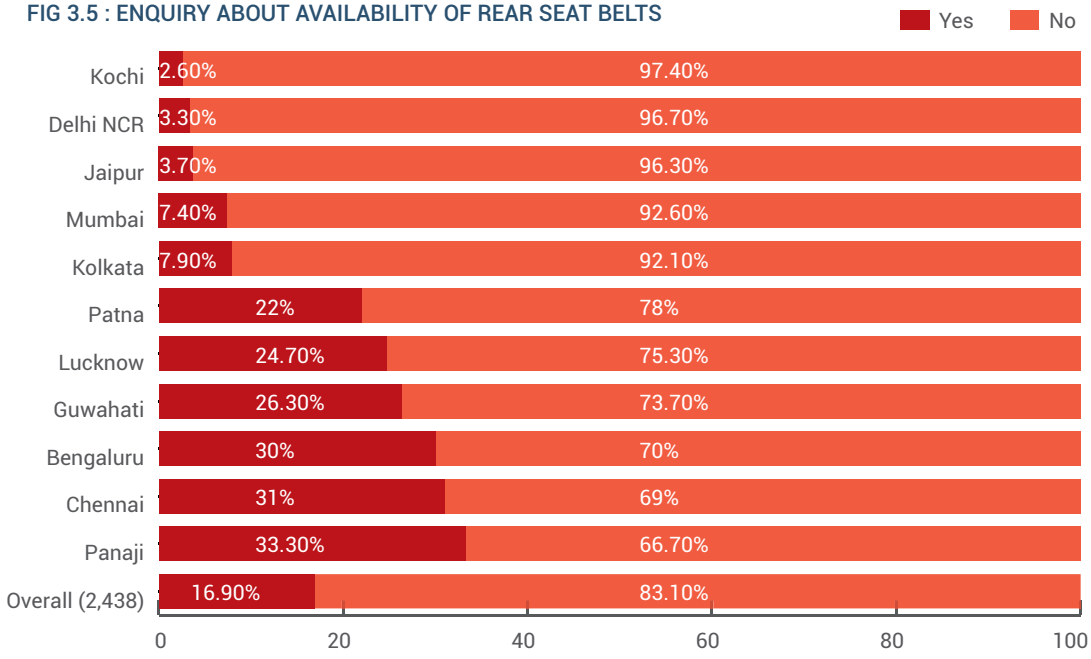


PASSENGERS ENQUIRY ABOUT AVAILABILITY OF REAR SEAT BELT

Respondents were asked if they or their passengers have ever asked about the availability of rear seatbelt while traveling in 4-wheeler.

Survey revealed that only 17% of the respondents enquired about the availability of rear seatbelt. Across cities, one-third of respondents in Panaji have showed curiosity over the rear seat belt availability followed by Chennai (31%),

FIG 3.5 : ENQUIRY ABOUT AVAILABILITY OF REAR SEAT BELTS



Bengaluru (30%), Guwahati (26%) etc.

Among all, in terms of asking for availability of rear seatbelt, Kochi, Delhi and Jaipur were at the bottom of the tally.

ASKED/STOPPED BY POLICE FOR NOT WEARING REAR SEAT-BELT

With regard to enforcement for usage and punishment for non-usage of rear seatbelts, respondents were asked if they or their driver/ passenger had ever been stopped by the police for not wearing rear seat-belt; overall, 91 percent of the respondents said no.

In the city-wise responses, one-third of respondents from Guwahati and one-fifth in Patna said they had been stopped by the police for not wearing rear seat-belt. In Kochi no one said they had ever been stopped for this reason.

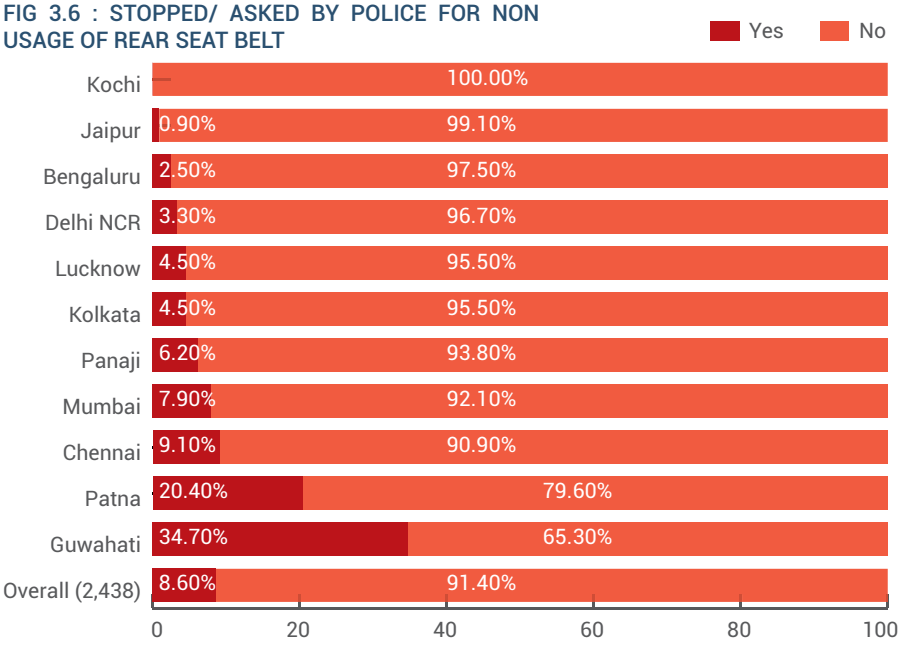
IMPACT OF NON-USAGE OF REAR SEAT-BELT IN A ROAD CRASH

Respondents were asked whether any one or both of the following statements were correct:

Statement 1: Non-usage of seat-belt by a person sitting in the rear-seat is a serious threat to any person sitting directly in front of him/her; and
Statement 2: Non-usage of seat-belt by the rear-seat passenger is a serious threat only to him/her.

More than half of the respondents surveyed found both the statements to be correct, and

FIG 3.6 : STOPPED/ ASKED BY POLICE FOR NON USAGE OF REAR SEAT BELT



that not wearing a seat-belt in the rear seat can be dangerous for both the unrestrained rear seat passenger and the person sitting directly in front of him/her.

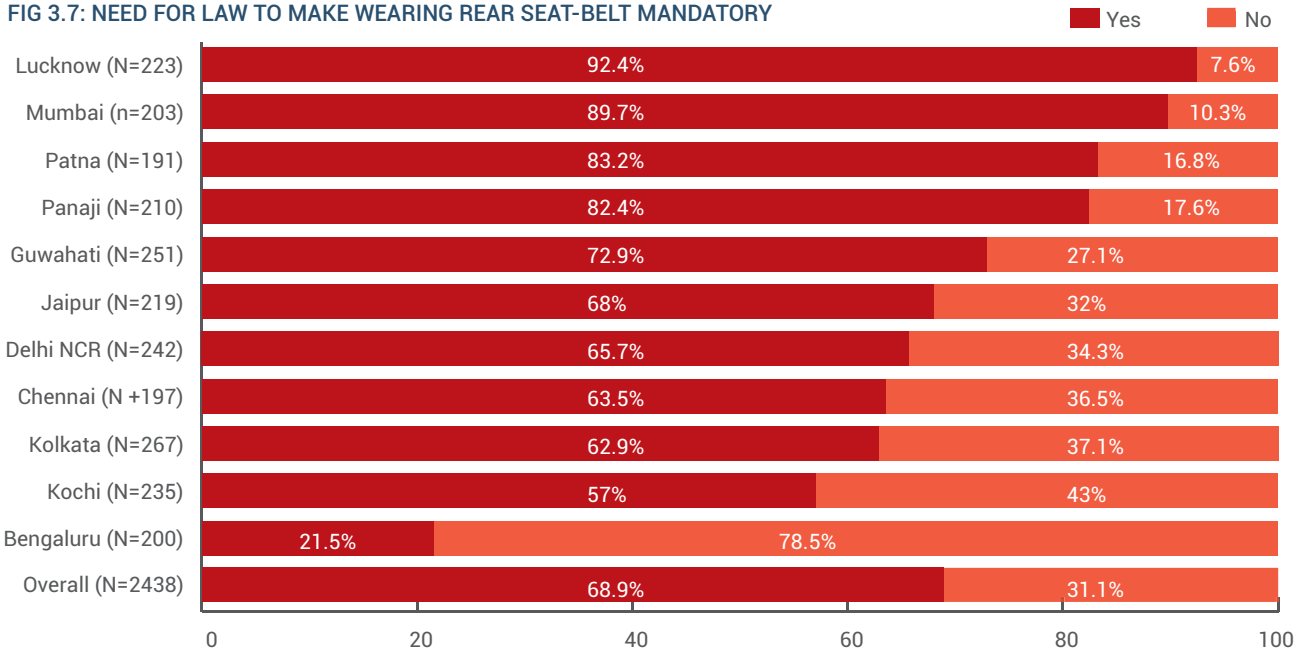
Across all the 11 cities, most of the respondents had the same opinion except for those in Bengaluru, Jaipur and Panaji.

TABLE 3.2: IMPACT OF ROAD CRASH AND NON-USE OF REAR SEAT-BELT

[all figures in percent]

STATEMENT 1: Non-use of seat belt by the rear seat passenger is a serious threat to any person seated directly in front of them STATEMENT 2: The non-use of seat belt by the rear seat passenger is a serious threat to him/her only												
Statement	**Only statement 1 correct**	**Only statement 2 correct**	**1 & 2 both correct**	**None is correct**	**DK/ CS**	**107**	**154**	**166**	**151**	**149**	**51**	**173**
Bengaluru (N=200)	52.5	4.0	38.0	0.5	5.0	28.0	23.4	37.3	41.1	32.9	23.5	17.3
Guwahati (N=251)	**25.5**	13.5	60.6	0.0	0.4	19.6	11.0	11.4	15.2	28.2	9.8	15.0
Kolkata (N=267)	**23.6**	28.1	47.9	0.4	0.0	4.7	16.2	13.9	13.9	6.7	23.5	3.5
Delhi NCR (N=242)	**20.2**	29.8	39.3	0.8	9.9	2.8	4.5	3.6	14.6	--	11.8	20.2
Jaipur (N=219)	**20.1**	53.9	24.7	1.4	0.0	4.7	9.7	15.1	8.6	5.4	5.9	1.7
Patna (N=191)	**15.2**	24.6	57.6	2.1	0.5	0.9	11.0	6.6	2.6	0.7	7.8	1.7
Panaji (N=210)	**14.3**	46.7	38.6	0.5	0.0	3.7	4.5	1.8	13.9	1.3	--	2.9
Lucknow (N=223)	**12.6**	25.1	52.0	1.3	9.0	6.5	3.9	4.8	3.3	2.0	--	1.7
Mumbai (N=203)	11.3	4.4	83.7	0.0	0.5	0.9	7.1	1.2	4.0	0.7	2.0	0.6
Chennai (N=197)	**10.7**	13.2	75.1	1.0	0.0	--	--	--	2.6	--	2.0	2.9
Kochi (N=235)	**8.1**	23.0	55.3	3.8	9.8	1.8	2.5	4.2	0.0	0.0	0.0	0.0
Overall (N=2438)	**19.5**	24.5	51.7	1.1	3.3	44.9	37.0	24.7	32.5	36.9	27.5	54.9

FIG 3.7: NEED FOR LAW TO MAKE WEARING REAR SEAT-BELT MANDATORY



Overall, one in four respondents agreed with statement two, while one in five said statement one was correct. Seat-belts limit the movement of vehicle occupants in the event of a crash, thus reducing the likelihood of serious or fatal injury. Wearing a seat-belt reduces the risk of fatality among drivers and front seat occupants by 45-50 percent. Wearing a seat-belt in the rear seat can reduce fatal and serious injuries by 25 percent and minor injuries by up to 75 percent, according to The Handbook of Road Safety Measures.

NEED FOR LAW ON WEARING REAR SEAT-BELT WHILE COMMUTING

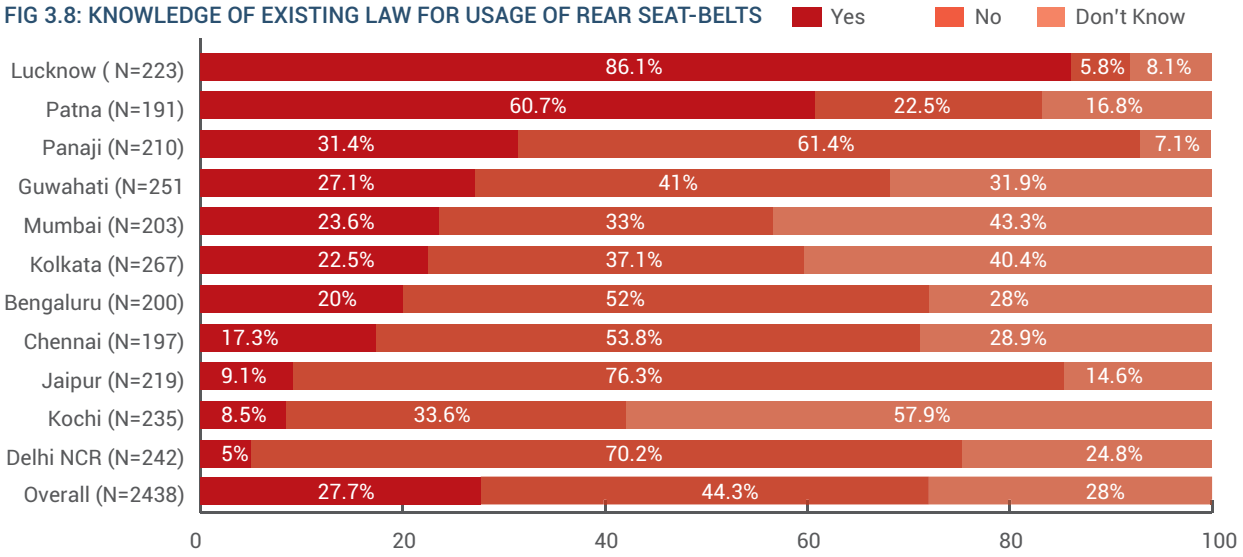
Respondents were asked whether wearing the rear seat-belt ought to be made mandatory in four-wheelers and almost 70 percent of surveyed people responded in affirmative. The highest number of respondents who felt the need for a strict law enforcing the use of rear seat-belts were in Lucknow (92.4 percent), followed by Mumbai (90 percent).

KNOWLEDGE OF EXISTING LAWS AROUND USAGE OF REAR SEAT-BELTS

Currently under Rule 138 (3) of Central Motor Vehicle Rules (CMVR) "all persons occupying front facing rear seats", should wear seat-belts. Respondents were asked whether they were aware of an existing law around wearing rear seat-belts in India and around 3 out of 10 respondents knew about it. The rest either said they weren't aware or there wasn't any.

Most of the respondents who were aware of such a law lived in Lucknow (86 percent), followed by Patna (61 percent) and Panaji (31 percent). Awareness of laws around wearing of rear seat-belts were low in metros, according to the survey.

FIG 3.8: KNOWLEDGE OF EXISTING LAW FOR USAGE OF REAR SEAT-BELTS



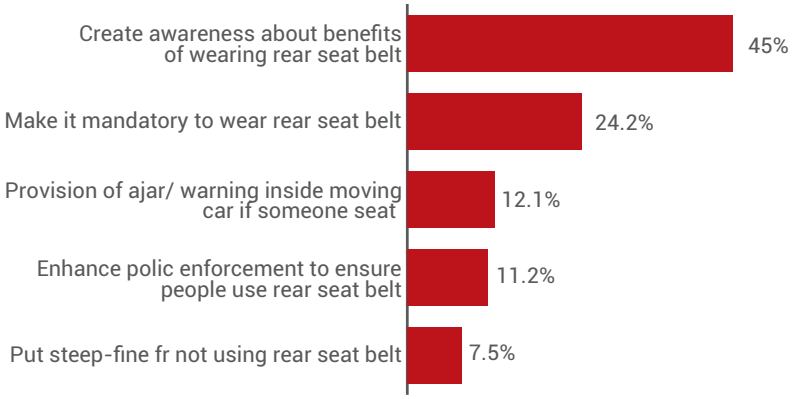
EFFECTIVE WAYS OF MAKING PEOPLE WEAR REAR SEAT-BELT WHILE COMMUTING

In order to find effective ways to motivate people traveling in cars to wear seat-belts while sitting in the rear-seats, the following options were given: creating and raising awareness, making it mandatory by law, warning sign inside a moving car if rear seat-belt is not worn, enhancing police enforcement or imposing steep fines.

Overall, most respondents (45 percent) chose creating and raising awareness about the benefits of wearing rear seat-belt, while 24 percent voted for making it mandatory by law. About 12 percent respondents suggested that a warning signal option be there, and 11 percent said enhanced enforcement by police would help. Eight percent respondents felt imposing a steep fine would push people to wear rear seat-belts.

More than 40 percent people surveyed in Patna and 36 percent in Kolkata said making it mandatory to wear rear seat-belt will increase its usage, whereas around one-third of respondents in Guwahati and Lucknow chose the presence of a warning signal inside a moving car in case of non-usage of rear seat-belt.

FIG 3.9: WAYS TO MAKE PEOPLE WEAR REAR SEAT-BELT
[N=2438]



SUGGESTIONS BY TAXI DRIVERS TO MOTIVATE PASSENGERS TO WEAR REAR SEAT-BELTS

With an increasing population using cab services, safety in cabs and taxis has become a crucial aspect in Road Safety. Taxi drivers are an important stakeholder as far as influencing or encouraging their passengers to wear rear seat-belts is concerned. The survey found that, on an average, each taxi driver ferries about 22 passengers every day in the rear-seat of their taxi.

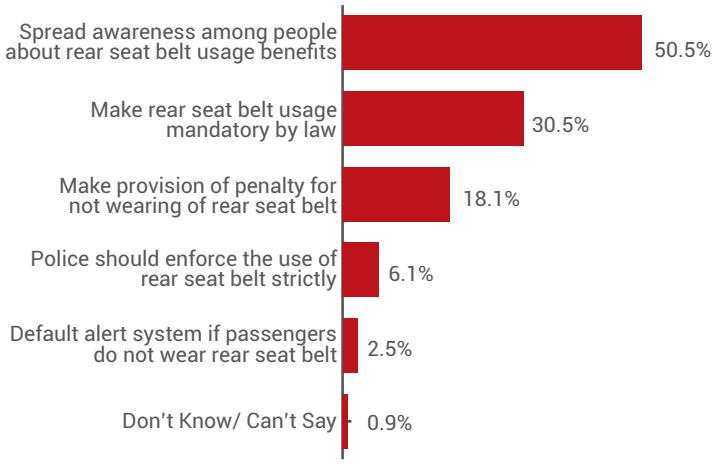
When asked open-ended questions on how to motivate more and more of their rear-seat passengers to use seat-belts, half of the taxi drivers surveyed suggested that spreading awareness was the best idea. Three out of ten were in favour of making it mandatory by law. 18 percent suggested that levying a penalty on those not wearing a rear seat-belt would work best, while 6 percent thought strict enforcement would be an effective way, and 2.5 percent agreed that having a default warning system would remind people sitting in the rear to strap up.

TABLE 3.3: AVERAGE PASSENGERS FERRIED BY TAXI EVERY DAY

Average passengers ferried every day on rear-seat of taxi	N	Average
Guwahati	40	37.1
Kolkata	43	25.6
Chennai	40	23.5
Patna	40	23.2
Panaji	40	20.9
Bengaluru	40	20.8
Jaipur	40	20.3
Lucknow	40	19.4
Delhi NCR	40	19.3
Kochi	40	17.8
Mumbai	40	17.7
Overall	**443**	**22.3**

FIG 3.10: SUGGESTIONS TO ENSURE USAGE OF REAR- SEAT BELT (AS REPORTED BY TAXI DRIVERS)

[N=443, Open-ended, Multiple response]



OBSERVATIONS

Observations as a methodology was also employed to understand trends in usage of rear seat-belts in Kolkata, New Delhi, Mumbai, Jaipur, Lucknow, and Bengaluru, at strategic locations such as near State Assemblies, Secretariat/Mini Secretariat, Commissioner's Office, District Courts, and District Magistrate's offices, etc. The purpose of the observations was to examine whether key influencing personalities who hold important

positions in public offices from the fields of politics, administration, bureaucracy, judiciary, etc. use rear seat-belts. The observation was conducted from 9 AM till 6 PM.

A total of 1,353 passengers in 1,077 vehicles were observed for whether they wear rear seat-belt.

The survey shows that overall only 1.8 percent of passengers sitting in rear-seats were wearing seat-belts. The highest proportion of passengers who wore rear seat-belts were in Delhi (4 percent) followed by Mumbai (2.4 percent), Bengaluru (2.1 percent), while none of the passengers in Jaipur, Kolkata and Lucknow were found to be wearing rear seat-belts.

REAR SEAT-BELT USAGE-KABP IN CHILDREN

Seat-belts and child restraints are extremely effective at saving the lives of car occupants in the event of a crash. The non-use of seat-belts and child restraints more than doubles the risk of serious and fatal injury.

WHERE CHILDREN NORMALLY SIT IN 4-WHEELERS: PARENT RESPONDENTS

This survey explored attitudes and behavior of parents while commuting with children in four-wheelers. Parents who commute with their children in four-wheelers were asked

TABLE 3.4: CITY WISE SEGREGATION OF PASSENGERS WEARING REAR SEAT-BELT
[All figures in percent]

City	Yes	No
Delhi (N=276)	4.0	96.0
Mumbai (N=85)	2.4	97.6
Bengaluru (N=516)	2.1	97.9
Jaipur (N=158)	0.0	100.0
Kolkata (N=78)	0.0	100.0
Lucknow (N=240)	0.0	100.0
Overall (N=1353)	**1.8**	**98.2**

which seat their child generally used while travelling.

Nearly 57 percent parents said their children sat in the rear-seat, while 37 percent said they sat in the front-seat. Around 6 percent of respondents said their children do not sit on any particular seat.

Mostly in metro cities six out of ten respondents said their children sat in the rear-seats, except in Chennai. In the smaller cities also, most respondents said that their children sat in rear-seats, except in Panaji and Guwahati.

I. FRONT SEAT

When sitting in the front-seat, most respondents (61.3 percent) said that their child sat alone in the front passenger seat while wearing a seat-belt. Twenty-four percent of parents said their child sat alone in the front-seat without wearing a seat-belt, while 14.5 percent parents said their child sat in the lap of a passenger in the front seat.In fact, the incidence of this trend increases in the age group 0-5 (with 55 percent respondents making their child sit in their lap).

Most respondents (77 percent) said that children between the ages of 9 and 14, and 11 and 17 years (74.7 percent) sat alone in the front passenger seat while wearing a seat-belt. Almost half the parents said children who were six to eight years old also did the same, while this figure was 20.4 percent for respondents with children aged 0-5 years.

Almost 66 percent respondents said their children sat alone in the front-seat with a

TABLE 3.5: MANNER IN WHICH CHILD SITS MOSTLY WHILE TRAVELING - FRONT SEAT
[All figures in percent]

Manner in which child sits mostly while traveling - Front Seat	Child sits alone on the front passenger seat WITH seat belt	Child sits alone on front passenger seat WITHOUT seat belt	Child sits in the lap of front seat passenger	Child sits in the lap of the driver
(4-W Users) 0-5 yrs. Child (N=103)	20.4	25.2	54.4	--
(4-W Users) 6-8 yrs. Child (N=96)	47.9	30.2	21.9	--
(4-W Users) 9-14 yrs. Child (N=165)	77.0	20.6	1.8	0.6
(4-W Users) 11-17 yrs. Adolescents (N=174)	74.7	25.3	--	--
(4-W Users) Cab drivers (Ola \ Uber etc.) (N=139)	65.5	21.6	12.9	--
(PT Users) School Bus Users (N=21)	61.9	23.8	14.3	--
Overall (N=698)	**61.3**	**24.1**	**14.5**	**0.1**

seatbelt while taking a taxi, while 62 percent said the same for children while traveling in school buses.

II. REAR SEAT

Among those respondents who said their children mostly sat in the rear-seat, 77 percent said their children sat there without wearing a seat-belt, while 14.2 percent said they sat in the lap of a rear-seat passenger. Only 8.4 percent said their children sat in the rear-seat while wearing a seat-belt.

The survey found that most respondents (90.6 percent) claimed their children sat in a school bus in the rear seat without wearing a seat-belt.

In an age-wise breakup, the survey found that 86 and 84.6 percent respondents who said that their children sat in the rear-seat without a seat-belt were in the age groups 11-17 and nine-14 years, respectively. This was followed by respondents who said their children who did the same were between six years and eight years old (75 percent parents), and 0-5 years old (51 percent parents). 62 percent parents said their children sat in taxis in the rear-seat without a seat-belt.

FIG 3.11: MANNER IN WHICH CHILDREN SIT MOSTLY WHILE TRAVELING - REAR SEAT
[N=1041]

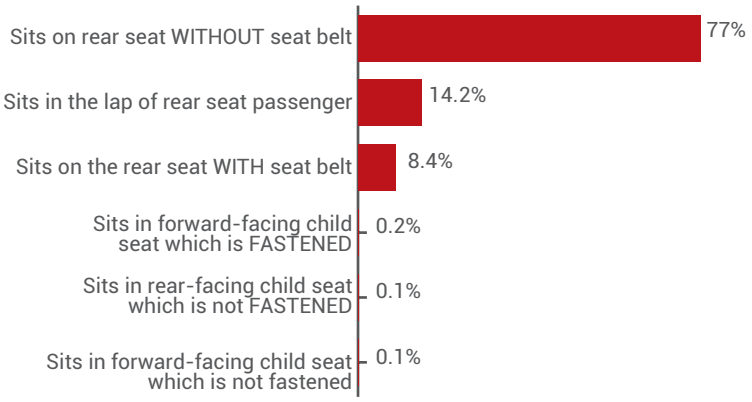


TABLE 3.6: MANNER IN WHICH CHILD SITS MOSTLY WHILE TRAVELING - REAR SEAT
[All figures in percent]

Manner in which child sits mostly while traveling - Rear Seat	Sits on the rear seat WITH seat belt	Sits on rear seat WITHOUT seat belt	Sits in the lap of rear seat passenger	Sits in forward-facing child seat which is FASTENED	Sits in rear-facing child seat which is NOT FASTENED	Sits in forward-facing child seat which is NOT FASTENED
(4-W Users) 0-5 yrs. Child (N=145)	6.2	51.0	42.1	--	0.7	--
(4-W Users) 6-8 yrs. Child (N=144)	7.6	75.0	16.0	0.7	--	0.7
(4-W Users) 9-14 yrs. Child (N=293)	9.9	84.6	5.5	--	--	--
(4-W Users) 11-17 yrs. Adolescents (N=286)	10.5	86.0	3.1	0.3	--	--
(4-W Users) Cab drivers (Ola \ Uber etc.) (N=109)	5.5	62.4	32.1	--	--	--
PT Users/School Bus Users	3.1	90.6	6.3	--	--	--
Overall (N=1041)	**8.4**	**77.0**	**14.2**	**0.2**	**0.1**	**0.1**

SAFEST SEAT IN 4-WHEELERS FOR CHILDREN BELOW 13 YEARS

Respondents were asked which they thought was the safest seat for children under 13 years in a four-wheeler. Overall, 47 percent of respondents said it was the rear-seat, while some 29 percent respondents said the front passenger seat was the safest, followed by the rear child-seat (10 percent). About 13 percent respondents were not aware which seat was the safest.

Across cities, the rear-seat of a four-wheeler was mostly considered safest for children below 13 years, except in Chennai, Panaji, Guwahati and Lucknow.

In Lucknow, over half the respondents said that the rear seat was the safest for children of that age.

> **Sixteen percent responded that they ensure usage of seat-belt as a safety precaution**

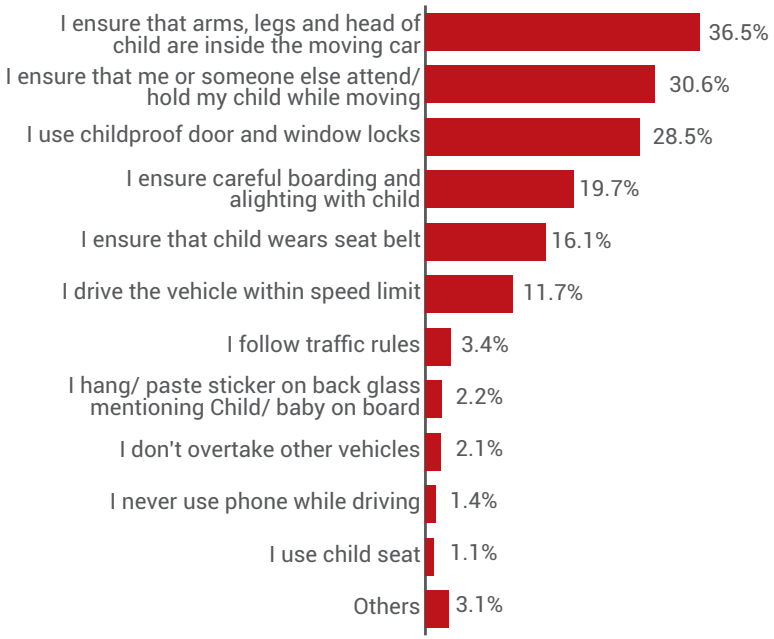
SAFETY PRECAUTIONS TAKEN WHILE COMMUTING WITH CHILDREN IN FOUR-WHEELERS

A direct open-ended question was asked about precautions taken while traveling with children in four-wheelers to ensure their safety.

Only 16.1 percent respondents answered the precaution was to ensure the child wore a seat-belt. 37 percent said they ensured that none of child's body parts were jutting out of the window/door of a moving car, followed by those (31 percent) who said they ensured that someone attended or held the child in a moving vehicle. Other safety precautions parents take are using child-lock on the doors and windows so that they could not be opened suddenly in a moving vehicle (28 percent), and safe boarding and alighting of children (20 percent).

FIG 3.12: SAFETY PRECAUTIONS TAKEN WHILE TRAVELING WITH THE CHILD IN 4-WHEELERS

[N=1639, Open-ended, Multiple response]



WHERE CHILDREN NORMALLY SIT IN 4-WHEELER: CHILD RESPONDENTS

In this section, children were asked where they usually sit while commuting in a four-wheeler. Most children (40 percent) said they sit alone in the rear seat, followed by 34.4 percent who said they sit alone in the front seat. Approximately 24 percent children said they do not sit in any particular seat but keep moving within the vehicle.

Frequency-wise, those who travel on a regular basis with parents, mostly preferred to sit in the front seat alone, while with decline in frequency of travel with parent, tendency of sitting at rear seat alone is high.

City-wise, there was a mixed response by children about their seating habits. A majority of children in metro cities like Delhi NCR, Kolkata, Bengaluru said they sit alone in the rear seat, while most children in the metros of Chennai and Mumbai said they sit alone in the front seat. A high number of children in smaller cities like Kochi, Panaji and Lucknow said they did not sit in any fixed seat, but rather kept switching seats.

40% children sit at rear seat of 4W alone while 34.4% sit at front seat alone

Seat of one-fourth of children was not fixed

Regular commuters mostly sit at front seat alone while with decline in frequency of travel tendency of seating at rear seat alone was high

PRACTICE OF WEARING SEAT-BELT

Children were asked if they have a practice of wearing seat-belts while traveling with their parents in four-wheelers. Over half of them (53.2 percent) said that they do not wear seat-belts. The proportion of children not wearing seat-belts while traveling with their parents was above the national average in 9 of the 11 cities, except in Panaji and Mumbai.

In an age-wise breakup, 57.8 percent children in the age group of 9-14 years and 49 percent in the ages of 11-17 years answered in the negative when asked if they had a practice of wearing seat-belts.

A higher proportion of children traveling frequently (daily or regularly) said they had a practice of wearing seatbelts, compared to those who traveled less frequently (occasionally or rarely) with their parents.

In terms of seat and seat-belt usage, 74 percent of those who sat alone in the front-seat said they were in a practice of wearing a seat-belt, while only 24 percent acknowledged to wearing one when they sat alone in the rear seat.

