SOCIO-ECONOMIC IMPACTS OF ROAD CRASHES

CHAPTER 4

INTRODUCTION

Road Traffic Injuries (RTIs) in India are closely interlinked with on-ground socioeconomic realities like class, gender and geographical location that often intersect and affect various sections of the population differently. This chapter highlights the disproportionate impact of road crashes among LIH and HIH in the four selected States by capturing the situated hierarchies and lived experiences of respondents, i.e., it discusses the differential impact of crashes among various States, male and female, poor and rich and urban and rural areas. The extent and degree of disproportionate economic impact among LIH and HIH is estimated by determining the direct and indirect costs borne by households after an crash. Direct costs are tangible, paid upfront and include medical expenses, property costs, vehicle costs etc. In contrast, indirect costs are hidden, often difficult to determine and are characterised by a deterioration in the standard of living, loss of productivity/ income etc. The ability to mitigate risks associated with an crash and the capacity to respond to it also varies among poor and rich households. This chapter highlights that differential response among LIH and HIH w.r.t how they meet their financial burden after a crash.

KEY FINDINGS

The key findings of this chapter can be summarised under two broad points of inter-state variations in the impact

of road crashes among LIH and HIH households and the mechanisms used to cope with the sudden financial burden. Inter-state variations also include pointers on urban and rural disparities and how they further deepen the impact on households. The mechanisms to cope with socio-economic burden posed by road crashes highlight the differential abilities of LIH and HIH to deal with it.

INTER-STATE VARIATIONS

1. Decline in total household income was sharper across all States among LIH vis-a-vis HIH. A greater percentage of LIH across States reported borrowing money and selling land/mortgaging family assets to meet their financial expenses vis-à-vis HIH. For instance, In Tamil Nadu, 30% of the respondents from LIH reported selling/mortgaging assets compared to 10% of the respondents from HIH. In Maharashtra, 44% of LIH had to borrow money compared to 8% from HIH.

2. In the event of a crash, LIH are disproportionately affected in both Low Capacity States (LCS) and High Capacity States (HCS). However, the socio-economic impact on LIH in LCS is the most severe.

3. Resilience of households to deal with financial impact of road crashes was however most fragile in Tamil Nadu. The proportion of LIH respondents who stated that they had to sell off or mortgage their assets, take up extra work, and avail for compensation from the insurance company and other parties involved in the crash in order to deal with their financial burden, was highest in Tamil Nadu.

   This could be because Tamil Nadu has the highest pendency of Motor Accident Claims Petition in India. With over one lakh fifty thousand pending cases, Tamil Nadu has almost double the pendency in comparison to the National level pendency[10]. Tamil Nadu also reported the highest number of married road crash respondents[11]. Additionally, the State also had the highest number of CWE respondents among all States (34%). Since it is mostly men getting involved in road crashes (79% of the victims in TN were male), it is highly probable that Tamil Nadu has the highest number of female headed household's post-crash and therefore limited resilience to deal with financial burdens. While the State has performed well on gender reforms and access to maternal healthcare, it still lags behind in female labour force participation rate. On the work front, women have been leaving the labour force in large numbers since 2005 (WB, 2017)[12]. Women have slightly more casual-wage jobs than men in rural areas in the State.

4. Bihar had the lowest average costs borne by LIH across all expenditure heads except Out Of Pocket Expenses (OOPE) on treatment of the victim and amount paid to

10. https://njdg.ecourts.gov.in/njdgnew/?p=main/pend_dashboard
11. 85% of the victims were married at the time of the crash.
12. World Bank (2017). "Tamil Nadu – Gender", July: http://documents1.worldbank.org/curated/en/154201504176664933/pdf/119264-BRI-P157572-Tamil-Nadu-Gender.pdf

other parties involved in the crash. It was the opposite for Tamil Nadu where average costs were higher across most of the heads except for out of pocket expenses on treatment and legal/administrative expenses.

5. Among the LIH, Maharashtra and Tamil Nadu fared better with a higher survivability rate of 75% compared to UP and Bihar that showed a survivability rate of 53%.

6. The household income in HCS declined by 64% after the crash whereas it decreased by 78% among households from LCS.

7. Similarly, while living standards of the household deteriorated by 49% among HCS, it fell by 64% in LCS.

8. There was a wide contrast in proportion of LIH that availed of loans to deal with resulting financial burdens: 48% of LIH from Uttar Pradesh vis-a-vis 15% of the HIH from Tamil Nadu. Further, the ability to obtain a loan from institutional sources also depends on one's socioeconomic status and makes the process of repayment more strenuous for poor households. 27% of the LIH in urban areas and 48% of the LIH in rural areas availed of loans to mitigate the financial crisis. A similar trend was noticed among HIH. 7% of HIH in urban areas and 30% of HIH in rural areas availed of loans, indicating greater financial stress among households in rural areas.

9. The highest expense among LIH on victims' funerals was incurred in Tamil Nadu (Rs 42, 010) while the lowest amount was spent in Uttar Pradesh (Rs 12, 517).

10. Decline in living standards was drastic across all states with Bihar reporting the sharpest decline among LIH (73%) followed by Uttar Pradesh (72%).

11. In terms of the amount arranged to tide over the economic crisis, LIH from Maharashtra managed to raise the highest amounts whereas among HIH, a similar trend was observed in Tamil Nadu.

12. LIH in Uttar Pradesh (over 2.5 lakhs on an average) received the highest compensation from Government schemes at the central and local level followed by Maharashtra (around 1lakh average). The pendency of compensation cases in UP is one of the lowest in the country at 1.80% of total Original Civil Cases in UP[13]. Additionally, there has been extensive digitisation of Courts in India through the eCourts Mission. Most of the Courts including Motor Accident Compensation Tribunals (MACT) are part of the Case Information System (CIS) software under which courts have been provided flexibility to customize cause lists, mechanism for e payment etc. However, there is dearth of data on actual on-ground practices and how much has this system being implemented as district and taluka level.

13. The National Judicial Data Grid was accessed on 29th October 2020 and the pendency rate is calculated till 28th October 2020.

VARIATIONS IN RURAL AND URBAN HOUSEHOLDS

1. The severe impact of decline in income was higher among rural households, and cases where victims died as well as where victims were males.

2. Income decline was the most severe for LIH rural households (56%) compared to LIH urban (29.5%) and HIH rural (39.5%). However, on comparison of the monthly household income and financial losses (expenditure and loss of income) due to road crashes, it was found that the loss among LIH was equivalent to about 7.6 months household income while among HIH it was equivalent to less than 1 month household income (0.84 month)[14]

3. The total average costs (direct and indirect costs combined) borne by HIH (Rs.1,98,042) after the crash was higher than the total costs borne by LIH (Rs.1,52,826).

4. Medical costs constituted a bulk of the total costs of LIH, i.e., Rs. 78,824 (52% of total costs) followed by loss of productivity/loss of income costs, i.e. Rs. 37, 572 (25% of total costs).

5. Across households, 34% of the respondents from urban areas said they had to borrow money after the crash compared to 78% of respondents from rural areas.

6. Expenditure on OOPE in urban areas was higher compared to rural areas across households. Among the LIH in urban areas, OOPE was slightly higher at 66% of the total expense compared to 60% of the total expense among HIH in rural areas.

GENDER DIFFERENTIATED IMPACT

1. LIH respondents stated that in the absence of any steady primary source of income (especially in the case of death of a breadwinner), the women of the household often had to step up and take additional jobs to mitigate the financial burden. Further, the burden of non remunerative caregiving work mostly falls on females within the household after a crash. This is non quantifiable and does not come under the purview of economic activity.

2. Across household categories, the proportion of male Chief Wage Earners (CWE) was higher than female CWE; the number being higher among LIH. 50% of the women from LIH and 55% from HIH were CWE of the household before the crash whereas 81% of the men from LIH and 74% men from HIH were CWE before the crash.

14. Please note MHI was calculated by taking mid points of ranges.

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3. 31% of the female members in LIH were severely affected by the decline in household income after the crash compared to 53.5% of the male members. Among HIH, 18.5% of female members of the household were severely affected compared to 26.5% of the male members in the household.

4. The male (dead) victims' contribution to household income was significantly higher than female victims' (more than double) across both categories of households. For instance, among LIH, male (dead) victims contributed to 63.5% of the total monthly household income whereas female victims contributed to 29% of the same.

MECHANISMS TO COPE WITH FINANCIAL BURDEN

1. The financial crisis after an crash was more aggravating for LIH than HIH. Compared to HIH, LIH were three times more likely to seek financial help in order to cope with the financial burden post-crash

2. Higher debt among LIH - About 42% of the LIH respondents reported that their household underwent debt after borrowing money (through both formal and informal sources) to cope with the additional expenses after an crash, compared to 11% of respondents from HIH.

3. 24% of the LIH respondents said they had to sell/ mortgage their assets (land, jewellery) to meet their daily expenses and repay their debt, compared to only 7% of the HIH respondents.

4. About 14% of LIH respondents reported taking up extra work to deal with the situation, compared to 4% of HIH respondents.

5. A higher percentage of respondents from LIH in rural locations opted for a loan (lenders, bank, relatives etc.), sold off/mortgaged their assets and took up extra work to cope with the financial burden than their counterparts in urban areas.

6. While LIH were more dependent on loans and selling off their assets to meet their expenses, they were less likely to receive compensation from insurance companies compared to HIH. Only 14% of the LIH received compensation from insurance companies compared to 24% of HIH respondents. The average amount of compensation received by LIH, i.e., Rs.89,215 was also less than the average amount received as compensation for HIH, i.e., Rs.1,62,562.

7. A higher percentage of respondents from HIH (90%) than that in LIH (70%) relied on their savings to meet their additional expenses post-crash. The amount of savings used to meet related expenses was also higher in the case of HIH (Rs.1,45,401) as compared to LIH (Rs. 92,060)

4.1. DISPROPORTIONATE IMPACT ON VICTIMS' SURVIVAL, EMPLOYMENT STATUS AND INCOME LEVEL

The socioeconomic realities and victim's status in the hierarchy determines his/her chances of survival and speedier recovery. The financial impact of road crashes is often severe especially among LIH and can deeply impact victims and their families in terms of loss of employment and income, decline in productivity and lost opportunities.

