

Health and Well-being of Truck Drivers in India:

*A mixed method study on the
situation, and the way forward*

July 2022



Health and Well-being of Truck Drivers in India: A mixed method study on the situation and the way forward

*Designing a Healthier, Safer, and Prosperous Tomorrow for Truck
Drivers*

The health and well-being of truck drivers hold the key to road safety and national growth and calls for urgent actions by key stakeholders.

July 2022

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Abbreviations

Abbreviation	Expansion
AASTHA	Asia-Africa Supply Chain Transform Health Alliance
CSR	Corporate Social Responsibility
ESI	Employees' State Insurance
FGD	Focus Group Discussion
GPS	Geo-Positioning System
GQ	Golden Quadrilateral
HIV	Human Immunodeficiency Virus
IDI	In-depth Interview
IEC	Institutional Ethics Committee
KII	Key Informant Interview
MCS	Mental Component Summary
NGOs	Non-Government Organizations
NHAI	National Highways Authority of India
PCS	Physical Component Summary
PPHF	People to People Health Foundation
PI	Principal Investigators
PMT	Project Management Team
RTO	Regional Transport Office
SCI	Sleep Condition Indicators
SOPs	Standard Operating Procedures

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1. BACKGROUND

India relies heavily on road transport for freight movement and efficient supply chain management (1). During the COVID-19 pandemic, truck drivers also emerged as valiant ‘corona warriors’ for delivering essential lifesaving medical and household supplies. The trucker’s profession, however, is very demanding and involves obvious as well as implicit issues and challenges e.g. irregular shifts, long trips without adequate rest, hostile working conditions, unaddressed health issues, etc. (2–5). Fatigue and insufficient sleep continue to be a well-documented occupational health concern among truckers plying the long-distance routes and have been linked to an increased risk of fatal crashes (6,7). Chronic life-threatening conditions such as heart diseases, hypertension, and diabetes mellitus have also been reported among truckers (8–11). Along with these, there is a high prevalence of skin and musculoskeletal diseases that further increase morbidity in truck drivers (12–14). Truckers also represent a vulnerable high-risk group for infectious conditions like tuberculosis and human immunodeficiency virus (HIV) infection (15–17).

Beyond health issues, the inattention to the well-being of truck drivers is also an increasing concern for the trucking industry. In addition to strenuous and tiring working conditions, truck drivers face inconveniences due to improper road infrastructure, and inadequate safety and resting facilities on the highways. The semi-organised structure of the trucking industry in India coupled with insufficient sporadic funding support and the unavailability of large-scale strategic programs targeted at the comprehensive health and well-being of truck drivers are some of the major challenges of this profession (18). The pitiable plight of the truck drivers has also largely escaped the attention of public health policymakers, program implementors, researchers, and academia. Research and academic discourse on truck drivers in India have sparingly explored the dimensions of accessibility and utilisation of health services among truck drivers beyond the context of HIV (19,20).

The Indian trucking industry has around ~9 million vehicles on the road and needs around ~900,000 new truck drivers every year. Although this number is growing, about 40% of total trucks and goods transport vehicles lay idle on any given day due to a shortage of drivers (15). Could the lack of drivers be linked to the overall unattractiveness of the profession given the adversities enumerated above? What could be some of the possible ways forward to ensure a healthier, safer, and prosperous tomorrow for truckers, their families, and for all since it is logical to link truckers' health and well-being to overall road safety and contribution to national growth? To facilitate evidence-informed planning and interventions for the welfare of truck drivers, there is a need to explore the situation of and factors associated with their health and well-being as they operate across major road networks/ key highway routes in India. To address this need, a pan-India study was undertaken with the under-mentioned objectives.

2. OBJECTIVES

1. To identify the major challenges related to lifestyle and working conditions faced by the truck drivers operating across major highways in India (e.g., those related to health and well-being, food and water insecurity, road safety, vehicle maintenance, financial security, etc.).
2. To identify the priority services required by the truck drivers along the key highway routes of India.
3. To generate evidence-informed recommendations for designing a comprehensive ‘1- Stop Service Centre’ for truck drivers as a prototype for future scalability.

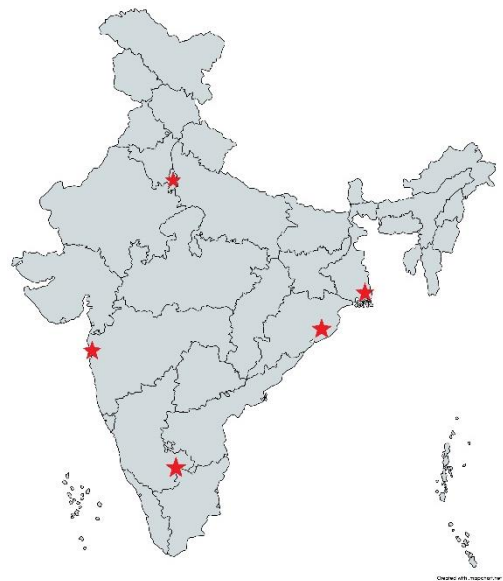
3. METHODOLOGY

Study Design

A mixed-method study design i.e., having both quantitative and qualitative research methods was used for this study.

Study setting

For the assessment, the Golden Quadrilateral (GQ), India’s national highway network that connects four major cities i.e., Delhi (North), Kolkata (East), Chennai (South), and Mumbai (West) was considered. The assessment was conducted in five different locations in India i.e., **Palwal, Haryana (North); Bengaluru, Karnataka (South); Dankuni, West Bengal & Jagatpur, Odisha (East); Vasai, Maharashtra (West)**. The sites were chosen purposely as they are major hubs for road transportation infrastructure in India. It helped the research team to capture experiences from drivers and transportation companies operating in the four segments of the Golden Quadrilateral.



Study participants

The study participants were the truck drivers, trucking companies/fleet owners, corporate users of road transportation, and representatives from the trucker's association.

Study timeline

The data collection was conducted over 2 months (April-May 2022).

Governance

The study team consisted of 03 Principal Investigators (PI) (MD Community Medicine, Ph.D. in Population Sciences, BDS-Masters in Public Health), and 05 Co-Investigators constituted the Project Management Team (PMT). The PMT team was responsible for the field staff recruitment, training, data analysis, and preparation of the final study report.

Field team

Two field investigators for each site were recruited for both qualitative and quantitative assessments. The investigators hired were of at least intermediate level, having a minimum of 2 years of work experience, and were conversant in the local language.

Quality Control

A one-day training session was conducted for site investigators to train them on standardisation of data collection practices and processes for the study. The training was recorded, and training videos were given to the field team for future reference. Data was collected using google forms with logic and skips (quantitative) and hand-held audio recorders (qualitative). The data collected were examined for completeness and accuracy before analysis. The internal data quality was ensured by the PMT through the field investigators.