Children who said they wear a seat-belt while commuting with their parents in a four-wheeler were further asked about the

frequency. 60 percent children said they always wear a seat-belt while traveling in a four-wheeler, while about 35 percent said they wear it sometimes.

Overall, 60 percent children said they always wore a seat-belt while traveling in a four-wheeler, while about 35.1 percent said they wore it sometimes. Across metro cities, 69 percent children said they had a regular habit of wearing seat-belt, except Bengaluru where this proportion was only 27 percent.

Asked what seat they normally sat in, three-fourth or 74.6 percent front-seat occupants who sat alone said they wore a seat-belt regularly, while this figure was 43.3 percent for those who sat in the rear seat.

53.2% children do not wear seat-belt while commuting with parents in 4-wheeler

74% children who commute at front seat alone wear seat-belt while it was 24% for those who sit alone at rear seat

Habit of seat-belt wearing is more among frequent commuters compared to those who travel occasionally or rarely

FIG 3.13: CITY-WISE BREAKUP OF HABIT OF SEAT-BELT WEARING BY CHILDREN

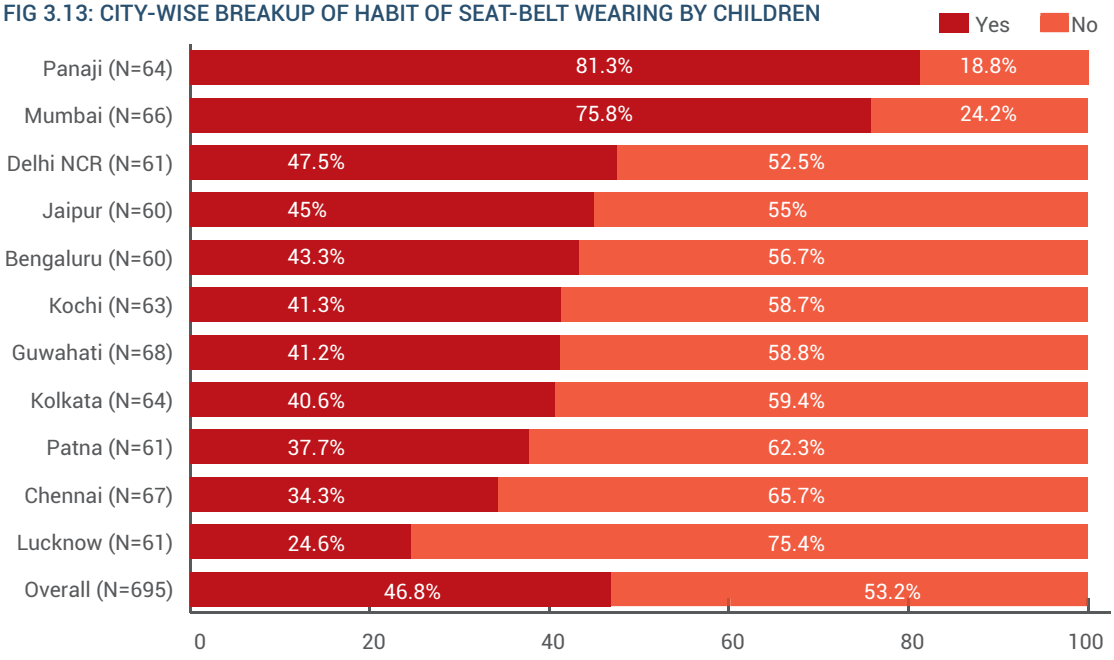
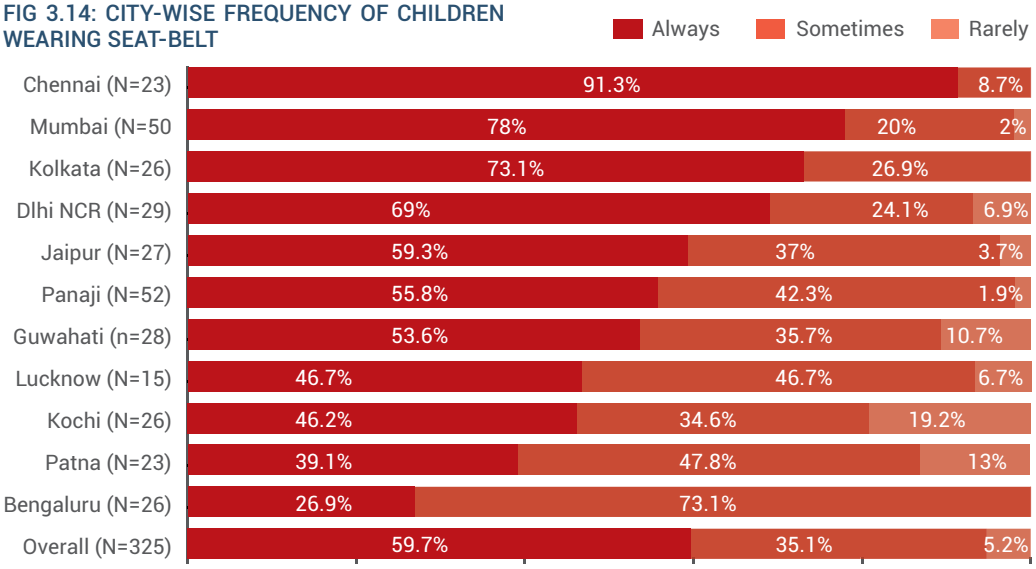


FIG 3.14: CITY-WISE FREQUENCY OF CHILDREN WEARING SEAT-BELT

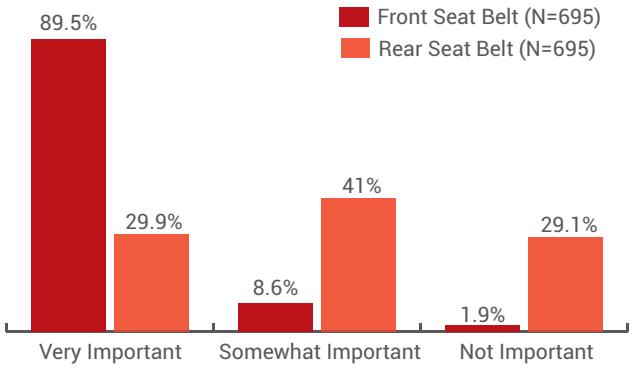


IMPORTANCE OF WEARING SEAT-BELT (FRONT AND REAR)

Children who travel in four-wheelers were asked about their opinion on the importance of wearing seat-belts in the front and the rear seats. Most children (9 out of 10) said it is very important to wear a seat-belt when sitting in the front seat, while only 30 percent said it was important to wear one while sitting in the rear seat.

As observed throughout the earlier parts of the report, most children (9 out of 11) said

FIG 3.13: IMPORTANCE OF WEARING SEAT-BELT (AS REPORTED BY CHILDREN)



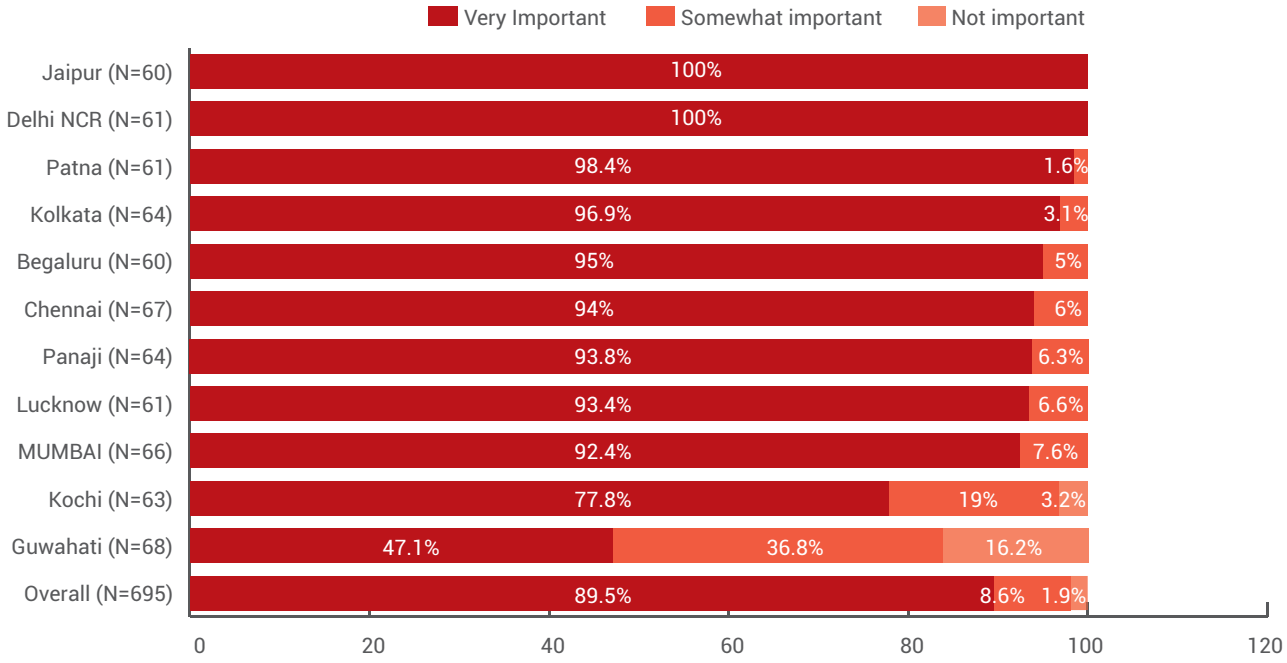
they thought it was very important to wear a seat-belt when sitting in the front seat, while only 30 percent said it was important to wear one while sitting in the rear seat.

At the city-level, all respondents emphasized the importance of wearing a front seat-belt in the cities of Delhi NCR, Jaipur, while in tier II and III cities like Kochi and Guwahati especially, the proportion of such respondents was a little low.

About three-fourth of children in Bengaluru felt that wearing a seat-belt was not important at all, followed by children in Jaipur (53.3 percent), Delhi NCR (49.2 percent) and Guwahati (47 percent).

During discussions with the children, it was also understood that they felt due to slow-moving traffic and high congestion on Indian city roads, there were less chances of high-impact road crashes. Moreover, some said rear-seat passenger were less vulnerable to such incidents hence they did not pay much attention on wearing seat-belts.

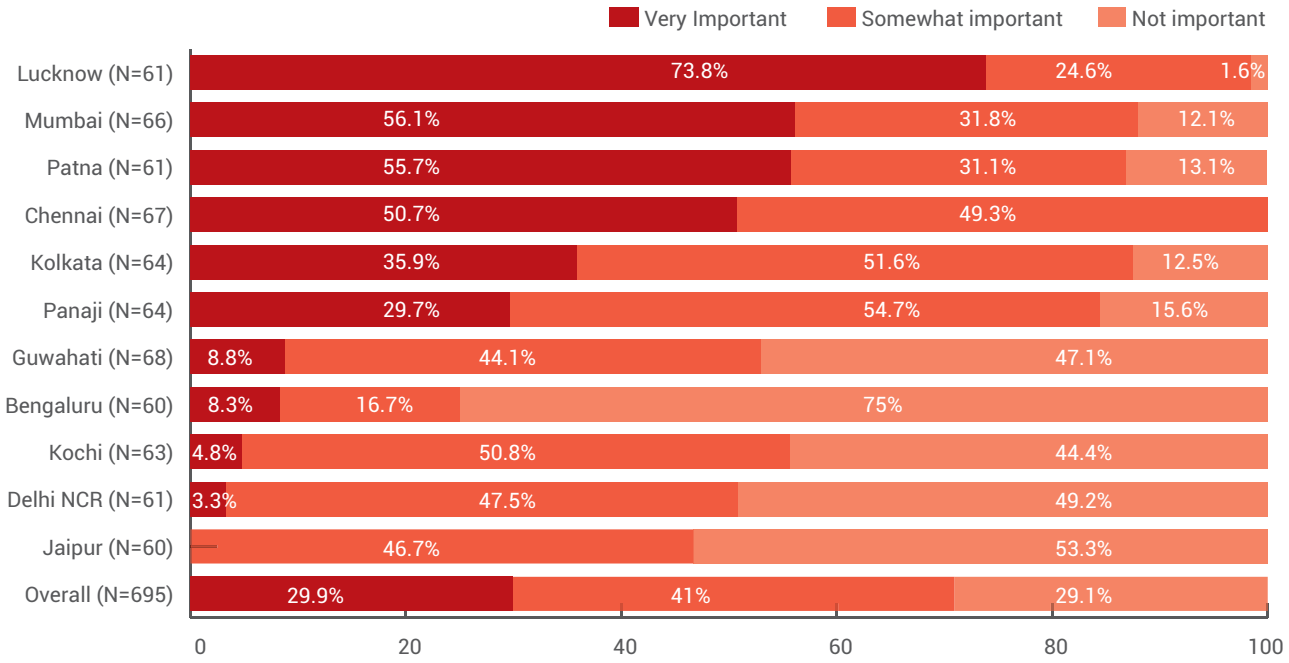
FIG 3.15: CITY WISE IMPORTANCE OF WEARING SEAT-BELT (FRONT SEAT)



STATUS OF SEAT-BELT USAGE IN INDIA

According to a World Health Organization report, of road crash casualties who were not restrained by a seat-belt, 70 percent were travelling at a speed of less than 50 kilometer/hour. A collision at that speed has the same effect as falling from the fourth floor of a building. Two-thirds of crashes happen less than 15 km away from home.

FIG 3.16: IMPORTANCE OF WEARING REAR SEAT-BELT (CITY-WISE)



SAFETY PRECAUTIONS TAKEN BY PARENTS WHILE COMMUTING WITH CHILDREN IN FOUR-WHEELERS

Children were asked a direct open-ended question about safety precautions taken by their parents while traveling with them in four-wheelers.

Overall, 36 percent of children said their parents ask them to wear a seat-belt, around 28 percent said that their parents followed traffic rules strictly and paid attention to traffic. A similar percentage said their parents asked them to sit properly so that they could concentrate on driving and also ensure that doors and windows of a four-wheeler are properly closed.

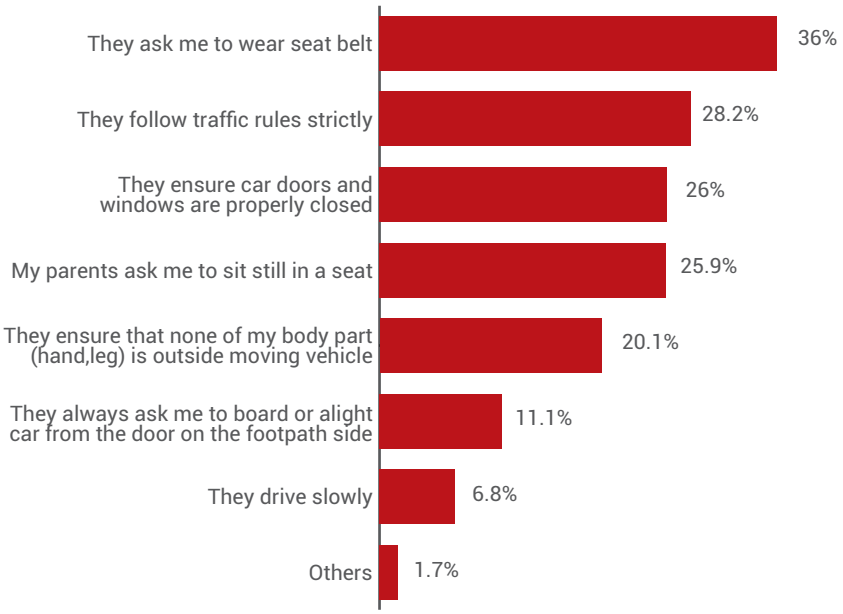
SEAT-BELT AVAILABILITY IN SCHOOL BUSES

The survey asked parents of school going children if the school buses that their children commuted in had seat-belts for all. Only 15.1 percent parents said that this was the case. When school bus/van drivers were asked the same question, 88.8 percent reported that their buses/vans were not fitted with seat-belts for all passengers.

CHANGES REQUIRED IN SCHOOL BUSES/VANS TO ENSURE SAFETY OF CHILDREN

Parents were asked an open-ended question on whether they would like to see any changes in the way that school-owned buses and vans followed safety precautions while in transit with their children.

FIG 3.17: SAFETY PRECAUTIONS TAKEN BY PARENTS COMMUTING IN 4 WHEELERS
[N=695, Open-ended, Multiple response]



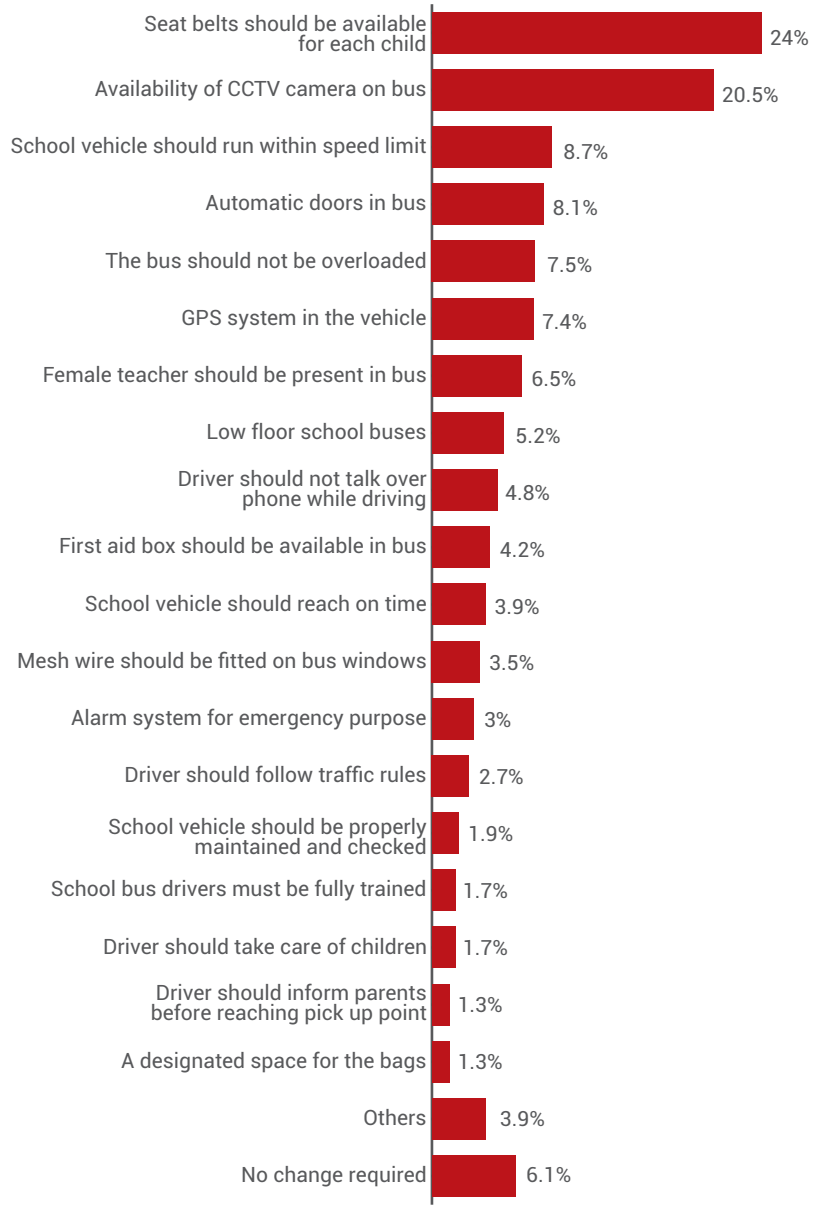
STATUS OF SEAT-BELT USAGE IN INDIA

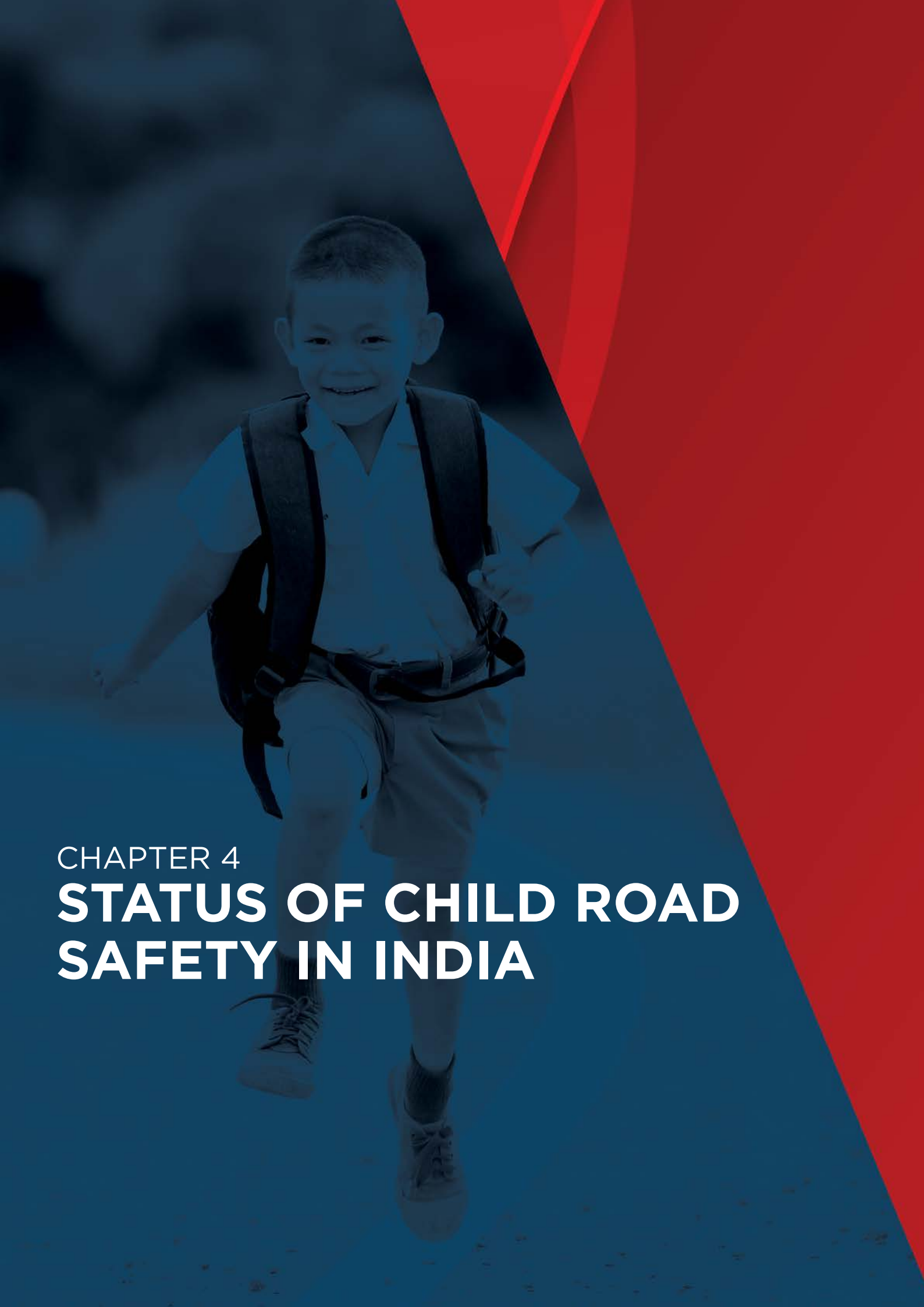
According to the National Crime Records Bureau, 'Accidental Deaths and Suicides in India', in 2015, 1622 children were injured and 422 were killed due to crashes involving school buses in India.

Maximum number of parents advocated for the provision of seat-belts for each seat so their children could be safer. Around 8.7 percent people said they would like to ensure that school vehicles drove within a permissible speed limit, while some others said they would prefer the bus to be less crowded.

FIG 3.18: CHANGES REQUIRED IN SCHOOL BUSES/VANS TO ENSURE SAFETY OF CHILDREN

[N=691, Open ended, Multiple response]





CHAPTER 4

STATUS OF CHILD ROAD SAFETY IN INDIA

STATUS OF CHILD ROAD SAFETY IN INDIA

Since 2008, over 55,000 children have lost their lives in road crashes in India. In 2017 alone, 6.4% road crash fatalities in India were attributed to children aged below 18. The World Health Organization asserts that using child restraint systems decreases the risk of death in a crash by about 70% for infants and 54-80% for small children*. As the safety measures for adults do not apply to children, it is erroneous to believe that the same safety strategies for adults can work for children. Therefore, it becomes important for Governments to provide special focus on safety policies for children in transit.

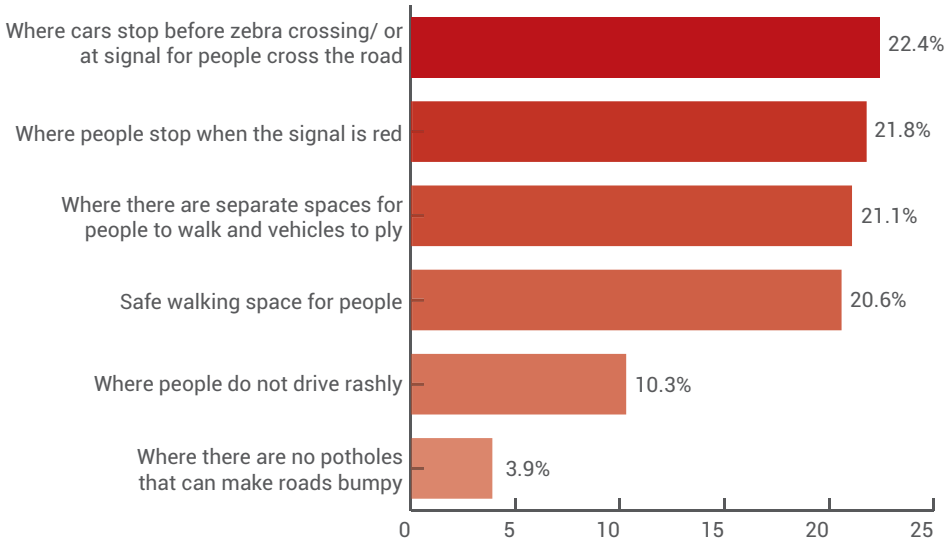
This chapter explores status of safety of children as commuters with parents, independent commuters, school-goers and underage drivers.

The survey attempted to understand various other aspects of road safety for children while they commute for activities other than going to or coming from school. Children were segregated under five categories based on the primary mode of transport they used and the age-group they fell under. Their responses were explored on various parameters including commuting with parents in city, commuting independently or/ and as a pedestrian or cyclist.

PERCEPTIONS ABOUT ROAD SAFETY (CHILDREN)

Children were asked to describe the most important feature of a safe road. Most children (22.4 per cent) identified this feature as where all cars stopped before a zebra crossing or when the traffic signal is red. Other children said they felt roads were safest when:

FIG 4.1: DESCRIPTION OF SAFE ROAD BY CHILDREN
[N=1740]



* Global Status Report on World Safety 2013, World Health Organization.

- People stop when traffic signal is red (21.8 percent);
- Walking space is available (20.6 percent); and
- Separate spaces are available for pedestrians and vehicles (21.1 percent)

Perspective of parents was also assessed on road safety of children. Their ratings were recorded on a three-point scale where one meant 'very unsafe' and three meant 'very safe'.

On most of the parameters in this section, maximum number of parents surveyed rated their city unsafe. The only parameter which was rated as safe by the majority of parents (54 percent) was how they behave on the road when they are with children.
Below is the city-wise breakup of whether parents thought their city was safe, unsafe or neutral for children from a road safety point of view. Most parents in Jaipur (81 percent) thought their city was unsafe, while Guwahati and Panaji were cities where least number of parents (40.5 percent) felt roads were unsafe for children from a road safety perspective.

REASONS FOR RATING CITY ROADS AS UNSAFE FOR CHILDREN

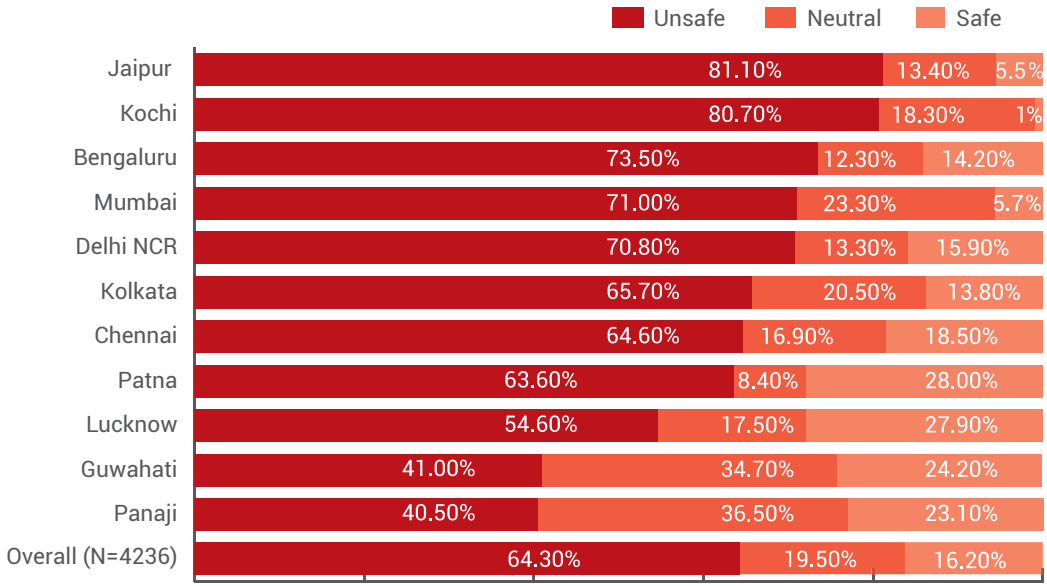
Our interviews with Road Safety Experts revealed that irresponsible and negligent road user behavior aren't the only factors that make commute unsafe for children. Poor infrastructure which includes the lack of footpaths and zebra crossings also contribute to lack of safety during commute for children. Moreover, with increased motorization, roads are crowded round the clock which makes roads more unsafe for children when travelling by themselves.

TABLE 4.1: PARENTS' RATING OF THEIR CITY ROADS DURING PERSONAL COMMUTE W.R.T CHILD SAFETY

[All figures in percent]

S.N.	Safety Aspect	Rated "Unsafe"	Rated "Neutral"	Rated "Safe"
1	**How safe are your city roads for children?**	**64.3**	**19.5**	**16.2**
2	How would you rate the way people drive in your city from the point of child safety?	54.3	28.0	17.7
3	Parents' road behavior w.r.t child safety when they are with children?	24.2	21.8	54
4	Enforcement of slow traffic zones near schools, children parks, residential societies, etc.?	36.9	26.3	36.8
5	The way children move or cross roads alone/ independently in your city?	52.4	23.9	23.7

FIG 4.2: PARENTS' OPINION ON CITY ROADS W.R.T CHILD ROAD SAFETY



To a follow-up question, respondents said it's because of people's behavior while driving. 52.6 percent said people on the roads drive fast or dangerously, while 23.3 percent said that people do not follow traffic rules. 43.8 percent said faulty road infrastructure like potholes or lack of foot over bridges make roads unsafe for children. Almost 31 percent respondents said that lackadaisical traffic management made roads particularly unsafe for children.