One of the most significant findings of this study is that the survival rate post-crash was higher among victims from HIH compared to LIH : around 87.5% of the crash victims from HIH survived compared to 64% of the crash victims from LIH. The vast difference in road crash outcomes among victims from rich and poor households can be attributed to various factors like access to medical treatment immediately after the crash and the ability to afford long-term and effective post-crash care. The nature of the crash, and the risk assessment of the mode of transport used for commuting also influences the chances of survival/death among victims. were either using a bicycle/auto rickshaw/ commuting on foot with "VRUs". The findings of this study confirm that the highest proportion of LIH victims from Uttar Pradesh and Bihar were at the time of the crash, thereby making them more susceptible to road crash linked mortality and morbidity. States especially LCS need to urgently spend more on VRU friendly infrastructure in rural areas that prioritises their safety. State Governments should select districts with a high VRU crash rate and prioritise their safety through dedicated Annual Action Plans.

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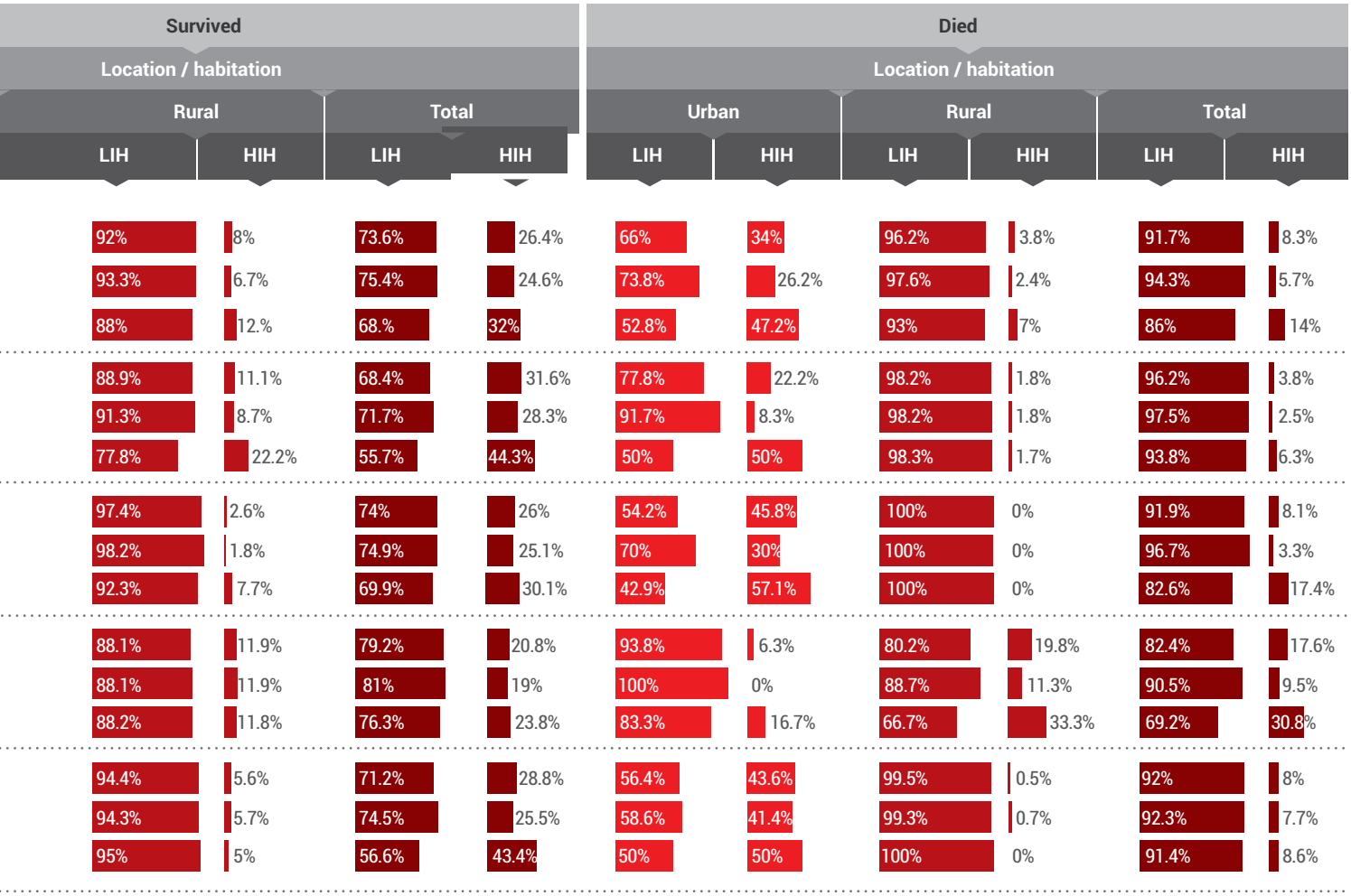
TABLE 4.1: TABLE INDICATING HOUSEHOLD SPLIT OF ROAD CRASH OUTCOMES: LOCATION/HABITATION

Category (State, gender)	Overall							
	Location / habitation							
	Urban		Rural		Total		Urban	
	LIH	HIH	LIH	HIH	LIH	HIH	LIH	HIH
Overall	57.5%	42.5%	93.9%	6.1%	79.2%	20.8%	56.4%	43.6%
Male	60%	40%	95.1%	4.9%	80.9%	19.1%	58.4%	41.6%
Female	50.9%	49.1%	90.5%	9.5%	74.6%	25.4%	50.5%	49.5%
Bihar	54.1%	45.9%	93.8%	6.3%	78.2%	21.8%	51.9%	48.1%
Male	57.6%	42.4%	94.5%	5.5%	79.6%	20.4%	54.8%	45.2%
Female	42.9%	57.1%	91.8%	8.2%	73.9%	26.1%	41.9%	58.1%
Maharashtra	51.8%	48.2%	98.4%	1.6%	78.6%	21.4%	51.5%	48.5%
Male	50.9%	49.1%	98.8%	1.2%	79.7%	20.3%	49.7%	50.3%
Female	54.1%	45.9%	96.6%	3.4%	74.8%	25.2%	57.4%	42.6%
Tamil Nadu	70.7%	29.3%	85.9%	14.1%	79.8%	20.2%	68.8%	31.2%
Male	75.8%	24.2%	88.3%	11.7%	83%	17%	73.8%	26.2%
Female	61.6%	38.4%	82.5%	17.5%	74.9%	25.1%	59.7%	40.3%
Uttar Pradesh	54%	46%	97.4%	2.6%	80.4%	19.6%	53.4%	46.6%
Male	58.5%	41.5%	97.1%	2.9%	81.9%	18.1%	58.5%	41.5%
Female	37.2%	62.8%	98.5%	1.5%	74.8%	25.2%	33.3%	66.7%


Survived
Location / habitation
Rural
Total
LIH
HIH
LIH
HIH
Died
Location / habitation
Urban
Rural
Total
LIH
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LIH
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LIH
HIH
92% 8% 73.6% 26.4% 66% 34% 96.2% 3.8% 91.7% 8.3%
93.3% 6.7% 75.4% 24.6% 73.8% 26.2% 97.6% 2.4% 94.3% 5.7%
88% 12.% 68.% 32% 52.8% 47.2% 93% 7% 86% 14%
88.9% 11.1% 68.4% 31.6% 77.8% 22.2% 98.2% 1.8% 96.2% 3.8%
91.3% 8.7% 71.7% 28.3% 91.7% 8.3% 98.2% 1.8% 97.5% 2.5%
77.8% 22.2% 55.7% 44.3% 50% 50% 98.3% 1.7% 93.8% 6.3%
97.4% 2.6% 74% 26% 54.2% 45.8% 100% 0% 91.9% 8.1%
98.2% 1.8% 74.9% 25.1% 70% 30% 100% 0% 96.7% 3.3%
92.3% 7.7% 69.9% 30.1% 42.9% 57.1% 100% 0% 82.6% 17.4%
88.1% 11.9% 79.2% 20.8% 93.8% 6.3% 80.2% 19.8% 82.4% 17.6%
88.1% 11.9% 81% 19% 100% 0% 88.7% 11.3% 90.5% 9.5%
88.2% 11.8% 76.3% 23.8% 83.3% 16.7% 66.7% 33.3% 69.2% 30.8%
94.4% 5.6% 71.2% 28.8% 56.4% 43.6% 99.5% 0.5% 92% 8%
94.3% 5.7% 74.5% 25.5% 58.6% 41.4% 99.3% 0.7% 92.3% 7.7%
95% 5% 56.6% 43.4% 50% 50% 100% 0% 91.4% 8.6%

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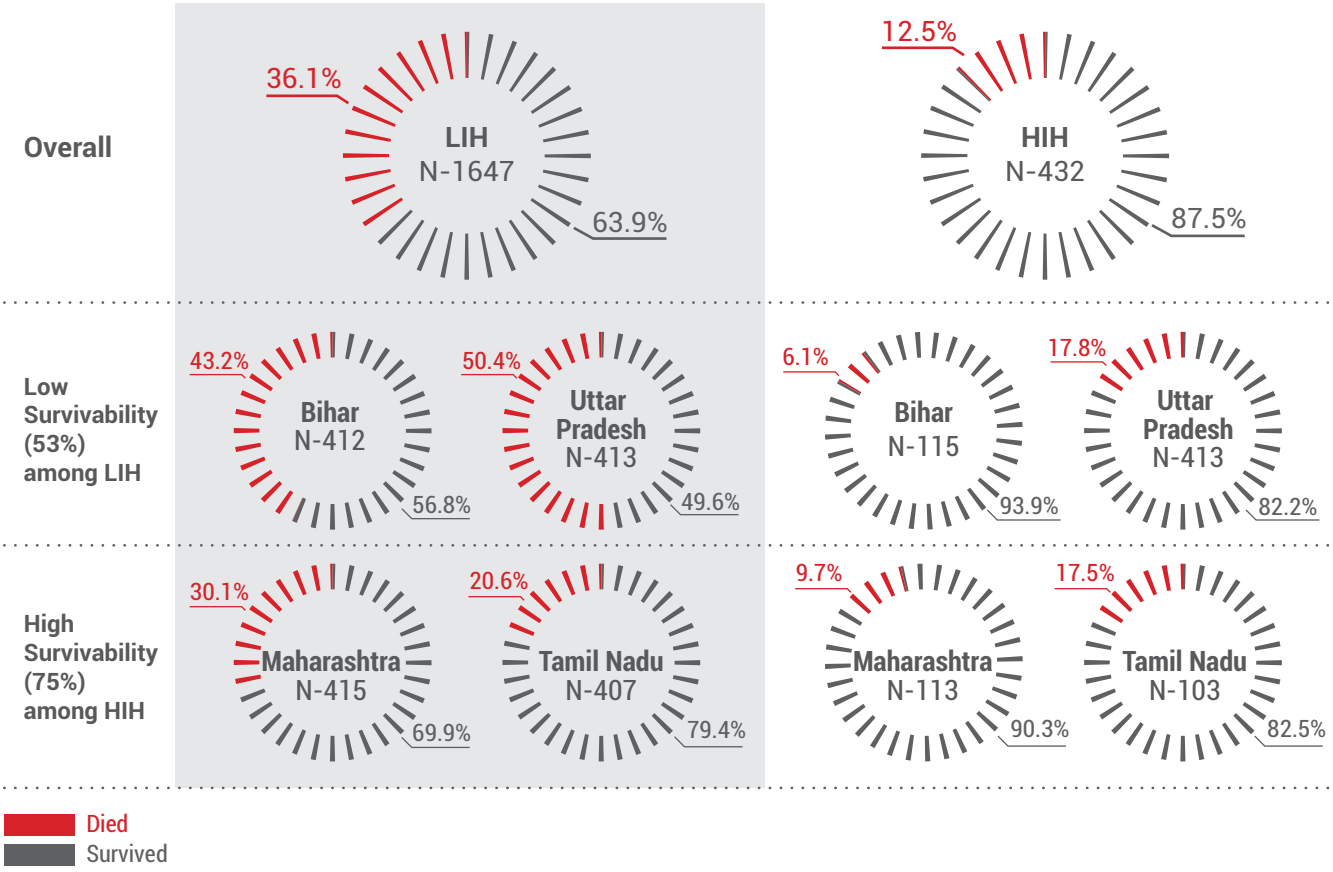
UP and Bihar are one of the highest populated states and home to the largest proportion of poor in India. Further, both the states are comparatively less developed, and the level of education is also low. Based on several factors like proportion of urban population, literacy rate, poverty rate and per capita net State GDP, Bihar and Uttar Pradesh have been categorised as "Low Capacity States", while Maharashtra and Tamil Nadu have been categorised as "High Capacity States". All these factors contribute to differing levels of vulnerability and survivability of road users in crashes.

