









Health and Well-being of Truck Drivers in India:

A mixed methods study on the situation and way forward



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

Introduction

India relies heavily on the movement of trucks for freight transport and efficient supply chain management (1). During the COVID-19 pandemic, the truck drivers also emerged as valiant 'corona warriors' for delivering the 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 continues to be a well-documented occupational health concern among truckers plying on the longdistance routes and have been linked to 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 (15-17). Truckers also represent a vulnerable high risk group for infectious conditions like tuberculosis and human immunodeficiency virus (HIV) infection (12-14).

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 semiorganized structure of the trucking industry in India coupled with insufficient sporadic funding support and unavailability of large-scale strategic programs targeted at 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 policy makers, program implementors, researchers and academia. Research and academic discourse on truck drivers in India has sparingly explored the dimensions of accessibility and utilization 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 shortage of drivers (12). 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? In order to facilitate evidenceinformed 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 wellbeing as they operate across major road networks/ key highway routes in India. To address this need, a pan-India study was undertaken with the following objectives:

Objectives

- 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.).
- To identify the priority services required by the truck drivers along the key highway routes of India.
- To generate evidence-informed recommendations for designing a comprehensive '1- Stop Service Centre' for truck drivers as a prototype for future scalability.

Methodology

A mixed-methods study design was used for this study. The research team interacted with truckers on long route assignments in five different locations of India i.e., Palwal-Ballabhgarh, Haryana (North); Bengaluru, Karnataka (South); Dankuni, West Bengal & Jagatpur, Odisha (East); Vasai, Maharashtra (West), along the Golden Quadrilateral (GQ), India's national highway network connecting the major metropolitans. The sites were chosen purposely as they were major hubs for truck-transportation providers in India.

Only those truck drivers that had been working as long-duration (beyond 24 hours) drivers for at least the past one year and consented to participate in the survey and the interviews, were included in the study. A target of 35 truckers were surveyed from each of the study sites. Interviews and focus group discussions were also undertaken with the truck drivers at each site.

Additionally, interviews were conducted with the fleet owners, and representatives from leading corporate users and trucker's association as key informants.

The study was conducted over a period of 2 months (April-May 2022). Qualitative data was summarized with the help of themes and quotable quotes. Quantitative data was represented as frequencies, proportions and measures of central tendency and dispersion.

Key Findings

A total of 177 truck drivers were surveyed for the quantitative assessment. For the qualitative assessment, a total of 20 in-depth interviews, 5 focus group discussions with the truck drivers and 10 key informant interviews were conducted.

In the quantitative survey, the mean age of the respondent truck drivers was 35.0 ± 9.0 years with ~36% aged 20-30 years, ~34% aged 31-40 years and ~30% being above 40 years age. About 84% were currently married. Around 75.0% of the respondents were Hindu followed by 24.3% who were Muslim. Most (74.6%) of the respondents were the sole earner in their family. Almost 88% did not own the vehicles they drove.

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 (11-12)	26 (14.7)
Graduation and above (beyond 12 years)	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)

Health status

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

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

- 75.1% truck drivers had possible physical health condition. It was found more frequently in those who had been driving trucks for 15 years or more.
- 59.9% 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:

- Chronic pain/ Musculoskeletal issues (36.7%)
- Sleep related problems and tiredness (28.2%)
- Vision related issues (19.2%)
- Respiratory issues (14.7%)
- Acidity/ Stomach related problem (9.6%)

Nine percent of the truckers surveyed were found to have symptoms of 'possible insomnia'. With increasing age and years of experience of the truck drivers, upward trend of 'possible insomnia' was evident. Concern for the security of the truck and goods was mentioned as the major reason for inability to sleep well. (Fig.1)

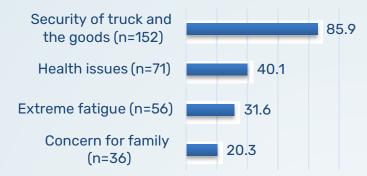


Fig. 1 Reasons cited for inability to sleep well during a work trip (%)

Care seeking for health

Qualitative explorations revealed that most of the drivers did not undergo any routine health check-up and neither did they have any provision for it though, on the contrary, the fleet owners and corporate users mentioned that the drivers employed by them were offered periodic health check-up services. The truck drivers reasoned that they did not have the time or opportunity to get routine health check-ups done. They also considered their existing health conditions to be minor and which could be managed just with symptomatic medication. They were often found reluctant to incur expenses for their health. It was evident that there was an attitude of self-neglect as well as lack of health awareness among the truckers. Only 3.4% reported of having hypertension and 2.8% reported of having diabetes. More than half (57.1%) of the drivers did not have a first aid kit in the truck which they drove.

Working conditions & Lifestyle

- The median duration of trips in the month preceding the survey was of 5 days, with the longest work trip lasting for 25 days.
- On an average, respondents reported to drive for 10.8± 2.7 hrs./day on a usual work trip.
- During these work trips, the respondents reported to take an average of 4.8 ± 3.3 stops.
- The top three reasons cited for taking stops during work trip were for food (97.2%), to take rest or sleep (80.8%) and for using restrooms (57.1%).

75.1% of the drivers reported of 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 and 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 inter-state entry unless bribed and use of abusive languages and physical assaults were commonly reported concerns of the truck drivers. (Fig.2)



Fig. 2. Occupational hazards faced by truck drivers during work trips (%)

Poor sanitation facilities were reported to be the most challenging issue for the truck drivers. Lack of enclosed washrooms and poor conditions of accessible washrooms were major concerns. At petrol pumps they were 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. (Fig.3)

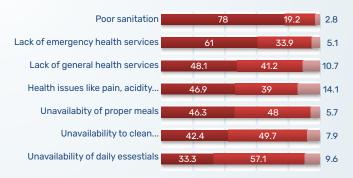


Fig. 3. Daily lifestyle related challenges faced by truck drivers during a work trip (%)

As regards the communication aids, 92.1% of respondents used smart phones 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.