TABLE 4.2: REASONS FOR RATING CITY ROADS AS "UNSAFE" FOR CHILDREN (PARENTS)

[N=3551, Open-ended, Multiple response]

Key Aspects of Road Safety	Reasons for rating city roads as "unsafe" for children	N	Percent
People Behaviour and Driving Related Aspects (100.4%)	People indulge in fast/ rash driving	1868	52.6%
	People do not follow traffic rules	826	23.3%
	Wrong overtaking behaviour	300	8.4%
	People indulge in drunk driving	173	4.9%
	People do not follow lane driving	135	3.8%
	Lack of attention while people commute on road	81	2.3%
	Habit of driving on footpath	68	1.9%
	Wrong parking at roadsides	51	1.4%
	People use mobile phone while driving	50	1.4%
	People do not use helmet	11	0.3%
	Driving by untrained people	5	0.1%
Road Infrastructure Aspects (43.8%)	Potholes on roads	857	24.1%
	Lack of footpaths to walk	181	5.1%
	Narrow roads	166	4.7%
	Lack of signals at crossings/ zebra crossings	132	3.7%
	Lack of speed breakers on road	95	2.7%
	Many curves on roads	67	1.9%
	Open gutters/drains on roadside	43	1.2%
	Lack of foot over bridges/ subways	14	0.4%
Traffic Management Related Aspects (30.8%)	Heavy traffic on roads	964	27.1%
	Lack of traffic enforcement on roads	56	1.6%
	Casual attitude of traffic police	32	0.9%
	No strict rule/ punishment for traffic violation	22	0.6%
	Non-availability of police near schools	21	0.6%

On the other hand, the 685 respondents who said city roads were safe for children to travel on were further questioned to find out their reasons for saying so. 29 percent of these respondents said wider roads make them feel the city is safe for children for commute , while for 27 percent parents, it's the fact that people adhere to traffic rules and that rules are enforced strictly by police.

Some, respondents also chose availability of footpaths, less crowded roads, and lane-driving as reasons for safe roads.

ENFORCEMENT IN SLOW TRAFFIC ZONES NEAR SCHOOLS, CHILDREN PARKS, RESIDENTIAL SOCIETIES

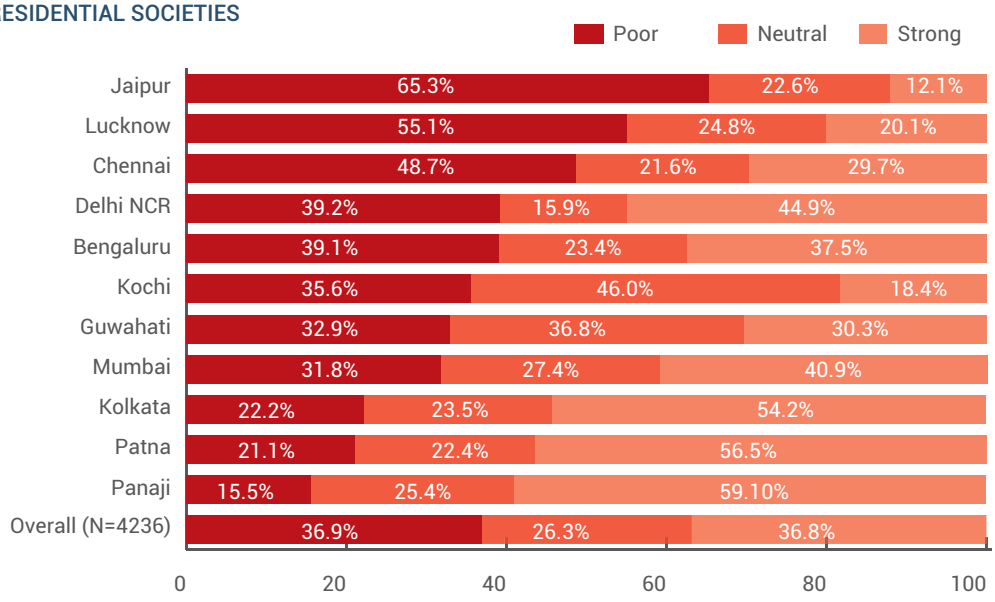
Parents were surveyed on terms of enforcement of slow traffic zones near schools, children parks, and residential societies etc. to ensure the safety of children.

Overall, a mixed rating was provided with almost 37% parents each rating their cities as unsafe and safe on this aspect. City wise, highest respondents from Jaipur (65 percent) followed by Lucknow (55 percent) and Chennai (49 percent) felt most unsafe w.r.t enforcement of slow traffic zones while respondents of Patna (57 percent), Panaji (59 percent) and Kolkata (54 percent) felt safest among the cities where survey was conducted.

ROAD SAFETY OF CHILDREN DURING INDEPENDENT COMMUTE

Over half the surveyed parents said that they feel children are unsafe while traveling independently and crossing roads, and close

FIG 4.3: ENFORCEMENT IN SLOW TRAFFIC ZONES NEAR SCHOOLS, CHILDREN PARKS, AND RESIDENTIAL SOCIETIES



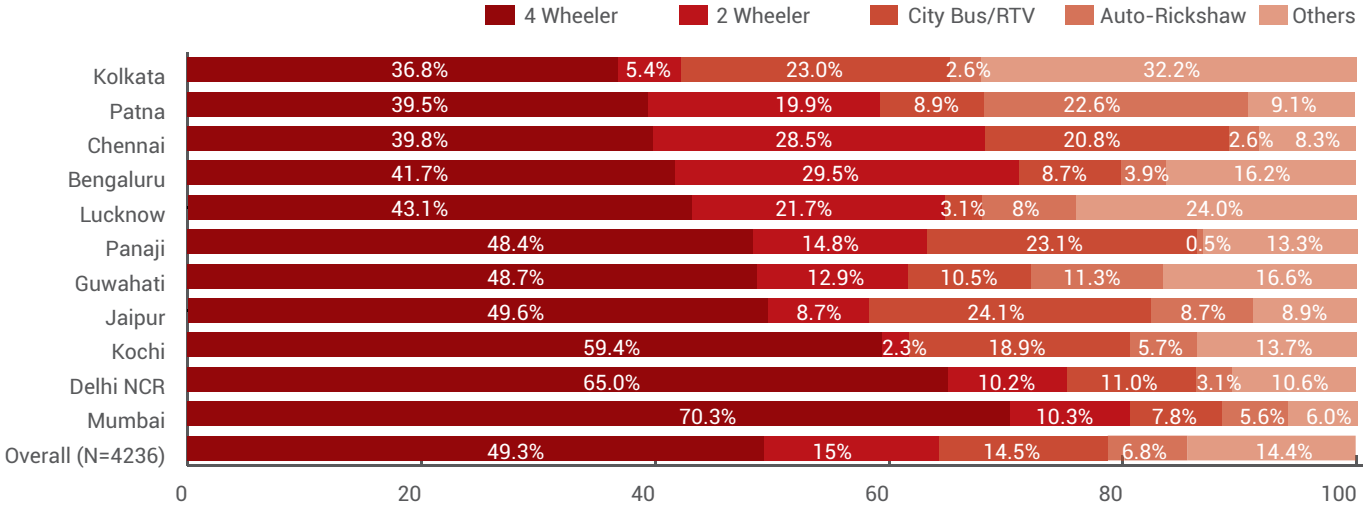
to one-fourth said they feel children are safe. Most parents (60 percent) surveyed in Kochi, Jaipur, Chennai, Lucknow and Bengaluru said their roads were unsafe for children to travel independently or crossing roads, while most respondents in Panaji (63 percent) and Patna (56 percent) said they were safe.

SAFEST MODE OF TRANSPORT FOR CHILDREN

Parents were asked what they thought was the safest mode of transport for their children to commute. Across all the cities, four-wheelers were considered as the safest by almost half the parents. They added that children were mostly accompanied by parents or someone known to them when traveling in four-wheelers.

Two-wheelers were considered the second-safest mode of transport by about 15 percent of respondents. Another 14 percent of respondents said city buses/trams/RTVs are safe for their children to commute because public transport drivers are trained and professional and drive according to traffic rules and regulations. 7 percent respondents opted for three-wheelers, and 5 percent for walking and metro rail/trains.

FIG 4.4: SAFEST MODE OF TRANSPORT FOR CHILDREN TO COMMUTE (PARENTS)
[All figures in percent]



[Note: Others include Bicycle, walking, Metro/ train etc.]

SAFETY DEVICES: CHILD RESTRAINT SYSTEM - KNOWLEDGE AND USAGE

Respondents were surveyed to assess their knowledge of child restraint systems (CRS). The survey revealed that at least three-fourth Adult respondents were not aware about child restraint system, while some 15 percent said they were aware of a rear-facing CRS. Another 13 percent said they knew of a forward-facing CRS and booster seats to ensure the safety of the child.

Awareness of CRS was higher among the driver category of respondents than the passenger category of respondents. Similarly, those who generally commuted by their own four-wheeler with a child were more aware about CRS than those who used taxis for traveling.

The 339 parents who said they were aware of CRS were further questioned whether they used a CRS to ensure safety of their children. Overall, while some 15 percent of parents surveyed said they knew about a rear facing CRS, only 4.1 percent said they had used one themselves while commuting with children. Again, while 13 percent of the respondents said they knew about a forward-facing CRS, only 2.1 percent said they had used them to ensure the safety of the child.

13.3 percent of the respondents said they knew about a booster seat, while 4.3 percent said they had used them.

FIG 4.5: KNOWLEDGE OF CHILD RESTRAINT SYSTEM (CRS)T

[N=1639, Multiple response]

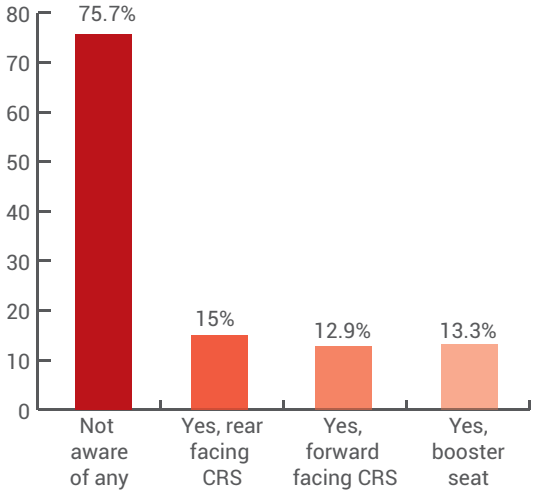


TABLE 4.3: KNOWLEDGE AND USAGE OF CHILD RESTRAINT SYSTEM (CRS)

% of Parents know/ Use CRS	Rear facing CRS	Forward facing CRS	Booster seat
Awareness	15.0%	12.9%	13.3%
Usage	4.1%	2.1%	4.3%

WILLINGNESS TO PAY FOR A CHILD SEAT

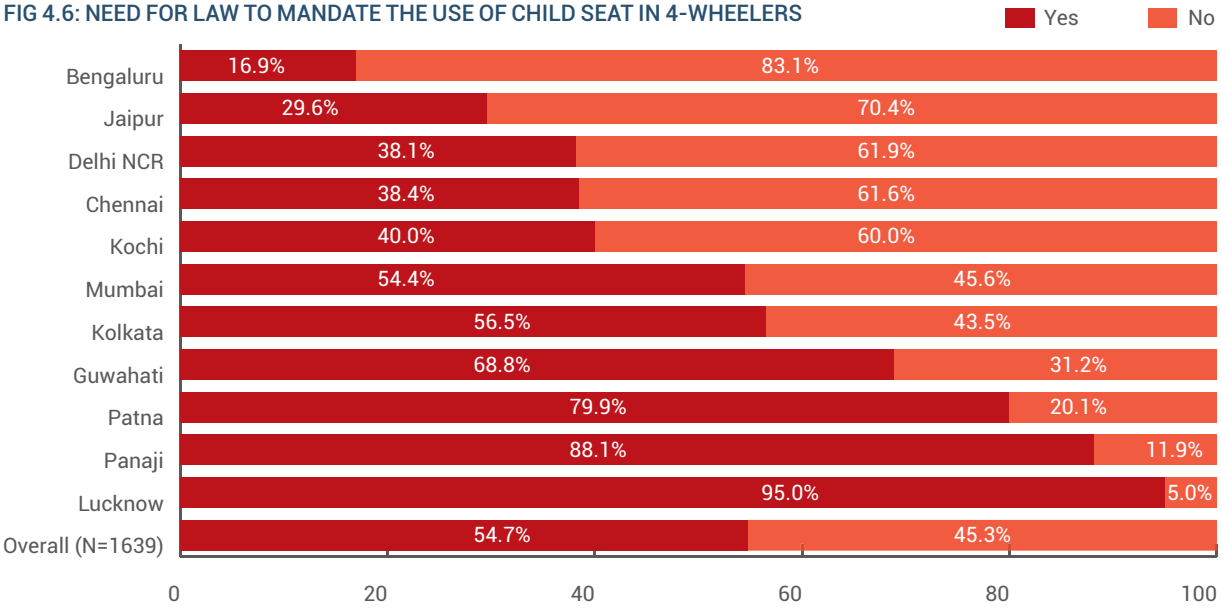
Parent respondents were asked if they would be willing to pay for a child seat. One-third of the respondents said that they are willing, while 56 percent said otherwise. The highest proportion of respondents unwilling to buy a child seat were based in the metro cities: Bengaluru, Kolkata and Delhi NCR. The likelihood of respondents willing to pay for a child seat increased with the level of education of the respondent.

Respondents who traveled as passengers (36 percent) were more willing to pay for a child seat than those who drove (30 percent). Respondents from the SEC A category were more willing to pay for child seat compared to others. Also, 40 percent of parents surveyed who had a child between the ages of 0-5 years or the ages 9-12 years were more interested in paying for a CRS.

NEED FOR LAW MANDATING USE OF CHILD SEAT

Overall, 55 percent of respondents felt the need for a law to mandate use of child seat to ensure safety of children in India while traveling in four-wheelers. Most of these respondents were in Tier II cities (except Jaipur). Interestingly, the more economically well-off people were less likely to wanting a law mandating use of child seats. Even then, more passengers (57 percent) of four-wheelers said they would be in favor of a law compared to those that drove the four wheeler. (52 percent).

FIG 4.6: NEED FOR LAW TO MANDATE THE USE OF CHILD SEAT IN 4-WHEELERS

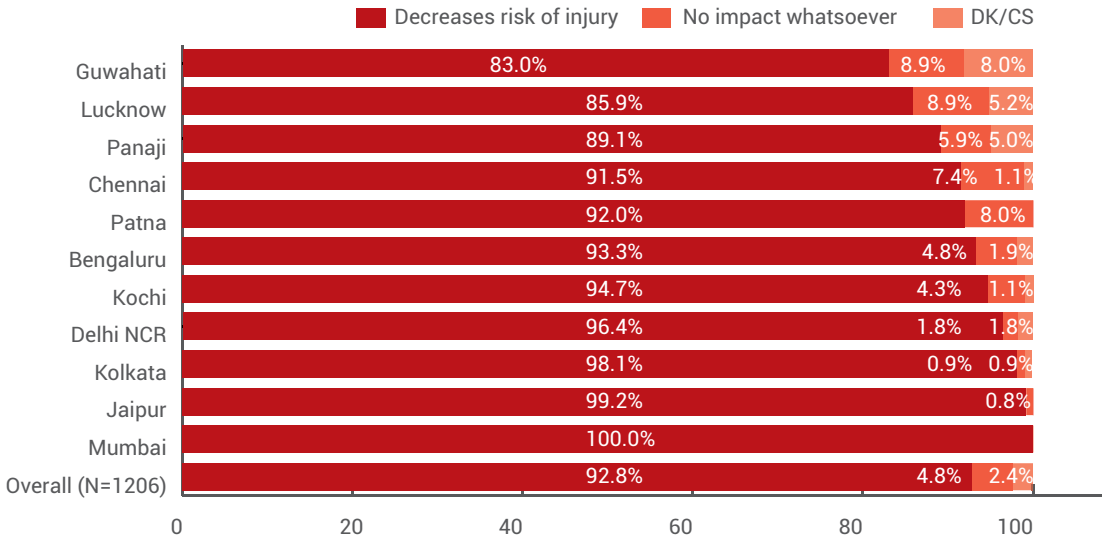


SAFETY DEVICES: CHILD HELMETS

A study of crash victims in New Delhi revealed that riders who used any type of helmet with some protective padding benefited from it[14]. Parents were queried about the relation between use of helmets and injury or death during a road crash where children were involved. A majority of them (93 percent), nationwide, answered that wearing one would decrease the chances of injury or death, while 5 percent felt it would have no impact. The older the respondents were, the more they felt wearing helmets would decrease the chances of injury and deaths. Similar pattern was followed with increase in monthly household income as well.

In Mumbai 100 percent of respondents answered that helmets decreased chances of injury or death during a road crash, while other cities where very high percentages of people felt the same were Jaipur and Kolkata.

FIG 4.7: RELATION BETWEEN ROAD CRASH INJURY/ DEATH AND USE OF HELMETS



14 "Two-wheeler injuries in Delhi, India: a study of crash victims hospitalized in a neuro-surgery ward. Accident Analysis and Prevention", 1984, B.K. Mishra, A.K. Banerji, D. Mohan

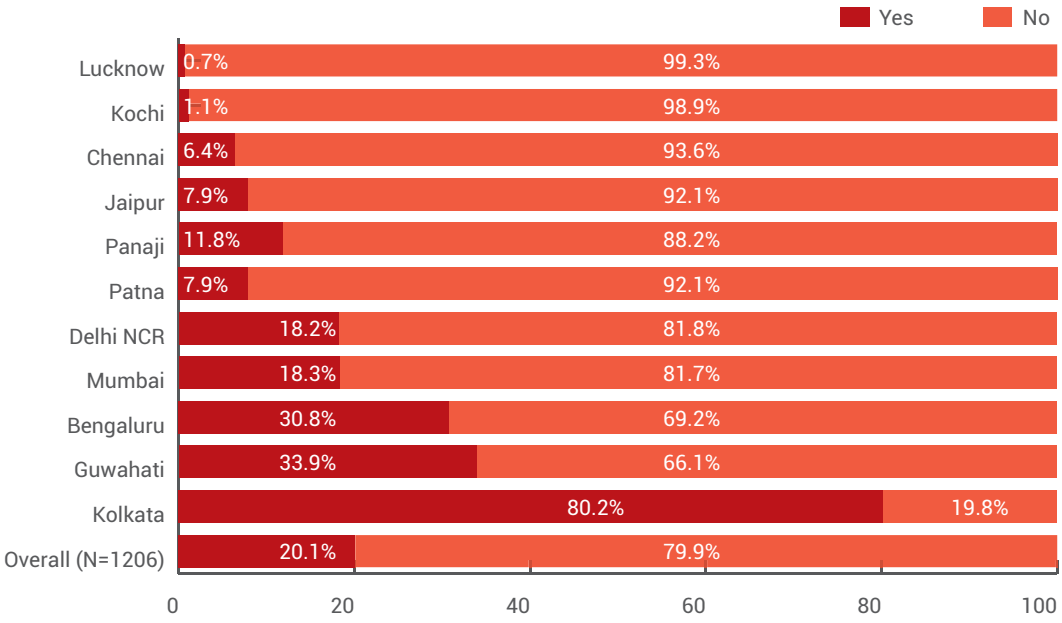
OWNERSHIP OF CHILD HELMET

Despite most people acknowledging that helmets played an important role in saving children from injury or death during road crashes, 8 out of 10 respondents nationwide said that they do not own a child helmet. Lucknow (99.3 percent) and Kochi (98.9 percent) had the highest percentage of people who do not own a child helmet.

Most people surveyed in Kolkata (80 percent) said they owned a child helmet, followed by Bengaluru (31 percent), and Guwahati (34 percent).

The survey also found that the higher the monthly household income of respondents, the more likely they were to own a child helmet.

FIG 4.8: PARENTS WHO OWN CHILD HELMETS



REASONS FOR NOT OWNING A CHILD HELMET

Nearly 65 percent of respondents, who do not own a child helmet, said the reason is absence of a law mandating child helmets, while 20 percent and 11 percent of the respondents cited limited availability and affordability, respectively, as the reason.

FREQUENCY OF CHILDREN WEARING HELMETS

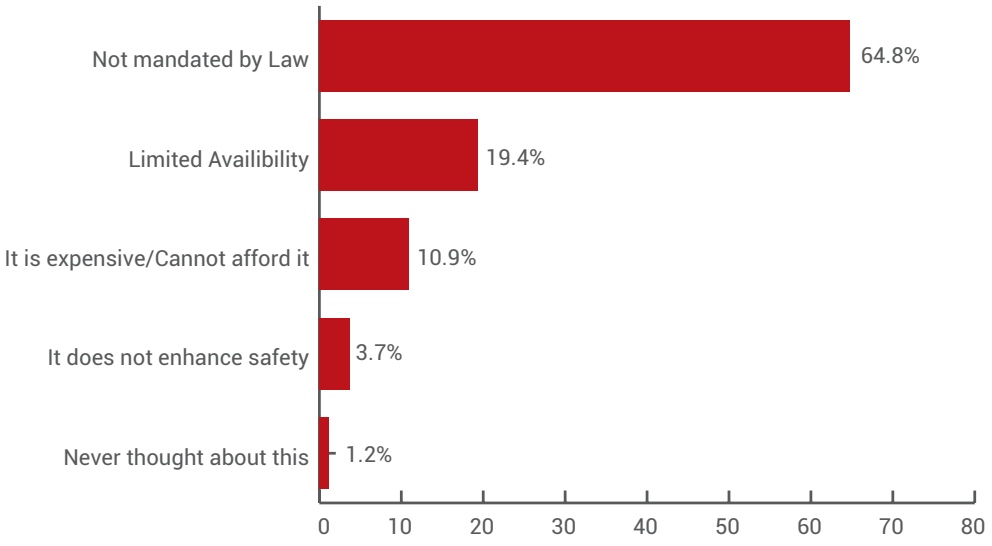
Among the 243 respondents who owned a child helmet, close to two-third (64 percent) confirmed their children wore the helmet on a regular basis while commuting on two-wheelers, while 17 percent said their child wore it only sometimes. Twenty percent respondents who owned a child helmet said their child never used it or used it rarely.

SUGGESTIONS FOR ENCOURAGING USAGE OF CHILD HELMET

Respondents who said their children did not wear helmets or wore them infrequently were further asked what factors they thought might encourage children to use helmets on a regular basis.

Overall, 40 percent parents said if helmets were mandated by law, children would be

FIG 4.9: REASON FOR NOT OWNING CHILD HELMET
[N=963]



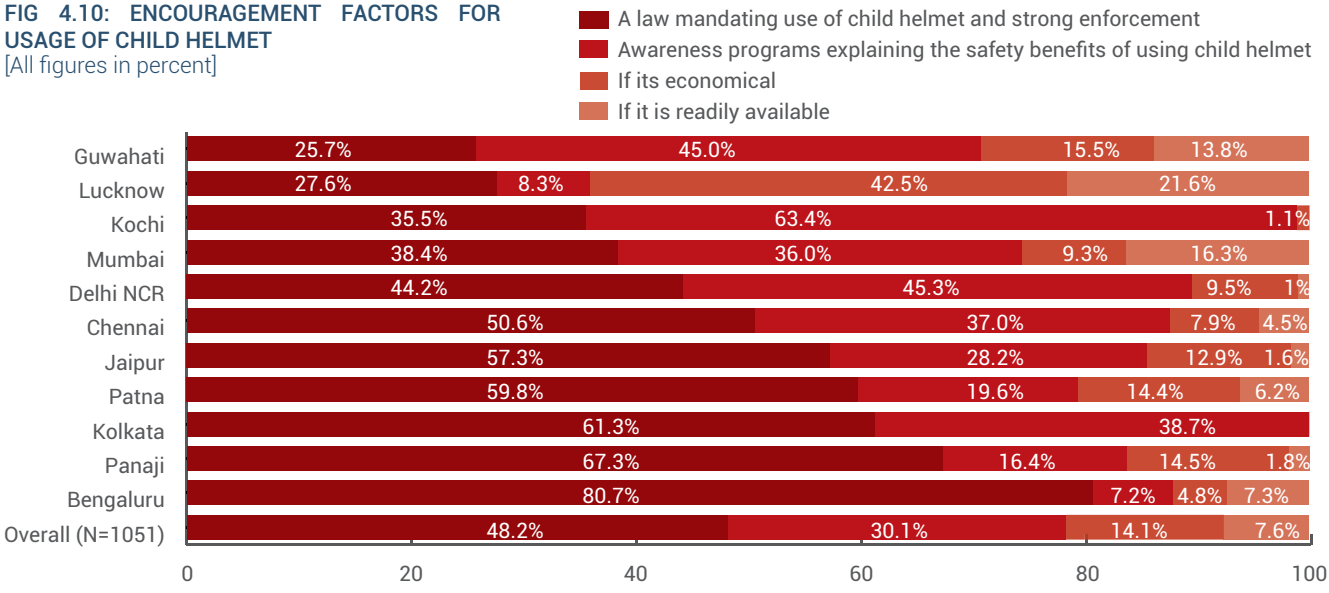
encouraged to wear them due to fear of punishment, fine or challan, followed by raising awareness on benefits of using child helmets (30 percent), affordability (14 percent) and ease of availability (8 percent). City wise, respondents from eight out of 11 cities advocated for a law mandating use of child helmets and its strong enforcement.

In Bengaluru, around 81 percent also chose mandating helmets by law as the number one encourager. Also, during interviews some said strict fines should be imposed on those who violate traffic rules and put their and others' lives in danger.

Respondents from Tier II and III cities like Kochi and Guwahati suggested conducting awareness programs explaining the safety benefits of using child helmets.

In Lucknow, about 43 percent of the respondents said affordability of a child helmet was an issue stopping people from buying it, and that making them available at an economical price would encourage more people to use them. Another 22 percent said to make them more easily available at shops.

FIG 4.10: ENCOURAGEMENT FACTORS FOR USAGE OF CHILD HELMET
[All figures in percent]



LAW MANDATING USE OF CHILD HELMETS

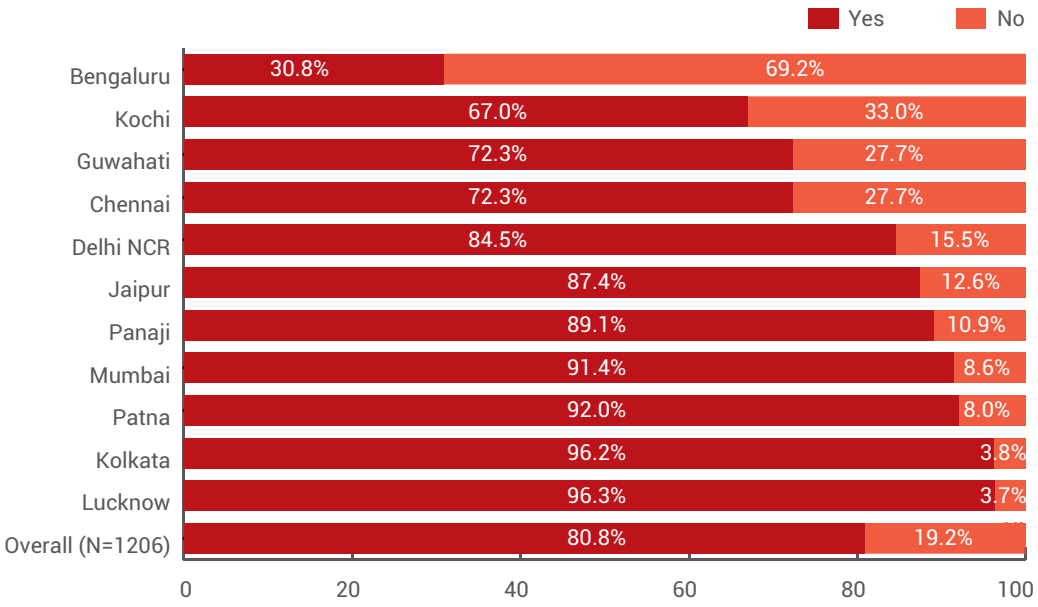
When asked if there should be a law mandating child helmets in two-wheelers, overall, eight out of 10 respondents agreed, while 19 percent were against it. The highest proportion of respondents in favor of a law lived in Lucknow (96.3 percent), followed by Kolkata (96.2 percent), and Patna (92 percent).

The three southern cities of Bengaluru, Kochi and Chennai were least in favor of a law mandating use of child helmets in two-wheelers, along with Guwahati.

Need of such law was advocated by a higher proportion of female respondents (83 percent) compared to males. (79 percent).

More economically well-off people (85 percent) answered in affirmative in response to the question.

FIG 4.11: NEED OF LAW MANDATING THE USE OF CHILD HELMETS

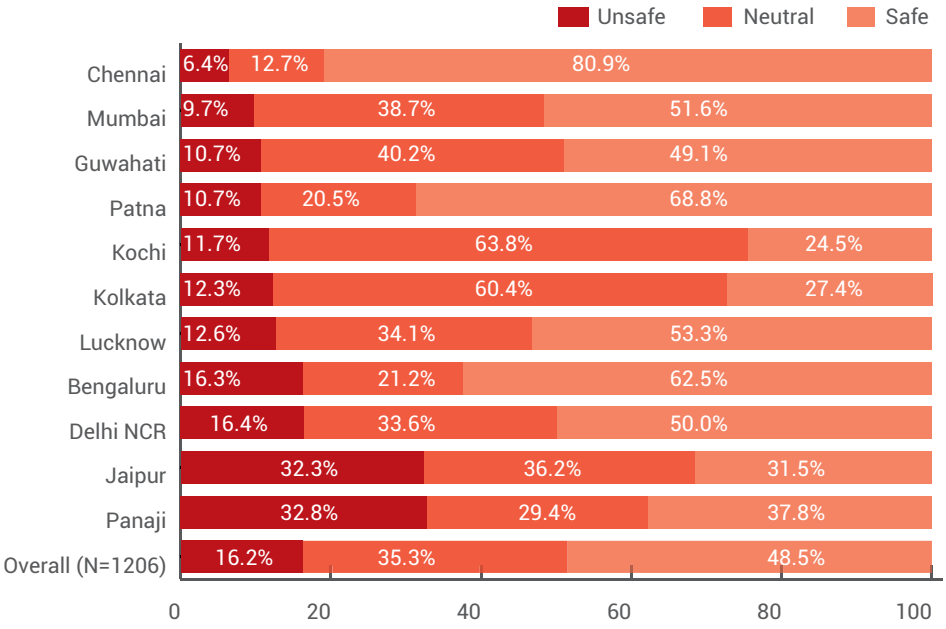


COMMUTING ON 2-WHEELER

Overcrowding of two wheelers is one of the major reasons for child deaths in road crashes. While two-wheelers are meant for two people, people often commute with their whole families on the same. However, it is to be noted that, given the economic realities of India, the lack of affordability of bigger vehicles and underdeveloped system of public transportation coupled with a general indifference to Road Safety leads people to travel on two wheelers with such peril.

Of the parents surveyed on whether they felt children were safe, unsafe or neutral while traveling on a two-wheeler, most (48.5 percent) said they felt safe. Chennai, Patna and Bengaluru were cities where the maximum number of parents said they felt their children were safe on two-wheelers, at 80.9 percent, 68.8 percent and 62.5 percent, respectively. Meanwhile, approximately 32 percent of surveyed parents in Jaipur and Panaji feel that two-wheelers are unsafe for children.

FIG 4.12: CHILD ROAD SAFETY WHILE TRAVELING ON A 2-WHEELER (PARENTS)



WHERE CHILDREN SIT WHILE TRAVELING ON A 2-WHEELER

When asked where their children sat while traveling on a two-wheeler, most parents (56.1 percent) said they sat at the back while holding driver from the back. In 14.7 percent cases the parents said their child sat between the driver and a pillion rider. Only 2.7 percent parents said their child sat in an additional seat fitted for a child on a two-wheeler.

SAFETY PRECAUTIONS WHILE TRAVELING WITH CHILDREN IN 2-WHEELER

When questioned about what precautions parents took to ensure their child was safe when traveling on a two-wheeler, most parents (70.8 percent) said they drove at low speeds or speeds within the permissible limit, while another 30.1 percent said they avoided overtaking another vehicle while a child was with them on a two-wheeler. 10 percent parents said they ensured their child wore safety equipment, e.g. helmet, head gear, kneecaps, etc.

MODE OF PUBLIC TRANSPORT USED WHILE COMMUTING WITH CHILDREN

The survey asked frequent public transport users what was the most common mode of transport they used while commuting with their children. 60 percent respondents said they used buses or rural transport vehicles (RTVs) for commuting with their children, while the rest said they used auto-rickshaws/ modified auto-rickshaws.