Overall, the victim survivability rate[15] in high capacity states (77%) was found to be higher than that in low capacity states (61%). For instance, Uttar Pradesh (UP) registered the highest death rate among LIH. 50% of crash victims

TABLE 4.2: TABLE INDICATING HOUSEHOLD SPLIT OF ROAD CRASH OUTCOMES: VICTIMS WHO SURVIVED/DIED AFTER A ROAD CRASH FROM STATE, HABITATION AND GENDER LENS.



15. Survivability here refers to the ability of a road accident victim to remain alive/continue to live after an the accident. It depends on several factors like timely access to emergency care and the quality of care etc.

from LIH in UP died after the crash compared to 18% of crash victims from HIH. Similarly, in Bihar, 43% of the victims from LIH died after the crash compared to about 6% of the victims from HIH. Among the LIH (refer to Table 4.2), Maharashtra and Tamil Nadu fared better with a higher survivability rate of 75% compared to UP and Bihar that showed a survivability rate of 53%.

Victims from rural areas were more likely to die in an crash while victims from urban areas were more likely to survive an crash. 46% of the LIH victims and 28% of the HIH victims from rural areas died post-crash whereas 87% of the LIH victims and as high as the 91% of the HIH victims from urban areas survived post-crash. The reasons for difference in survival rates of urban and rural crash victims can be explained by the better availability of tertiary care medical facilities and the accessibility (including distance) to emergency care in urban areas. The distribution of qualified health workers is skewed towards urban areas; 77.4% of all qualified workers are in urban areas, even though the urban population accounts for only 31% of the total population. The density of qualified health workers is 22.7 per 10,000 population in urban areas, as compared to 3.0 per 10,000 population in rural areas (WHO South-East Asia Journal of Public Health, 2016).

Due to serious injuries and disabilities accruing from an crash, the surviving victims experience a drastic change in their employment status and income levels. Many victims either lose their pre-crash jobs or face a sharp decline in their income post-crash. Respondents were asked details of the victims' monthly earnings, i.e., pre crash, on resuming work post-crash and present earnings (as on 31st January 2020). Additionally, respondents were asked about the recovery period of victims and the time taken to resume their existing work or find a new job.

Before the crash, 82% of the victims from LIH and 86% of the victims from HIH were earning members of their family (Table 4.3). The proportion of male victims as earning members of the family was higher than female victims. Rural areas had more victims who were earning members of their family compared to urban areas.

Compared to pre-crash income levels, the monthly earnings of victims from LIH remained the same or reduced across all income brackets (refer to table 4.5). Nearly one-third (32%) of the victims from LIH experienced a decrease in their incomes on resuming work after the crash, compared to only one-fifth (22%) of the victims from HIH. 52% of the LIH victims continued to earn the same income compared to 73% of the HIH victims.

Even the proportion of unemployed or non-earning victims from LIH increased significantly after the crash. 18% of the respondents reported that the victim was a non-earning member of the household before the crash which increased to 27% after the crash. This proportion was later reduced to 22% as on 31st Jan 2020. In a sharp contrast to the data on LIH, among HIH, surveyed respondents said that the monthly earnings of victims were not impacted to a great extent, reducing only gradually across all income brackets (refer to Table 4.6). The non-earning members decreased from 14% before the crash to 11% on resuming work after the crash.

This indicates that road crashes cause greater financial shocks and income disruptions among victims from LIH compared to HIH. A plausible explanation for this is better placement in the job market, greater bargaining power and higher social standing enjoyed by victims from HIH. 41.5% of HIH victims were salaried employees whereas another 42% were doing business/were self-employed whereas a

majority of the victims from LIH were either unemployed or working as unskilled labour/farmers in the agriculture sector. Working in the formal organized sector guarantees social security benefits and the extension of the social safety net to fall back upon in the event of a tragedy. Being involved or running a family business also helped the HIH victims dip into their savings reserve to make up for any losses owing to the crash. Moreover, unlike victims from poorer households who are struggling to make ends meet, victims from non-poor households can afford to halt work or take a break till their recovery is complete. This combined with good medical care hastens their recovery after a crash.

The severity of injuries and the quality of post-crash recovery plays a vital role in the rehabilitation of road crash victims. It is pertinent to note that a higher proportion of victims from both categories of households that had undergone any sort of disability received a lower salary/wage on resuming work after the crash compared to what they were earning earlier (refer to Table 4.8). Owing to disability, the decline in the monthly income of victims intensified further across households. Among LIH, the decline of income was 12% sharper for victims who underwent a disability post-crash vis-à-vis victims who did not. Similarly, among HIH, the decline in income was 25% lower than the previous income for victims who underwent any sort of disability compared to victims who did not. This indicates that irrespective of poor or rich households, disability adds another layer of disadvantage among road crash victims and cripples their life choices, putting them at a disadvantage in terms of job prospects and earning a decent income. In the absence of technological advancements, disability intensifies the impact of a road crash both at the individual and household level. 73.6% of the disabled in India are still outside the labour force (ILO,2011).[16] Of these, those with mental disability, disabled women and those in rural areas are most neglected (ILO, 2011). In the event of a road crash, PwD require medical rehabilitation and support services including counselling with regard to any technical assistance, equipment, wheelchairs, artificial limbs and so on which may be required. Additionally, once rehabilitated, PwD require vocational rehabilitation, equal educational and employment opportunities, protective and supportive socio-economic measures and the creation of a barrier-free environment to guarantee their vocational and social integration. PwD also require their legal rights to be determined by appropriate legislation. This can assure protection against discrimination, non-exclusion in social welfare, entrenched rights at the workplace, equal opportunities and accessibility to public places. The quota system that requires a certain percentage of employees to be PwD (followed by European countries and Japan) should be implemented at the State level. Fines may be levied on employers who fail to meet the prescribed quota. Further, States should also create self-employment opportunities for PwD through entrepreneurship drives and special employment schemes. The rights of the PwD arising from a road crash can be furthered within the legislative framework provided by the Rights of Persons with Disabilities Act, 2016 that replaces the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. The Act defines 21 types of disabilities and also addresses the needs of children with disabilities. Responsibility has been cast upon the state governments to take effective measures to ensure that PwD enjoy their rights equally with others. The progressive provisions of this act like reservation in higher education (not less than 5%), government jobs (not less than 4 %), reservation in allocation of land, poverty alleviation schemes (5% allotment) for people with benchmark disabilities should be effectively implemented by all States.

16. Persons with Disability and The India Labour Market: Challenges and Opportunities' ILO, 2011: https://www.youth4jobs.org/pdf/ilo-study-pwd.pdf

4.2. HABITATION & STATE-BASED VARIATIONS

Road crashes impact the entire household; not just the victim. About three-fourth (75%) of LIH respondents confirmed that their household income declined due to the crash compared to less than six-tenth (57%) of the HIH respondents. The financial impact on the household intensifies due to loss of income of the victim in case of an earning member. A higher proportion of LIH and HIH respondents reported a sharper decline in their household income in case the victim died (79%) compared to cases where the victim survived (72%). Apart from income loss, expenses like out of pocket medical expenditure on treatment of victims including hospitalization, medicine, etc. also aggravates the financial distress among households. The overall OOPE was higher for LIH (62%) than HIH (59%). LIH in urban areas reported a 6% higher OOPE than LIH in rural areas. Similarly, HIH in urban areas reported a 3% higher OOPE than HIH in rural areas.

On the question of borrowing money post-crash, there was a stark difference between LIH and HIH. Respondents from LIH were three times more likely to borrow money and sell/mortgage their family assets to cope with the financial burden post-crash. 42% of the LIH respondents stated they had to borrow money compared to 11% of the HIH respondents. In the absence of institutional and credible sources of financial support and lack of income, LIH were more likely to borrow money from informal sources like relatives/friends after an crash. Banks ask for proper documentation (that most LIH find difficult to produce) and take a longer time to approve loans as opposed to informal sources. Across households, 34% of the respondents from urban areas said they had to borrow money after the crash compared to 78% of respondents from rural areas.

Similarly, 24% of the LIH respondents stated they had to sell/mortgage their family assets like land, jewellery etc to meet their financial expenses, compared to 7% of the respondents from HIH. Compared to urban areas, a higher percentage of LIH in rural locations opted for a loan (lenders, bank, relatives etc.), selling/mortgaging assets and taking up extra work, to cope with the financial burden. LIH in rural areas reported a slightly higher percentage (25%) of selling/mortgaging assets compared to urban areas (21%).