Quality Assurance

- **Study protocol:** Written, tools structured after reviewing of literature, reviewed and finalized iteratively with feedback. Validated questionnaires and schedules were included in the study
- **Translation of tools** by local academician
- **IEC review** and approval
- Staff selection and training
- **Data collection** using Google form-cannot be edited once submitted
- **Data archival** on Google drive and server
- **Daily monitoring** – GPS tagged photos, WhatsApp group, morning planning meetings, audio recording with consent, real-time analytics on Google Form data
- **Debriefing calls** for troubleshooting, mid-course correction, and alignment
- **Audio recording** of the qualitative interviews in two separate devices
- Administration of questionnaire in local language and through verbatim
- **External Quality Assurance** –Field visit by the team
- Data accuracy and completeness check before analysis
- Analysis using software
- **Internal validation meeting** before finalization of the report

3.1 Quantitative Survey

Study Design: Cross-sectional survey

Study participants: The study participants for the survey included the truck drivers from the selected sites. A target of 35 truckers was surveyed from each of the study sites.

Study tools: A survey tool was designed in the google form and translated into the Hindi language. The following domains were explored in the survey:

1. Respondent's Profile
2. Professional Profile
3. Sleep Condition Indicators (SCI)
4. Earning and Economic Condition
5. Health Profile
6. Quality of Life (12 items short-form survey (SF-12))
7. Health Insurance
8. Need for a one-stop service centre near highways for truck drivers

Sample size: To calculate the sample size for this survey, we hypothesised that at least 50% of participants would have our outcome of interest with 10% absolute error, design effect 1.75, at 95% confidence level, and accounting for about 5% data loss, we targeted a sample size of about 175 truck drivers as participants for the quantitative survey.

Participant Eligibility Criteria: The following eligibility criteria were considered while selecting truck drivers:

- Truck drivers who were employed full-time as a long-duration (beyond 24 hours) drivers and been driving trucks for at least a year
- Drivers consenting to participate in the survey was included

Data management: Daily monitoring format was prepared to check the progress and the quality of the data which included interim analysis. A daily monitoring report was prepared by the research team to check for the completeness of the data. Regular feedback was given to the field team to maintain the quality of data.

Analysis: Data were managed in MS Excel and analysed using STATA 16. Thereafter, they were summarised as means, frequency, and proportions (categorical data). Statistical significance was tested at a 95% confidence interval ($p < 0.05$).

3.2 Qualitative Assessment

Design: The assessment adopted an exploratory descriptive design.

Participants: -Interactions were carried out with participants from the following categories: truck drivers, trucking companies/ fleet owners, corporate users of trucking services, and a representative from the trucker's welfare association

Participant Eligibility Criteria: Efforts were made to interview equal number of truck drivers of ≤ 30 years or >30 years of age and having years of experience of ≤ 5 years or >5 years. The fleet owner and corporate users were the senior management or supply chain leads/heads.

Data collection: For data collection, In-depth interviews (IDIs), Key informant interviews (KIIs), and Focus group discussions (FGDs) were conducted with the participants. The tools were translated into local languages (English, Hindi, and Marathi).

Table 1: Details of participants interviewed for qualitative explorations

S.No	Stakeholder	Per city			Total Per City X 05		
		IDI	KII	FGD	IDI	KII	FGD
1	Truck Drivers	04	-	01	20	-	05
2	Fleet Owners	-	-	-	-	04	-
3	Corporate Owners	-	-	-	-	05	-
4	Transport Authorities (State level)	-	-	-	-	01	-

A total of 20 IDIs, 10 KIIs, and 05 FGDs were conducted with the study participants.

Study tool: Structured interview schedules were designed for each of the participant categories i.e., truck drivers (IDI), fleet owners, and corporate users (KII). Interview guides/ checklist was prepared for conducting FGDs with truck drivers. The qualitative assessment of the truck drivers explored their experience with the long-haul journey, challenges faced by them, health concerns during the journey, awareness about any welfare initiatives targeted towards them, and the utility of a one-stop centre on the highway.

The KIIs were asked about the concerns about the trucking industry and truck drivers, policies for the welfare of truck drivers, utility of highway side centre and challenges in doing one-stop centre and steps to be taken to mitigate those challenges, areas to be focused for investment to improve service delivery of trucking industry, and role of CSR/NGO initiative for the betterment of trucking industry.

We requested the participants in the interviews to share their reflections on a ‘1-stop’ integrated centres along major highways that would offer essential services for truck drivers to improve their health, enhance driving performance, and overall work-life balance. The ‘1-stop’ integrated centres were narrated as a hybrid service delivery system for truck drivers that offered health services along with an add-on value package of comprehensive services as per the identified needs and demands of truck drivers. Facilities like safe parking, quality meals, clean washrooms, resting area, convenience stores, information booth, and vehicle maintenance services has been envisaged in the offering. Views of the stakeholders (truckers, fleet owners, and corporate owners) regarding the utility and feasibility of such a model were also sought.

Data Analysis: The qualitative data were summarised for content. Quotable quotes have been included to validate critical findings.

4. FINDINGS

4.1 Participant Profile

As a part of the qualitative assessment, 20 in-depth interviews (IDIs), 05 focus group discussions (FGDs), and 10 key informant interviews (KIIs) were conducted (Table 1).

A total of 177 truck drivers were surveyed for the quantitative assessment.

- Mean age of the participants was 35 ± 9.0 years
- Over four-fifth (84.2%) were currently married Around 75.0% of the participants were Hindus followed by 24.3% who were Muslims, while 0.6% followed Sikhism
- There was an equal distribution of participants who belonged to nuclear (49.7%) and non-nuclear (50.3%) families
- Most (74.6%) of the respondents were the sole earner in their families
- The vast majority of respondents (almost 88%) did not own the vehicles they drove
- The average years of experience of the participants as truck drivers were 12.5 ± 8.2 years and the median was 10 years

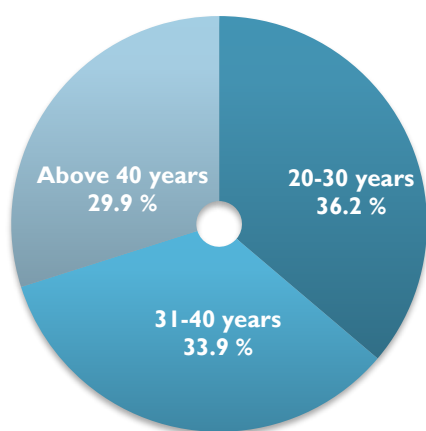


Figure 1: Percentage of participants across different age groups

Table 2: Profile of the participants surveyed (%)

Completed years of education	N (%)
Illiterate	08 (04.5)
Primary school (1-4)	09 (05.1)
Middle school (5-7)	20 (11.3)
High school (8-10)	111 (62.7)
Intermediate/diploma	26 (14.7)
Graduate	03 (01.7)
Years of Experience	N (%)
1-5 years	40 (22.6)
6-10 years	52 (29.4)
11-15 years	32 (18.1)
More than 15 years	53 (29.9)
Type of Permit	N (%)
All India Permit	159 (89.8)
Multi-State Permit	16 (09.1)
Within State Permit	02 (01.1)

4.2 Health Status(self-reported)

67.2% of the drivers mentioned that pain killers were the most essential medicine during work trips.