FIG 4.13: 2-WHEELER SEAT WHERE CHILDREN SIT MOSTLY (PARENTS)

[N=1206]

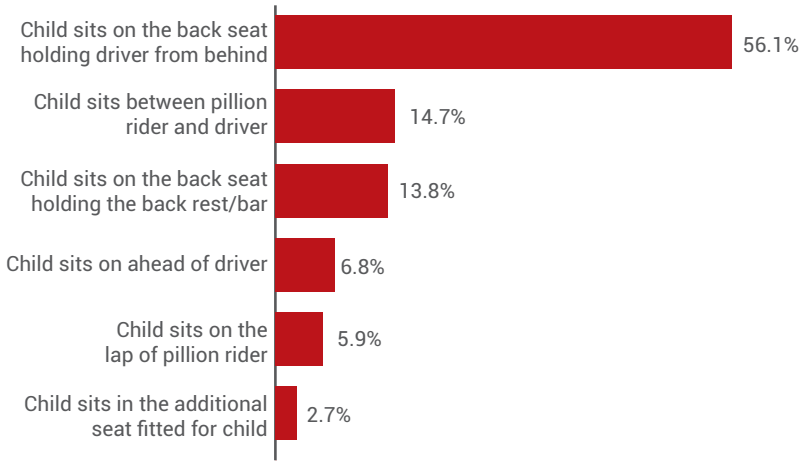
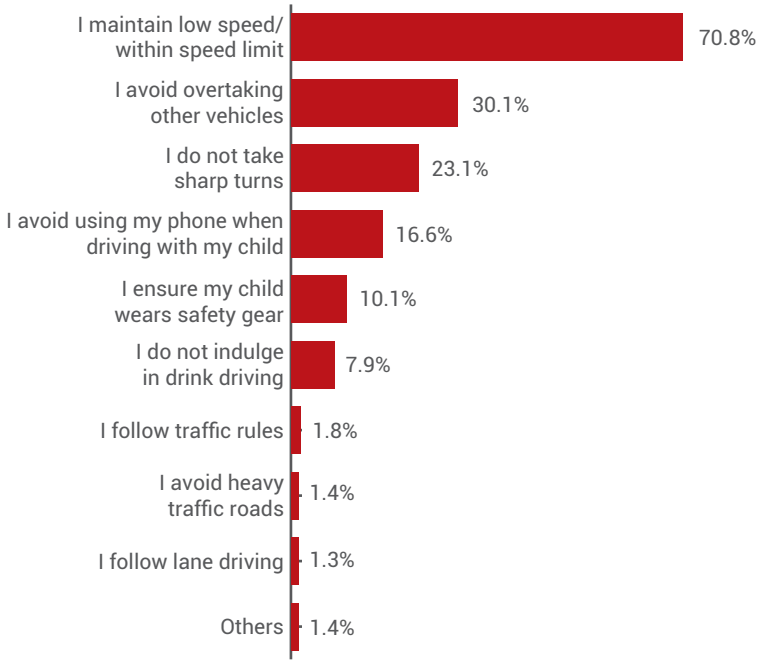


FIG 4.14: SAFETY PRECAUTIONS TAKEN WHILE TRAVELING WITH THE CHILD IN 2-WHEELERS

[N=1206, Open-ended, Multiple response]



In eight out of 11 cities, buses or RTVs were used by more than half of the respondents. In Mumbai, Bengaluru and Patna, however, more people said they used autos.

Majority of the respondents (56 percent) with children in the age group of 0-5 years said that they use autos/modified autos. On the other hand, 64 percent of those who have children between 13 and 17 years of age said that they use buses or RTVs.

Further, habits of parents commuting on public transport with their children were studied. The most common practice followed by 34 percent of the parents, while commuting with a child below 5 years on public transport, was to try to get a seat. Thirty-one percent parents with children in this age group said they carried their child in both arms and did not hold anything else for support, whereas 16 percent respondents said they commuted while holding the child with one arm and latching onto some support with the other.

Analysis of the data from all 11 cities reveals that the highest proportion (45 percent) of parents with children who were between 6 and 9 years old, said they held the hands of their children as they walked/stood inside a public transport vehicle. Thirty percent parents with children in this age group said they ensured they got a seat so that they could safely sit with their children. One-fourth respondents said they let their children walk/stand on their own while they supervised them.

When parents with children in the age group of 10-17 years were surveyed, over half of them (53 percent) said they ensured their child

FIG 4.15: MODE OF PUBLIC TRANSPORT USED WHILE COMMUTING WITH CHILDREN

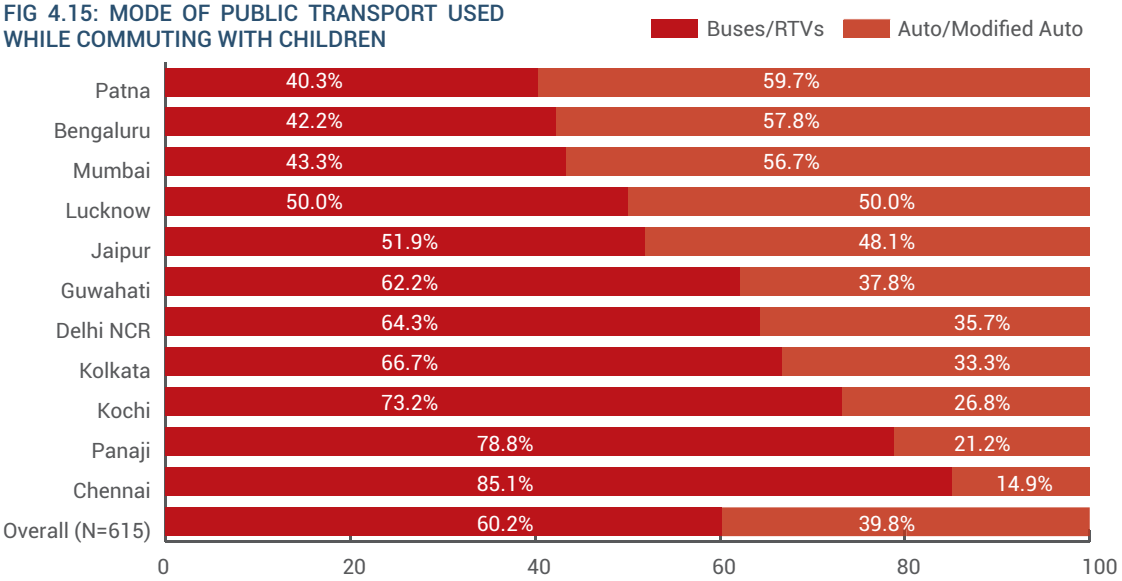


TABLE 4.4: WAYS OF COMMUTING WITH CHILDREN IN PUBLIC TRANSPORT
[All figures in percent]

WAYS OF COMMUT WITH CHILDREN ON PUBLIC TRANSPORT	0-5 YEARS (N=80)	6-9 YEARS (N=177)	10-17 YEARS (N=358)
Ensure I get a seat so that I can sit safely with my child	33.8	29.9	26
Carry in both my arms while not holding anything	31.3	--	--
Carry in one arm while latching onto the bus bar	16.3	--	--
Hold my child's hand while we walk/ stand	11.3	44.6	6.1
Secure my child with a cloth strapped around me	5.0	--	--
Let the child walk/ stand on their own as I supervise them	2.5	25.4	--
Ensure that they board and alight the bus/ auto safely	--	--	52.8
They travel alone in public transport	--	--	15.1

[As the city-wise and child-age-group wise sample is small, the analysis is not provided

safely boarded and alighted the bus/auto. Twenty-five percent parents in this category said they ensured they got a seat, while 6 percent said they held their child's hand while walking/standing in public transport. About 15 percent respondents said their children traveled alone on public transport.

SAFETY PRECAUTIONS WHILE TAKING PUBLIC TRANSPORT WITH CHILDREN

When asked what safety precautions they take while traveling with their children in public transport, most parents (39.7 percent) replied that they ensured that they or someone else attends to or holds their child's hand while traveling. Almost 36 percent said they did not board crowded vehicles or that they ensured safe boarding and alighting with child.

SAFETY PRACTICES WHILE COMMUTING ON FOOT

Commuting practices of parents were assessed when they travel with children as pedestrians. The assessment included parents of children of age groups 0-5 years, 6-9 years and 10-17 years. Over half of the respondents with a child aged between 0 and 5 years said they usually carry the child or use

the footpath when commuting as pedestrians with their children. 15 percent of the parents said that they hold their child's hand when they walk on the road, 18 percent said that they walk on the main road or wherever they find space, and 15 percent said they walk on the side of the road.

Among parents with children between the ages of 6 and 9 years, 64 percent said they hold their child's hand while walking with them on the road, and 13 percent said they let their children walk/stand independently while supervising them. About 16 percent said they cross the road with a child only at pedestrian traffic signals, and 7 percent said they cross the road whenever it is convenient to cross.

FIG 4.16: SAFETY PRECAUTIONS TAKEN BY PARENTS COMMUTING IN PUBLIC TRANSPORT
[N=615, Open-ended, Multiple Response]

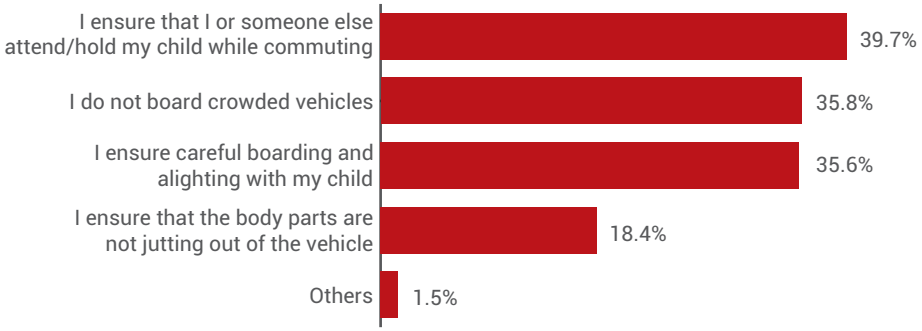


TABLE 4.5: WAY OF COMMUTING WITH CHILDREN AS PEDESTRIAN
[All figures in percent]

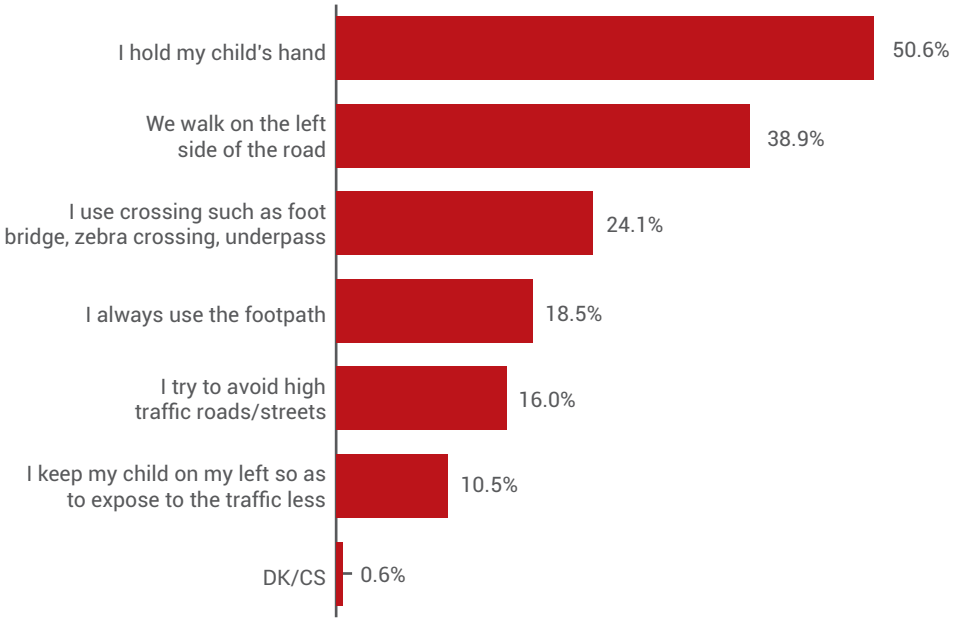
Way of commute with children as pedestrian	0-5 yrs. (N=33)	6-9 yrs. (N=45)	10-17 yrs. (N=84)
Carry my child/ walk with my child while on the footpath	51.5	--	--
Carry my child while walking on main road/ wherever I get space to walk	18.2	--	--
Hold my children's hand as I walk with them	15.2	64.4	26.2
Carry my child/ walk with my child on the side of the road	15.2	--	--
We cross the road at traffic signals which allow pedestrians	--	15.6	28.6
Let the child walk/ stand on their own as I supervise them	--	13.3	31.0
We cross the road whenever it is empty and it's convenient to cross	--	6.7	14.3

[As the city-wise and child-age-group wise sample is small, the analysis is not provided here

When asked about safety precautions taken to ensure safety of children while commuting as pedestrians, more than half of the parents said that they hold their child's hand, 39 percent said they walk on the left side of the road, and 24 percent said they use designated road crossings such as zebra crossing, foot-over-bridge, underpass, etc.

Other responses to the open-ended question included using a footpath (18 percent), avoiding streets and roads with heavy traffic (16 percent) and keeping the children to the left where they would be less exposed to moving vehicles on the road (10 percent).

FIG 4.17: SAFETY PRECAUTIONS TAKEN BY PARENTS WITH CHILDREN AS PEDESTRIAN
[N=162, Open-ended, Multiple Response]

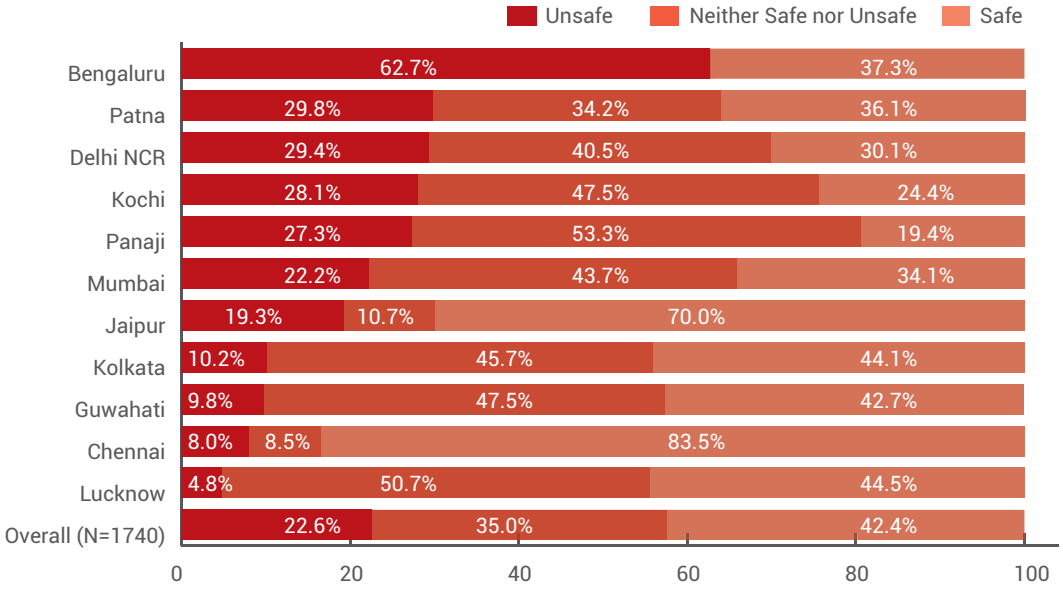


INDEPENDENT COMMUTE BY CHILDREN - ROAD SAFETY AS INDEPENDENT PEDESTRIAN

Children were asked what they thought of road safety as independent pedestrians on the road. Most (42.4 percent) said roads were safe for them as independent pedestrians, while 35 percent said they were not sure.

Most children surveyed in Bengaluru (62.7 percent) said roads were unsafe for them as pedestrians, while 83.5 percent in Chennai and 70 percent children in Jaipur said roads in their city were safe.

FIG 4.18: CHILDREN'S OPINION ABOUT ROAD SAFETY AS AN INDEPENDENT PEDESTRIAN



58.4 percent of the children who felt that roads are unsafe for children as pedestrians cited dangerous driving as the reason and 29 percent said violation of traffic rules make them feel unsafe. 11.4 percent children said that encroachment of footpaths compelled them to walk on the road. Dangerous driving, crowded roads, violation of traffic signals and driving on pedestrian lanes by several drivers were the other reasons for children feeling unsafe as pedestrians on roads.

SAFETY PRECAUTIONS TAKEN BY CHILDREN WHILE COMMUTING ALONE ON ROAD AS PEDESTRIAN

Approximately three-fourth of the surveyed children said that they always used a footpath or pedestrian lane for moving on roads, 21 percent said they always used designated pedestrian crossings (zebra crossing, underpass, foot-over-bridge, etc.) to cross the road, and 18.3 percent said they looked both sides before crossing the road. Around 15 percent mentioned that they avoid using gadgets while walking on roads and 12 percent try to avoid roads and streets with heavy traffic.

FIG 4.19: CHILDREN'S REASONS FOR FEELING UNSAFE AS INDEPENDENT PEDESTRIAN ON ROAD

[N=1003, Open-ended, Multiple response]

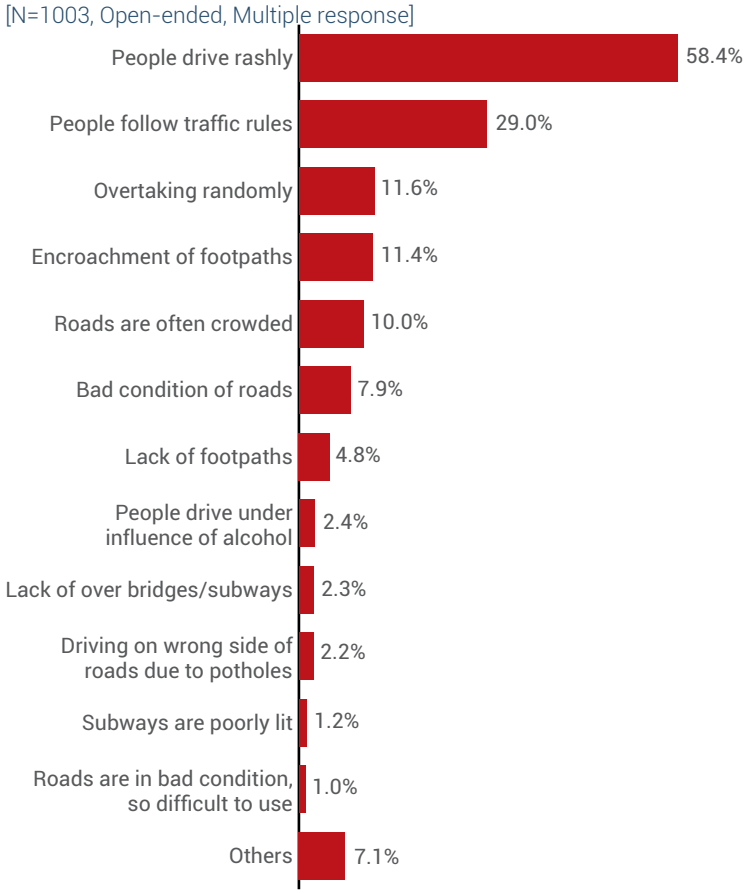
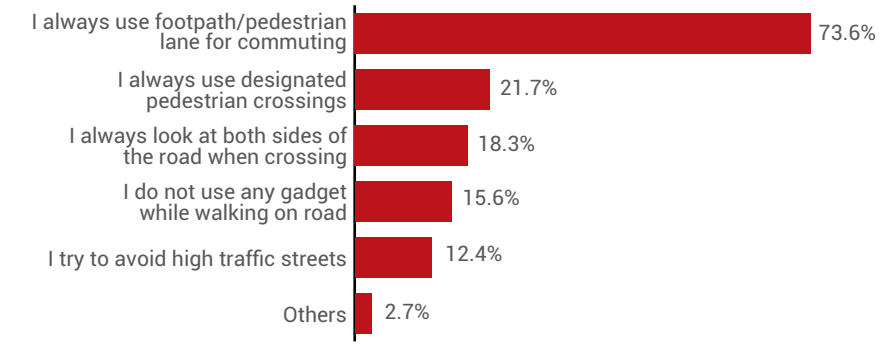


FIG 4.20: SAFETY PRECAUTIONS TAKEN BY CHILDREN AS INDEPENDENT PEDESTRIAN ON ROAD

[N=1740, Open-ended, Multiple response]



CHILDREN OWNING CYCLE AND USING THEM INDEPENDENTLY

About 61 percent of the children responded in the affirmative when asked whether they owned a cycle while 57.5 percent said that they ride a cycle independently. Across the 11 cities, almost 90 percent children reported that they feel safe while riding their cycles independently. Among those who feel unsafe, 75.7 percent said overspeeding vehicles makes them feel so. Other reasons for feeling unsafe while riding a cycle are reckless driving, violation of traffic rules, drunk driving, etc.

Children who said they rode bicycles independently were then asked where they mostly rode them, and overall, 8 out of 10 said they rode them within a residential complex or in parks or streets, while the remaining said they rode them on main/busy roads. The answer was an affirmative with the increase in the age of the respondent.

FIG 4.21: CHILDREN OWNING AND CYCLING INDEPENDENTLY

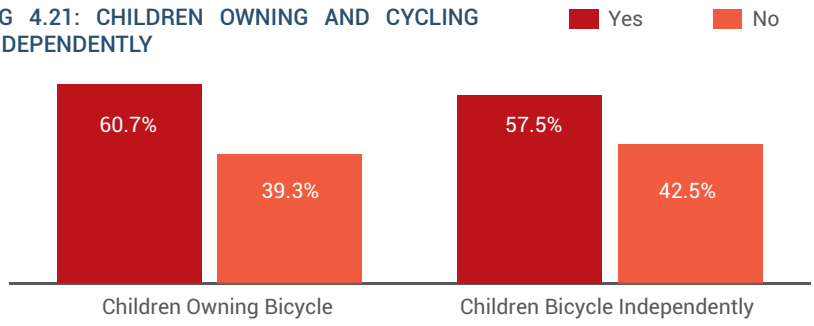
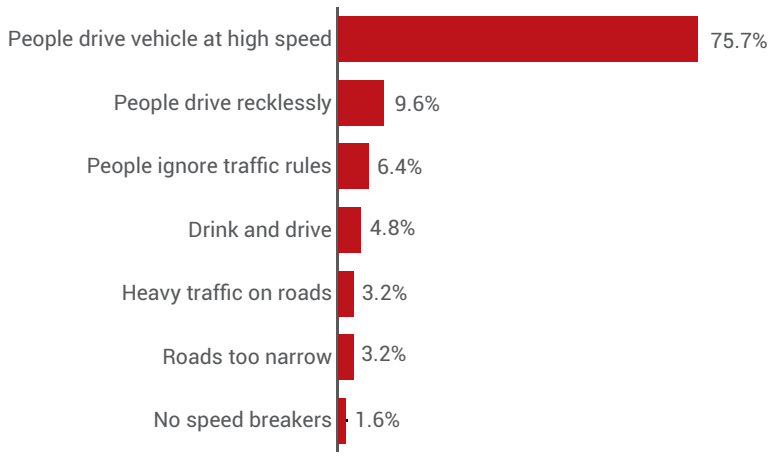


FIG 4.22: REASONS FOR FEELING UNSAFE WHILE RIDING BICYCLE INDEPENDENTLY

[N=60, Open-ended, Multiple response]



SAFETY DEVICES USED BY CHILDREN AS CYCLISTS

When children were asked if they used any safety devices on their cycles or whether their cycles were equipped with any safety devices, almost 83 percent said no. Only 15 percent said their cycles came equipped with pre-installed reflectors on the back/front and on tyres or rear-view mirrors. Less than 1 percent said they used a helmet to prevent head injuries.

NEED FOR STRONG CHILD SAFETY LAW FOR REDUCING ROAD FATALITIES AMONG CHILDREN

9 out of 10 respondents strongly advocated the need for strong child safety laws in order to reduce road fatalities among children in India. This figure was more than 88 percent in each city surveyed, except in Bengaluru, where only 57.5 percent agreed.

FIG 4.23: SAFETY DEVICES USED BY CHILDREN ON BICYCLE
[N=1000, Multiple response]

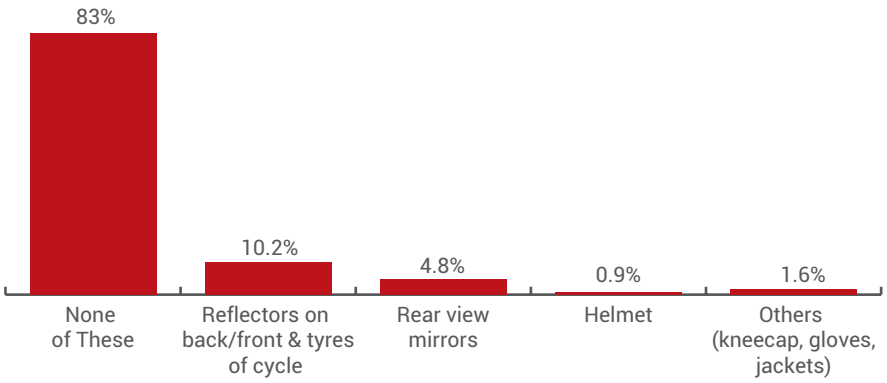
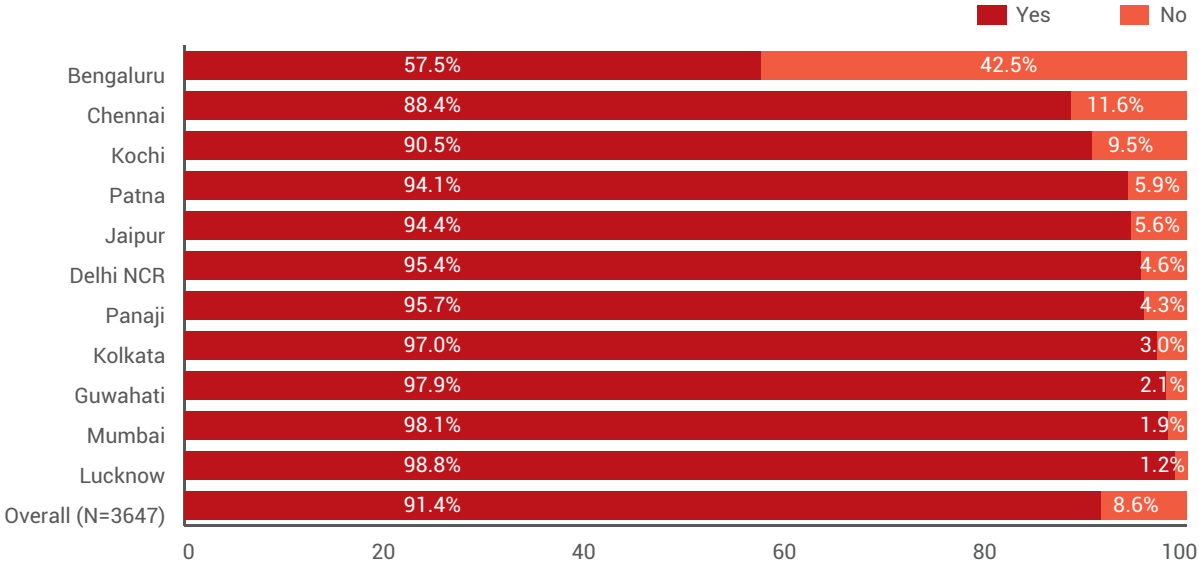


FIG 4.24: NEED FOR STRONG CHILD SAFETY LAW FOR REDUCING CHILDREN ROAD FATALITIES IN INDIA



STATUS OF COMMUTE TO SCHOOL

The "Safe to Learn" UNICEF report**, advocating for the right of children to travel safely to schools, has shown that child road traffic injuries are preventable and prioritizing safe routes to schools can make an important contribution to preventing injuries. As per the report, more than 500 children lose their lives every day on roads globally.

While India stresses on the universal Right to Education, there is still much left to be done in ensuring that the roads to schools are safe for children. As per a Road Safety expert interviewed as a part of this study, children are most prone to road crashes when travelling to school. Commute to school forms a large portion of the time children spend on roads. However, repeated cases of children losing their lives to crashes during commute only reflect the lack of interventions to prevent such crashes. In Himachal Pradesh, at least 29 children around the age or 4 and 6 lost their lives when their school bus fell into a gorge almost 20 years ago in 1997.

The Supreme Court issued guidelines for safety of children when travelling in school buses***.These guidelines also include motor cabs and Omni buses in their ambit. The Automotive Industry Standards also provide standards of design for schools buses.

In 2017, CBSE**** issued a fresh set of guidelines pertaining to the same. Some of these guidelines, among others, include-

- Installation of speed governors with a 40 kph limit in school buses
- Schools to designate a Transport Manager who oversees commute and ensures safety of children when travelling in school buses
- School authorities are to ensure training of drivers and attendants including in safely boarding and de-boarding children, refresher training courses for drivers etc.
- Only those drivers with 5 years of experience in driving heavy motor vehicles and no record of serious offences like drunk driving, speeding and such are eligible to drive these vehicles.

However, non-compliance to these guidelines leads to action only against those schools which are affiliated to CBSE and not other schools.

This part of the study includes surveys with school going children, parents as well as school bus and van drivers. The survey also includes results from an observational exercise of 100 school buses conducted as a part of the study to check adherence with CBSE guidelines meant to ensure safety of children during commute.

** (https://www.fiafoundation.org/media/45780/safe-to-learn-report.pdf)

*** (http://ddeehmr.org.in/SUPREME%20 COURT%20GUIDELINES%20ON%20 CHILD%20SAFETY%20IN%20SCHOOLS.pdf.)

**** (http://cbse.nic.in/news- ite/prunit/2017/07.%20Safety%20of%20 School%20children%20in%20the%20 school%20bus.pdf)

AVERAGE DISTANCE FROM HOME TO SCHOOL

As reported by parents, the average distance of school from home at the national level was about 3.02 km, as reported by parents. The reported distance was highest for Chennai and Delhi NCR where schools were situated at an average distance of 4.15 km and 3.45 km, respectively. Lowest distance between school and home was reported in Mumbai at 1.78 km.

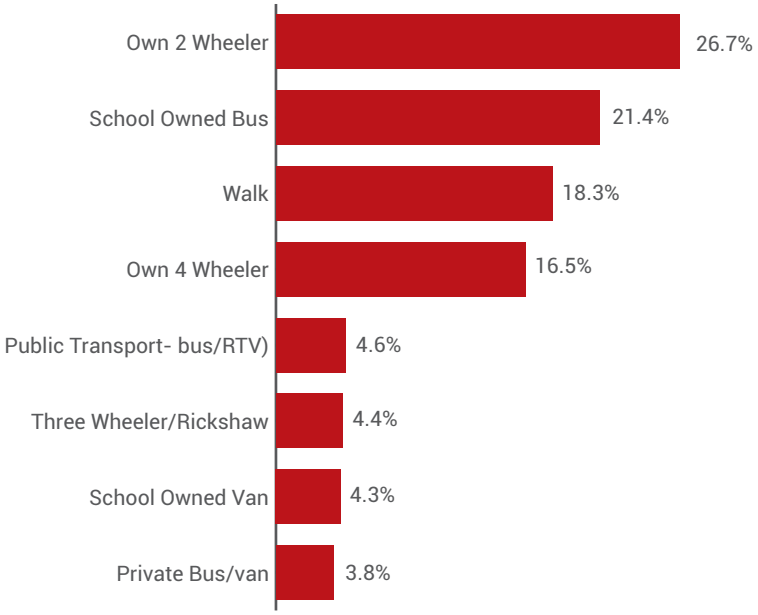
In a mode of transport-wise distribution, the largest distance was by school buses (4.04 km) and vans (4.05 km), followed by public transport (3.80 km) and private bus/van (3.79 km). The shortest distance was covered by those who walked to school 1.36 km.

MODE OF TRANSPORT USED BY CHILDREN TO GO TO SCHOOL

Parents were asked which mode of transport their children took to go to school, and maximum number of parents(26.7 percent) said it was their own two-wheelers, followed by 21.4 percent who said they used school-owned buses, another 18.3 percent who said their children walked to school followed by 16.5 percent who said they went by their own four-wheeler.

Few others (about 4 percent each) said they used public transport, three wheelers/ rickshaws or school-owned vans to go to school.