Similarly, 33% of the respondents from LIH said that they had to relocate for treatment either for more than 30 days or permanently after the crash compared to only 13% of the respondents from HIH. Relocation increases the cost of treatment and mounts additional costs on the household. Irrespective of the type of habitation (rural or urban), a higher percentage of LIH respondents said they had relocated after the crash compared to HIH.

Decline in total household income was sharper across all States among LIH vis-a-vis HIH. A greater percentage of LIH across States reported borrowing money and selling land/mortgaging family assets to meet their financial expenses vis-à-vis HIH. For instance, In Tamil Nadu, 30% of the respondents from LIH reported selling/mortgaging assets compared to 10% of the respondents from HIH. In Maharashtra, 44% of LIH had to borrow money compared to 8% from HIH.

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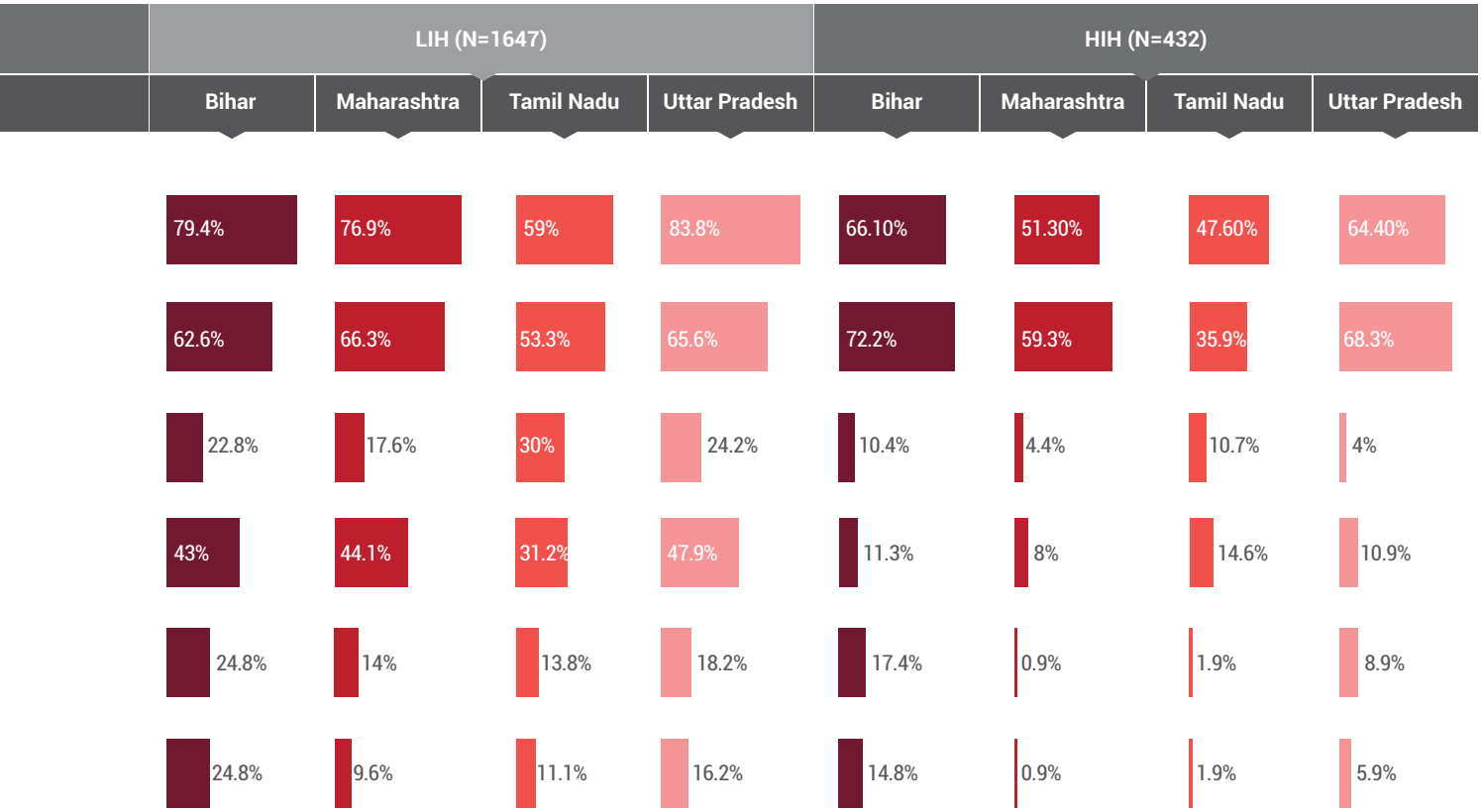
TABLE 4.3: TABLE INDICATING STATE-WISE URBAN-RURAL AND GENDER SPLIT OF FINANCIAL IMPACT ON HOUSEHOLD

Financial impact on the victim household	LIH (N=1647)	HIH (N=432)	LIH (N=1647)		HIH (N=432)		LIH (N=1647)		HIH (N=432)	
	Overall	Overall	Urban	Rural	Urban	Rural	Male	Female	Male	Female
Decline in total income of household	74.8%	57.4%	65.1%	78.8%	55.1%	68.4%	77.4%	58.6%	60.9%	44.6%
OOPE increased due to medical treatment	62%	59.3%	66%	60.3%	59.8%	56.6%	62.1%	61.2%	61.5%	51.1%
Had to sell/ mortgage family assets	23.6%	7.4%	20.7%	24.8%	5.1%	18.4%	24.4%	18.9%	7.4%	7.6%
Had to borrow money (from anyone)	41.6%	11.1%	26.6%	47.8%	7%	30.3%	43%	33%	12.4%	6.50%
Had to relocate for treatment for more than 30 days	17.7%	7.4%	18.5%	17.3%	6.2%	13.2%	18%	15.9%	8.2%	4.3%
Had to sell/ mortgage family assets	15.4%	6%	14.5%	15.8%	4.5%	13.2%	15.5%	15%	6.2%	5.4%


LIH (N=1647)
HIH (N=432)
Bihar
Maharashtra
Tamil Nadu
Uttar Pradesh
Bihar
Maharashtra
Tamil Nadu
Uttar Pradesh
79.4%
76.9%
59%
83.8%
66.10%
51.30%
47.60%
64.40%
62.6%
66.3%
53.3%
65.6%
72.2%
59.3%
35.9%
68.3%
22.8%
17.6%
30%
24.2%
10.4%
4.4%
10.7%
4%
43%
44.1%
31.2%
47.9%
11.3%
8%
14.6%
10.9%
24.8%
14%
13.8%
18.2%
17.4%
0.9%
1.9%
8.9%
24.8%
9.6%
11.1%
16.2%
14.8%
0.9%
1.9%
5.9%

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While LIH were more dependent on loans and selling off assets to meet their expenses, they were less likely to receive compensation from insurance companies compared to HIH. One-fourth of HIH respondents (24%) said that they received compensation of about Rs.1,62,562 from insurance companies (including vehicle/ medical/ life insurance, etc.) whereas only 14% of LIH respondents said they received an average compensation of Rs.89,215. This gap highlights the asymmetry in insurance penetration and reach, and a skewed claims to coverage ratio among the rich and poor.

In terms of severity of decline in household income, every second respondent (50%) from LIH confirmed that their household underwent a severe impact whereas it was every fourth respondent (25%) among HIH who affirmed the same. Additionally, 41% of the respondents from HIH reported no impact on their household income compared to 24% of LIH respondents. Income decline was the most severe for LIH rural households (56%) compared to LIH urban (29.5%) and HIH rural (39.5%).

As part of this study, 61% of the surveyed households in low capacity States (UP, Bihar) and 46% in high capacity States (Maharashtra, TN) belonged to the BPL category. The average monthly household income of LIH in low capacity States (Rs.15,430) was found to be lower than that in high capacity States (Rs.24,702).

Overall, LIH are disproportionately affected in both Low Capacity States (LCS) and High Capacity States (HCS). However, the socio-economic impact on LIH in LCS is the most severe. For instance, the chance of survival of a LIH crash victim from low capacity states was only 53% while that from high capacity states was as high as 75%. Whereas the survivability rate was almost similar in case of HIH crash-victims from both categories of states (87% for victims from high capacity states and 88% for victims from low capacity states).

From the findings of the report its clear that across households, respondents in rural areas had to look at different mechanisms to cope with financial burden, this included borrowing money, taking a loan, selling, mortgaging assets and taking up extra work. The State Governments should ensure better implementation of social security schemes in rural areas to increase the resilience of households to cope with economic burden of road crashes. Additionally only 14% of LIH respondents received state compensation. Anecdotal evidence gathered through FGDs also points at reluctance of police officials to file FIRs in rural areas which further complicates the compensation process for them. State Governments should also address underreporting of crashes.

17. The institutional capacity of states refers to the ability of states to respond to developmental challenges, the strength and resilience to take decisions and effectively implement them for better governance. Institutional capacity is a function of infrastructure, i.e., the better the quality of infrastructure, the higher is the preparedness of the State in meeting sudden challenges. A delay in making decisions also increases the cost and puts the State under greater pressure.
18. Tamil Nadu ranks third in the country with a high score of 67 out of 100 followed closely by Maharashtra with a score of 64 (NITI Aayog's Composite SDG India Index, 2019). This indicates that the States have crossed their half way mark in meeting the SDG targets for 2030. Compared to Tamil Nadu and Maharashtra, Uttar Pradesh scores 55 while Bihar scores 50 on the index. Tamil Nadu also scores the highest on the SDG goal of no poverty.

4.3. INSTITUTIONAL CAPACITY OF STATES [17]

Maharashtra and Tamil Nadu are comparatively more economically advanced and urbanized states of India than the states of Uttar Pradesh and Bihar. The Low Capacity States of Bihar and Uttar Pradesh have historically experienced a sluggish growth rate and have had weak administrative and legal structures. Due to high poverty and a rampant law and order problem, their delivery mechanisms are weak and governance institutions and structures are underdeveloped. In terms of State performance on meeting the SDG goals[18] and on Governance Performance Index (GPI)[19], HCS perform better than LCS.

In the LCS, the development framework has to be Government-led since the private sector is weak and less developed. Expanding its institutional capacity and quality of service is the only way these states can catch up with the developed states. The per capita state GDP, share of urban population, share of adults (age 15+ years), and literacy rate are higher in Maharashtra and Tamil Nadu compared to UP and Bihar. At the same time, Bihar and UP are amongst the highest populated states and home to the largest proportion of poor in India (9.6 Crores). The poverty rates in Bihar (34%) and UP (29%) are significantly higher than the all India poverty rate of 22%. The proportion of poor in urban as well as rural areas of UP and Bihar are comparatively higher than that in Maharashtra and Tamil Nadu. Also, the proportion of qualified health workers per 10,000 population and labour participation rate are comparatively low in Bihar and UP.