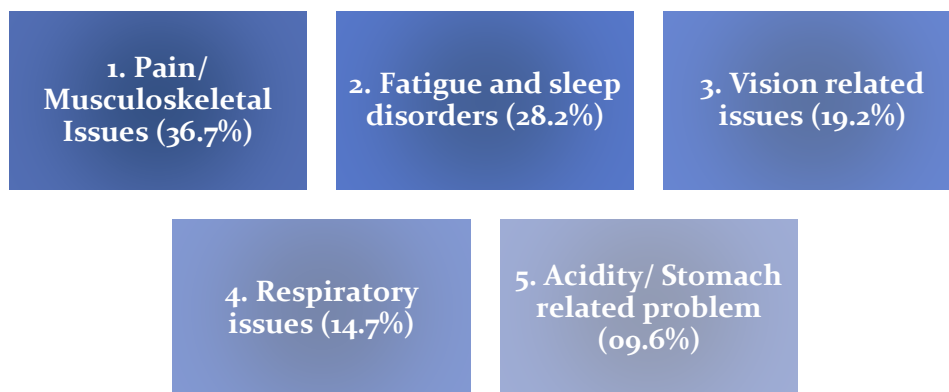
As per the health-related quality of life assessment (SF-12)¹,

- 75.1% were found to be having some kind of physical health condition. Further, it was also found more frequently in those drivers who have been driving trucks for 15 years or more
- Musculoskeletal issues were the most common health problem across all age groups
- 59.9% of truck drivers had scores that indicated possible psychological distress

54.2% of the truck drivers had low physical as well as mental health scores when assessed for health-related quality of life.

“My back hurts a lot, especially when I drive for long hours. I don’t give importance to my ailments. If I have medicines, I consume else take some rest on the way. We truck drivers do not have time or facilities to go to the doctor for check-up and follow up with the medicines. Also, if I spend so much on doctors and medicines, my family will starve.” - Truck driver, Jagatpur, Odisha

The five most commonly (self)reported health issues among the truck drivers were:



¹ The SF-12, a validated questionnaire for health-related quality of life is an abbreviated version of the SF-36. It has 12 items assessing two components; (i) Physical Component Summary (PCS) and (ii) Mental Component Summary (MCS). PCS determines the physical condition of the population and MCS determines probable psychological distress and well-being in the population (26). The PCS-12 and MCS-12 scores, represented by six items each, were computed and normalised for the SF-12 according to published algorithms. Scores range from 0 to 100, with higher scores indicating better physical and mental health functioning. A score of 50 or less on the PCS-12 has been recommended as a cut-off to determine a physical condition; while a score of 42 or less on the MCS-12 may be indicative of ‘clinical depression’ (21,22). Our study found that mean PCS score was 44.6 ± 7.2 (95% CI 43.5-45.7). The median score was 44.8 and mean Mental Component Summary (MCS) score was 41.9 ± 8.6 (95% CI 40.6-43.2). The median score for the MCS was 39.9.

As per the Sleep Condition Indicator (SCI)²,

- The mean final score SCI was 24.1 ± 4.9
- 09% of the respondents were found to have symptoms of 'Possible Insomnia' (total score of ≤ 16)
- Data showed that the chances of having 'possible insomnia' increased with age and years of experience with truck drivers
- Of the truck drivers who had more than 15 years of experience, 18.9% were found to be at risk of 'Possible Insomnia' and this was statistically significant (p value= 0.02)
- In contrast, for truck drivers with less than 15 years of experience, 04.8% had a risk of 'Possible Insomnia'
- Concern for the security and safety of the trucks and their goods were cited by truck drivers as the main reason for not being able to sleep well during a work trip. (Fig.2)

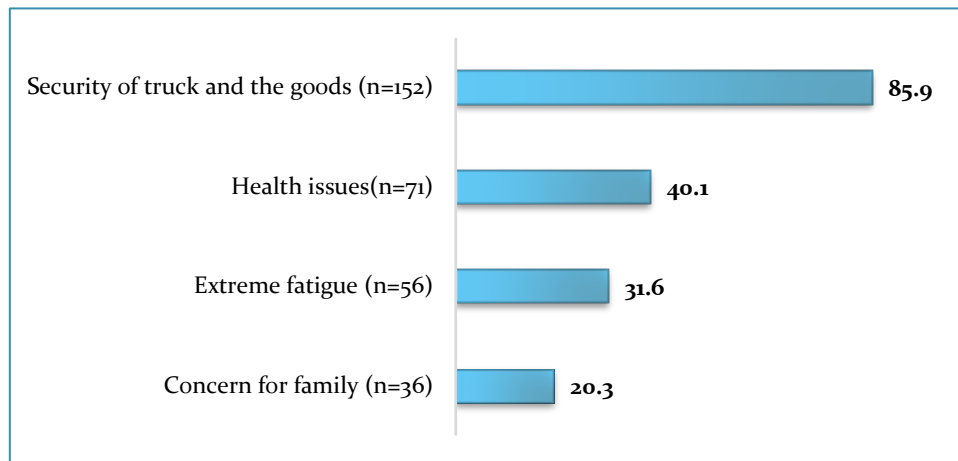


Figure 2: Reasons given by truck drivers for not being able to sleep well (Multiple responses were allowed)

4.3 Care seeking for health

Qualitative explorations revealed that the drivers did not undergo any routine health check-ups. While most of the truck drivers informed that they did not have any provision for health check-up, the fleet owners and corporate users mentioned that the drivers employed by them were offered periodic health check-up services. The truck drivers also reasoned that they did not have the time or opportunity to have a routine health check-up done. They also considered their existing health conditions to be minor that could be managed with symptomatic medication. They were often found reluctant to incur expenses for their health. Thus, it was

² The Sleep Condition Indicator is a brief, eight-item scale, the first questionnaire to be modelled upon the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) insomnia criteria (SCI: Espie et al., 2014b). Each item is scored on a five-point scale (0-4). The possible total score ranges from 0 to 32, with higher values indicative of better sleep. With sufficient literature available on concurrent validity of the SCI cut-offs, a cut of ≤ 16 was defined for 'possible insomnia' while an SCI score of >16 was defined for 'good sleep' (23-25).

evident that there was an attitude of self-neglect as well as a lack of health awareness among the truckers.