FIG 4.25: MODE OF TRANSPORT USED TO GO TO SCHOOL BY CHILDREN
[N=3551]



PICK UP/DROP LOCATION TYPE

In this section the type of stops from which children boarded their school vehicles were explored i.e. where they were picked up and dropped while going to and coming from school. Overall, three-fourth of the parents surveyed said their children were picked up from safe stop locations (i.e. 47 percent from gate of the house/colony away from the busy main road, and 27 percent from designated bus stop). However, about 26.6% said their children were picked from unsafe locations, such as side of the main road or busy intersections.

Across cities most parents confirmed their children were picked up from safe locations i.e. either colony gate or bus stop, except Chennai and Guwahati where 43 percent and 38 percent parents, respectively, said their children were picked up from the side of a main road.

TABLE 4.6: TYPE OF PICK UP/DROP LOCATION
[All figures in percent]

Stop location type	Just outside the house/ colony gate	A bus stop	On the side of the main road	At the side of a busy intersection
Overall (N=1362)	**46.5**	**26.9**	**23.8**	**2.8**
Lucknow (N=90)	63.3	15.6	17.8	3.3
Jaipur (N=123)	60.2	13.0	22.8	4.1
Delhi NCR (N=126)	58.7	19.0	20.6	1.6
Panaji (N=109)	56.9	38.5	3.7	0.9
Patna (N=142)	52.8	13.4	28.9	4.9
Mumbai (N=110)	50.9	27.3	18.2	3.6
Bengaluru (N=148)	45.3	30.4	23.0	1.4
Kochi (N=204)	43.6	26.0	29.9	0.5
Chennai (N=91)	30.8	18.7	42.9	7.7
Guwahati (N=95)	24.2	32.6	37.9	5.3
Kolkata (N=124)	22.6	61.3	15.3	0.8

[Color shade represents value in the cell. Where green, yellow and red color indicate row-wise highest, average and lowest value respectively]

Further delving the way in which vehicles were boarded while going to school, the survey found that most parents, (approximately 48 percent) across the 11 cities that participated in the survey said their child boards the vehicle on their own while going to school.

The highest percentage of parents who said their child boarded the vehicle on their own were in Jaipur (74 percent), followed by Delhi NCR, 60.3 percent, and further followed by Patna and Mumbai, 56.3 percent and 55.5 percent, respectively.

ARE CITY ROADS SAFE WHILE COMMUTING TO SCHOOL?

When asked if they felt safe on city roads while traveling to school, overall 44.6 percent children answered in affirmative. City-wise, the highest percentage of children who said they felt safe while commuting to school on city roads were from in Delhi NCR, at 57.3 percent, followed by Jaipur and Lucknow at 54.3 percent and 53.2 percent, respectively.

The city where most children said they felt unsafe while commuting to school on city roads was Bengaluru, at 37.5 percent, followed by Chennai, 28.8 percent.

Those who said city roads were unsafe for traveling to school were further asked why they felt so, most said it was because of over-speeding (44.7 percent) followed by the fact that there were a large number of vehicles on the road. (28.3 percent).

Road infrastructure was the second-most cited reason (31.9 percent). 25.5 percent of these respondents stated "bad road conditions" as the main reason for city roads being unsafe.

TABLE 4.7: WAY IN WHICH CHILDREN BOARD THE VEHICLE
[All figures in percent]

Way of vehicle boarding	I help her/ him board the vehicle	Vehicle attendant helps him/ her board the vehicle	The driver helps him/ her board the vehicle	My child boards on their own
Overall (N=1362)	**24.2**	**19.8**	**8.3**	**47.7**
Kolkata (N=124)	54.8	23.4	6.5	15.3
Guwahati (N=95)	36.8	2.1	16.8	44.2
Kochi (N=204)	30.9	12.7	2.9	53.4
Chennai (N=91)	27.5	44.0	3.3	25.3
Bengaluru (N=148)	24.3	27.0	6.1	42.6
Delhi NCR (N=126)	23.0	11.1	5.6	60.3
Patna (N=142)	17.6	16.2	9.9	56.3
Panaji (N=109)	16.5	34.9	1.8	46.8
Mumbai (N=110)	14.5	21.8	8.2	55.5
Jaipur (N=123)	10.6	5.7	9.8	74.0
Lucknow (N=90)	1.1	30.0	30.0	38.9

[Color shade represents value in the cell. Where green, yellow and red color indicate row-wise highest, average and lowest value respectively]

FIG 4.26 : CHILDREN'S OPINION ABOUT CITY ROADS WHEN TRAVELING TO SCHOOL

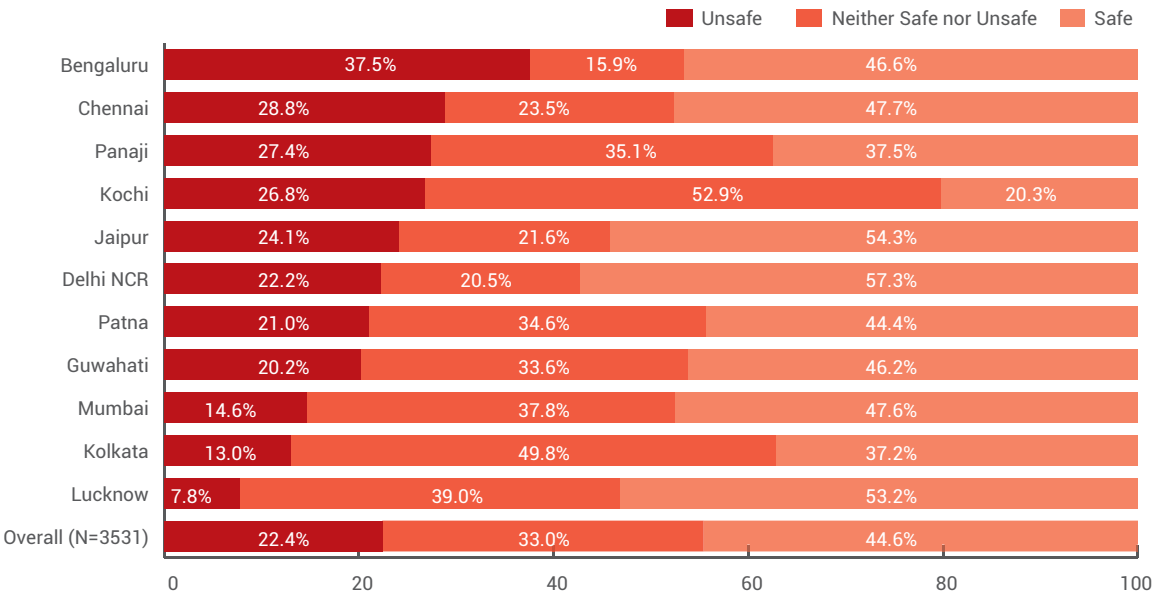


TABLE 4.8: REASONS FOR FEELING 'UNSAFE' DURING COMMUTE OF CHILD TO/FROM SCHOOL

[N=1955, Open ended, Multiple response]

Key Aspects of Road Safety	Reasons for rating city roads as "unsafe" for children	N	Percent
People's Behaviour & Driving Related Aspects (102.8%)	High speed driving	874	44.7%
	Large numbers of vehicles on road	554	28.3%
	People not follow traffic rules	275	14.1%
	People drive on the wrong side	138	7.1%
	Drunk driving	47	2.4%
	People do not stop their vehicle on zebra crossings	43	2.2%
	Prevalence of underage driving	37	1.9%
	People take U-turn anywhere	27	1.4%
	People use mobile phone while driving	13	0.7%
Road Infrastructure Aspects (31.9%)	Bad road conditions	499	25.5%
	Roads are narrow	59	3.0%
	Lack of zebra crossings	21	1.1%
	Absence of foot over bridges/ subways	18	0.9%
	Lack of speed breakers	14	0.7%
	Signals do not work all the time	13	0.7%
Road Traffic Related Aspects (9.8%)	Non-availability of traffic police near schools	91	4.7%
	No child protection signals near the school	13	0.7%
	No footpath near the school	71	3.6%
	No divider on the road near school	16	0.8%
Other Aspects (4.8%)	Others	88	4.8%

SCHOOL OWNED VEHICLES

OCCUPANCY LEVEL OF THE SCHOOL-AUTHORIZED BUSES/VANS

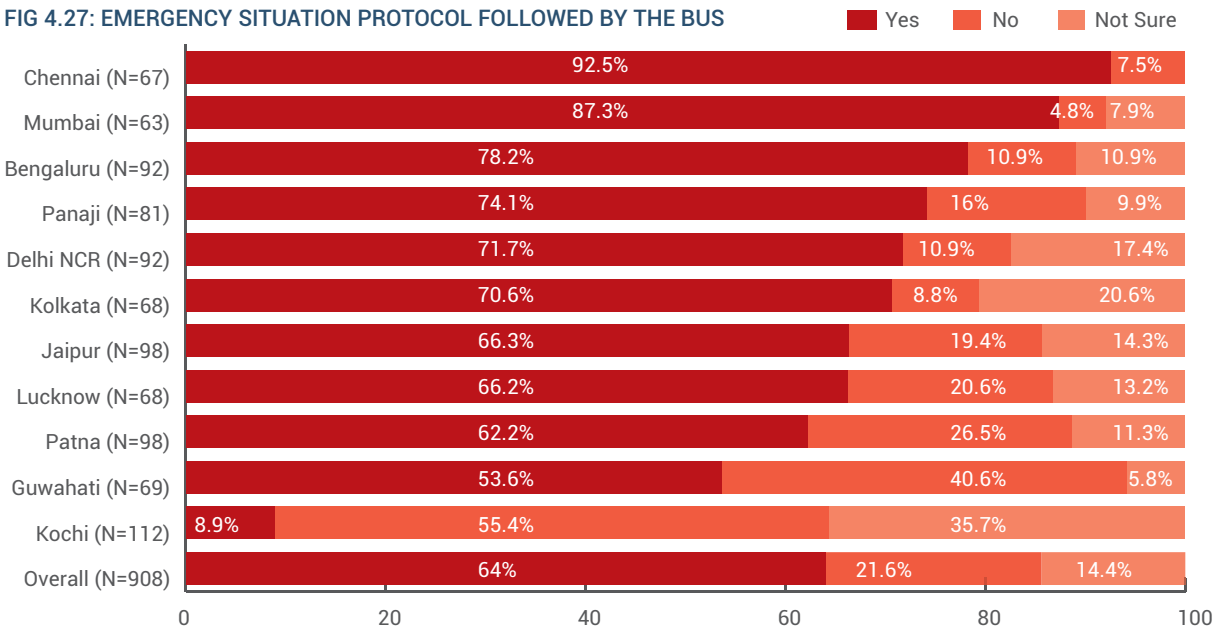
Overall, more than half the parents (51.3 percent) said school buses/vans were not very crowded while 19 percent felt they were overcrowded. About 30 percent of parents surveyed found school buses/vans to be appropriately crowded in terms of occupancy level.

AVAILABILITY OF PROTOCOL FOLLOWED BY THE BUS IN CASE OF AN EMERGENCY

When asked if bus drivers followed guidelines and protocols in case of an emergency, overall 64 percent parents said yes, while about 22 percent said no, and 14.4 percent were not aware.

City-wise, parents in metro cities confirmed the availability of such protocol, along with those in Panaji, while Kochi and Guwahati

FIG 4.27: EMERGENCY SITUATION PROTOCOL FOLLOWED BY THE BUS



had the lowest proportion. In Kochi, over half the parents surveyed said there was no such protocol available, while about 36 percent were not sure about it.

Children were asked if they had experienced a road crash or a "near miss" situation when commuting in a school bus/van and about 15 percent answered in affirmative. 40 percent children in Kolkata, and 25 percent and 19 percent in Delhi NCR and Chennai, respectively, said they had. A large percentage of children surveyed in Guwahati (45 percent) also said they had been in dangerous situations while commuting to and from school in a school bus or van.

Children (17 percent) travelling in school-owned buses said they had experienced a dangerous situation, than those traveling in school-owned vans (11 percent).

SCHOOL TRANSPORT ORGANIZED BY PARENTS

20 percent parents had reported their child took "public" transport while commuting to and from school; these parents were asked why they or their child had chosen a mode of transport which was other than school-owned buses or vans, or personal vehicles as the primary mode of transport for going to school.

Across categories, parents choose privately organized transport because they believe that school is close by and the driver is known to them. Also, parents with relatively young children, prefer to accompany their child to the school and hence prefer privately organized transport. Surveyed parents also believe that privately organized transport is more economical and hence prefer it.

TABLE 4.9: REASONS FOR CHOOSING PARTICULAR MODE OF TRANSPORTATION
[N-320, Open-ended, Multiple response]

Reasons for choosing particular mode of transport	Overall	Private Bus/ Van	Public transport	3-W/ Rickshaws
N	**320**	**89**	**109**	**122**
The child is very young, so we have to drop and pick by ourselves	**16.3**	16.9	13.8	18.0
There is someone at home always to drop and pick the child	**14.1**	7.9	14.7	18.0
School is close by and also driver is known to us	**16.3**	19.1	19.3	11.5
Lack of school bus facility in our area	**12.2**	9.0	13.8	13.1
School bus is always crowded	**6.9**	6.7	6.4	7.4
It is economical	**5.9**	11.2	4.6	3.3
All children use this mode from our area	**9.4**	4.5	8.3	13.9
The pick and drop stops are near to our house	**5.3**	3.4	9.2	3.3
My child is safe in this mode	**5.0**	9.0	4.6	2.5
This mode takes less time	**4.4**	4.5	0.9	7.4
Bus service is very slow	**2.8**	3.4	1.8	3.3
Others	**7.2**	5.6	10.1	5.7

[Highlighted cells indicate column-wise top 3 reasons]

PROVISION OF DESIGNATED DRIVERS FOR SCHOOL VEHICLES (OTHER THAN SCHOOL BUSES/VANS)

Overall 72 percent of parents surveyed said there was a designated driver for the personally organized vehicle to drive the child to and from school every day, whereas 28.2 percent of the parents said there was no designated driver.

The highest proportion of parents who said there was a designated driver were in Patna (96 percent), whereas Guwahati had the lowest percentage of such parents (30 percent), followed by Panaji (50 percent).

As far as designated drivers for the various types of vehicles carrying school-children were concerned, three-wheelers had the highest proportion of designated drivers, according to parents that were surveyed (87.9 percent), followed by private buses and vans (83.0 percent) and city bus/RTV (46.9 percent).

When children were asked the same question, while 51 percent children said there was a

designated driver for the vehicle by which they commuted to school, 49 percent said there wasn't.

Most children said there was a designated driver for three-wheelers/rickshaw (73 percent), 68 percent for private bus/van and 34 percent for public buses and RTVs.

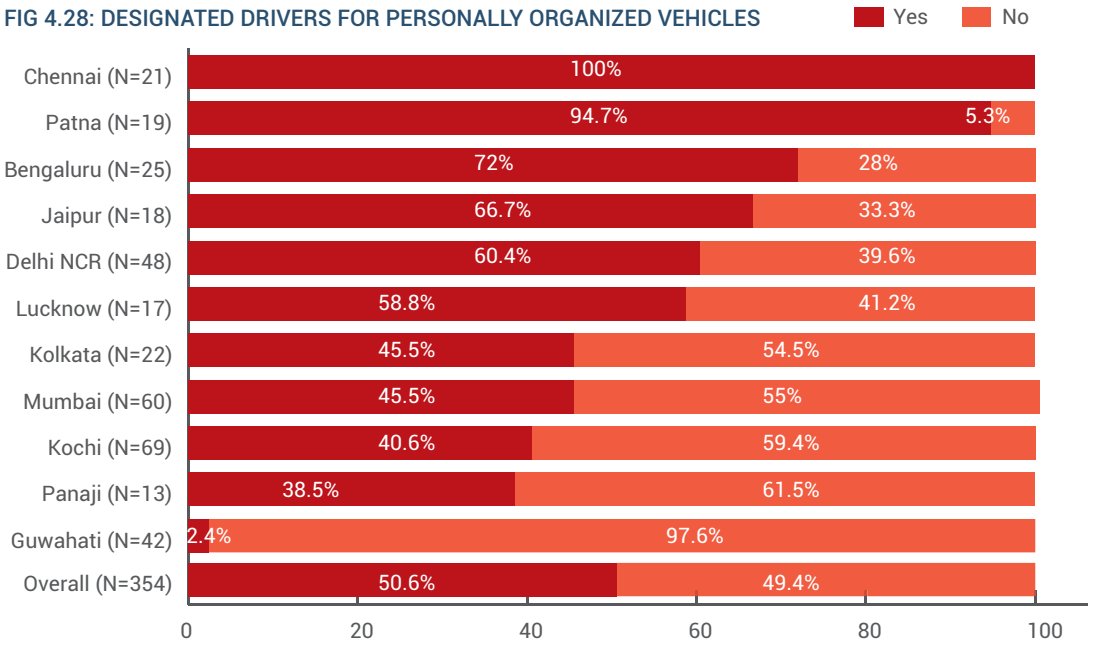
DETAILS OF DRIVERS WITH PARENTS

Surveyed parents were also asked if they had contact details of the drivers who drove their children to and from school, and overall a little over half (56.2 percent) of the parents said yes, while around 44 percent said they did not.

Most parents who said yes lived in Patna (75 percent), while most parents who did not have the details were from Panaji (25 percent).

In a mode of transport wise typology, in terms of whether drivers' details were available with parents, three-wheelers (80.9 percent), followed by private buses and vans (68.1 percent) and city bus/RTVs (22.2 percent) said they had the same to help them with coordination for a safe pick-up and drop of their child while commuting to and from school.

FIG 4.28: DESIGNATED DRIVERS FOR PERSONALLY ORGANIZED VEHICLES

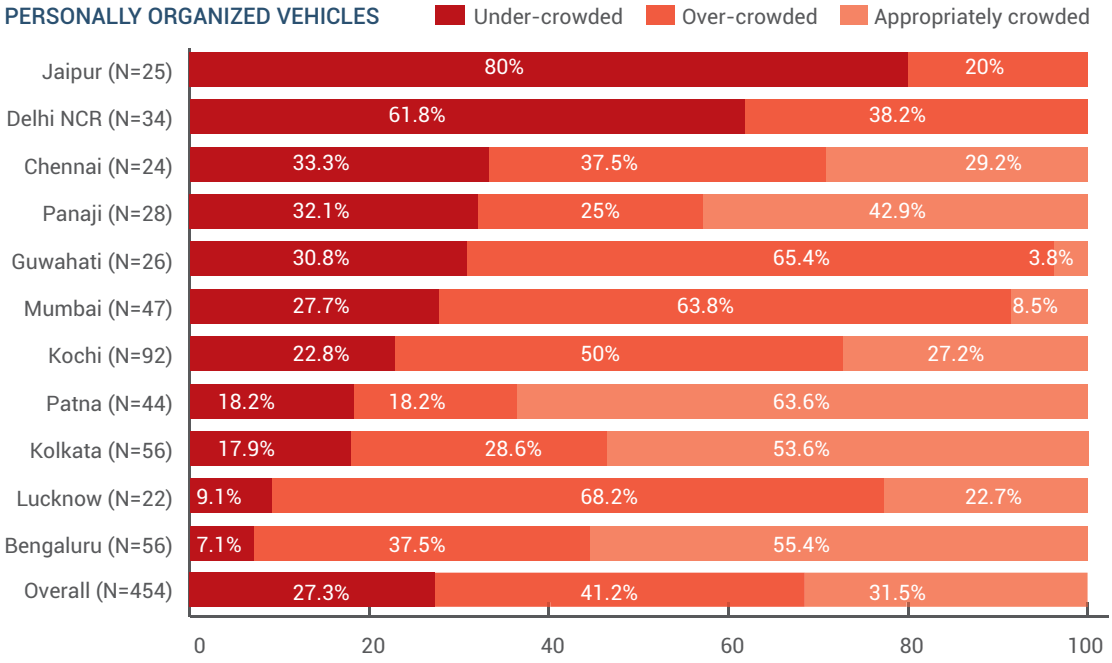


OCCUPANCY LEVEL OF PERSONALLY ORGANIZED VEHICLES

When asked about occupancy levels of personally organized vehicles, overall 41.2 percent of the parents said they found these vehicles to be overcrowded, while 31.5 percent found these vehicles appropriately crowded, and 27.3 percent said vehicles were under crowded.

The vehicle type which parents found most overcrowded, overall, was the city bus/RTV (64.8 percent) followed by three-wheelers (29.9 percent) and private bus/van (25.9 percent).

FIG 4.29: OCCUPANCY LEVEL OF PERSONALLY ORGANIZED VEHICLES



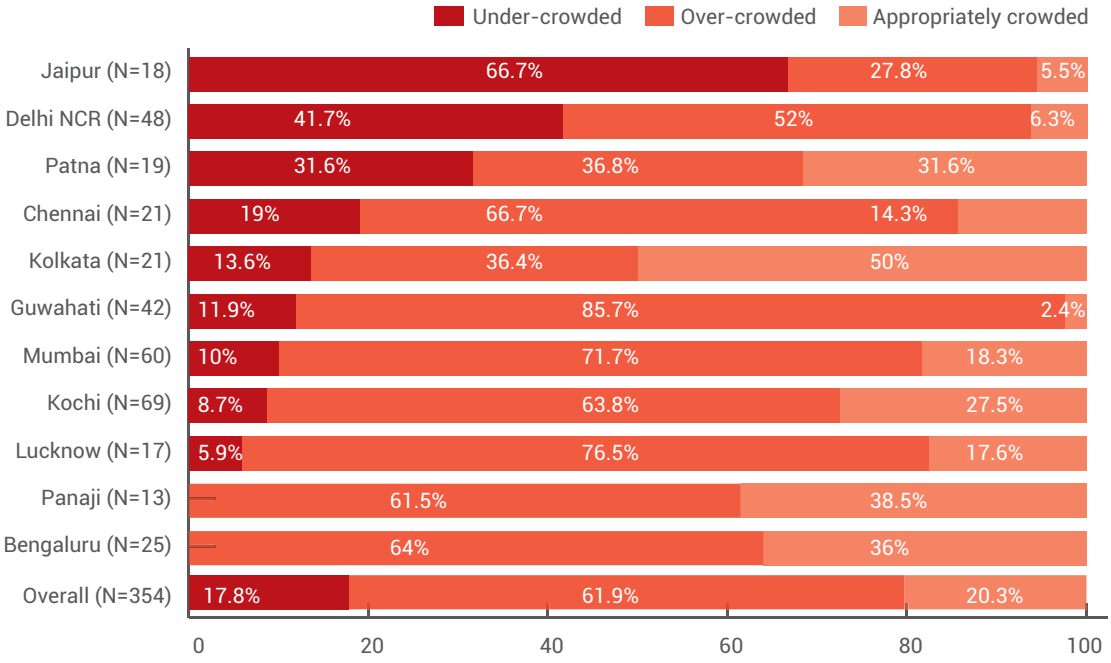
More than 60 percent children said that personally organized vehicles they used for commuting to and from school usually carried more students than their capacity, while 20.3 percent said these vehicles were appropriately occupied as per capacity.

In a city wise split, overcrowding was reported by a majority of children in 8 out of 11 cities, with the highest proportion of children reporting it in Guwahati (86 percent).

CHANGES REQUIRED IN SCHOOL VEHICLES TO ENSURE SAFETY OF CHILDREN

Parents were asked if they had any suggestions to help personally organized transport carrying their children to and from school become safer. Overall, one-third of the parents surveyed (32.1 percent) said drivers must maintain the speed of the vehicle within the prescribed limit, and that all vehicles be

FIG 4.30: OCCUPANCY LEVEL OF PERSONALLY ORGANIZED VEHICLES AS REPORTED BY CHILDREN



equipped with speed governors to avoid over-speeding.

Further, 14.6 percent parents suggested vehicles needed to be fitted with a GPS tracker and CCTV cameras (7.5 percent) so that the drivers' behaviour and way of driving could be monitored.

Other suggestions included drivers not taking crowded routes, avoiding overcrowding of the vehicles and deputation of attendant in these vehicles.

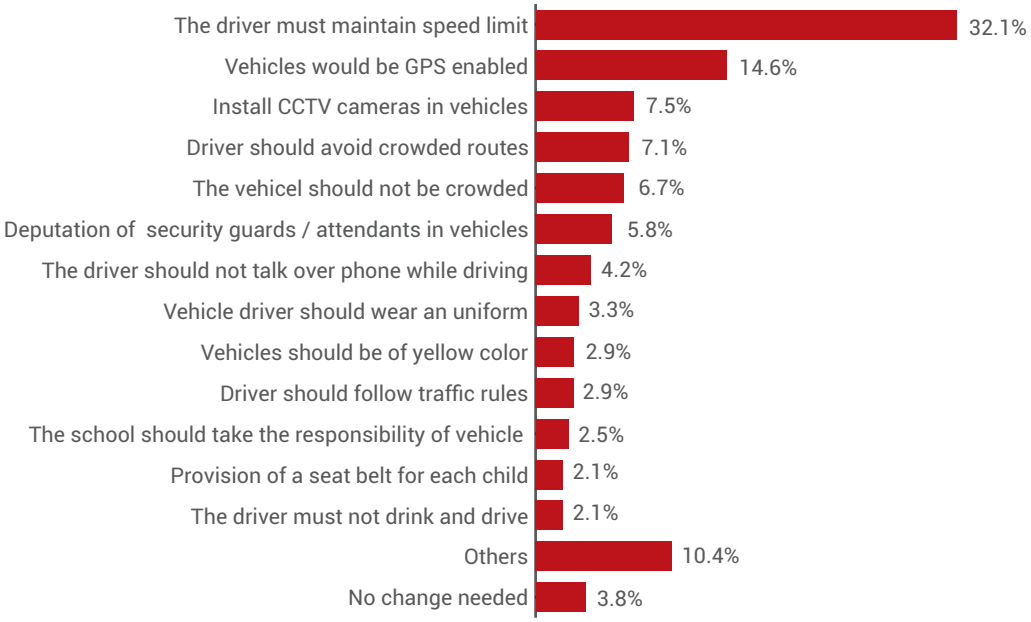
OPINION OF SCHOOL BUS/ VAN DRIVERS

WHETHER ROADS WERE SAFE FOR CHILDREN TO COMMUTE TO SCHOOL

45% of the surveyed drivers either found roads for the commute of children to school completely unsafe or were not sure how safe it was.

Opinion towards roads being unsafe increased

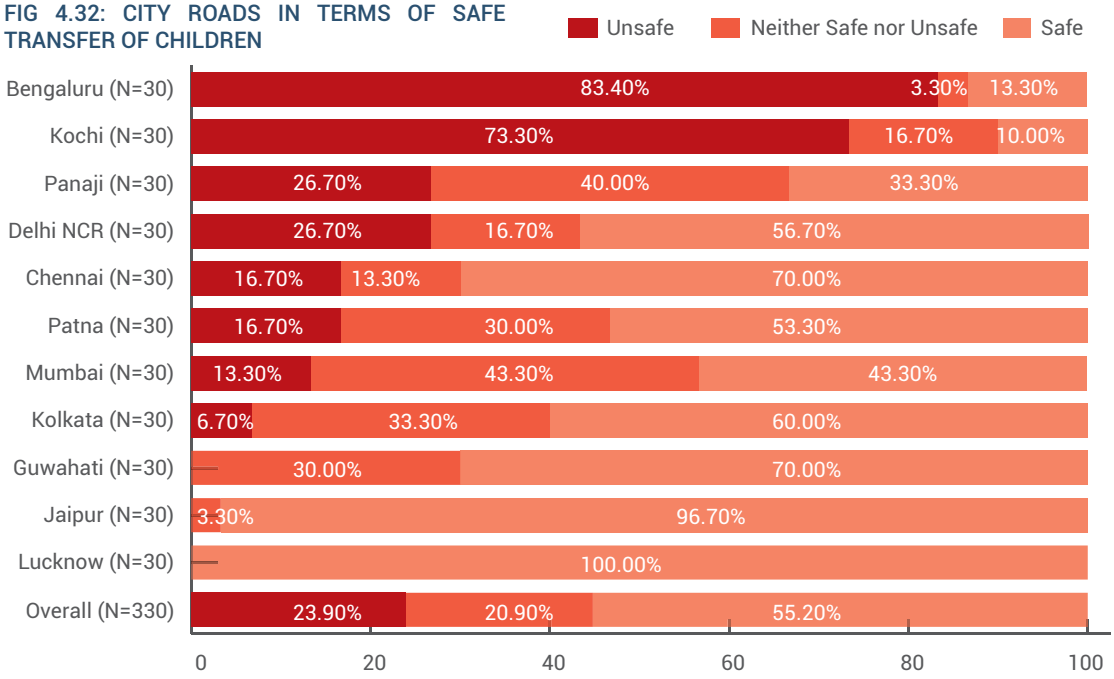
FIG 4.31: SUGGESTED CHANGES IN PERSONALLY ORGANIZED VEHICLES
[N=240, Open-ended, Multiple response]



as the respondents' experience of driving a school bus/van increased. More drivers of school-owned bus/van said city roads were unsafe compared to drivers of private bus/van.

More than 80 percent drivers in Bengaluru said roads there were unsafe, followed by Kochi (73 percent), Panaji and Delhi NCR (27 percent each), while high percentages of drivers in Mumbai (43 percent), Panaji (40 percent), Kolkata (33 percent), Guwahati (30 percent) and Patna (30 percent) said they were not sure.

FIG 4.32: CITY ROADS IN TERMS OF SAFE TRANSFER OF CHILDREN



Those drivers who said city roads were unsafe for children who commuted to and from school, were asked why they felt so. Overall, one-third of them said it was because of poor road conditions and rash driving by people. Another 30 percent drivers said heavy traffic on city roads was the reason for unsafe roads, followed by those who said frequent violation of traffic rules (15 percent), over-speeding (16 percent), and overtaking from the wrong side (13 percent), etc were factors making roads unsafe.

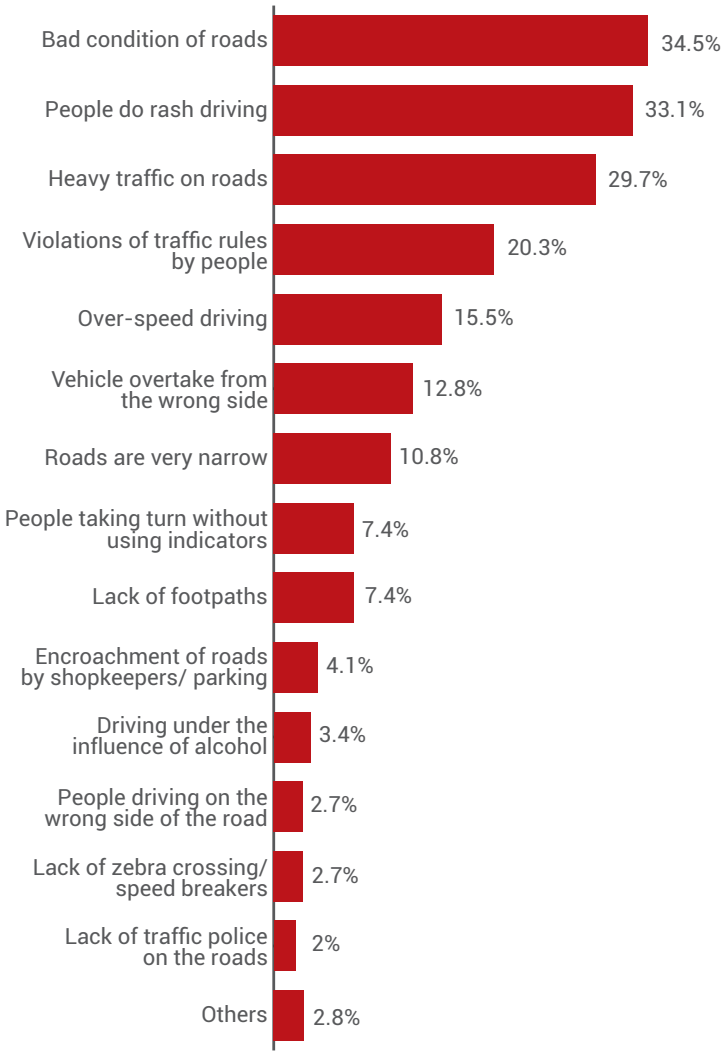
SEATING CAPACITY OF SCHOOL BUS/ VAN VS. NUMBER OF CHILDREN BEING FERRIED

This section helped in understanding occupancy levels of school vehicles- the total number of seats in a school vehicle vis-à-vis the total number of children ferried.