When it comes to framework for Road Safety, all four States have a Road Safety Policy with fixed targets[20]. Following a Public Interest Litigation (PIL) in 2012, Supreme Court of India appointed a Committee on Road Safety in 2014 in the case of S. Rajaseekaran Vs. UOI & Ors. W.P. (C) 295 of 2012. The committee was formed to oversee the efforts of Central and State Governments to improve road safety. The Supreme Court Committee on Road Safety (SCCoRS) has been issuing directives to all states to create a standardised policy framework. SCCoRS has directed all States to formulate Road Safety Policies, Annual Action Plans, State Road Safety Councils, establish a Road Safety Fund and a Road Safety Cell.[21,22]

All four States under the purview of this study have constituted Road Safety Cells and Road Safety Councils. They have a Road Safety Fund and Action Plan as well. The Maharashtra Road Safety Cell was created last year and is supervised by the State Transport Commissioner. In Tamil Nadu, the cell has been reconstituted as a Lead Agency to assist the Joint Transport Commissioner (Road Safety)[23]. It comprises of 5 members, i.e., Inspector of Police, Assistant

19. The quality of governance as service delivery is measured using the overall Governance Performance Index (GPI). On the GPI, Tamil Nadu and Maharashtra have consistently featured in the top 10 best performing states whereas Bihar and Uttar Pradesh have held the slot for the worst performing states.
20. http://morth-roadsafety.nic.in/index1.aspx?lsid=492&lev=2&lid=445&langid=1
21. https://transport.uk.gov.in/files/RoadSafetyDocs/24-09-2018.pdf
22. The Supreme Court recently appointed Mr. Justice Abhay Manohar Sapre, former Judge of this Court, as the Chairman of the aforesaid Committee on Road Safety vide Order 14-01-2020.
23. Transport Commissionerate, Government of Tamil Nadu: https://tnsta.gov.in/roadsafety_legalagency.jsp

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Engineer, Highways, Office Superintendent, Medical Education, Deputy Director, IRT and Assistant Director, School Education. Besides acting as the Secretariat for the State Road Safety Council, the Cell notifies all the targets for reduction of crashes and draws the Annual Action Plan. Additionally, it manages the State Road Safety Fund and monitors all district level programmes on road safety. Further, the Tamil Nadu State Government under its Road Safety Mission has mandated the creation of Road Safety Cells in Chennai, Madurai and Coimbatore corporations.

In addition to all these functions, Road Safety Cells/Council should also be entrusted with the task to ensure that all States mandatorily publish their targets on road safety annually so that their performance can be measured against these targets. Additionally, their budgets should be reviewed by a relevant authority to maintain transparency and efficiency. Since High Capacity States have higher spending power and more effective institutional mechanisms to implement targets, a multi-level agency should be set up in every State to oversee road safety efforts and guide HCS in drawing out detailed plans.

Tamil Nadu, Maharashtra and Bihar have also seen a decline in road crash deaths over the last 4 quarters (since July 2020) with Tamil Nadu seeing a consistent drop in fatalities over the last 5 years. The state witnessed a 10% decline in road crashes between 2018 and 2019 alone. The State's efforts have been acknowledged by the Centre that has recently awarded it for 'Best Performance in Road Safety' One of the biggest reasons for an over 22% reduction in fatalities in Tamil Nadu between 2016-18 could be attributed to improved post-crash care in the State. Since VRUs are the most at risk especially in LCS, marginal improvement in post-crash emergency care and trauma services can go a long way in saving lives of road crash victims.

If we look at the pendency of Motor Accident Claims Petition (MACP) at national out level, over 8 lakh cases are pending at district and taluka level courts[24]. To put that in perspective, nationally, out of all original civil pending cases, 12.4 percent of the cases are MACP. As far as inter-state variations are concerned, Tamil Nadu has the highest pendency at 28.4% (1,54,847 cases) followed by Maharashtra (9.11%), Bihar (4.66%) and Uttar Pradesh (1.8%).

As far as Road Safety funding in concerned, Maharashtra State Government allocated 50 lakhs for publicity and education of road safety in its Annual Scheme 2019-20[25]. In terms of emergency health facilities, Maharashtra has over 930 ambulances and 23 District Hospitals as of date. The State Government has a State scheme for cashless and

24. https://njdg.ecourts.gov.in/njdgnew/?p=main/pend_dashboard
25. https://plan.maharashtra.gov.in/Sitemap/plan/pdf/Annual%20Secheme%20(Departmentwise)%202019-20.pdf

free treatment in designated hospitals.[26] The Department of Medical Health & Family Welfare, Government of Uttar Pradesh has also issued detailed post-crash Guidelines for strengthening Trauma Care response system in the State through a sectoral approach (Trauma Care Guidelines for Road Traffic Injuries 2018-2025)[27]. The guidelines cover a wide range of topics like pre-hospital care, hospital care, rehabilitative care and establishing trauma centres in the vicinity of National Highways traversing through the State.

Looking at the data from the survey, compared to High Capacity States, a higher proportion of households in low capacity states reported an adverse impact due to crashes. This was indicated by decline in household income, living standard, food consumption, increase in OOPE on medical treatment and rising household debt.

26. https://www.hindustantimes.com/mumbai-news/maharashtra-approves-free-treatment-scheme-for-road-crash victims/story-FDPR09XLfM9eym8rDUq9lI.html
27. http://uphssp.org.in/Tenders/Traumacareguidelines.pdf

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TABLE 4.4: TABLE INDICATING SUMMARY OF FINDINGS FOR HIGH AND LOW CAPACITY STATES

Particular	High Capacity States (Overall – LIH and HIH)		Low Capacity States (Overall – LIH and HIH)	
	LIH	**HIH**	**LIH**	**HIH**
N	1038		1041	
Female victims	20%		11%	
BPL households	46%		61%	
Avg. Monthly household income – LIH (INR)	24,702		15,430	
Victims earning members of household before crash	86%		79%	
Victim survived in crash	77%		61%	
	75%	87%	53%	88%
Decline in household income after crash	64%		78%	
	68%	50%	82%	65%
Living standard of household decreased due to crash	49%		64%	
Increase in household OOPE on medical treatment	57%		65%	
Increase in household debt due to crash (borrowed money)	32%		38%	
Food consumption decreased after crash	34%		40%	

4.4. OUT OF POCKET EXPENDITURE (OOPE) AND TIME TAKEN TO GET BACK TO WORK

Direct financial costs are one of the major consequences of road crashes to be borne by victim households. These are tangible and can be quantified. These costs include medical costs, funeral costs, damage costs, rehabilitation costs, property costs and other such costs that have a monetary value. The five direct costs included for discussion in this section are medical costs, property/vehicle costs, legal and administrative costs, funeral costs, compensation cost and other additional costs. Indirect costs associated with crashes are often hidden and constitute a much larger cost burden than direct costs. These include job losses, productivity/income losses, reduced quality of life/decline in standard of living and even psychological impact. The loss in income, especially of a breadwinner of the family can be a crippling cost incurred on the household after a crash.

Overall, the total average costs (direct and indirect combined) borne by victim households was about Rs.1,52,339 for LIH victims. This was lower than the average costs recorded by respondents among HIH, i.e., Rs. 1,98,037. Owing to the high medical costs borne by road crash victims, especially from LIH that further pushes them into poverty and debt, the Centre has proposed a scheme for cashless treatment of road crash victims under Section 162 of the Motor Vehicles (Amendment), Act, 2019. A draft of the scheme suggests a cap of Rs 2.5 lakh for the victim's treatment per crash and designates the National Health Authority as the nodal agency to implement the scheme under Pradhan Mantri Jan Arogya Yojana. Immediately implementing this scheme will help save a lot of lives during the crucial golden hour. Some other States like Delhi, Odisha, Gujarat and Karnataka have also been running their own cashless assistance schemes. Though there is no standardization in terms of the cap offered on the cost of treatment, list of injuries covered and the funds available for the same. However, most State schemes cover treatment up to 48 hours after the crash except Maharashtra which covers treatment up to 72 hours. Under the Maharashtra State scheme, cashless and free treatment is provided up to 1.5 lakh per family per year.

Medical costs constituted a bulk of the total costs of LIH, i.e., Rs. 78,824 (52% of total costs) followed by loss of productivity/loss of income costs, i.e. Rs. 37, 572 (25% of total costs). Property damage is one of the key costs resulting from a road crash and refers to the damage caused to any personal/public property and to the vehicle involved in the crash. LIH incurred a lower property cost (average amount of Rs. 12,752, comprising 8% of the total income) than HIH (average amount of Rs. 28,845, comprising almost 15% of their total costs). The legal and administrative costs reported by LIH were higher compared to HIH. While LIH spent an average amount of Rs. 6,627 (4% of total costs), HIH spent an average amount of Rs. 5,629 (2.8% of the total costs) on legal and administrative costs incurred post-crash. The main heads under legal and administrative costs include police costs, costs of fire services and other emergency services (excluding transportation of casualties to hospital, which is part of medical costs), insurance costs, costs of legal cases resulting from road crashes, and costs of imprisonment etc (Wijnen et al, 2017).There is an urgent need to lower the OOPE for LIH by improving health infrastructure, especially in rural areas, investing in better training of manpower, making post-crash emergency care more accessible and efficient, ensuring more efficient penetration and coverage of LIH under health insurance.