- Only 03.4% reported having hypertension and 02.8% reported having diabetes
- More cases of diabetes were reported by truck drivers who were aged above 40 years and this was seen to be statistically significant ($p=0.04$)

More than half (57.1%) of the drivers did not have a first aid kit in the truck that they drove.

- Of the truck drivers who had the first aid kit in their truck, 80.3% reported having used it often
- 25.4% of the truck drivers reported that they did need any medicine in particular during their work trips

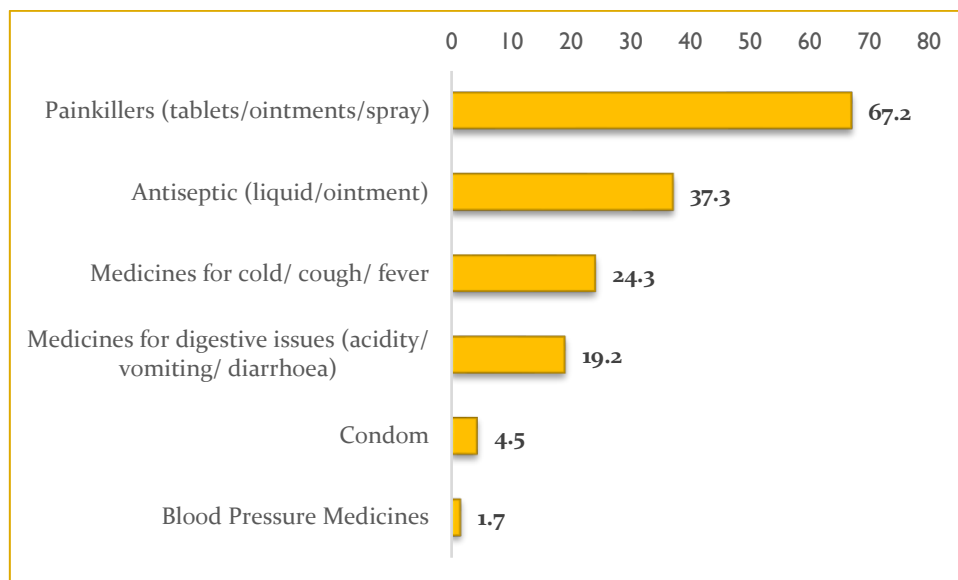


Figure 3:: Essential medicine supplies during work trips as reported by the truck drivers surveyed (%)

4.4 Working conditions & Lifestyle

The quantitative survey helped with some detailed insights on the working and lifestyle experiences of the truck drivers.

- The average duration of work trips in the past month was 6.6 ± 4.9 days; the median duration of trips in the month preceding the survey was of 5 days, with the maximum work trip duration being reported to be 25 days
- On average, participants reported driving for 10.8 ± 2.7 hrs./day on a typical work trip, with a minimum of 5hrs./day and a maximum of 20hrs./day
- During these work trips, the participants reported taking an average of 4.8 ± 3.3 stops.

- The top 03 reasons cited for taking stops during work trips were for food (97.2%), to take rest or sleep (80.8%), and using restrooms (57.1%). (Figure 4)
- Of all the truck drivers surveyed, 67.8% reported having less than 6 hours of sleep per day during their work trip

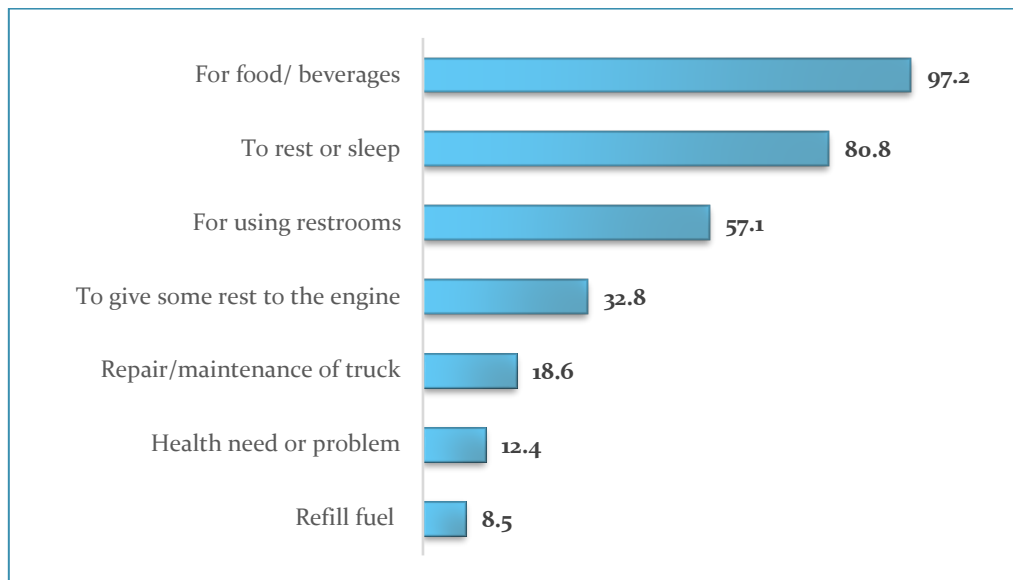


Figure 4: Reasons (%) for taking stops/breaks during a work trip as reported by the truck drivers surveyed (multiple responses were allowed)

75.1% of the drivers reported rarely getting a comfortable place to sleep during their work trip.

The truck drivers informed that they did not prefer to park their trucks at unknown stops for resting but instead preferred to sleep inside the trucks due to security issues (personal safety, safety of the truck, and the consignment of goods against theft and robbery)

Theft and robbery, risk of life due to accidents, having to stay away from the family, and extreme weather conditions were the most commonly expressed occupational hazards. Harassments by road transport authorities, police, and local groups were often reported as a challenge. Demand for bribes, illegal issue of challans, delay in an inter-state entry unless bribed and use of abusive languages and physical assaults were commonly reported concerns of the truck drivers. (Figure 5)