On an average, the seating capacity of school vehicles was about 27 seats, while average occupancy was little higher i.e. about 28 children.

Specifically, school-owned buses had an average capacity of 34 seats while their average occupancy was 35. School-owned vans had an average capacity of about 13 seats and their average occupancy was 14 children. Similarly, for private buses, the average seating capacity was 31 seats while their average occupancy was 33 children, and

FIG 4.33: REASONS FOR UNSAFE COMMUTE TO SCHOOL AS REPORTED BY CHILDREN
[N=148, Open-ended, Multiple responses]



for vans, the average seating capacity was 11 seats while their average occupancy was 12 seats.

PRECAUTIONS TAKEN TO ENSURE SAFETY WHILE COMMUTING

Drivers of school bus/vans were asked a direct open-ended question about what safety precautions they took to ensure children were safe when ferrying them to and from school. Nearly 74% said they did not drive above the speed limit when children were in their vehicles, while a little over half the drivers mentioned they avoided using mobile phones while driving. Forty-one percent said they did not overtake other vehicles in order to maintain the safety of children on-board.

Only 23 percent of drivers said they used a seatbelt while driving. Some 14.2 percent said they ensured that they did not overcrowd the vehicles when commuting with children.

PRECAUTIONS TAKEN TO ENSURE SAFETY WHILE COMMUTING

Drivers of school bus/vans were asked a direct open-ended question about what safety precautions they took to ensure that children were safe when ferrying them to and from school. Nearly 74% said they did not overspeed when children were in their vehicles, while a little over half the drivers mentioned they avoided using mobile phones while driving. Forty-one percent said they did not overtake other vehicles in order to maintain the safety of children on-board.

Only 23 percent of drivers said they used a seatbelt while driving. Some 14 percent said they ensured that they did not overcrowd the vehicles when commuting with children.

TABLE 4.10: SEATING CAPACITY VS. OCCUPANCY LEVEL OF SCHOOL VEHICLES

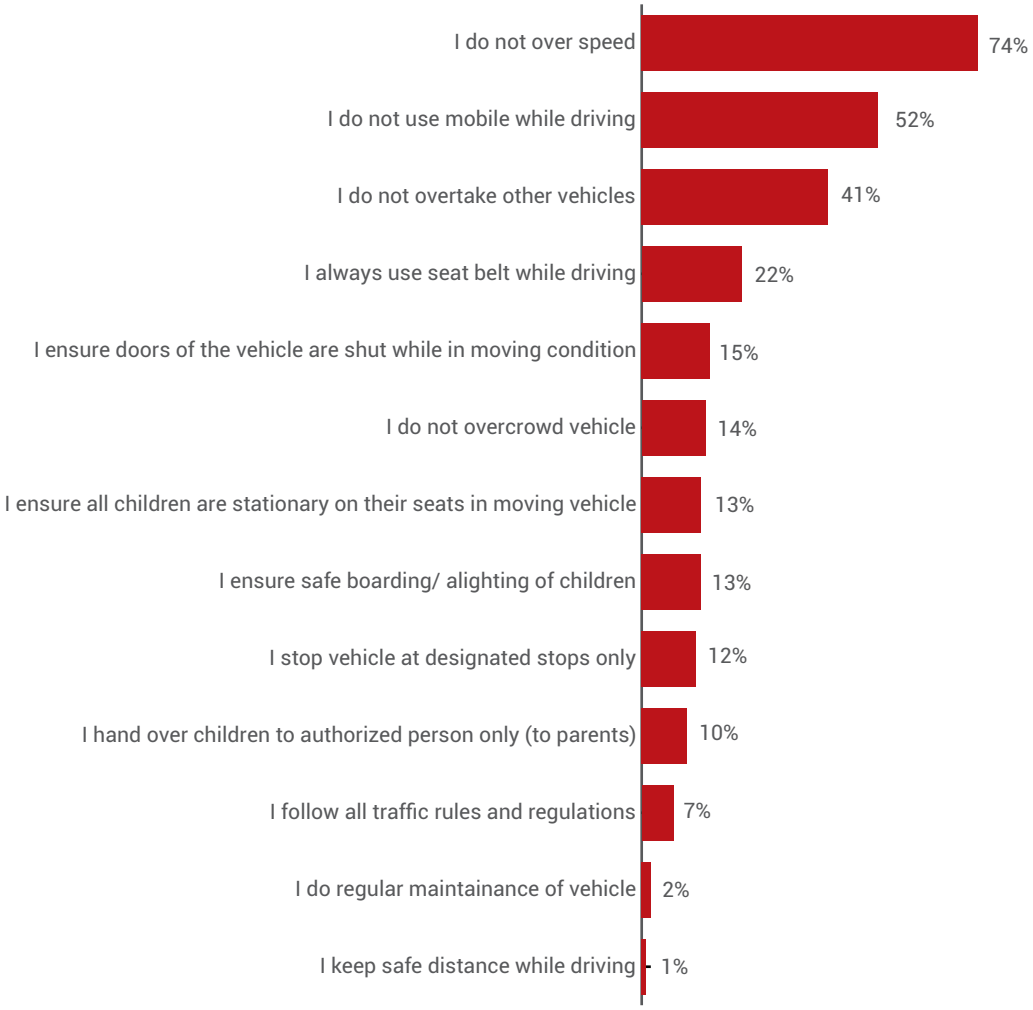
Average Seating capacity vs. Average occupancy level	Avg. Seating capacity	Avg. number of children ferry
School owned Bus (N=190)	34.4	35.3
School owned Van (N=60)	12.9	14.4
Private Bus (N=36)	31.3	33.4
Private Van (N=44)	11.4	12.0
Overall (N=330)	**27.1**	**28.2**

REASONS FOR ROAD CRASHES DURING SCHOOL COMMUTE

Drivers were asked what they thought were the primary reasons for road crashes involving children.

Overall, 41 percent drivers thought speeding vehicles caused most of the crashes involving children, 23 percent said it was when drivers did not follow traffic rules, another 20 percent said crashes happened because of dangerous driving, overtaking from the wrong side (16 percent) and driving under the influence of alcohol or drugs (11 percent).

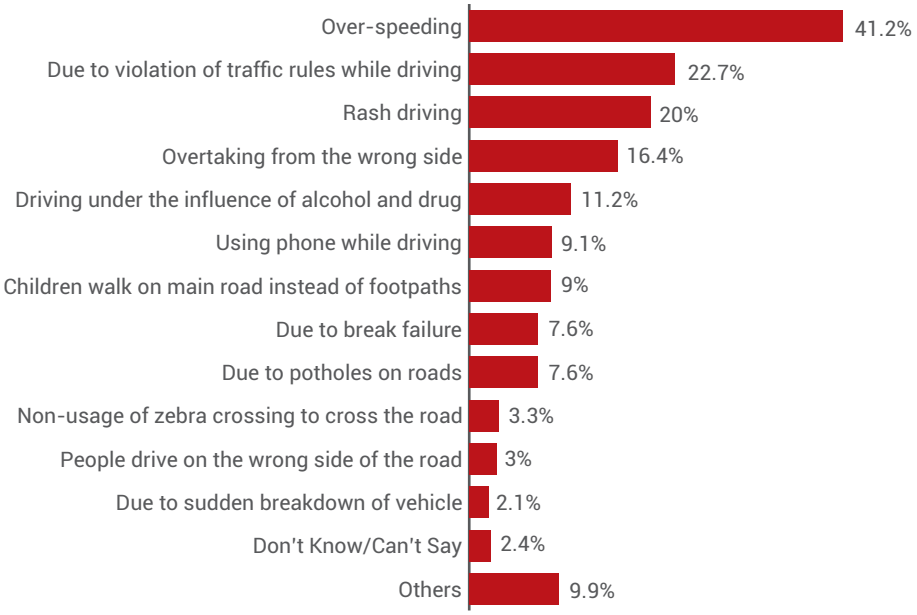
FIG 4.34: PRECAUTIONS TAKEN TO ENSURE SAFETY DURING COMMUTE
[N=330, Open-ended, Multiple responses]



16 *Others include following:
Underage driving, Narrow roads, Burst tire , Non-availability of seatbelt for children, Bad road infrastructure, Lack of responsibility from drivers, Less traffic police, Heavy traffic and large number of vehicles on road, Non-availability of roads

FIG 4.35: REASONS FOR DEATH OF CHILDREN DURING ROAD CRASH[16]

[N=330, Open-ended, Multiple responses



DRIVER'S POLICE VERIFICATION AT THE TIME OF APPOINTMENT

Police verification is an essential initial part of school drivers' screening in order to ensure that children are being driven by safe individuals. Drivers were asked if their police verification had been conducted by school authorities before their appointment in the school.

Overall, two-third of respondents said they had undergone a police verification (45 percent before appointment and 21 percent after appointment). About 28 percent said police verification at the time of their appointment was not required, while 7 percent said they did not remember.

Most drivers who reported to have had their police verification done either at the time of the appointment or after selection were in Delhi, Jaipur and Patna.

Among metro cities, at least 8 out of 10 respondents in Delhi, Mumbai and Chennai said they had undergone a police verification

at the time of appointment or after selection, whereas in Kolkata only 20 percent said so.

In Bengaluru the percentage of drivers who affirmed to having been verified was as low as 3 percent. While 76 percent drivers of private bus/van said they had undergone a police verification, this figure was 63 percent for drivers of school bus/van.

MEDICAL CHECK-UP OF DRIVERS

Medical check-ups, especially eye testing is mandatory under the CBSE guidelines for safety of children traveling in school vehicles. Drivers were asked if they had undergone a medical check-up and any sort of physical fitness examination, including an eye test. Overall, 55 percent of the drivers answered in affirmation, while 45 percent said they had not.

All drivers surveyed in Delhi NCR said they had to take a medical test, including eye testing, followed by Panaji (93 percent), Guwahati (90 percent and Jaipur (80 percent).

Unlike Delhi, the proportion of drivers who had gone through a medical check-up was low in all other metro cities. (less than 3 of 10 respondents).

More school bus drivers said they had undergone medical test (60 percent) compared to those who drove vans. (43 percent).

FIG 4.36: DRIVER'S POLICE VERIFICATION AT THE TIME OF APPOINTMENT
[N=330]

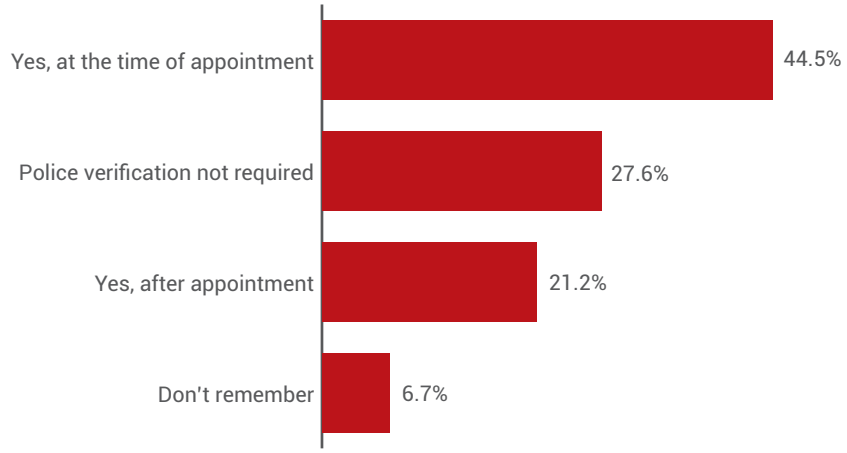
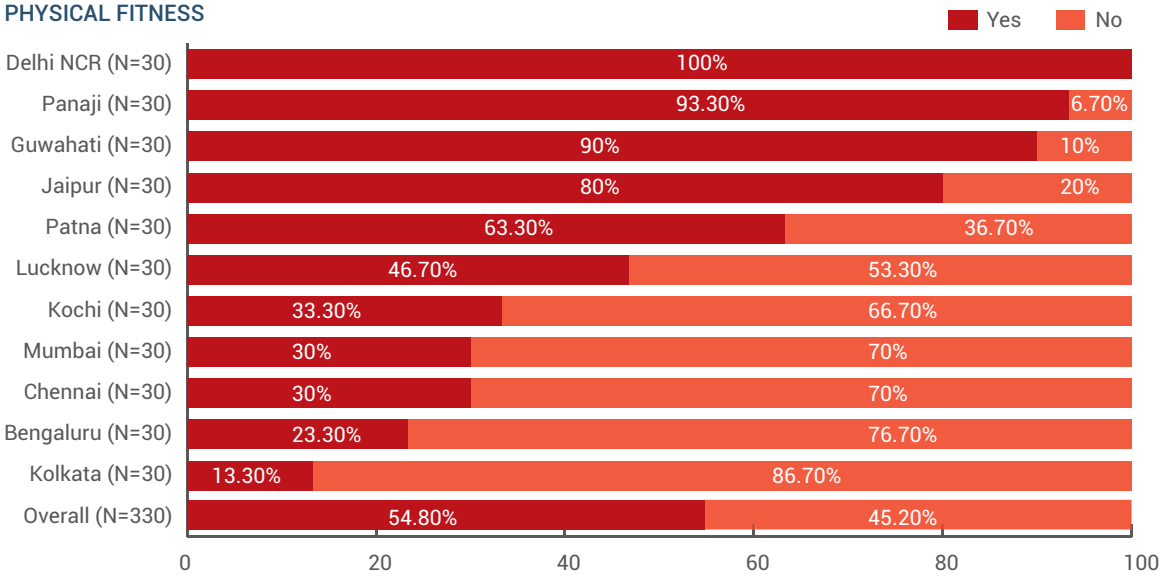


FIG 4.37: WHETHER DRIVERS WENT THROUGH MEDICAL CHECK-UP TO ASSESS PHYSICAL FITNESS



Of those who said they had undergone a medical check-up, 68 percent said they had one annually, while 27.6 percent said they had it once in two years. Among the cities, most drivers in Panaji (96.4 percent), Jaipur (95.8 percent) and Patna (94.7 percent) said they had to take a medical test annually.

REFRESHER TRAINING COURSE FOR DRIVERS

CBSE also mandates that refresher training courses be imparted to drivers of school vehicles with a view to fine-tune their skills and their efficiency. This, it says, needs to be done twice a year.

When drivers were asked whether they had been given any such training, 61 percent said they had not, while 39 percent affirmed to it.

More drivers from private schools (64 percent) claimed they had not been given any refresher training compared to drivers from government-aided (56 percent) and government schools (49 percent).

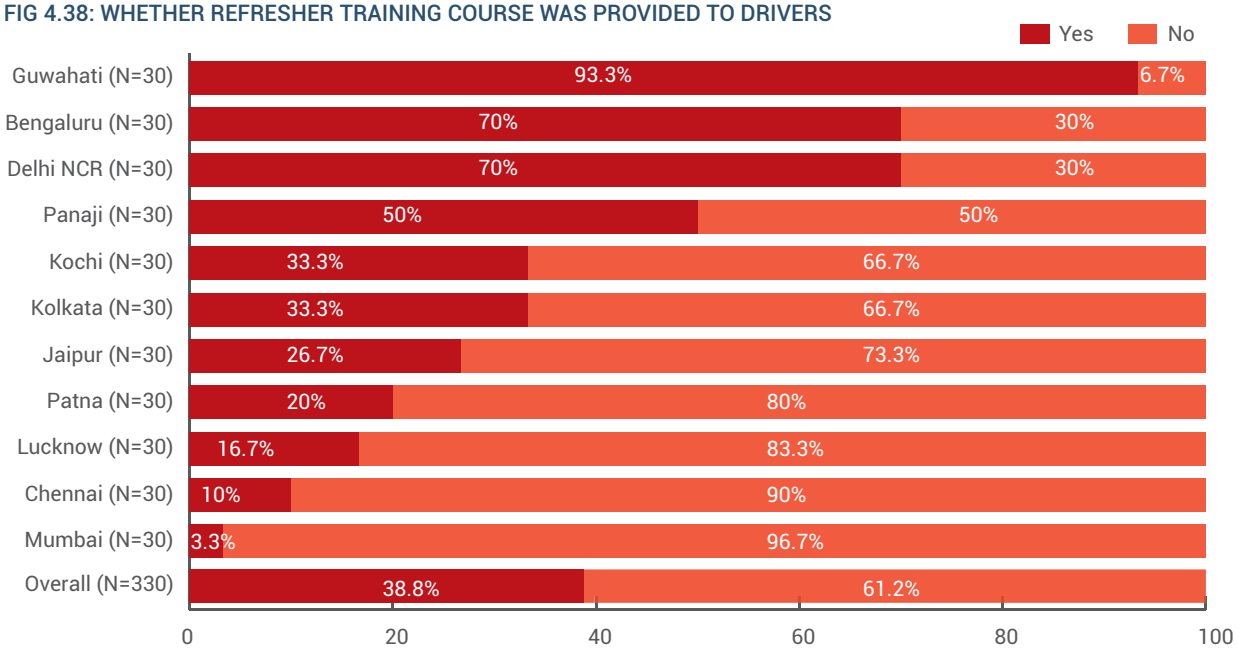
67 percent drivers of school vans (both, school-owned and private) said they had received a refresher training, while 58 percent drivers of school buses (both, school-owned and private) said they had not.

In Guwahati, the highest percentage of drivers (93 percent) surveyed said they had received a refresher training, followed by drivers in Bengaluru, Delhi NCR, and Panaji. Meanwhile, in cities like Patna, Lucknow, Chennai and Mumbai, less than 20 percent respondents said they had been provided with refresher training.

WILLINGNESS TO ATTEND TRAINING ON ROAD SAFETY AND SAFE DRIVING

Drivers were asked if they would be willing to attend training sessions regarding road safety and safe driving. 47 percent drivers were willing to attend such a workshop to enhance their awareness about Road Safety and become better drivers while 53 percent drivers felt they did not need such training as they had enough experience and awareness with regard to road safety.

FIG 4.38: WHETHER REFRESHER TRAINING COURSE WAS PROVIDED TO DRIVERS



PARENTS' RESPONSE ON SAFETY MEASURES IN SCHOOL ZONES

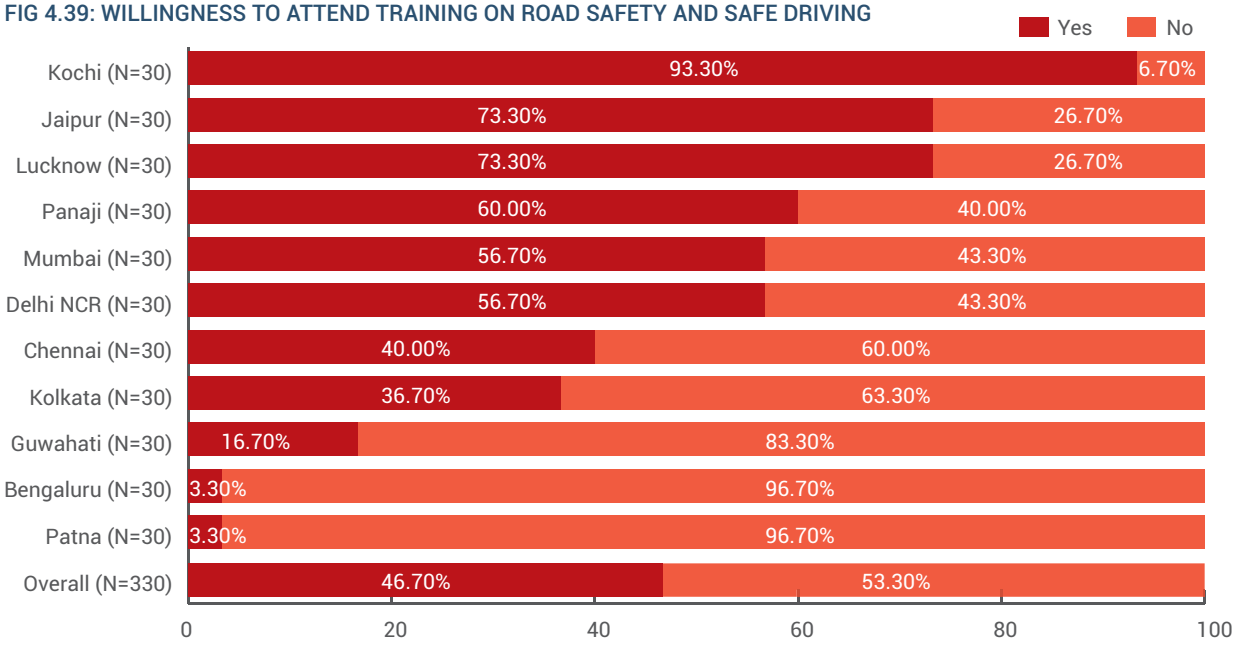
Parents across the 11 selected cities were asked what they thought about the safety measures available in school zones.

81 percent of the parents said there were road signs displayed at school zones/areas that informed people about the presence of a school, which encouraged them to drive safely to ensure the safety of children.

62.4 percent said that there were designated speed limits, 62.9 percent parents said there were enough pedestrian crossings and footpaths in school zones/areas, 46.3 percent said there was restricted access to other vehicles in that area when school started and ended, while 45.1 percent said there was enough police enforcement and volunteers around school zones to ensure adherence to traffic rules.

City wise, more than 90 percent people in Mumbai, Kochi and Panaji said there were road signs informing people of the presence of a school. Panaji also ranked the highest (93.8 percent) on designated speed limits around schools, while Guwahati (37.9 percent) and

FIG 4.39: WILLINGNESS TO ATTEND TRAINING ON ROAD SAFETY AND SAFE DRIVING



Lucknow (39.6 percent) ranked the lowest in this category.

Guwahati also ranked lowest in presence of enough police enforcement or volunteers around the schools to ensure adherence to traffic rules, with only 24.2 percent parents saying yes.

More than 91 percent parents in Mumbai said there were enough pedestrian crossings and footpaths around the school area, while only 44.2 percent parents in Chennai said so.

Most cities ranked low in terms of restricted access to vehicles in school zones during the start and ending hours of school. Guwahati (28.4 percent), Kolkata (36.3 percent), Lucknow (39.9 percent) and Jaipur (40.4 percent) were ranked low by parents.

CHANGES SUGGESTED TO SCHOOL ZONES TO ENSURE SAFETY OF CHILDREN

In the 11 cities surveyed, 24.7 percent of the parents said people should drive within the speed limit of less than 40 km/hour around school zones, and that drivers must be alert while driving through the school zone.

Around 20.4 percent of parents felt the need for a security guard to be deputed at the school gate to assist children while crossing the roads and also for controlling the traffic in the school zone. Further, they added that the security guard should ensure no vehicle is parked in front of the school or in the pedestrian lane.

Around 18.8 percent of the parents surveyed said vehicles other than school vehicles and parents' vehicles should be restricted during school hours. 16.2 percent parents also suggested the provision speed calming measures, followed by providing proper footpaths for children (9.6 percent).

TABLE 4.11: AVAILABILITY OF SAFETY MEASURE IN SCHOOL ZONES/AREAS

[All figures in percent and for affirmative responses only. Remaining percentage was for 'No' and 'Don't know/Can't say' responses.]

Safety measure available in school zones/ areas for children safety	Overall	Lucknow	Jaipur	Guwahati	Delhi NCR	Kolkata	Mumbai	Chennai	Panaji	Bengaluru	Patna	Kochi
N	**3531**	**293**	**324**	**327**	**316**	**317**	**294**	**344**	**399**	**328**	**324**	**325**
Road signage informing people of the presence of a school	**81.0**	74.1	67.6	86.2	74.1	69.7	97.3	81.7	94.1	74.4	77.5	94.5
Designated speed limits over which one cannot drive in the area around the school	**62.4**	39.6	44.8	37.9	69.6	56.2	65.6	73.0	93.8	65.2	65.1	72.0
Enough police enforcement/ volunteers in this area to ensure obedience to traffic rules	**45.1**	37.2	38.0	24.2	50.3	52.1	49.3	64.2	58.4	27.4	47.2	46.8
Alternate gate of school which does not open on the main road	**63.5**	53.2	59.0	43.1	72.8	80.4	65.3	56.7	79.4	57.6	60.2	70.8
Enough pedestrian crossings and footpaths in this area	**62.9**	48.1	57.7	69.1	58.2	71.0	91.8	44.2	65.2	70.1	59.6	58.8
Restricted access to vehicles in this area when the school commences and ends for the day - only school transport and vehicles of parents are allowed to ply	**46.3**	39.9	40.4	28.4	41.5	36.3	57.5	39.5	79.4	46.3	46.6	52.6
Enough speed calming measures to prevent speeding on these roads	**54.2**	43.0	34.6	57.5	62.0	38.5	93.2	36.3	84.7	45.4	50.9	52.6

TABLE 4.12: SUGGESTED CHANGES IN SCHOOL ZONES TO ENSURE SAFETY OF CHILDREN

[N-2976, Open-ended, Multiple response]

Suggested changes in school zones	Overall	Jaipur	Guwahati	Lucknow	Delhi NCR	Kolkata	Mumbai	Chennai	Panaji	Bengaluru	Patna	Kochi
N	**2976**	**294**	**304**	**283**	**265**	**279**	**254**	**286**	**244**	**213**	**313**	**241**
People should drive within speed limit	**24.7**	14.6	18.8	1.1	18.1	33.0	26.8	37.1	22.1	24.9	45.0	29.5
Depute security guard at school gate	**20.4**	22.1	21.4	17.3	37.4	19.4	29.1	19.9	18.9	12.2	8.0	19.5
Outside vehicle should not be allowed near school	**18.8**	14.3	20.1	22.6	17.4	25.8	19.7	22.7	15.2	17.4	16.3	14.5
Provision of speed breakers on both side of the school	**16.2**	43.9	20.7	22.6	21.9	8.2	15.4	11.2	16.4	2.8	7.7	1.7
Pedestrian lane outside the school	**9.6**	2.7	0.7	4.6	2.6	12.5	3.5	9.1	27.5	18.8	18.2	8.7
Provision of CCTV cameras in school zone	**7.0**	4.1	8.2	12.0	9.1	0.7	15.7	1.0	2.5	7.5	8.0	8.7
Maintained traffic outside the school	**3.8**	2.4	5.6	4.2	2.3	2.5	10.6	6.3	1.6	0.5	3.2	1.7
Deputation of traffic police during school hours	**3.0**	6.5	2.0	0.4	2.6	2.9	0.4	0.7	1.2	3.8	0.0	14.5
Parents should follow traffic rules	**2.6**	1.0	1.6	0.0	2.6	2.5	4.7	4.2	3.7	3.3	3.8	0.8
Provision for back door entry for school vehicles	**2.3**	1.4	4.6	0.4	0.0	1.8	1.2	3.8	8.6	2.3	0.3	0.8
Road/warning signs around the school	**1.9**	8.5	0.0	0.7	4.9	0.4	2.4	0.3	0.4	3.3	0.3	0.0
Others	**9.0**	10.9	10.9	8.5	16.6	4.3	5.5	5.6	7.0	7.0	10.9	11.6
No change needed	**4.6**	3.4	2.6	23.0	2.6	3.6	3.1	1.4	3.7	5.6	0.3	1.2

ADHERENCE TO CBSE GUIDELINES: OBSERVATIONS OF SCHOOL BUSES/ VANS

A part of the study involved observation of school buses and vans running for each segment of schools – private schools, government-aided schools and public schools.

TABLE 4.13: SCHOOL BUSES/VANS FOR OBSERVATIONS

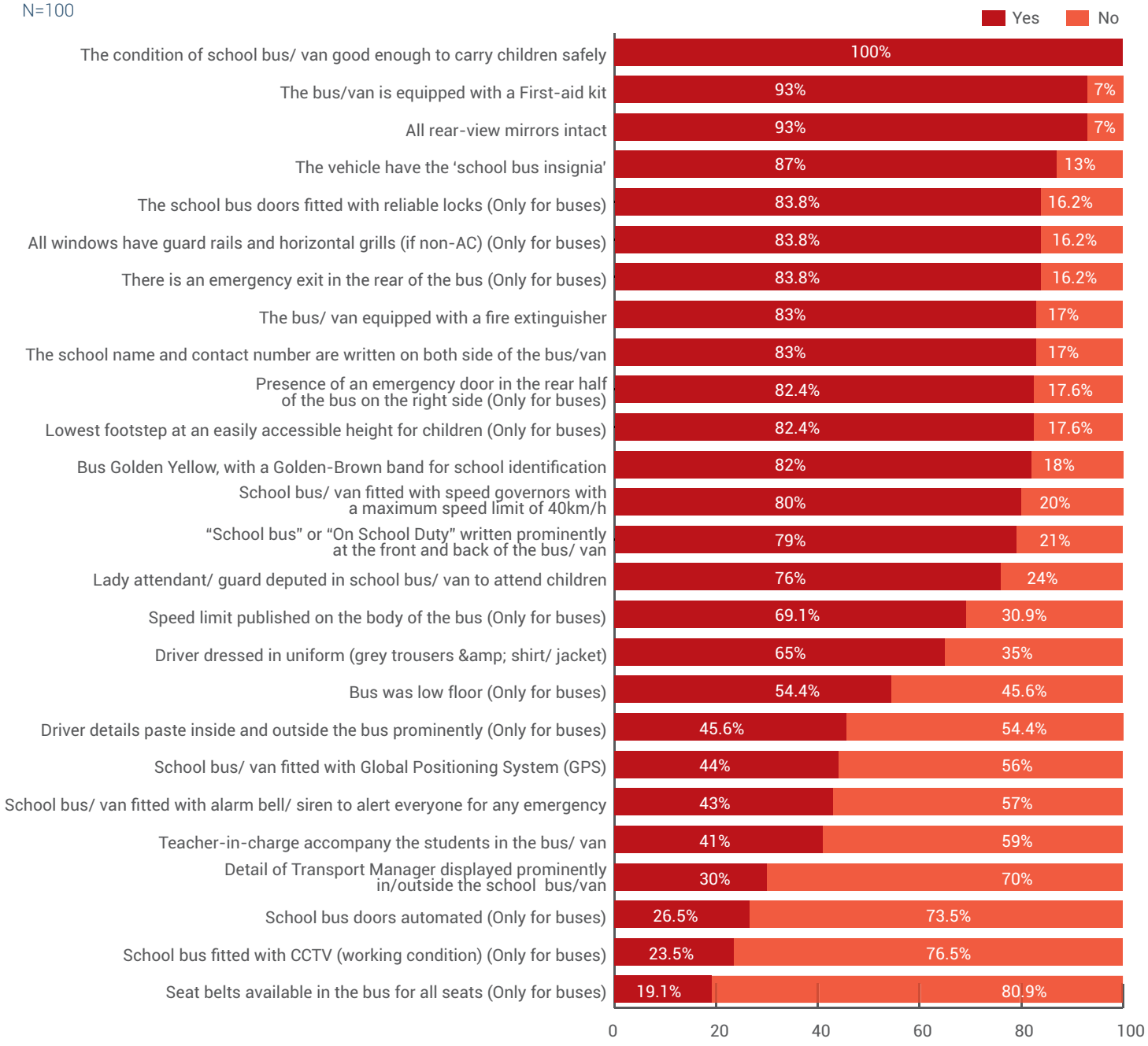
City	Private Schools		Government Aided Schools		Government Schools	
	Count	Percent	Count	Percent	Count	Percent
Bengaluru	7	77.8	2	22.2	--	--
Chennai	4	44.4	3	33.3	2	22.2
Delhi	9	90.0	--	--	1	10.0
Kochi	3	33.3	3	33.3	3	33.3
Guwahati	3	33.3	3	33.3	3	33.3
Jaipur	9	100.0	--	--	--	--
Kolkata	9	100.0	--	--	--	--
Lucknow	9	100.0	--	--	--	--
Mumbai	3	33.3	3	33.3	3	33.3
Panaji	4	44.4	4	44.4	1	11.1
Patna	9	100.0	--	--	--	--
Overall	**69**	**69.0**	**18**	**18.0**	13	13.0

Observations were made to check whether or not there was an adherence to CBSE guidelines and certain other features for better safety.