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TABLE 4.5: TABLE INDICATING STATE WISE COMPARISON OF AVERAGE COSTS PAID BY VICTIM HOUSEHOLDS

Losses incurred due to the road crash	LIH (Rs.)							
	Gender wise		Habitation wise		State wise			
	Male	Female	Urban	Rural	Bihar	Maharashtra	Tamil Nadu	Uttar Pradesh
N	**1420**	**227**	**482**	**1165**	**412**	**415**	**407**	**413**
Total expenditure	**155950**	**131768**	**136767**	**159204**	**1,09,227**	**1,89,621**	**1,42,350**	**1,64,230**
Loss of income (victim & family members) during period of treatment	38,259	33,281	39,563	36,749	19,825	48,381	52,399	29,805
Loss of property/ vehicle etc. due to road crash	13,034	10,988	13,463	12,458	6,915	10,863	20,201	13,133
Out of pocket expenses on treatment of victim	81,723	60,689	64,424	84,782	66,659	1,10,029	58,701	79,433
Legal/ administrative/ compensation expenses including police, lawyer, etc.	6,740	5,916	3,694	7,840	4,192	6,512	6,190	9,600
Amount paid to other vehicle/ person involved in crash	2,565	2,160	3,469	2,112	1,033	969	4,857	3,216
Others (hospital visits, loss of belongings, food expenses, travel, etc.)	13,629	18,733	12,154	15,264	10,604	12,867	--	29,042

Losses incurred due to the road crash	HIH (Rs.)							
	Gender wise		Habitation wise		State wise			
	Male	Female	Urban	Rural	Bihar	Maharashtra	Tamil Nadu	Uttar Pradesh
N	**340**	**92**	**356**	**76**	**115**	**113**	**103**	**101**
Total expenditure	**197712**	**236354**	**222992**	**198189**	**1,47,156**	**1,62,907**	**2,49,081**	**2,30,800**
Loss of income (victim & family members) during period of treatment	79,159	61,465	74,316	80,422	68,957	73,885	1,13,340	45,699
Loss of property/ vehicle etc. due to road crash	30,999	20,886	28,681	29,616	28,496	19,331	40,097	28,414
Out of pocket expenses on treatment of victim	64,278	46,424	59,871	63,309	27,083	68,221	74,913	75,110
Legal/ administrative/ compensation expenses including police, lawyer, etc.	5,899	4630	4,391	11,428	6,896	872	11,391	3,634
Amount paid to other vehicle/ person involved in crash	7,233	2949	5,699	9,234	12,224	598	9,340	2,943
Others (hospital visits, loss of belongings, food expenses, travel, etc.)	10,143	100000	50,033	4,180	3,500	--	--	75,000

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The compensation costs[28] made up a minor chunk of the total costs among both LIH and HIH. While LIH paid Rs. 2,509 (1.6% of the total costs) as the average amount to the other party; HIH paid double the amount at Rs. 6,321 (3.2% of total costs). Under the purview of this study, other costs were included to be all other miscellaneous and additional costs incurred by households on travel, hospital visits, food expenses, and other arrangements during the victim's treatment. LIH spent an average amount of Rs. 14,054 (9.2% of total costs) while HIH spent a slightly higher average amount of Rs. 21,375 (10.8% of total costs) on additional costs.

Overall, the average expense incurred on the victim's funeral was Rs.22,242 (16% of the total costs) among LIH whereas the average costs incurred on the victim's funeral among HIH households was 51,498 (23% of total costs), i.e., almost double the LIH costs. The highest expense among LIH on the victim's funeral was incurred in Tamil Nadu (Rs 42, 010) while the lowest amount was spent in Uttar Pradesh (Rs 12, 517). It must be noted that in none of the cases funeral expenses were covered through insurance. Respondents among LIH were either not aware of this or did not claim funeral compensation under insurance.

A mixed-methodology study by Archana Kaushik estimated that on an average (across religious affiliations), about ₹8,000–₹10,000 is the minimum amount spent only on cremation/burial of the deceased[29]. Additionally a large amount of money is spent on death rituals. The study concluded that the "expenditure on death rituals invariably destabilises family budgets, especially among middle- and low-income households." The interim compensation envisaged under Section 164A of the Motor Vehicles (Amendment) Act, 2019 should be implemented to ensure mechanism for quick compensation as direct credit in Aadhar linked bank accounts of the family member.

In terms of indirect costs, LIH incurred a 25% (Rs. 37, 572) loss in their household income owing to the inability to work/loss of employment whereas HIH incurred a loss of 38% (Rs. 75, 391). This made up the most significant cost for HIH followed by OOPE that comprised 30% of their total costs. Costs incurred due to loss of income was highest in Tamil Nadu among both HIH and LIH.

Bihar had the lowest average costs borne by LIH victim across all expenditure heads except out of pocket expenses on treatment of the victim and amount paid to other parties involved in the crash. It was the opposite for Tamil Nadu where average costs were higher across most of the heads except for out of pocket expenses on treatment and legal/ administrative expenses. Property costs were highest among households in Tamil Nadu. Legal and administrative costs were highest among LIH in Uttar Pradesh. Among LIH, highest OOPE related costs were recorded for Maharashtra followed by Uttar Pradesh.

Out of pocket expenditure (OOPE) is the payment made directly by individuals at the point of service where the entire cost of the health good or service is not covered under any financial protection scheme. The out of pocket

28. Compensation costs refer to the amount paid by the victims/their families as compensation to the other party involved in the crash in case the crash happened due to the victim's fault.
29. https://www.epw.in/engage/article/can-you-afford-die-estimates-expenditure-rituals-and-impact-ecology

medical expenditure in India is over 62.4% of the overall cost of healthcare (FICCI-KPMG Report, 2017). This is an indicator of low government investment in healthcare and such expenditure is typically financed by household revenues (71%). The highest percentage of out of pocket health expenditure (52%) is made towards medicines (Rao, Nivedita, 2018, PRS). This is followed by private hospitals (22%), medical and diagnostic labs (10%), patient transportation, and emergency rescue (6%). 72% in rural and 68% in urban areas is spent on buying medicines for non-hospitalised treatment. The private sector provides more than 80% of outpatient care and 60% of inpatient care. Out of the total household expenditure, 45% is spent on outpatient care (including both general and special treatment) as compared to 35% on inpatient care. Due to high out of pocket healthcare expenditure, about 7% population is pushed below the poverty threshold every year (NSSO Survey, 2014).

Under this study, respondents were asked to provide an estimate of their household's medical expenses after the crash. Medical costs cover the entire post-crash expenditure on the victim's treatment. It includes the Out of Pocket Expenditure (OOPE) on hospitalisation costs, costs on medicines and other medical apparatus etc. The findings revealed that on an average, LIH spent a little more than half (52%) of all their income as out of pocket expenses on the victim's treatment (hospitalisation, medicines, care). In terms of the average amount, out of pocket expenses on treatment of LIH victims accounted for Rs.78,824. On the other hand, HIH reported spending 30.5% of their household income, i.e., Rs.60,476 on the victim's post-crash treatment and recovery.

The Central Government should notify and implement the scheme for cashless treatment of road crash victims under Section 162 of the Motor Vehicles (Amendment) Act' 19. The cashless treatment scheme will help in alleviating the OOPE on victim's treatment.

OOPE varies enormously by type of disease, health care provider (public/private), quality of care and geographical region. This study illustrates that OOPE related costs were higher among males than females. Additionally, expenditure on OOPE in urban areas was higher compared to rural areas among both households. Among the LIH in urban areas, OOPE was slightly higher at 66% of the total expense compared to 60% of the total expense among HIH in rural areas. Across both categories of households, a higher proportion of respondents (almost double) reported an increase in their OOPE in case the victim survived. Interestingly, among HIH, the highest OOPE related household costs were recorded in Bihar (72%) and the lowest were recorded in Tamil Nadu (35%).

Not only do LIH spend more on medical costs, victims from LIH also take double the time to recover from their injuries and resume work after an crash compared to victims from HIH. While victims from LIH took about 92 days, i.e. 3 months to resume work, victims from HIH took 43 days, i.e., about 1.5 months to return to their jobs. Similarly, victims from LIH also took nearly double the time to find a new job after the crash compared to victims from HIH. While victims from LIH took 107 days to assume a new job, victims from HIH took 65 days for the same.

4.5. GENDER-DIFFERENTIATED TRENDS AND IMPACTS

While road fatalities continue to be disproportionately higher among male road users, the consequences of a road crash create an unfavourable impact among the female members of a household. It helps us better conceptualise the impact of road crashes on women, especially from poor households in the framework of functioning and capabilities (Sen and Nussbaum). Functionings are 'beings and doings', that is, various states of human beings and activities that a person can undertake. Capabilities are a person's real freedoms or opportunities to achieve functionings. According to the capability approach, functionings and capabilities are constitutive of a person's core being and can be used as the best yardstick to evaluate one's well-being and freedom (Sen, 1992). These beings and doings together hold what makes a life valuable. Road crashes can be conceptualised as a sudden unforeseen assault on capabilities and functionings that curtails the freedom of victims to realise their best optimal potential and live a dignified life. Crashes not only derail the lives of the victims but they also jeopardise the realizations and potential of family members of victims, coercing them into untold misery and suffering.

In case the sole breadwinner of the household expires post-crash or a key earning member suffers serious injuries and hospitalisation, the burden of running the household falls on the shoulders of female members.

Out of the 1724 crash victims identified as earning members of the household by the respondents of this study, 1353 were identified as Chief Wage Earners of the household[30], i.e., almost 79% of all crash victims were the Chief Wage Earners (CWE) of their households. 78% of the LIH victims were CWE whereas 71% of the HIH victims were CWE. Across household categories, the proportion of men reported as the Chief Wage Earners was significantly higher than women, men from LIH being the highest. 50% of the women from LIH and 55% from HIH were CWE of the household before the crash whereas 81% of the men from LIH and 74% men from HIH were CWE before the crash. Uttar Pradesh had the highest number of CWE as victims (80%) from LIH while Maharashtra had the highest CWE as

"He received the salary for that month but for 5-6 months he was on a complete bed rest. All the load fell upon me."

- Female FGD Respondent

30. Chief Wage Earner refers to a person who contributes the maximum to the monthly expenses of the household.

victims from HIH (78%).

The involvement of the CWE in the crash affects the household's financial status adversely, especially among LIH. The severe impact of decline in income was higher among rural households, and cases where victims had died as well as where victims were males. 31% of the female members in LIH were severely affected by the decline in household income after the crash whereas 53.5% of the male members were severely affected by the same. Among HIH, 18.5% of female members of the household were severely affected compared to 26.5% of the male members. Income decline was severe for rural LIH rural (56%) compared to urban HIH (29.5%) and rural HIH (39.5%).

As per survey findings, the contribution of LIH victims (60%) who succumbed to their injuries after the crash to the total household income was a little higher than that of the victims belonging to HIH (57%). State-wise, the highest contribution of victims was reported from LIH in Maharashtra (64%) while the lowest was reported from LIH in Tamil Nadu (56%).

The male (dead) victims' contribution to household income was significantly higher than female victims' (more than double) across both categories of households. For instance, among LIH, male (dead) victims contributed to 63.5% of the total monthly household income whereas female victims contributed to 29% of the same. Similarly, the contribution of victims from rural areas to the total household income was higher than the victims living in urban areas across both household types; the highest being among HIH rural households (69%).