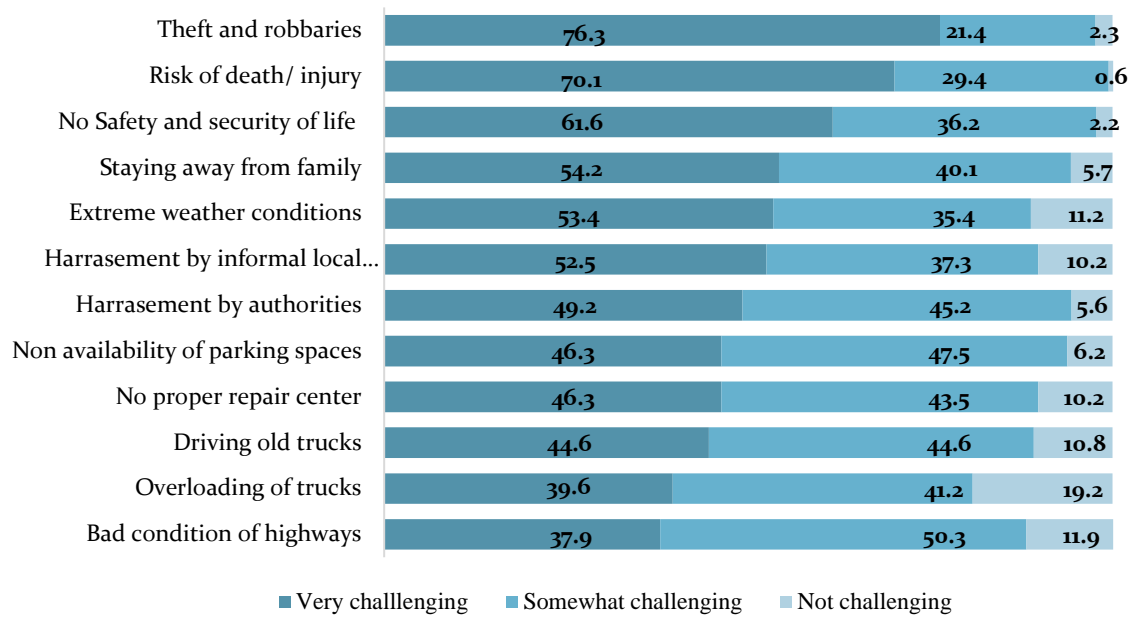


Figure 5: Occupational hazards faced by truck drivers during a work trip

Access to clean sanitation facilities were reported to be the most challenging issue for truck drivers.

- The most common lifestyle-related challenge faced by truck drivers was poor sanitation (public toilets/bathroom) followed by a lack of emergency and general health services during the work trip.
- The lack of enclosed washrooms and poor conditions of accessible washrooms were major concerns.
- At many petrol pumps, they are often not allowed to use the toilets.
- Besides poor sanitation, lack of emergency health services, health conditions, and unavailability of proper meals were the most common day-to-day lifestyle-related challenges reported by the truckers. (Figure 6)

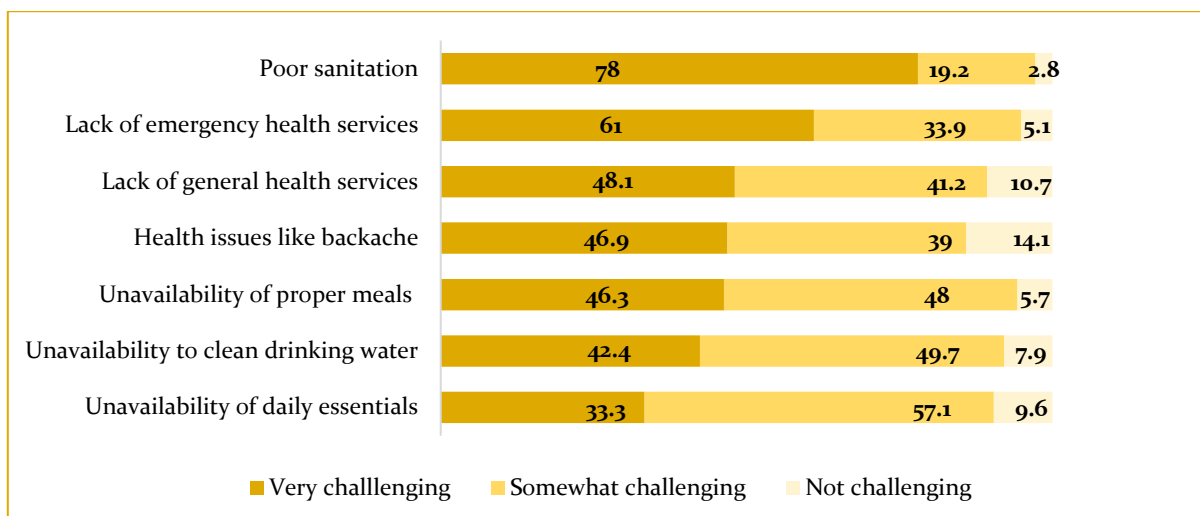


Figure 6: Lifestyle-related challenges faced by truck drivers during a work trip

As regards the communication aids, 92.1% of respondents used smartphones and reported that YouTube and Facebook were the social media applications they most commonly used. This was followed by WhatsApp. They used social media mostly for communicating with their families.

- A majority (92.1%) of truck drivers surveyed reported using smartphones, while the others reported using a feature phone.
- Social media usage among truck drivers was YouTube (89.3%); Facebook (86.7%); WhatsApp (80.0%) and Instagram (04.0%).
- While a majority of the truck drivers use one or the other social media platforms for communication or entertainment, 06.7% do not use any such platforms

4.5 Job satisfaction

98.3% of respondents did not want their family members to join the driving profession

- Nearly half of the participants were dissatisfied with the driving profession
- The most common reasons for dissatisfaction were harassment from authorities (police/RTO/local groups)

About 96.6% of the truck drivers were dissatisfied with the driving profession. The top 5 reasons reported by the truck drivers for being dissatisfied with their job were:

1. Harassment by authorities & local groups (75.1%)
2. Low and irregular income (71.8%)
3. Lack of family time (56.5%)
4. Risk of fatality and injury (41.2%)
5. No dignity of labour (36.2%)

“We expect police to help and support us, however it’s not at all like that. In spite of having all documents like national permit, license, registration certificate insurance and emission test etc., they impose fines and demand bribes. There is no way we can go ahead without bribing the authorities, be it the RTOs or the police.” Truck Driver, Bangalore, Karnataka

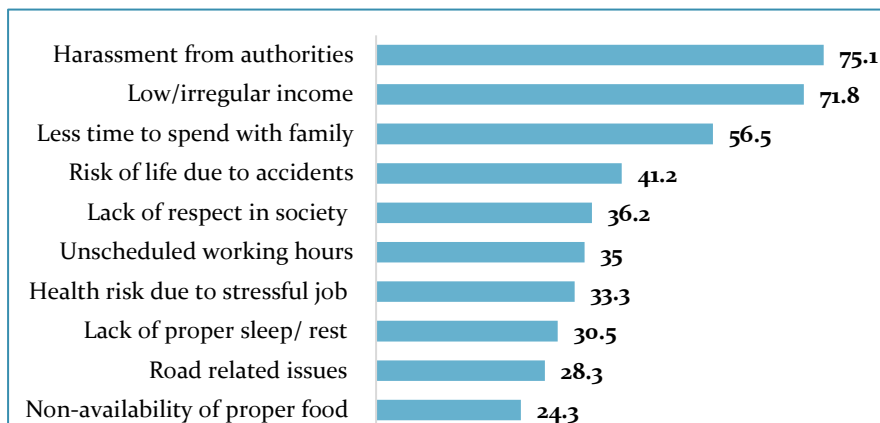


Figure 7: Top ten reasons for dissatisfaction (multiple responses were allowed)