The aspects where school buses and vans were observed to be lacking were installation of seat-belts for all seats), presence of CCTV cameras and automatic doors and details of the Transport Manager displayed prominently on the bus/van.

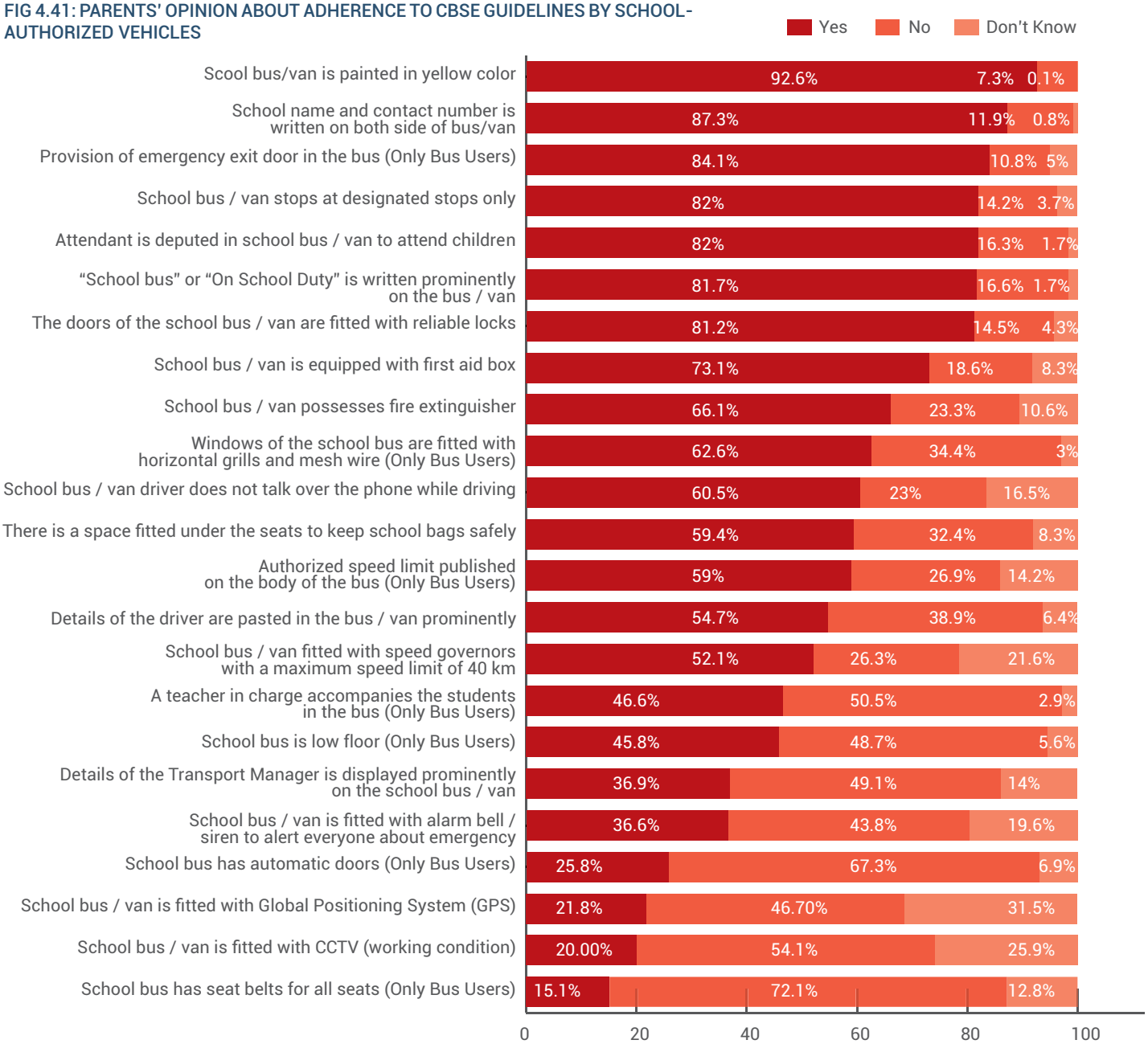
FIG 4.40: ADHERENECE TO CBSE GUIDELINES BY SCHOOL VEHICLES (BUS AND VAN) – OBSERVATIONS

N=100



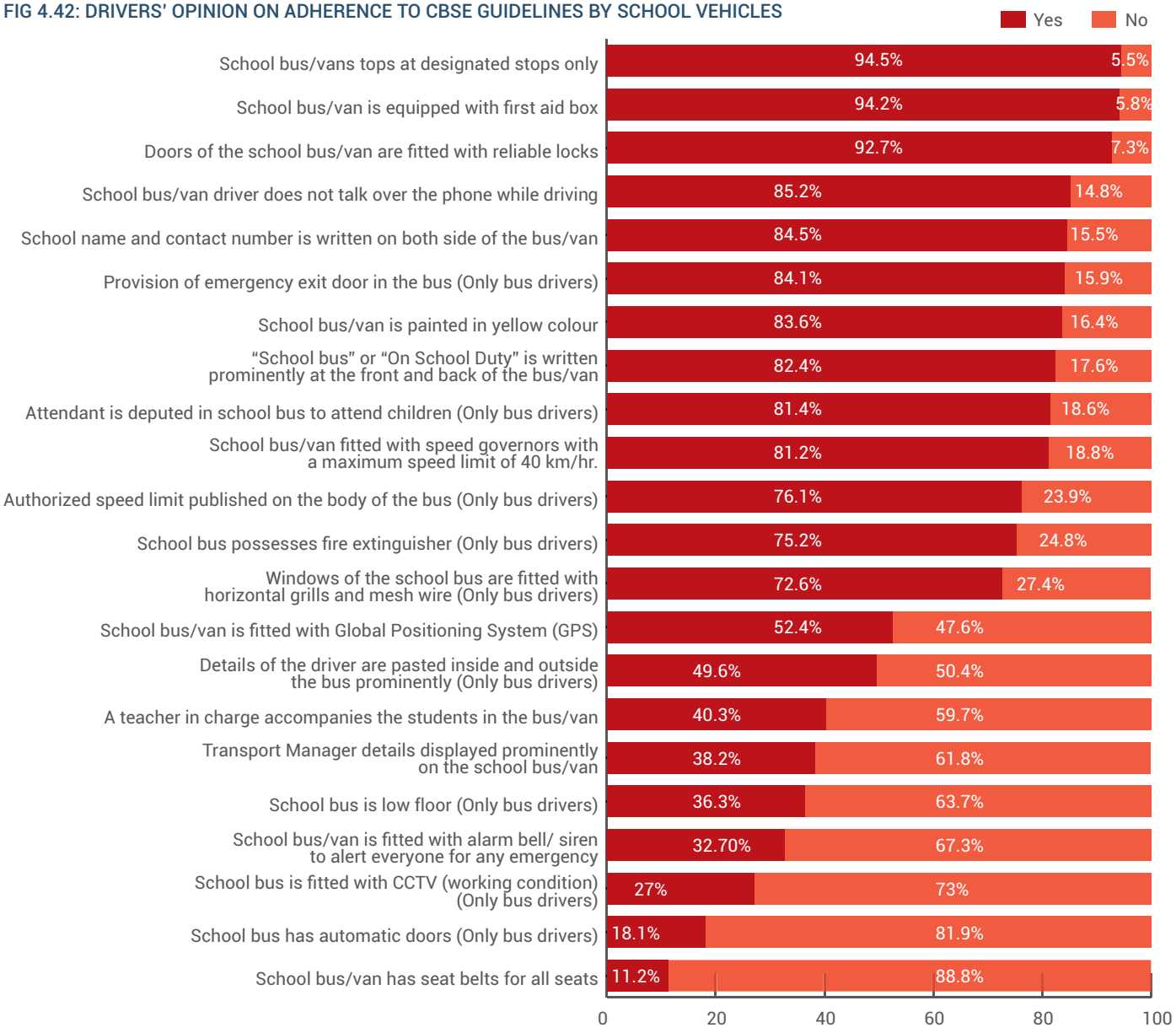
Apart from observations, parents were asked about the adherence of school owned buses and vans to CBSE Guidelines and its specific parameters. Only 46.6 percent parents confirmed to a teacher accompanying students in the bus while less than 22 percent parents confirmed to the buses having GPS facility. See detailed findings in Figure 4.41.

FIG 4.41: PARENTS' OPINION ABOUT ADHERENCE TO CBSE GUIDELINES BY SCHOOL-AUTHORIZED VEHICLES



Similarly when school bus/van drivers were asked the same, only 40.3 percent affirmed to a teacher accompanying students in the bus and 27 percent of them to the presence of CCTV cameras. See detailed findings in Figure 4.42.

FIG 4.42: DRIVERS' OPINION ON ADHERENCE TO CBSE GUIDELINES BY SCHOOL VEHICLES



UNDERAGE DRIVING

As per the World Health Organisation, with regard to driving behaviour among adolescents, while older children and adolescents may have developed skills unlike their younger counterparts, this age group tends to actively seek risks. Risk taking behaviour among children aids them in feeling a sense of control over their lives as well as rebelling against rules set for them.

However, there are several other factors that will be corroborated further that lead older children to drive under-age in India. This ranges from finding other modes of transport inconvenient as compared to driving themselves and sometimes has the stamp of approval from parents as it gives them another hand which can help run errands such as going to the market etc.

In 2016, as per official data, over 3, 000 children below the age of 18 who were driving lost their lives to road crashes. Moreover, over 5, 000 fatal crashes in 2016 were caused by drivers below the age of 18.

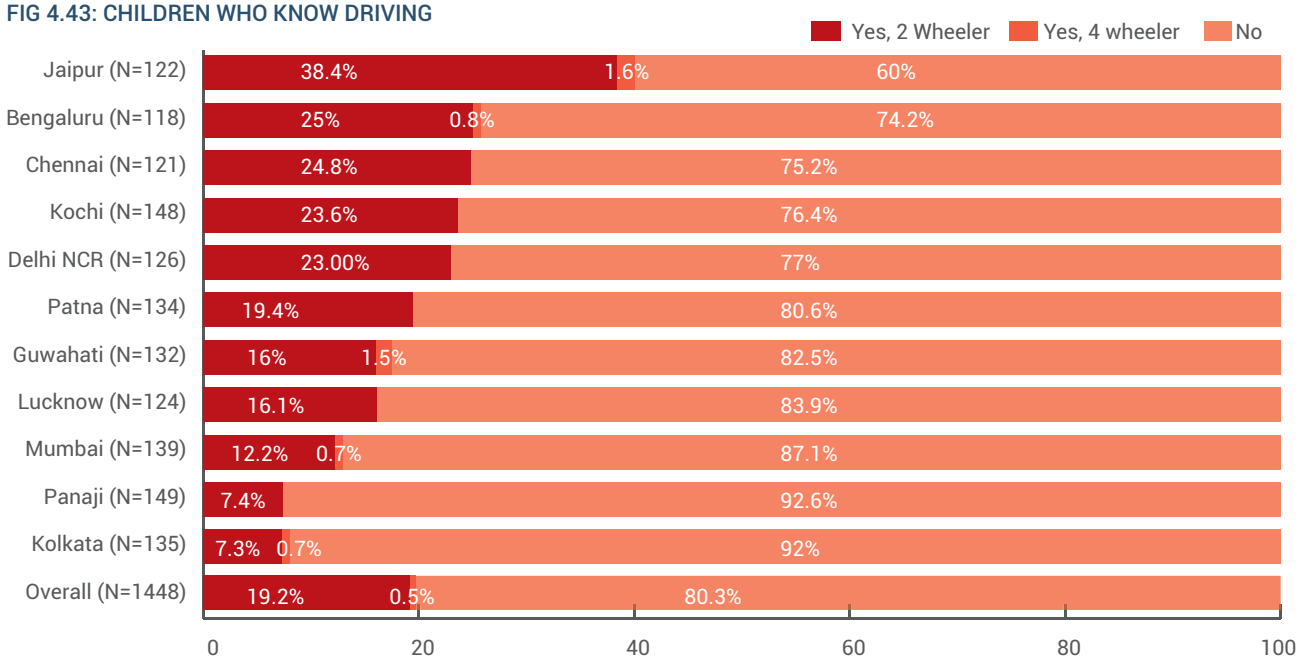
Given such figures, as a part of the study, children aged 11 to 17 years and parents with children in the age group of 11 and 17, were surveyed to understand the status of this issue in India.

6.3.1 PROPORTION OF CHILDREN WHO KNOW HOW TO DRIVE

Children in the age group of 11-17 years were asked if they knew how to drive, and nearly 20 percent of them admitted to knowing how to drive a two-wheeler or a four-wheeler.

In a city wise break up, the highest proportion of children who admitted to knowing how to drive was in Jaipur (40 percent), followed by Bengaluru (25.8 percent), Chennai (24.8 percent), Kochi (23.6 percent) and Delhi NCR (23 percent).

FIG 4.43: CHILDREN WHO KNOW DRIVING



However, when comparing this with the response of parents to the same question about their children, there was a considerable difference in figures. A mere 4.4 percent parents admitted that their children knew how to drive whereas 95.6 percent answered in negation.

In Jaipur, 9 percent parents said they knew their child (aged between 11 years and 17 years) drove a motorized vehicle; in Bengaluru, the proportion was 7 percent, and 6 percent in Delhi NCR. In other metros like Chennai (1.7 percent) and Mumbai (2.6 percent), such reporting was negligible.

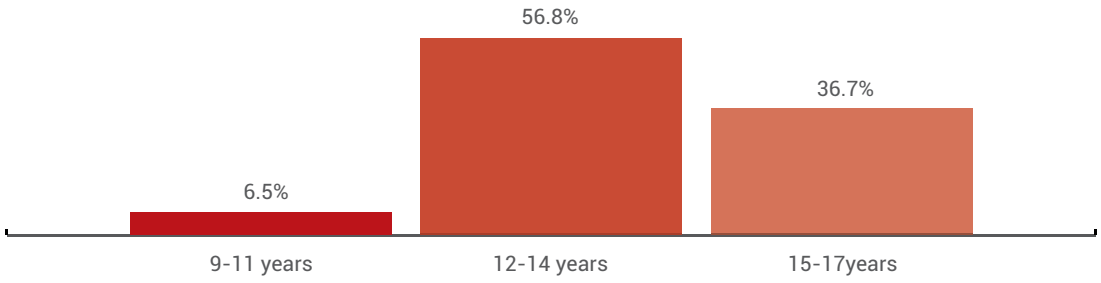
Parents who owned two-wheelers and generally commuted on them with their children reported the most about knowing that their child drove.

THE AGE AT WHICH THE CHILD LEARNED HOW TO DRIVE/STARTED DRIVING

When children were asked at what age they learned or started driving, more than half the respondents (57 percent) said they started driving between the ages of 12 years and 14 years. Over 6 percent children reported that they started driving between the ages of 9 to 11 years.

Overall, the average age of the children at which they started driving was reported as 13.9 years.

FIG 4.44: AGE AT WHICH CHILD STARTED DRIVING



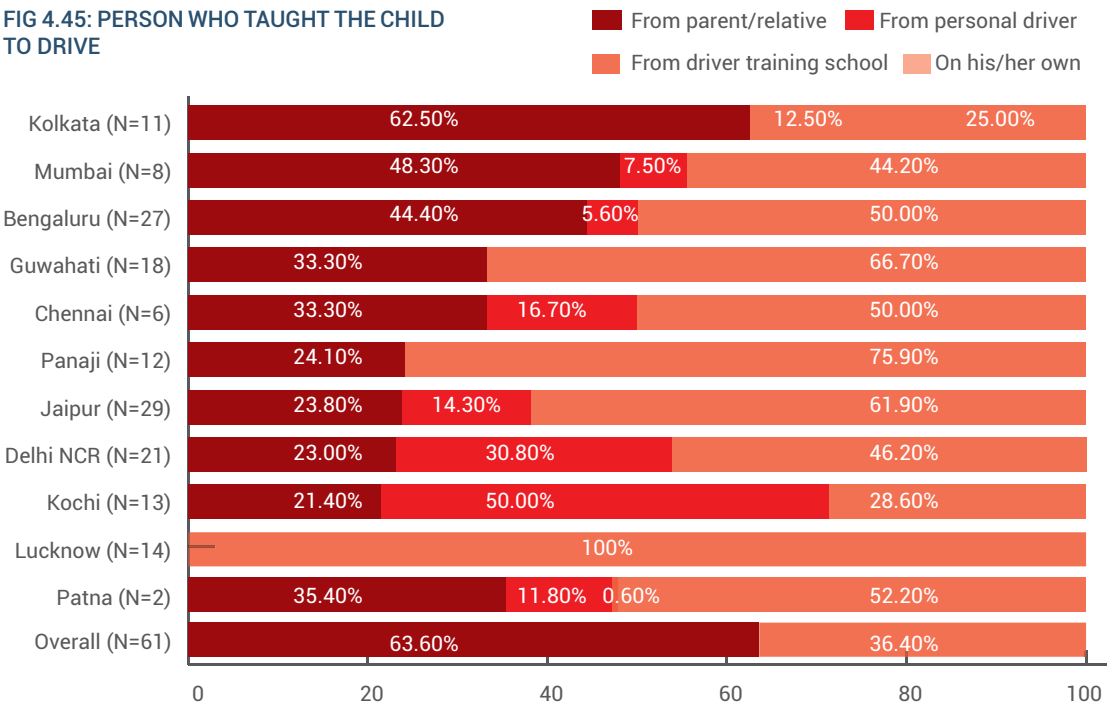
WHO TAUGHT THE CHILD HOW TO DRIVE?

Parents of children between the age of 11 years and 17 years were asked who taught their child to drive. 52 percent parents said that their children had learnt to drive by themselves, followed by 35 percent respondents who said that the parents themselves or a relative had taught the child how to drive. 11.8 percent said their children had learnt it from a personal driver.

In Patna, all parents said their child had learnt to drive by themselves. Percentages of parents who said the same were also high in Jaipur (75.9 percent), and in the metros like Chennai (66.7 percent) and Delhi NCR (61.9 percent).

Cities where more parents said their child learned to drive from them were Kolkata (63.6 percent) and Mumbai (62.5 percent), while in Lucknow half the parents surveyed said that the personal driver had taught them to drive.

FIG 4.45: PERSON WHO TAUGHT THE CHILD TO DRIVE



When the children who admitted to knowing how to drive were asked about who taught them the same, 41 percent said they learned it from their parents or relatives, followed by those who said they had learnt it from their friends and cousins (37.4 percent). 19 percent said they learned driving on their own, while only a few respondents said they learned driving from personal drivers or at training schools.

HOW OFTEN DOES THE CHILD DRIVE?

55.3 percent of the parents surveyed answered that their children only drove sometimes. In a city wise analysis, it was found that in the smaller cities of Jaipur (37.9 percent) and Panaji (33.3 percent) more parents said that their child drove all the time, while in Kochi, Chennai and Mumbai, respondents said that their children drove rarely.

34 percent parents who commuted using four-wheelers with their children said their child drove more frequently as compared to those parents who commuted by two-wheeler (20 percent) with their children.

FIG 4.46: PERSON WHO TAUGHT THE CHILD HOW TO DRIVE (AS REPORTED BY CHILDREN)
[N=278]

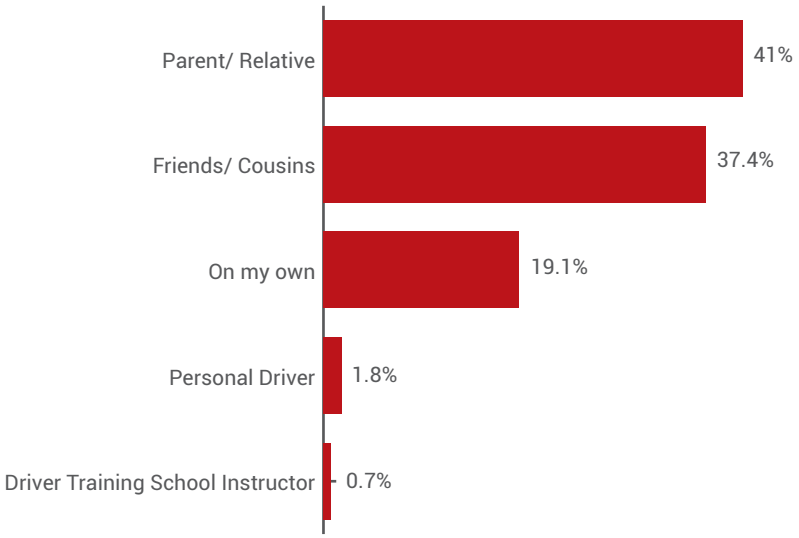
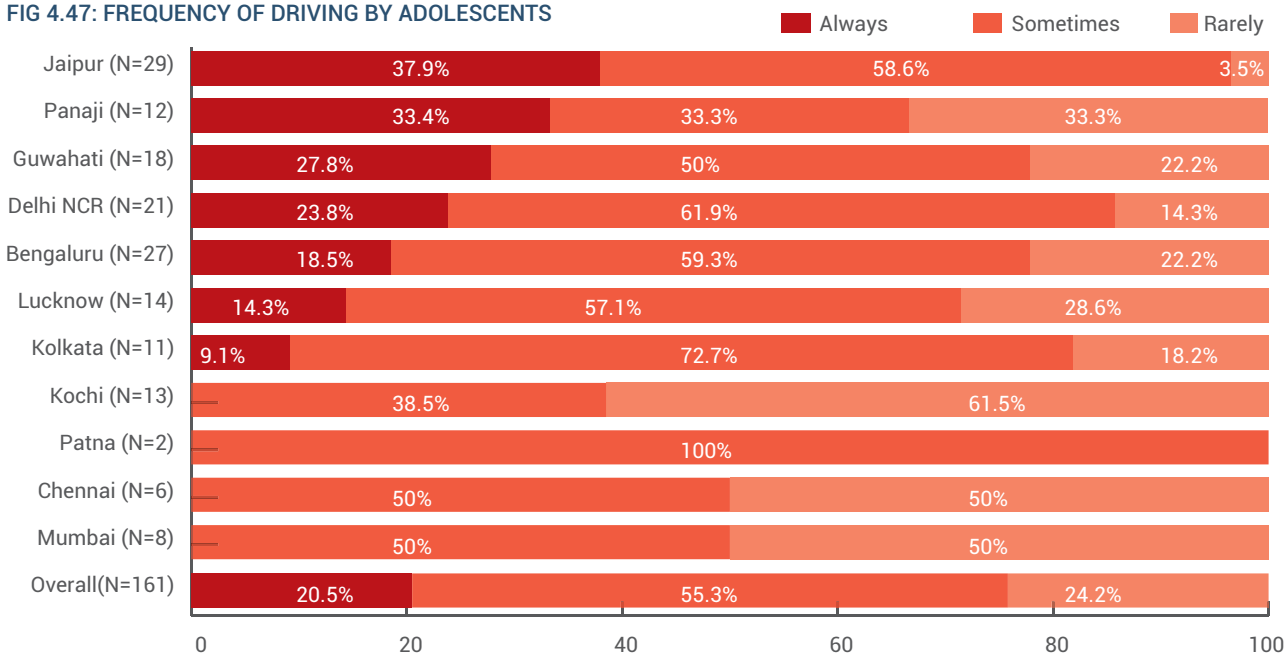


FIG 4.47: FREQUENCY OF DRIVING BY ADOLESCENTS



Those children who said they knew how to drive were also asked how often they drove. Close to one-third children said they drove a motor vehicle regularly, while about two-third said they drove occasionally. Only 6 percent children said they did not drive at all, despite knowing how to.

HAVE THE CHILDREN EVER BEEN CAUGHT DRIVING BY PARENTS?

Parents were asked if they had ever caught their child driving a vehicle, and overall 52.2 percent of them answered in affirmation. In Delhi NCR, all the parents said they had caught their children driving, followed by Jaipur (86.2 percent) and Lucknow (78.6 percent).

As per answers given by children to the question about whether or not their parents knew that they drive, almost 90 percent children reported that their parents were aware of the same. All children in Patna and Kolkata said their parents knew that they drive.

FIG 4.48: WHETHER THE CHILD HAS BEEN CAUGHT FOR UNDER-AGE DRIVING

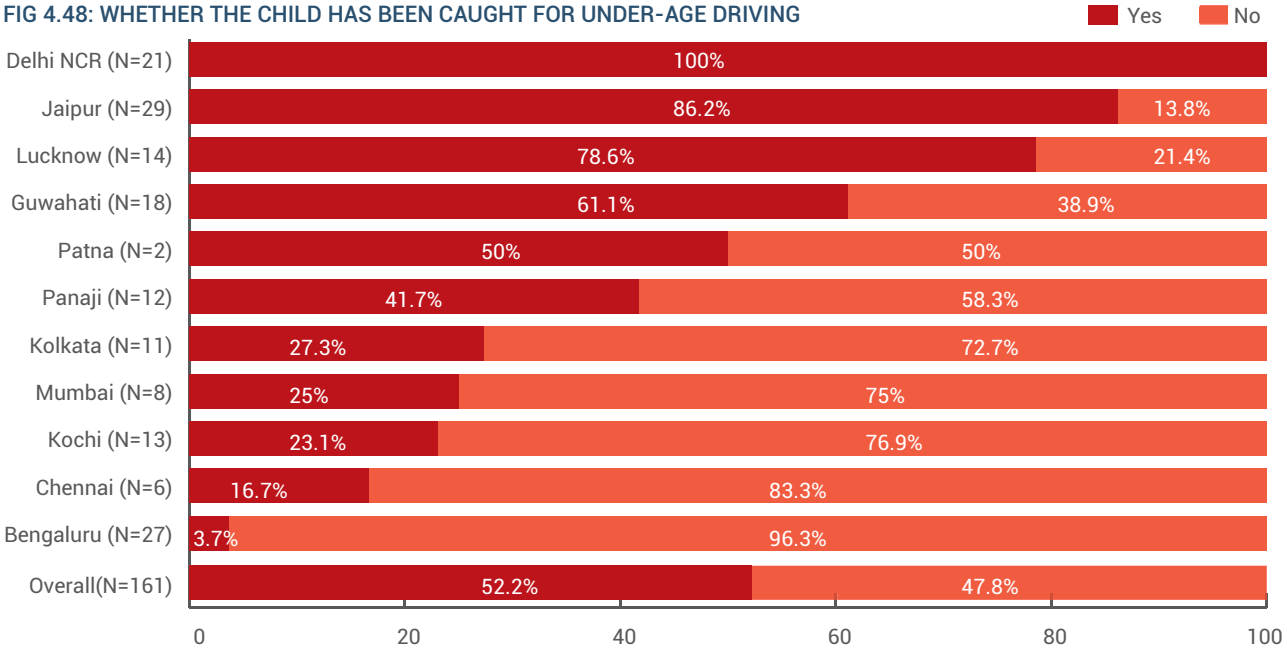
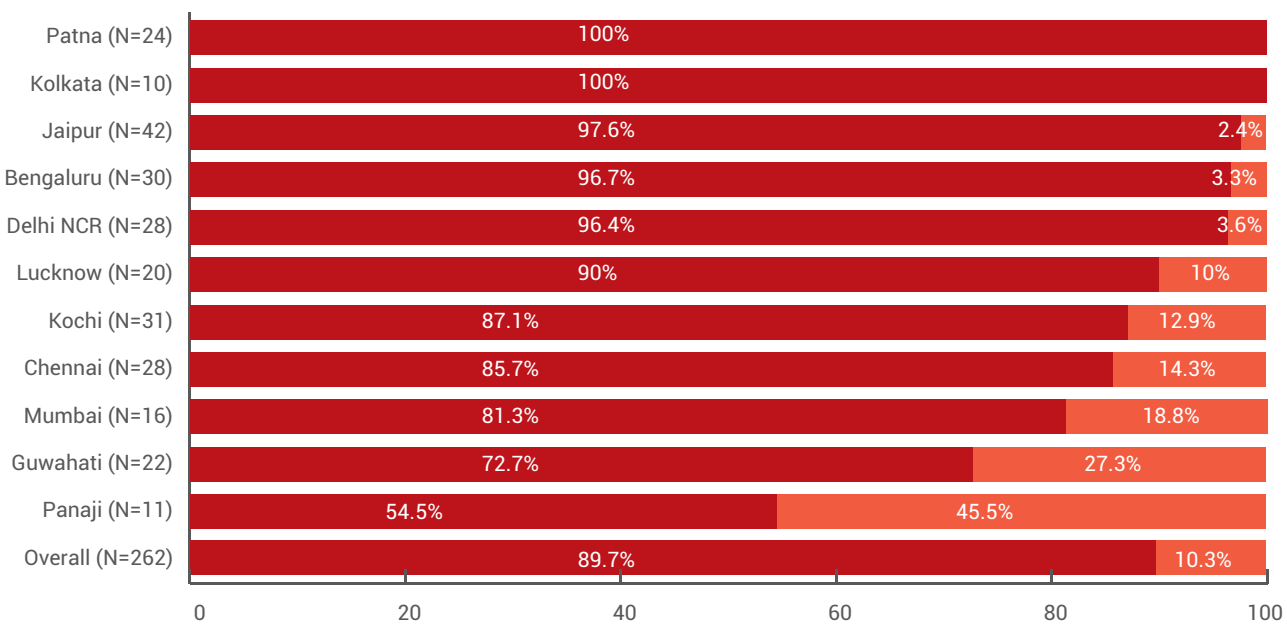


FIG 4.49: KNOWLEDGE OF PARENTS WITH REGARD TO THEIR CHILD DRIVING

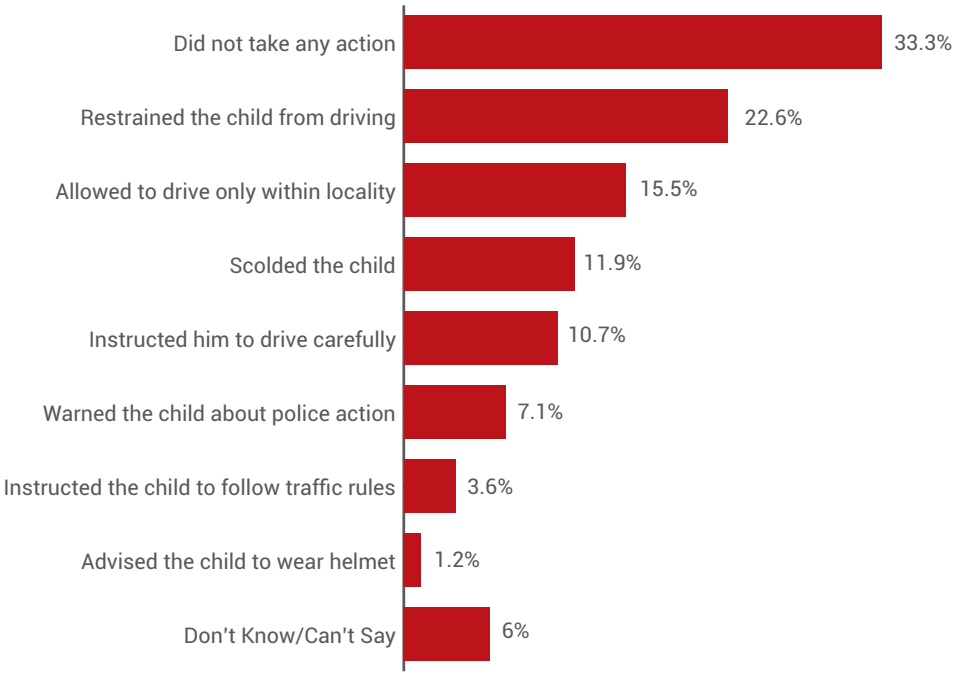


HOW DID PARENTS RESPOND TO THEIR CHILD KNOWING HOW TO DRIVE?

33.3 percent of the parents, who said they had caught their children driving, said they had not taken any action when they found out that their child knew how to drive. Only 22.6 percent parents said they restricted their child from driving any further and 12 percent said they scolded their children for doing so, while 7 percent warned them that they may be caught by the police.