Along with income, the pattern of (surviving) victims' contribution to household income was also examined. Respondents were asked to report the victims' contribution to the household's total income pre-crash, on resuming work after the crash and the current status as on 31st Jan 2020. Among LIH, while victims were contributing 56% of the total household income before the crash, their share was reduced by 10% after the crash with 46% of the surviving victims contributing to total household income on resuming work. With a reduction in monthly income, the contribution to total household income was also reduced among the LIH. An almost similar trend was observed across all the States with Uttar Pradesh registering the sharpest decline.

During the survey, LIH respondents had stated that in case of the victim being the breadwinner of the family, other family members had to shoulder responsibility for the sudden unforeseen expenses. In many cases, they had to arrange for loans from lenders/banks/relatives or sell/mortgage assets like land, jewellery, etc. to manage household expenses. LIH respondents also stated that in the absence of any steady primary source of income, the women of the household often had to step up and take additional jobs to mitigate the financial burden.

Women and labour can be used interchangeably. Women who enter the labour market for remunerative work often

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"No, I started doing this (stitching) after the crash as the person, from whom I borrowed money at the time of the crash, started asking for money. I had to take a micro finance loan and since I had to repay it, I had to take up stitching work. I took around Rs.30,000 and with interest gave back around Rs 36,000."

- FGD Respondent

"It was a tough period and hard task. We had to wake up early in the morning. We had to look after the children and provide for the medicines. In fact, we had to do everything all alone"

- FGD Respondent, Patna.

also perform additional household labour in developing countries. Caregiving is an unacknowledged undervalued activity predominantly undertaken by women within households. This includes nursing and looking after the daily needs of an injured person or dependent within the household, cooking for them, administering medicines to them, making their bed, assisting them to clean up etc. In terms of economic value, these activities are non-remunerative in nature and add to the double burden of work for women and also lead to time-poverty.

This section was thus an attempt to highlight the gendered impact of road crashes that is mostly underreported and unacknowledged within research studies and policy making. States need to acknowledge that gender responsive reporting and monitoring is essential to evaluate the impact of road crashes on women. WHO also recommends that "Gender differences in the social and economic consequences of temporary and/or permanent disability resulting from injury have to be taken into account when planning rehabilitation services" (WHO, 2002). To ensure rehabilitation services as well as adequate support to either women road crash victims or families which are left to deal with loss of male breadwinner, gender disaggregated data at state and district level would be imperative to create gender responsive post-road crash safety nets.

4.6. DIFFERENTIAL ABILITY TO COPE/ RESPOND TO A FINANCIAL CRISIS POST-CRASH - LIH VS HIH

Road crashes alter the socio-economic realities of families both in the short and long run. Road crashes chronically lower the Quality of Life (QoL), as measured by pain/ discomfort during usual activities, mobility, self-care, and mental issues. The main cost item related to serious road injuries is loss of opportunities to participate in market production due to disability or sick leave. It includes the loss of productivity and loss in income due to not being able to work. During the study, the loss in income/ productivity and other additional costs were self-reported by the respondents in terms of an average estimate while the standard of living costs were determined based on a qualitative assessment of the responses collected from respondents among both households.

The loss in income was self-reported by respondents on the basis of days of work they had to forsake during treatment/recovery post-crash care. This also includes the income forsaken of the family member/s accompanying the victim to the hospital for treatment or looking after him/ her at home, thus not being able to report to work. In terms of average loss of income reported by the respondents during the period of treatment, including that of the victim and family member(s), the average loss was estimated to be Rs.37,572 for LIH, i.e., 25% of their total costs. While it was estimated to be Rs. 75, 291 for HIH, i.e., 39% of the total costs. It's also important to note that for HIH, loss of income is the biggest component while looking at total costs. OOPE further adds to the burden for both LIH & HIH and drives them into financial distress.

Economic resources, including both cash and noncash income, determine the economic well-being of households. Cash income is the most widely employed measure of household economic well-being, but it excludes considerable amounts of resources received in a noncash form (Smeeding, 1993). These include health care, housing, education, child care, transportation, food, and other subsidies from governments or from other third parties (i.e., employers), and in-kind transfers received from relatives, friends and others in the form of food, clothing and/or shelter (Smeeding, 1993). Standard of living under the purview of this study has been defined as the level of wealth, comfort goods, material goods and necessities required to live a comfortable and fulfilling life; it includes non-cash resources that make a good life.

Nearly two-third (63.5%) of the respondents from LIH said that their family had undergone a deterioration in their living standards after the crash compared to less than three out of ten (29%) respondents from HIH who confirmed the same. An adverse impact on the living standard was confirmed by a higher proportion of respondents in cases where victims had died as well as where victims were male earning members of the family. Bihar reported the sharpest decline in living standards among LIH (73%) followed by Uttar Pradesh (72%). The decline was consistently low across all States for LIH (50% and above). Similarly, among HIH, Bihar again recorded the highest decline in living standards (40%) followed by Tamil Nadu (35%).

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Financial impact on the living standards of poor victims and their families (LIH) is more severe than those for rich victims and their families (HIH). Lack of financial resources leads to poor households making many compromises in terms of food consumption levels and cutting down on everyday items, even essentials to make ends meet. Financial distress affects the quality of life and can lead to health complications, depression, sleeping problems and other health issues among the victim/family. Among LIH, 38.5% of the respondents reported a severe deterioration in their living standards after the crash while among HIH, only 13% of the respondents said the same. Around 69% of the respondents from HIH chose the option "none", i.e., they did not witness any change in their living standards and could comfortably tide over the post-crash situation.

To cope with the excessive financial burden caused due to the crash, various mechanisms are used by victims/their family members to tide over the crisis. Mechanisms such as availing of loans, selling assets or taking up extra additional work by household members, dipping into family savings, etc. are exercised by victims and/or their family members. This section examines such mechanisms and contrasts the differences in which they are used by members of poor and rich households. The findings reveal that compared to HIH, LIH were three times more likely to seek financial help in order to cope with the financial burden post-crash. They took mostly informal loans from close friends/relatives, sold/mortgaged their family assets (land, jewellery, motor-vehicle) to meet their expenses.

About 42% of LIH reported that their household underwent debt after borrowing money (through both formal and informal sources), compared to 11% of respondents from HIH. The average value of loans taken by LIH was Rs. 99,850. Similarly, about one-fourth of the LIH (24%) sold/ mortgaged their assets to meet their daily expenses and repay their debt, compared to only 7% of HIH. At the same time, about 14% of LIH reported taking up extra work to deal with the situation, compared to 4% of HIH.

Compared to urban areas, a higher percentage of LIH in rural locations availed a loan, sold/mortgaged their assets and took up extra work, to cope with the financial burden. In the absence of institutional and credible sources of financial support and lack of income, LIH were more likely to borrow money from relatives/friends. Banks usually ask for proper documentation (that most LIH find difficult to produce) and take a longer time to approve loans as opposed to informal sources. 48% of the LIH in Uttar Pradesh availed for a loan to deal with the financial burden while 15% of the HIH from Tamil Nadu did so, exposing a wide contrast between the households. The ability to take a loan from institutional sources also depends on one's socioeconomic status and further makes the process of repayment more strenuous for poor households.

Compared to other states, the highest proportion LIH from Tamil Nadu sold/mortgaged their assets, took on extra work and received compensation from the insurance company as well as other parties involved in the crash to deal with their financial burden. While LIH were more dependent on loans and selling off assets to meet their expenses, they were less likely to receive compensation from insurance companies compared to HIH. One-fourth of HIH (24%) received compensation of about Rs.1,62,562 from insurance companies (including vehicle/ medical/ life insurance, etc.) while only 14% of LIH received an average compensation of Rs.89,215. This gap highlights the asymmetry in insurance penetration and compensation claims by the rich and poor. Though merely increasing insurance coverage is also not enough. There exists

an information asymmetry on awareness of insurance scheme and its benefits, Health insurance coverage in India particularly remains poor because the private health insurance industry is still at a nascent stage, the pool of people who are able and willing to pay for insurance is low, and insurance premiums are high. Further because LIH, especially in rural India, have limited access to healthcare services such as doctors and hospitals, they are less likely to buy health insurance. Additionally, insurance policies need to be made more comprehensive and inclusive by including mental health and rehabilitative care for road crash victims under its scope.

A higher percentage of respondents from HIH said they relied on their savings to meet their additional expenses post-crash. While about 7 out of 10 LIH dipped into their family savings (averaging at Rs.92,065), as high as 9 out of 10 HIH households used their family savings (averaging at Rs.1,45,401) to meet the additional expenses.

In terms of the amount arranged to tide over the economic crisis, LIH from Maharashtra managed to raise the highest amount whereas among HIH, a similar trend was observed in Tamil Nadu. Interestingly, LIH in Uttar Pradesh (over 2.5 lakhs on an average) received the highest compensation from Government schemes at the central and local level followed by Maharashtra (around 1lakh average). The lowest government compensation was received by LIH in Bihar (44,000). LIH in Maharashtra (1.8 lakhs) received the highest compensation from insurance companies followed by Uttar Pradesh (around 1.4 lakhs). HIH in Uttar Pradesh reported the highest compensation amount at around 4 lakhs followed by Bihar (2.3 lakhs).