87% of the drivers reported that they were unable to spend quality time with their families due to the nature of work

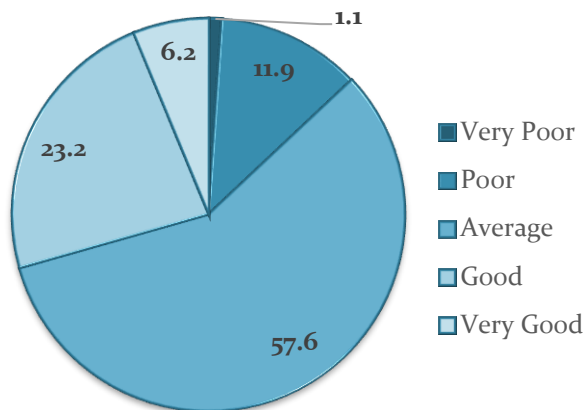


Figure 8: Social life as rated by the truck drivers surveyed

- Only 6.2% of the truck drivers rated their social life as ‘Very Good’
- Only 13% reported being able to have a good family time

The truck drivers complained that their profession had compromised their family engagement to a large extent. Due to their hectic and erratic schedule, on most occasions they were unable to physically support their families at times of distress and crises.

“My brother was trying his luck as a truck driver, but I precisely told him not to get into this career path. Disadvantages are far more than advantages. You don’t get to eat for a whole day at times, there are issues with transport companies, any passing vehicle be it a car or a cycle looks down upon you, they verbally abuse you, police fine you, harass you and beats you.” - Truck driver, Dankuni, West Bengal

“Now we are waiting here for unloading but there is no facility for washroom, water, resting or anything. We just have to keep waiting here in scorching heat. The petrol pump around has a washroom but we are never allowed to use that.” - Truck Driver, Bangalore, Karnataka

4.6 Income

75.7% of the drivers surveyed were not satisfied with their earnings

- The median income of the drivers last month from the time of the survey was Rs. 17000
- The fleet owners said that the truck drivers also save some additional variable amount indirectly (approximately, Rs 1500-2000 per trip) from fuel optimisation
- The truck drivers were usually spent Rs. 1000 (median value) on a typical work trip day on?

- The respondents reported that on average they expected an extra earning of at least Rs 15000 per month (median) to lead a comfortable life
- 22.6% of the drivers reported having some alternative source of income, besides truck driving
- The median income from the alternate source was reported to be Rs 8000

“For food we usually halt somewhere and cook in our trucks just to save on money. Eating at any dhaba costs us around 500-600 for two people and we can’t keep spending that much every day.”- Truck Driver, Vasai Maharashtra

4.7 Insurance

65.5% of the drivers reported not being covered under any insurance. However, this seemed to be a problem of lack of awareness and knowledge.

- Only 14.7% of the truck drivers reported having health insurance
- Only 27.2% of the truck drivers reported having accident insurance
- Only 07.3% reported having both health and accident insurance
- Thus, 65.5% of the truck drivers were informed that they were not covered under any life insurance or accident insurance

Some of the fleet owners differed from the information provided by the truck drivers. They (fleet-owners) mentioned that they indeed covered the driver's accident insurance in the vehicle policies they purchased. Ironically, most drivers seemed unaware of such existing insurance policies that could already be available for them from their employers. Even if some of them were, they did not know about the amount and nature of conditions they were covered for.

Table 3: Perspectives on the situation of truck drivers in India and mitigatory initiatives undertaken in response by fleet owners and corporate users regarding

Theme	Fleet Owners	Corporate Users
Concerns are expressed when it comes to the situation of truck drivers in India	<ul style="list-style-type: none"> • Shortage of adequately trained drivers → unable to assign two drivers per truck on long-distance assignments → difficult to optimise driver well-being • Truckers disrespected the society • Truckers are not valued as a key component in the supply chain management • Harassment of truck drivers by authorities and local bodies • Most of the drivers are on a contractual basis which excludes them from social security benefits • Allocation of drivers and their routes is done with a good understanding of mutual convenience taking into account the end customer's demands. 	<ul style="list-style-type: none"> • Shortage of drivers • Truckers are disrespected in society and taken for granted by the industry • Remuneration is often inadequate compared to job engagement and the risks involved. • Lack of specifications on required skill set, basic remuneration, safety and hygiene protocols for recruiting truck drivers. • Truckers are often excluded from discourses related to their issues and mitigation planning. • Issues of truck drivers are majorly addressed by only large corporates, which represent only a small percentage of the supply chain management industry. Even such steps are executed through fleet owners and transport companies than any direct intervention.
Mitigatory steps/ welfare initiatives undertaken to address the challenges	<ul style="list-style-type: none"> • Criteria-based selection of drivers e.g., age, years of experience, level of education, health condition • Providing basic training on safe driving practices • Regular maintenance of the vehicle. • Timely renewal of license and insurance. • Provision of medical assistance, if needed • Support with getting COVID vaccination. • Use of geo-positioning system (GPS) to track drivers for safety • Performance linked incentives • Use of custom-made mobile applications for instructing drivers in transit • Giving debit cards for expenses instead of cash, for safety <i>en route</i> • Supervisors attend to the emergency needs of the drivers during the work trips • Reimbursing the drivers for money spent on challans, bribes, and incidentals during work trips 	<ul style="list-style-type: none"> • Abiding by quality protocols and standard operating procedures (SOPs) when selecting a third party logistic, truck drivers, and the fleet. • Insisting on a criteria-based selection of drivers e.g., age, experience, education, and health condition • Capping driving hours to 8-10 hours a day • Having Driver Management Centre for educating, counselling, and supporting the drivers towards safety and wellbeing. • Providing rigorous and comprehensive training on driving and product handling • Training the drivers on behaviour and self-management during work trips. • Incorporating e-learning solutions for drivers • Standardised training extended to all business partners to bring all in the same line. • Provision of support of mentor driving initially • Reward-based on driver risk profiling and performance • Monitoring the truck driver and movement of the truck through GPS live tracking devices and cameras to identify driving skill gaps and alert the driver against a possible hazard. • Having route risk management protocols • Empanelment with dhabas for safe parking, quality food, and resting place • Provision of mandatory access to restrooms and canteens for the truck drivers at the warehouses • Provision of insurance customised for drivers

- with guaranteed income and easy claim process
- Offering annual health check-ups
- Incentives to the fleet owners based on the performance of the driver

4.8 ‘1-stop’ Integrated Centres along the highways: A possible fix to the hardships drivers face while on the move (but with ‘riders’)?