FIG 4.50: ACTIONS TAKEN BY PARENTS FOR UNDERAGE DRIVING

[N=84, Open-ended, Multiple response]



15.5 percent parents who found their children were driving admitted that they allowed them to drive within the locality and 11 percent told them to drive carefully.

As per children who were asked the same question about their parents' reaction, 56.6 percent children surveyed said their parents approved and allowed them to keep driving, while 25.5 percent children said their parents disapproved. Only 18 percent children surveyed said their parents, on finding out, ensured they did not drive at all.

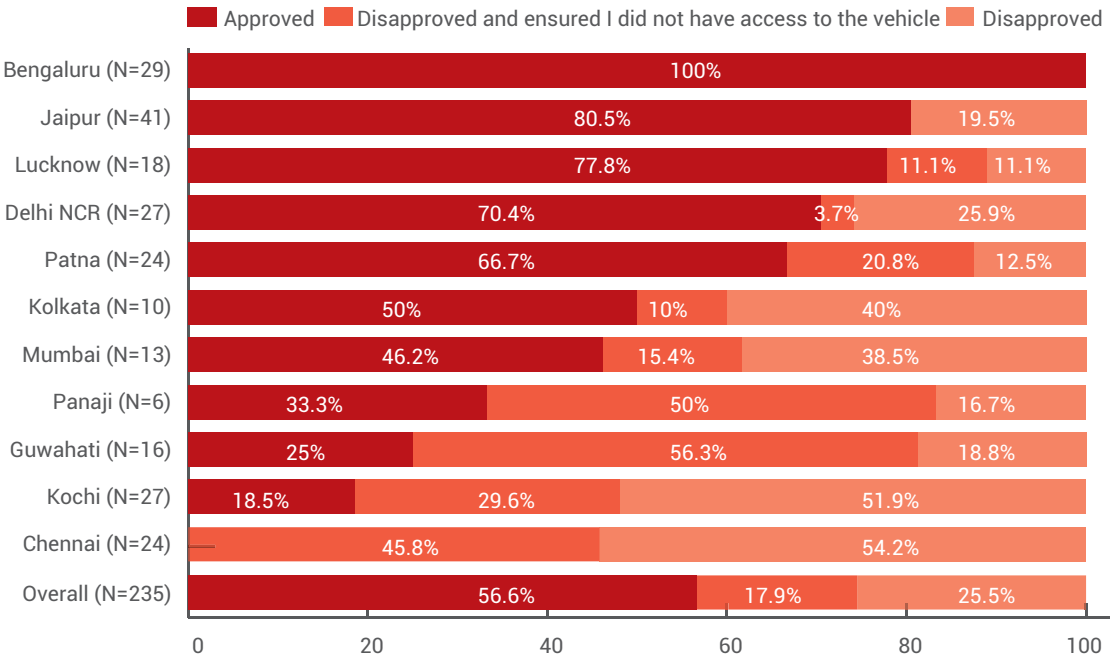
On studying city wise data, more than 7 out of 10 children in metro cities like Delhi NCR, Jaipur and Lucknow said their parents approved of them driving. In Chennai, none of the children said their parents approved, while 51.9 percent of the children in Kochi said their parents strictly disapproved of them driving.

INVOLVEMENT OF CHILDREN IN CRASH OR NEAR MISS SITUATION WHILE DRIVING

When asked whether their children had ever been involved in a road crash, 21.6 percent parents said yes, while the majority (78.4 percent) said no.

All respondents in Patna, followed by Kolkata

FIG 4.51: PARENTS' RESPONSE TO THEIR CHILDREN DRIVING (AS REPORTED BY CHILDREN)



(45.5 percent), Guwahati (44.4 percent), Jaipur (36.7 percent) and Mumbai (25 percent) answered in the affirmative.

WHETHER CHILDREN WERE CAUGHT/ FINED BY POLICE

Those children who said they knew how to drive were also asked if they had ever been caught by the police or fined for underage driving. Overall, an overwhelming majority of them (94.3 percent) said they had never been caught or fined. None of the a children in the cities of Panaji, Kochi, Patna, Lucknow said they had been caught or fined.

A small proportion of children said they had been caught/ fined by police in Mumbai (19 percent), Kolkata (10 percent), Delhi NCR (7 percent).

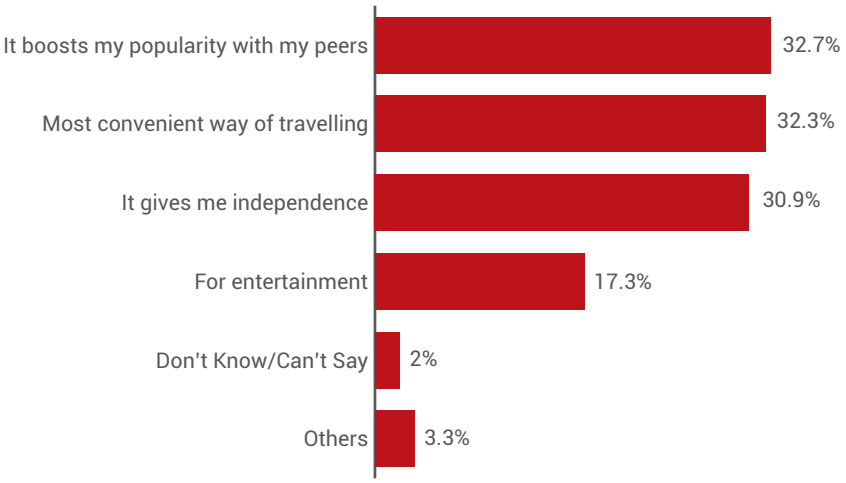
REASONS WHY CHILDREN LIKE DRIVING

Children were asked as to why they liked to drive. 32.3 percent of them said it was because it was the most convenient way to travel in the city.

32.7 percent said it boosted their popularity among peers, while 17.3 percent said it was simply because they enjoyed driving.

As per a road safety expert interviewed as a part of this study, the causes of underage driving include improper monitoring by parents and being given access to vehicles at an early age.

FIG 4.52: REASONS WHY CHILDREN LIKE DRIVING
[N=1405, Multiple response]



WHAT IS THE PURPOSE BEHIND CHILDREN DRIVING?

Those children who said they knew how to drive were asked what purpose they used their vehicle for. 37 percent of the children said they drove to the market, followed by 30.2 percent who said they drove to visit their friends/relatives, while another 12 percent said they drove to their tuition classes.

WHETHER CHILDREN WORE HELMETS WHILE RIDING TWO-WHEELERS

Those children who said they knew how to drive were asked if they wore helmets while riding two-wheelers and 62 percent said they did, while 38.1 percent said they did not.

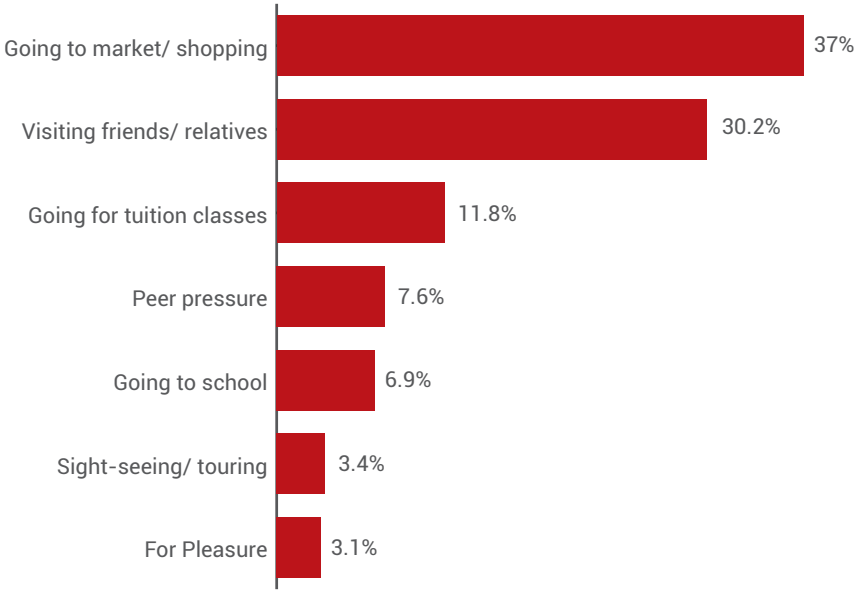
In a city-wise drill, the habit of helmet wearing was reported as most prevalent in Mumbai, followed by Patna, Lucknow, Bengaluru, Delhi NCR, Jaipur and Guwahati.

On the other hand, in cities like Chennai and Kochi fewer children reportedly wore helmets – 17 percent and 34.3 percent, respectively.

AWARENESS ABOUT THE LEGAL DRIVING AGE IN INDIA

Those children who admitted to knowing how to drive were asked if they also knew what the legal age of driving was. Interestingly, 97 percent of children surveyed in all 11 cities said they were aware.

4.53 : PURPOSE OF DRIVING VEHICLE BY CHILDREN
[N=262]



In a city-wise drill, all children in 6 out of 10 cities said they were aware of the legal age of driving, while 40 percent adolescents in Kolkata, 9.1 percent in Guwahati and 4 percent in Patna said the legal age for driving was 16 years or 14 years.

WHETHER THERE IS A NEED FOR LAW TO DISCOURAGE UNDER-AGE DRIVING IN INDIA

Parents were asked if they felt there was need for a law to discourage underage driving, and close to 9 out of 10 (88.5 percent) parents surveyed supported this proposition.

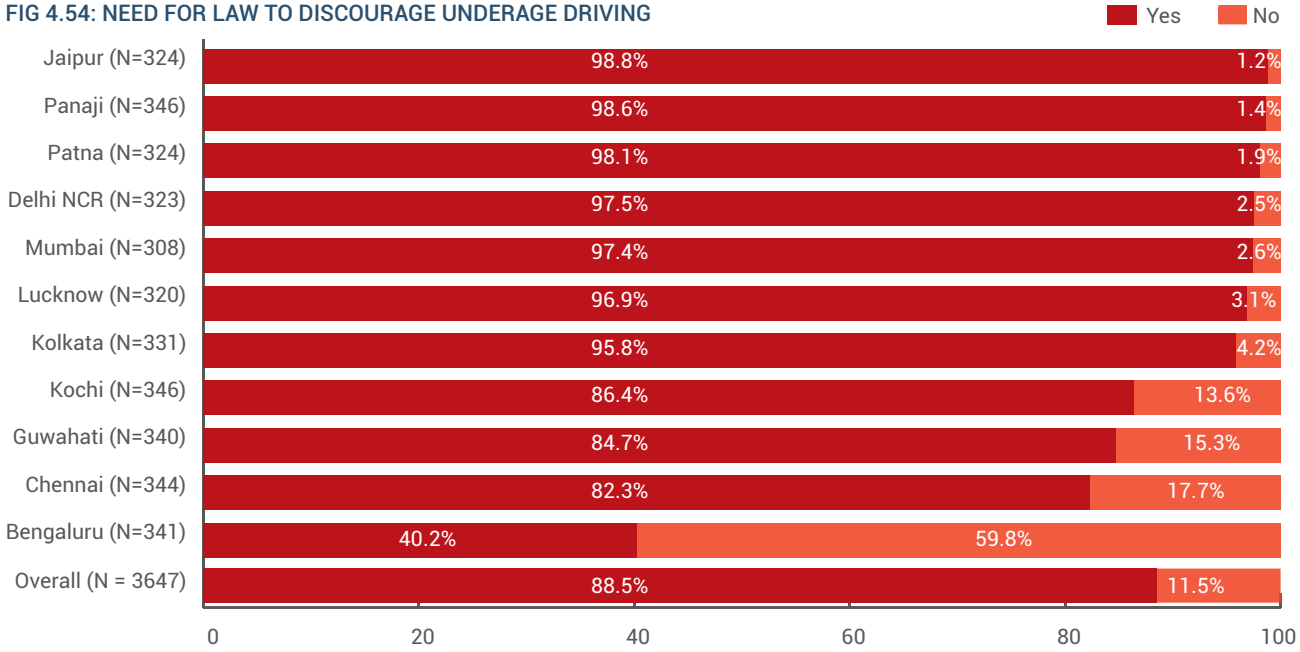
In terms of city wise data, over 9 out of 10 parents supported such a law in seven cities, whereas in the case of Bengaluru, almost 60 percent parents were unsupportive of such a law.

AWARENESS ABOUT UNDERAGE DRIVING LAW IN INDIA AMONG PARENTS

Close to 72 percent parents surveyed said they were not aware of the law for underage driving in India, while only 28.3 percent said they aware. Across cities, parents in Kolkata (8 percent) and Patna (12 percent) were least aware.

Those who said they were aware of the law against underage driving were asked further about their exact understanding of it. One-

FIG 4.54: NEED FOR LAW TO DISCOURAGE UNDERAGE DRIVING



third parents said that as per law, the parent of a child caught driving could be fined. Another 31.4 percent parents understood the law as specifying that vehicles cannot be handed over to a child less than 18 years of age.

As per the understanding of 29 percent of parents, children could not be issued a driving license, while 9.2 percent respondents said, if found guilty the registration certificate of the vehicle could be confiscated. Only 6.8 percent parents said parents could be jailed if their adolescent children were found driving a vehicle.

SUGGESTIONS TO DETER UNDERAGE DRIVING

In exploring methods to discourage underage driving, 22 percent parents advocated strict laws to tackle the situation, while 20.4 percent parents suggested the restrictions on access to vehicle for children so that they could not drive.

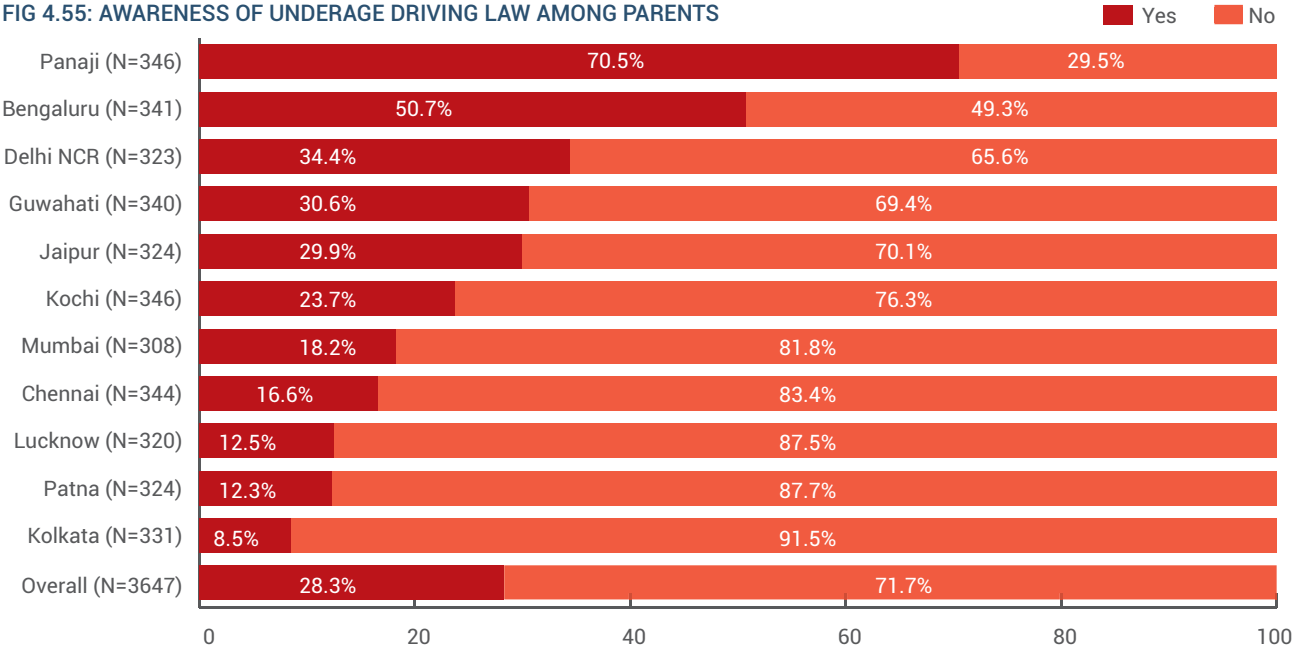
Seventeen percent parents believed that strict action and punishment should be taken against parents of those children who were found driving. Another 15 percent said imposition of heavy fines might discourage underage driving.

Close to 13 percent respondents said parents should educate their children about the dangers of underage driving, while about 10 percent suggested creating awareness among parents.

Some suggested stricter consequences like seizing the vehicles (8.7 percent) and cancelling the parents' license permanently (5.2 percent).

According to a road safety expert interviewed as a part of the study, improving public transport system to provide alternate routes of travel is crucial to prevent underage driving.

FIG 4.55: AWARENESS OF UNDERAGE DRIVING LAW AMONG PARENTS



CHAPTER 5

RECOMMENDATIONS

RECOMMENDATIONS

As part of this study, qualitative research tools were also employed to compliment the analysis derived from quantitative study. 100 in-depth interviews were conducted with key stakeholders including Road Safety experts, doctors with experience in emergency response, paediatricians, police personnel and school transport managers amongst others.

The qualitative part of this study also includes two focused group discussions. The focus group discussion were conducted with parents who use two and four wheelers as a chief mode of transport, respectively.

The objective of these qualitative discussions was to engage with key stakeholders in gaining comprehensive insights on the status of safety during transit with focus on use of rear-seat-belts and an emphasis on children. This chapter provides recommendations for improving the status of safety during commute with regard to use of rear seat-belts and protection of children.

THE USE OF REAR SEAT-BELTS

ROAD SAFETY EXPERTS :

Structured interviews were conducted with Road Safety experts around the country on both the issues: rear seat-belt usage as well as child road safety. While selecting Road Safety scholars and experts for the interviews, it was ensured that they had over ten years of average experience in the field.

The twin line of enquiry with Road Safety experts covered, the reasons behind low usage of rear seat-belts in India and recommendations to improve it. The experts felt that people are unaware of the benefits of wearing rear seat-belts and that contributes to low usage. People perceive that those who sit in front seat are more vulnerable to a crash as compared to rear seat passangers. Also since enforcement is weak, there is no behaviour modification by way of stringent enforcement. Some experts, also pointed at non-availability of seat-belts in public transport or older models of vehicles. While recommending measures to improve compliance, most experts suggested improving awareness and stricter enforcement. Experts also pointed at the fact that currently there are no safety devices for children below 14 years. To quote one expert, *"Rear seatbelts are not designed to be used by children less than 14 years. On wearing a seat-belt; it directly comes near their neck, so if there is sudden jerk or force, it will put a huge pressure on their necks, which can injure a child seriously. Therefore child restraint systems should be mandated by law."*

CAB DRIVERS :

Since density of interaction with rear seat passengers is relatively high for cab drivers, in-depth interviews were conducted with them to understand patterns in the use of rear seat-belts related knowledge, attitude and behaviour. The drivers echoed the views articulated by Road Safety experts. They also expressed the view that vehicles should be fitted with warning signals if rear seat passengers don't wear seat-belts.

TRAFFIC POLICE PERSONNEL:

Traffic personnel were interviewed across 11 cities to understand the low usage of rear seat-belts. The selected respondents were in active service and above the rank of sub-inspector.

Traffic Police personnel thought that the reason people do not wear rear seatbelt is the lack of awareness about it, lack of enforcement and because people think they are safe on the rear seat.

REASONS FOR LOW USAGE OF REAR SEAT-BELT	RECOMMENDATIONS TO IMPROVE REAR SEAT-BELT USAGE
• Lack of awareness amongst people about rear seat-belt and its benefits.	• Raise awareness about the consequences for not using rear seat-belts.
• Minimised risk perception. People think the front seat passengers are at greater risk of severe injury in case of crash as compared to rear seat passengers	• Vehicles to be equipped with warning system when rear seat passengers don't wear seat-belts.
• No fear of enforcement agencies	• Strict implementation of law by enforcement agencies
• Non availability of seat-belts in public transport and in old cars	• Making seat-belts available in Public transport vehicles

ROAD SAFETY FOR CHILDREN

ROAD SAFETY EXPERTS:

Based on in-depth discussions with road safety experts, the key risk factors for child road safety is poorly designed infrastructure and lack of child specific road safety laws in India. According to experts, between engineering, education and enforcement, engineering interventions should be prioritised and then focus should be given to education and enforcement activities. Many experts concurred that, streets are not safe for children mostly because of improper road design. Also, independent commute by children exposes them to high risk because road infrastructure is not developed keeping vulnerable users in mind. According to a road safety expert, "As high as , 25%-30% of children are exposed to potential road crash injury/ death in India."

MEDICAL PROFESSIONALS:

Emergency Physicians and surgeons and paediatricians were interviewed to understand road crashes involving children. Doctors/ paediatricians selected for the in-depth interview had at least 10 years of experience. According to medical professionals, non-availability and non-use of safety devices like helmets and child restraints is a key risk factor. Doctors also feel that there is a lack of trained professionals who can provide immediate care at scene of crash or while transfer. They felt that there is a need to increase adequately trained manpower to provide cardio-pulmonary resuscitation (CPR) for post-crash care before patient reaches hospital.

OBSERVATIONS OF MEDICAL PROFESSIONALS WITH REGARD TO INJURY FACED BY CHILDREN

CAUSE FOR SUCH INJURY

- Lack of awareness among parents of risk due to bone dysfunction and detachment.
- Lack of preventive measures taken by parents while commuting with child (no safety gears, which expose them to possible risks).

KEY ROAD CRASH INJURIES

- Lower limb, shoulder and head injuries are most common among children.
- Head injuries comprise 25-30 percent of all injuries, while head, chest and abdominal injuries about 60-70 percent of all injuries.

SCHOOL PRINCIPALS/VICE-PRINCIPALS/TRANSPORT MANAGERS :

33 school officials (including principals, vice-principals and transport managers) were interviewed to understand the status, issues and concerns regarding child safety while commuting to and from school. A mix of government, private and government-aided schools were selected across 11 cities in India. As per school authorities, one of the key challenges faced by schools is to ensure safe commute of the children especially children in the age- group of 6 years to 10 years since it requires constant vigil and supervision. Private schools assign teachers to every school-authorized bus/van to ensure safety of children. In case of government and semi-government schools, apart from a few exceptions, no teacher is assigned. Instead, attendants accompany children in buses/vans. In private schools, it is the teacher's responsibility to conduct an audit of these vehicles to check adherence to rules and regulations set by school management.

RECOMMENDATIONS

MAJOR CONCERNS FOR SAFETY OF CHILDREN:

GOVERNMENT

- Students in Government Schools don't get school bus facility.
- School bodies in India get authorization to build a school even in the most crowded areas, which directly risks the safety of children
- Roads in India are not designed to ensure safety of commuters, especially for children, which makes them most vulnerable to crashes.
- No separate lanes for vehicles moving at different speeds; even where such lanes are available most, people do not abide by it.
- Lack of road safety audits, to review infrastructure facilities etc.

SCHOOL

- In many cases, school-owned vehicles are also used as an informal mode of commercial transport as many of them are on a contract basis or are operated by unprofessional operators
- Many school drivers are not trained to deal with school-children
- Frequent medical check-up and proper police verification should be conducted for school drivers
- Background check of drivers is very important as many drivers work on multiple shifts and due to work pressure, may indulge in rash driving

OTHERS

- Lack of trained drivers and a lenient licensing system is one of the biggest reasons for almost all types of crashes except, the ones occuring due to infrastructure issues.
- Parents' confidence on private operators -- without doing proper background check, most parents opt for private vans only on the basis of reference or because it seems more viable, economically.

FOCUS GROUP DISCUSSION(FGD) WITH 4- WHEELER OWNER/ PARENTS IN DELHI-NCR

Two Focus Group Discussions (FGD) were conducted as part of this study. One FGD was conducted in Delhi with parents who use 4 wheeler as primary mode of transport another was conducted with parents who use 2-wheeler as primary mode of transport.

The respondents concurred on many themes including greater accountability and responsibility of parents to ensure safety of Children. They agreed that parents should be held responsible for underage driving. Parents also believed that Child Restraint System (CRS) was more useful for toddlers. One of the parents also suggested that once a minor gets caught driving, they should be punished in a way that they cannot apply for a license for, say, five years even if they become 18 years of age. Another respondent suggested that as children are more exposed to visual media, awareness about risk of underage driving can be raised through media, including awareness about dangerous consequences and punishment for the same. Parents also note that if timings could be made flexible by 15 minutes, the added pressure of being late to school, which forces parents to drive rashly, can be mitigated.

FOCUS GROUP DISCUSSION(FGD) WITH 2- WHEELER OWNER/ PARENTS IN CHENNAI

Respondents admitted that they don't use helmets for their children during the commute to school since the average distance to school is less and therefore the perception of risk is low. One respondent also mentioned that her child finds the helmet heavy and uncomfortable and therefore doesn't like to use it. Most of the parents suggested that the child helmet should be light, should have mechanism for air circulation, should have certification for standardisation and also that it should be designed in a way to make it attractive for children to use. Parents also suggested that police should prioritise deployment of at least one personnel near school zones around the time children enter and depart the school.

RECOMMENDATIONS

RECOMMENDATIONS FOR DIFFERENT STAKEHOLDERS

GOVERNMENT

- Mandatory annual road safety audit around school zones
- Interventions in road engineering needed as there is hardly space available for children to walk safely. Road signages and other safety infrastructure needs to be improved, especially in small towns
- Transport commissioners, and Road Transport Offices (RTO) to take the initiative in educating commuters and parents about the road safety rules and norms especially keeping in mind child safety.
- Stringent license system, especially for school vehicle drivers and public transport drivers.
- Passage of stringent Child Road Safety Laws.

INDIVIDUALS/PARENTS

- Educate children about road safety and basic traffic norms.
- Encourage usage of safety devices like child helmets, Child Restraint System and Seat-belts.
- Discourage underage driving.
- Behaviour change to priortise safety over perceived comfort.

STAKEHOLDER/SCHOOLS

- Collaboration between school authorities and parents to make child zones risk-free
- Include road safety in school curriclum for all age groups.
- Do not allow students to commute to school by-driving any vehicle by themselves until they attain the legal age of driving.
- Ensure well trained drivers are employed to drive school buses
- Periodically inspect vehicles to ensure that they are fit to transfer children and comply with all safety standards.

RECOMMENDATIONS FROM SAVELIFE FOUNDATION

It is evident from the study that usage and awareness regarding rear seat-belts is quite low in India. Child road safety is also a major concern due to lack of effective strategies. In order to ensure safety amongst road users including children, the following measures are recommended:

REAR SEAT-BELTS USAGE:

AWARENESS ABOUT THE IMPORTANCE OF REAR SEAT-BELTS:

Increase in awareness regarding the fact that rear seat-belts are as important as front seat belts. The general perception among the masses is that it is not mandatory to wear seat belts under the law. It is therefore recommended that people should be made aware of the legal provisions regarding seat belts. Section 138 (3) of the Central Motor Vehicles Rules under the Motor Vehicles Act makes it mandatory for passengers occupying front facing rear seats to wear seat belts.

EFFECTIVE LEGISLATION:

Legislation should ensure that language is not restrictive. All rear seat passengers and not just "front facing rear seat passengers", as is the case currently, should wear the rear seat belt. Legislation which mandates that anyone not wearing a seat belt or with passengers not wearing seat belts should be fined, as given in the Motor Vehicles Amendment Bill, 2017 should be implemented.

STRICT ENFORCEMENT BY AUTHORITIES:

The enforcement agencies should strictly monitor and regulate adherence to the law mandating the use of rear seat-belts.

CHILD ROAD SAFETY:

The need of the hour is to have a Comprehensive Road Safety Law inclusive of special section for complete protection of children while commuting on our roads. This includes:

1. Demarcating Safe Play Areas for children / Child Zones

RECOMMENDATIONS

2. Violation of speed and overtaking restrictions in "Child Zones" should be a non-bailable offense and attract severe fines.

3. Ensuring areas outside schools become "safe" or demarcate "school zones" with reduced speed, traffic calming measures and better engineering interventions

4. School buses should be designated as a special class of vehicle and their regulation be clearly defined under the ambit of law.

5. The Supreme Court guidelines for school buses should be brought into the central Motor Vehicle Rules and notified and schools violating the said statutes should be heavily fined including provisions for cancellation of their registration and licenses

6. Child helmets should be made mandatory for children above the age of 4

7. Ensuring Child Safety Equipment in all vehicles where relevant – Child Helmets, Child Restraints, Child Seat Belts

8. Strict Penalty system on Violation of Child Safety laws

ANNEXURE-
RESPONDENT PROFILE

ANNEXURE 2

RESPONDENT PROFILE

The profile of respondent categories i.e. adults, children, taxi drivers is provided in this section.

A2.1. CITY WISE BREAKUP

TABLE 1: RESPONDENT PROFILE - CITY WISE BREAKUP

City	Adult/ Parents	Children	Driver
N	**4236**	**1740**	**330**
Bengaluru	9.0%	8.6%	9.1%
Chennai	9.1%	9.4%	9.1%
Delhi NCR	9.0%	8.8%	9.1%
Guwahati	9.0%	9.4%	9.1%
Jaipur	9.0%	8.6%	9.1%
Kochi	9.1%	9.2%	9.1%
Kolkata	9.2%	9.2%	9.1%
Lucknow	9.0%	8.7%	9.1%
Mumbai	9.1%	9.6%	9.1%
Panaji	9.1%	9.5%	9.1%
Patna	9.3%	8.9%	9.1%
Total	**100.0%**	**100.0%**	**100.0%**

A2.2. GENDER WISE BREAKUP

TABLE 2: RESPONDENT PROFILE - GENDER WISE BREAKUP

Gender	Adult/ Parents	Children	Driver
N	**4236**	**1740**	**330**
Male	61.6%	64.0%	100.0%
Female	38.4%	36.0%	---
Total	**100.0%**	**100.0%**	**100.0%**

A2.3. EDUCATION QUALIFICATION WISE BREAKUP

TABLE 3: RESPONDENT PROFILE – EDUCATION QUALIFICATION WISE BREAKUP

Education qualification	Adult/ Parents	Children	Driver
N	**4236**	**1740**	**330**
Illiterate	1.4%	0.0%	2.4%
Studied up to primary level	9.9%	71.2%	30.3%
SSC/ HSC	40.7%	28.8%	61.5%
Graduate	39.1%	---	5.2%
Post Graduate	8.9%	---	0.6%
Total	**100.0%**	**100.0%**	**100.0**

A2.4. SEC WISE BREAKUP

TABLE 4: RESPONDENT PROFILE – SEC WISE BREAKUP

SEC Wise	Adult/ Parents	Children
N	**4236**	**1740**
A1	27.2%	30.6%
A2	26.2%	24.7%
A3	24.4%	24.7%
B1	13.1%	12.5%
B2	5.6%	5.3%
C1	2.5%	1.6%
C2	0.6%	0.5%
D1	0.3%	--
D2	0.1%	--
Total	**100.0%**	**100.0%**

ANNEXURE 2

A2.5. OCCUPATION WISE BREAKUP

TABLE 5: RESPONDENT PROFILE – OCCUPATION WISE BREAKUP (ADULT/ PARENTS)

Occupation	Adult/ Parent
N	**4236**
Housewife	28.7%
Employee- Pvt. Sect	27.9%
Businessman/trader/self-employed	23.5%
Taxi Driver	11.0%
Employee - Govt. Sect	5.6%
Labourer/ Daily wage earner	2.0%
Unemployed	0.4%
Student	0.4%
Farmer	0.3%
Retired	0.2%
Total	**100.0%**

A2.6. MONTHLY HOUSEHOLD INCOME (MHI) WISE BREAKUP

TABLE 6: RESPONDENT PROFILE – MHI WISE BREAKUP (ADULT/ PARENTS)

Occupation	Adult/ Parent
N	**4236**
Up to Rs. 10,000	6.7%
Rs. 10,001 to Rs. 25,000	41.8%
Rs. 25,001 to Rs. 50,000	37.3%
Rs. 50,001 to Rs. 1,00,000	12.1%
More than Rs.1,00,000	2.2%
Total	**100.0%**

NOTES

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