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TABLE 4.6: TABLE INDICATING MECHANISMS TO COPE WITH FINANCIAL BURDEN - LIH VS HIH

Arrangements to cope-up with the financial burden	LIH [N=1647] Yes % and Average amount (Rs.)								
	Overall	Gender wise		Habitation wise		State wise			
		Male	Female	Urban	Rural	Bihar	Maharashtra	Tamil Nadu	Uttar Pradesh
Arranged a loan (lenders, bank, relatives, etc.)	41.8% Rs.99,850	43.2% Rs.1,01,927	33% Rs.82,880	27.0% Rs. 85,874	47.9% Rs.1,03,107	43.2% Rs. 96,874	44.1% Rs.1,27,421	31.4% Rs. 74,024	48.2% Rs. 93,771
Sold/ mortgage assets (land, jewellery, motor vehicle etc.)	23.7% Rs.98,608	24.4% Rs.1,03,034	19.4% Rs.63,807	21.0% Rs. 51,228	24.8% Rs.1,15,167	22.8% Rs. 1,07,468	17.6% Rs. 1,43,566	30.2% Rs. 49,033	24.2% Rs. 1,18,440
Took on extra work by household members (monthly extra earning)	14.4% Rs.5,475	15.6% Rs.5,359	6.6% Rs.7,200	11.8% Rs. 5,414	15.5% Rs. 5,494	17.2% Rs. 4,201	12.3% Rs. 4,539	19.4% Rs. 7,384	8.7% Rs. 5,125
Compensation from the insurance company (including vehicle/ life insurance, etc.)	14.1% Rs.89,215	13.8% Rs.95,753	16.3% Rs.54,581	16.4% Rs. 99,009	13.2% Rs. 84,190	11.9% Rs. 84,239	7.2% Rs. 1,80,483	29.0% Rs. 53,203	8.7% Rs. 1,37,967
Received compensation under schemes (govt., local authorities, funeral expense, etc.)	8.3% Rs.1,20,478	8.7% Rs.1,27,411	5.7% Rs.54,346	5.4% Rs. 50,981	9.5% Rs. 1,36,757	13.1% Rs. 44,019	4.3% Rs. 1,04,222	5.2% Rs. 45,333	10.7% Rs. 2,56,830
Received compensation from employer	6.0% Rs.52,729	6.3% Rs.54,253	4.0% Rs. 37,667	7.5% Rs. 20,147	5.3% Rs. 71,648	8.7% Rs. 31,414	6.3% Rs. 79,692	5.2% Rs. 50,076	3.6% Rs. 60,867
Dependent was provided job by employer/ govt. (monthly income)	3.2% Rs.7,721	3.3% Rs.7,309	2.2% Rs. 11,600	4.6% Rs. 6,623	2.6% Rs. 8,527	7.3% Rs. 4,957	0.5% Rs. 16,500	2.2% Rs. 11,222	2.7% Rs. 10,800
Received compensation from other party involved in a road crash	9.8% Rs.64,572	9.2% Rs.70,301	13.7% Rs. 40,361	13.3% Rs. 31,007	8.4% Rs. 86,492	10.2% Rs. 19,778	5.3% Rs. 1,69,000	21.6% Rs. 47,852	2.4% Rs. 1,70,100
Spent from family savings	74.7% Rs.92,065	74% Rs.93,818	79.3% Rs. 81,833	87.3% Rs. 94,251	69.5% Rs.90,930	67.0% Rs.70,509	82.2% Rs. 96,487	77.9% Rs.110195	71.9% Rs.87,671

Arrangements to cope-up with the financial burden	HIH [N=432] Yes % and Average amount in (Rs.)								
	Overall	Gender wise		Habitation wise		State wise			
		Male	Female	Urban	Rural	Bihar	Maharashtra	Tamil Nadu	Uttar Pradesh
Arranged a loan (lenders, bank, relatives, etc.)	11.1% Rs. 92,218	12.4% Rs. 92,294	6.5% Rs. 91,683	7.0% Rs. 1,20,004	30.3% Rs. 62,015	11.3% Rs. 30,881	8.0% Rs. 1,34,444	14.6% Rs. 1,15,333	10.9% Rs. 98,636
Sold/ mortgage assets (land, jewellery, motor vehicle etc.)	7.4% Rs. 74,969	7.4% Rs. 81,920	7.6% Rs. 50,143	5.1% Rs. 1,01,444	18.4% Rs. 40,929	10.4% Rs. 19,083	4.4% Rs. 44,000	10.7% Rs. 1,40,909	4.0% Rs. 1,00,000
Took on extra work by household members (monthly extra earning)	3.9% Rs. 18,765	4.1% Rs. 19,214	3.3% Rs. 16,667	0.8% Rs. 16,667	18.4% Rs. 19,214	8.7% Rs. 5,000	0.9% Rs. 20,000	4.9% Rs. 44,800	1.0% Rs. 25,000
Compensation from the insurance company (including vehicle/ life insurance, etc.)	24.1% Rs. 1,62,562	26.2% Rs.1,81,319	16.3% Rs. 51,267	22.8% Rs. 1,89,844	30.3% Rs. 66,478	17.4% Rs. 2,32,450	31.9% Rs. 31,706	25.2% Rs. 89,846	21.8% Rs. 3,99,091
Received compensation under schemes (govt., local authorities, funeral expense, etc.)	2.5% Rs. 55,500	2.9% Rs. 60,900	1.1% Rs. 1,500	1.1% Rs. 25,750	9.2% Rs. 72,500	7.0% Rs. 57,375	0.9% Rs. 1,500	1.0% Rs. 1,00,000	1.0% Rs. 50,000
Received compensation from employer	3.5% Rs. 45,287	4.4% Rs. 45,287		2.2% Rs. 54,388	9.2% Rs. 34,886	7.0% Rs. 25,288	3.5% Rs. 63,000	2.9% Rs. 75,000	
Dependent was provided job by employer/ govt. (monthly income)	2.8% Rs. 11,917	2.9% Rs. 11,900	2.2% Rs. 12,000	0.8% Rs. 22,000	11.8% Rs. 8,556	7.8% Rs. 3,111	0.9% Rs. 15,000	1.0% Rs. 50,000	1.0% Rs. 50,000
Received compensation from other party involved in a road crash	9.7% Rs. 89,786	10.9% Rs. 99,484	5.4% Rs. 18,020	6.5% Rs. 57,222	25.0% Rs. 1,29,205	10.4% Rs. 17,917	5.3% Rs. 1,13,333	20.4% Rs. 1,24,571	3.0% Rs. 86,667
Spent from family savings	91.9% Rs. 1,45,401	90% Rs. 1,53,170	98.9% Rs. 1,19,279	93.8% Rs. 1,44,517	82.9% Rs. 1,50,089	87.8% Rs. 1,25,813	96.5% Rs. 1,32,450	94.2% Rs. 1,87,374	89.1% Rs. 1,37,832

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6-POINT POLICY RECOMMENDATIONS:

1. Differentiated Support for VRUs, especially from Rural LIH.

The findings of the study show linkages between VRUs, LIH and road crash outcomes, indicating the need to invest more in VRU friendly infrastructure that prioritises their safety especially in rural areas. State Governments should select districts with a high VRU crash rate and prioritise their safety through dedicated Annual Action Plans.

2. Urgent need to lower the OOPE for LIH.

Out of Pocket Expenses (OOPE) is the most significant direct cost borne by victim families among LIH. The risk of catastrophic expenditure is inversely proportional to increasing income per capita, i.e., it is significantly larger for those belonging to lower-income quartiles than for those belonging to the highest income quartile.

The Central Government needs to urgently notify the scheme for cashless treatment of road crash victims and publicize the Good Samaritan Law in order to save more lives during the critical golden hour. Currently, the Centre has proposed such a scheme under Section 162 of the Motor Vehicles (Amendment), Act, 19. The proposed scheme suggests a cap of Rs 2.5 lakh for the victim's treatment per crash and designates the National Health Authority as the nodal agency to implement the scheme under Pradhan Mantri Jan Arogya Yojana.

The lack of infrastructure at the primary level, lack of awareness on life-saving protocols among local communities and first responders, low doctor-patient ratio and inefficient emergency management increases the costs for post-crash care. There is an urgent need to lower the OOPE for LIH by improving health infrastructure, especially in rural areas, investing in better training of manpower, making post-crash emergency care more accessible and efficient, ensuring more efficient penetration and coverage of LIH under health insurance.[31]

3. Make insurance policies more inclusive by covering for rehabilitation and recovery of road crash victims.

Additionally, insurance schemes should also account for the mental health impact of road crashes on victims and design more progressive policies. Establish a neuro-spinal Rehab centre at the District level for all States. Merely increasing insurance coverage is not enough as not all those who are enrolled know about the scheme or its benefits, not all the poor are covered, and not everyone has access to healthcare. Health insurance coverage in India remains poor because the private health insurance industry is still at a nascent stage, the pool of people who are able and willing to pay for insurance is low, and insurance premiums are high. Further because LIH, especially in rural India, have limited access to healthcare services such as doctors and hospitals, they are less likely to buy health insurance.

4. Better Gender Disaggregated Data.

Gender responsive reporting and monitoring is essential to evaluate the impact of road crashes on women. WHO also recommends that "Gender differences in the social and economic consequences of temporary and/or permanent

31. India ranks 145th among 195 countries on the Global Healthcare Access and Quality Index (HAQ) created by the Global Burden of Disease Index study (Lancet, 2016). While the global average per capita spending on healthcare is $822, the WHO estimates India's per capita health expenditure per year to be $63 that translates to Rs 4,200 (WHO, 2018). Unfortunately, post-accident emergency healthcare is not given the attention or resources it deserves in a country that witnesses over 400 road vtv in a day. Among the poorest households, 90% do not have private or government health insurance. While richer households fare better, coverage among them also remains poor as 67% of urban households lack insurance (NSS, MoSPI, 75th Round Social Consumption in India Survey, July 2017-June 2018).

disability resulting from injury have to be taken into account when planning rehabilitation services" (WHO, 2002). To ensure rehabilitation services as well as adequate support to either women road crash victims or families which are left to deal with loss of male breadwinner, gender disaggregated data at state and district level would be imperative to create gender responsive post-road crash safety nets.

To ensure rehabilitation services as well as adequate support to either women road crash victims or families which are left to deal with loss of male breadwinner, gender disaggregated data at state and district level would be imperative to create gender responsive post-road crash safety nets. This can be achieved by conducting gender-disaggregated rapid surveys with commuters, bus conductors and public transport officials to assess their awareness and perceptions of sexual harassment in urban public spaces.

Additionally, States can also conduct universal accessibility and women's safety audits to assess the quality of urban transport infrastructure (bus and IPT stops, trains stations, terminals and interchanges) using the indicators and service level benchmarks identified by agencies like Safetypin and evaluate gaps. States can also assess the feeder roads/services in providing last mile connectivity.

5. Mandatory publishing of Real-Time Data, Road Safety Targets by every State to ensure Planned, Targeted Spending

It should be made mandatory for all States to publish their targets on road safety annually so that their performance can be measured against these targets. Additionally, their budgets should be reviewed by a relevant authority to maintain transparency and efficiency. Since High Capacity States have higher spending power and more effective institutional mechanisms to implement targets, a multi-level agency should be set up in every State to oversee road safety efforts and guide HCS in drawing out detailed plans.

6. Sensitisation among the media and police for greater reporting on crash cases and filing of FIRs.

Road safety educational programmes need to be enhanced for the education and sensitisation of targeted sections. For instance, the WHO Media Fellowship offers reporters a curriculum to help make their reporting around road crashes more nuanced. A similar model needs to be replicated at State level to ensure in-depth comprehensive and science-based coverage.

High levels of underreporting of crashes and the poor state of post-crash care exacerbates the problem of estimating the cost of road crashes among LMICs (WB, 2020). The invisibility of indirect costs further adds to the difficulty in estimating an accurate and fair compensation amount to be awarded to victims by the court and governments.