Response to the idea: The idea was enthusiastically welcomed by the truck drivers. However, the drivers prioritised secured parking space, quality meals at nominal prices, and hygienic restrooms, washrooms, and laundry facilities. Health services ranked fourth in the list of expectations from these stations. (Fig.4)

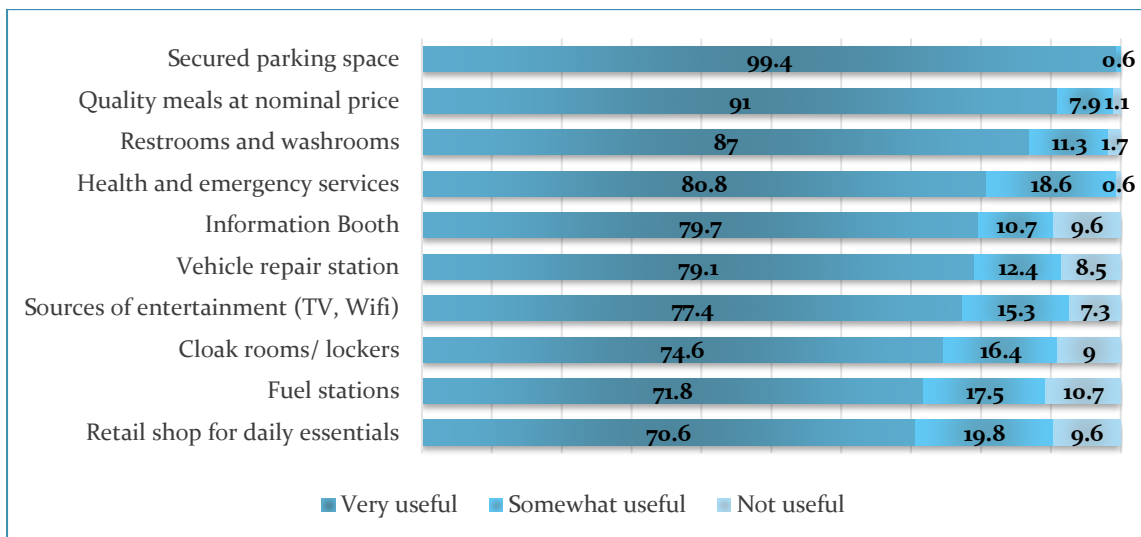


Figure 9: Essential services in a one-stop centre for truck drivers

Secured parking space was reported to be the most needed facility as the truck drivers stated that there were frequent events of theft of personal goods, diesel, battery, and tyres of the truck and cargo. The truck drivers were also uninformed about the helpline support available for them, especially in case of road emergencies, and the associations/NGOs working for them. Thus, they expressed the need for booths that would provide them with such information along with advice on the maintenance of their vehicles and the important documents being carried by them on the consignment.

“A center with all facilities is really thoughtful. The most important service we expect in these centers is safe parking space with CCTV camera, along with those other facilities like repair services, proper food and water, medicines, washroom. There should be a toll-free number or an information desk where we get information about road situation/ traffic/ accident ahead and also information related to license renewal. If we get all such facilities then a driver would not mind paying Rs 200-300, for at all these services together.” - Truck Driver, Palwal, Haryana

Nine of ten (91.1%) truck drivers interviewed reported that they were willing to pay for the services (1-stop centre) even from their own pocket while the fleet owners also expressed willingness to provide/ reimburse such expenses. The truckers said that they could be willing to spend an average amount of about Rs. 305.8 ± 97.6 per visit to such a centre if it provided quality services.

Response from the fleet owners and corporate users was more nuanced and thought-provoking from a systems perspective. While these stakeholders resonated well with the concept of the 1-stop service centre, all of them opinionated that there could be issues in its implementation. They reflected on the perceived resolution in the context of the challenges they perceived to the plight of the truck drivers, mitigatory responses they were already implementing, and additional areas that would need attention along with the initiatives for having a network of integrated 1-stop centres for the truck drivers along the major highways (summarised in Table 4 and Box 1).

“For drivers it is always about a combination of secured parking and food. They decide their place to halt based on where their colleagues usually take breaks and how are they treated there.”- Fleet Owner

“In order to have a sustainable model, the government should put up such service stations. It can be private too through their Corporate Social Responsibility (CSR) and social activities. All can come together for a common cause of social welfare of the truck drivers and manage its costs”- Corporate User

“The running costs like salary for employees at the center, water, electricity will be a challenge. At times the driver would not want to pay at the center, and would opt for sleeping in the truck and eating somewhere cheaper. So, we need to see how it can be made viable - Representative of Transport Welfare Association

Table 4: Reflections from fleet owners and corporate users regarding challenges to the feasibility of integrated 1-stop centres for truck drivers along major highways in India

Theme	Fleet Owners	Corporate Users
Challenges anticipated to the feasibility of integrated 1-stop centres	<ul style="list-style-type: none"> • Drivers have their preferred routes and <i>dhabas</i> to take a rest during their work trips. Thus, the 1-stop service centres may not be optimally used. • There are already many eating joints along the busiest routes serving affordable and quality food where the truckers have a practice of stopping over. It is difficult to compete with them. • The centre has to create some demand among truckers and fleet owners by informing them about these services so that they could choose to avail these. • Setting up such centres would require engagement with multiple departments for permission. • Implementation can be difficult without the government prioritising and supporting the initiative. 	<ul style="list-style-type: none"> • Drivers are spread across the highways in the country thus cost associated to establish such centres with standardisation is huge. • An enormous amount of funding is needed as this proposition could be real-estate intensive • It May not be scalable as it is a capital and land-intensive proposition • Difficulty in reaching the truck drivers, disseminating information, and creating demand • Creating a parallel health centre instead of leveraging the existing public health system could be time-consuming and not cost-efficient. • Engagement of multiple departments, permission from the government, and getting permission through bureaucracy could be tough and delay implementation. • Difficulty in building a consensus on the design and structure • Implementation can be difficult without the government prioritising • Utilisation of free services will be the highest, but sustainability will be an issue without philanthropic funding • The 1-stop service centre in areas of maximum concentration of truck drivers can be difficult to manage
Broader areas need attention without which the impact of 1-stop centres would be limited	<ul style="list-style-type: none"> • Intervention must be introduced to address the increasing corruption and harassment of truckers on the roads. • A system has to be put in place to focus on the wellbeing and concerns of the drivers instead of isolated sporadic efforts. 	<ul style="list-style-type: none"> • Behaviour changes programs need to be designed and run for inculcating respect for the truck driver community in society at large • Companies and factories should have washroom services for the in/out-bound truckers • Places serving meals at the factories should be accessible for truck drivers • There should be mandatory policies for accident insurance, ESI/ social security • Investing in improving the conditions of the trucks probably with an AC unit in the cabin for long haul journeys. • Advocacy with Government and the authorities for investing in improving the road infrastructure • Educating the drivers on undergoing regular health check-ups.

Box 1 Planning-related suggestions from stakeholders (truck drivers, fleet owners, corporate users, association) for the 1-Stop service centre

Distance

- Multiple centres are required at strategic locations
- Should preferably be established at an interval of 300-500kms (preferably at an interval of a distance that is safe for a driver to drive at a stretch)

Location

- Should be located at the truck terminus for optimal utilization
- Major truck routes and central and state highways
- Near the hubs of warehouses where a lot of trucks arrive for pick up and drop off goods and need to wait for long hours.
- The location should be matched with the capacity of the service stations

Cost

- Services should be available at subsidized costs
- Meals should be made available at about Rs 50 per Thali

Services

- The focus should be made on secured parking, quality sanitation facilities, resting area, and health requirements.
- Services should be available in a package including facilities for refuelling, sanitation, repair, food, rest, health needs, and secured parking.
- The centres should focus on the strategy of sustainability of the staff recruited for rendering services.
- Health camps can be organised at regular intervals
- Leveraging the existing public health facilities

Funding

- Government should prioritize the implementation
- The cost of establishment should be shared by the corporate or the government or both in *collaboration*

LIMITATIONS OF THE STUDY

This study has been conducted with focus on long route truck drivers operating across major highways in India. We further did not emphasise on equitable representation of truckers from organised and unorganised fleets. Also, our sample was majorly limited with an Indian mainland; we did not have sites from the North-East region. Thus, our findings may not have adequately captured contextual precision for these driver profiles. We anticipate that our reports on tobacco and alcohol usage among truck drivers is rather an underestimate due to potential social desirability bias among the trucker respondents. Our estimates on coverage of insurance among truck drivers is likely to be imprecise; the information received from the truck drivers and from the fleet owners contradicted one another. Therefore, these issues demand further exploration in future studies.

5. WAY FORWARD

“Most of the people don’t understand where we are heading into in the next 10 years, if the community of truck drivers are not taken care of at present. Nobody thinks about them. Instead, we only keep pushing them! We really need to rethink and rework on ourselves! There is need to engage with the truck drivers and listen to their issues before proposing changes.” -Corporate User

Truck Drivers

- Improve awareness of self-care and entitlements by engaging with fellow truckers and transport associations
- Acquire necessary skills for negotiating through en-route harassment
- Develop financial and digital literacy for empowerment
- Create peer groups for cross learning

Fleet Owners

- Prioritise dignity of the drivers by making provisions for basic amenities along with improved salary/ wages for them
- Educate truckers on their entitlements and necessary life-skills
- Implement SOPs to standardise approaches to truckers and consignments and minimise customisation on a case-to-case basis
- Design health and well-being initiatives that not just focus on the trucker but his family also in a holistic manner
- Adopt best practices and innovations that work for the well-being of truck drivers
- Transport organisations, unions, networks. Alliances need to work together for time-bound actions to improve the health and well-being of truck drivers

Corporate Users

- Insert suitable clauses regarding the welfare of the drivers while negotiating contracts with fleet owners
- Consider launching corporate social responsibility schemes for the truckers
- Extend training programs and periodic health check-up schemes to empanelled truckers/ fleet owners as well as design schemes that go beyond those empanelled
- Engage with the Ministry of Road Transport and Highways of India and National Highways Authority of India (NHAI) authorities for identification and scale-up of best practices for the wellbeing of truckers
- Develop a framework for demonstration and scaling a business plan that can be demonstrated for learning and replication
- Launch a public behaviour change management campaign for the dignified treatment of the truckers in society

Governments & Authorities

- Break the barriers- Design and implement a supportive action-oriented policy and targeted program with sustained funding and regulatory framework for improving and standardising truckers' experience across the country. Involvement of Insurance Regulatory & Development Authority (IRDA) in the expansion and coverage of life and health insurance of the drivers can be one of the possible steps to bring regulation of insurance in the sector.
- Mobilise resources for Public-Private Partnership models with the Ministry of Road Transport and Highways of India, NHAI, and private sectors
- Define a strategy to get essential information while drivers are on move

Academia/ Research/ Policy Advocates

- Develop and undertake a strategic advocacy campaign for making empathetic policies for the health and well-being of truck drivers with the engagement of regulators like the Insurance Regulatory and Development Authority of India (IRDAI), and loss prevention goods
- There is also a need to engage with the Ministry of Road Transport and Highways, various Parliamentary Committees for road safety, NITI Aayog, and philanthropic organisations like Lion's Club, Rotary Club, etc., for wider mobilisation of support

Society at large

- Treat truckers and their families with respect and care.
- Support an ecosystem approach for the health and well-being of the truck drivers by appreciating their role as critical levers in the supply chain and logistics sector, and as important contributors to national growth

For this study, we interacted with 200 long-route truck drivers during the quantitative survey and focus group discussions. Additionally, we also had in-depth interviews with fleet owners, truck owners' association leadership, and corporate users. While initially we felt that the exploration of the health and well-being of the truckers could be ensured through only health related intervention planning, it emerged that the challenge is rather complex and required a design thinking approach. We acknowledge that the plight of truck drivers in contemporary situations is not absolutely despicable, especially for those drivers who are engaged in the organized sector. However, trucking as a profession is losing its attractiveness for several reasons beyond the control of any single stakeholder. Standardisation of the operational and administrative systems could help in improving the driving performance of drivers along with their health and well-being. Thus, there is an urgent need to secure sustained commitment and harmonised strategic support for the health and well-being of the truckers across stakeholder constituencies. Consequently, opportunities must be innovated wherein stakeholders could partner synergistically and strategically to mitigate the hardships faced by the trucker community while ensuring that the overall viability of the supply chain and logistics sector is further enhanced. Initiatives must be co-designed with measures which are driver centric and with their involvement – a attribute which has mostly been missing in the trucker-welfare initiatives undertaken hitherto. Such steps should be scalable with mobilisation of the whole-of-society and sector-wide patrons. The effort is likely to show result if interventions are co-

designed and targeted not only at the truck drivers but also at the society at large so that a respectful ecosystem could be ensured for the truck drivers and businesses to operate and thrive within.

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