Job satisfaction

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

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:

- Harassment by authorities & local groups (75.1%)
- Low and irregular income (71.8%)
- Lack of family time (56.5%)
- Risk of fatality and injury (41.2%)
- 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, and 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

87% of the drivers reported that they were unable to have a good family time due to their nature of work

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

"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

Income

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

 The median direct monthly income as reported by the drivers 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 optimization.
- → The truck drivers usually spent Rs. 1000 (median value) on a typical work trip day.
- → The respondents reported that on an average they needed an extra earning of Rs 15000 per month (median) to have a comfortable life.
- → 22.6% of the drivers reported to have some alternative source of income, besides truckdriving.

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

Insurance

"Only about 15% truck drivers who are associated with big companies have insurance and other perks, but for rest there is nothing. There are some accident-related coverages for trucks and then the driver also gets certain amount. However, the amount is too low and procuring process is time consuming."— Representative of Transport Welfare Association

65.5% of the drivers reported of 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 to have health insurance while just about 27.1% of the truck drivers reported to have accident insurance. Only 7.3% had both health as well as accident insurance. Thus, 65.5% of the truck drivers informed that they were not covered under anylife insurance or accident insurance. However, some of the fleet owners mentioned that they indeed covered the driver's accident insurance in the vehicle policies they purchased. Ironically, overall, the drivers seemed unaware of existing insurance policies that may already be available for them from the employers. Even if some of them were, they did not know about the amount and nature of conditions they were covered for.

Table 1. 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 expressed when it comes to situation of truck drivers in India	 Shortage of adequately trained drivers → unable to assign two drivers per truck on long distance assignments → difficult to optimize driver well-being Truckers disrespected in the society Truckers not valued as key component in the supply chain management Harassment of truck drivers by authorities and local bodies Most of the drivers are on contractual basis which exclude them from social security benefits Allocation of drivers and their routes is done with good understanding of mutual convenience taking into account the end customer's demands. 	 Shortage of drivers Truckers disrespected in the society and taken for granted by the industry Remuneration often inadequate compared to job engagement and risks involved. Lack of specifications on required skill set, basic remuneration, safety and hygiene protocols for recruiting truck drivers. Truckers often excluded from discourses related to their issues and mitigation planning.
Mitigatory steps/ welfare initiatives undertaken to address the challenges	 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 en route Supervisors attend to the emergency needs of the drivers during the work trips Reimbursing the drivers for money spent on challans, bribe and incidentals during work trips 	 Abiding to quality protocols and standard operating procedures (SOPs) when selecting a third part logistic, truck drivers and the fleet. Insisting on 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 Standardized 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

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

We hypothesized a service model of having '1-stop' integrated centres along the highways to make available essential services for truck drivers to improve their health, driving performance and overall work-life experience. We conceptualized this 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 e.g., facilities like safe parking, quality meals, clean washrooms, resting area, convenience stores, information booth, and vehicle maintenance services. We explored the perceptions of the stakeholders (truckers, fleet owners and corporate owners) towards the utility and feasibility of such a model.

Response to the idea: The idea was enthusiastically welcomed by the truck drivers. However, the drivers prioritized 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)



■Very useful ■Somewhat useful ■Not useful

Fig. 4 Perceived need for services at the 1-stop service station 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 supports available for them, especially in case of road emergencies and of the associations/NGOs working for them. Thus, they expressed the need for booths that would provide them with such information along with advice on maintenance of their vehicles and the important documents being

carried by them pertaining to 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 every ten (91.1%) of the truck drivers interviewed reported that they were willing to pay for the services 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 (summarized in Table 2 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."
Truck Driver, Palwal, Haryana

"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 truck and eating somewhere cheaper. So, we need to see how it can be made viable - Representative of Transport Welfare Association

Table 2. Reflections from fleet owners and corporate users regarding challenges to feasibility of integrated 1-stop centres for truck drivers along major highways in India

Theme	Fleet Owners	Corporate Users
Challenges anticipated to feasibility of integrated 1-stop centres	 Drivers have their preferred routes and dhabas to take 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 government prioritising and supporting the initiative. 	 Drivers are spread across the highways in the country thus cost associated to establish such centres with standardization is huge Enormous amount of funding needed as this proposition could be real-estate intensive May not be scalable as it is capital and land intensive proposition Difficulty in reaching the truck drivers, disseminating information, and creating demand Creating a parallel health center instead of leveraging the exiting public health system could be time consuming and not cost-efficient. Engagement of multiple departments, permission from 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 government prioritising Utilisation of free services will be highest, but sustainability will be an issue without philanthropic funding 1-stop service centre at areas of maximum concentration of truck drivers can be difficult to manage
Broader areas needing attention without which the impact of 1-stop centres would be limited	 Intervention must be introduced to address the increasing corruption and harassment of the truckers on the roads. A system has to be put in place to focus on wellbeing and concerns of the drivers instead of isolated sporadic efforts. 	 Behaviour change programs need to be designed and run for inculcating respect towards the truck driver community in the 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 centers 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 lot of trucks arrive for pick up and drop of goods and needs to wait for long hours.
- 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

- 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 refueling, sanitation, repair, food, rest, health needs, secured parking.
- The centers should focus on the strategy of sustainability of the staffs recruited for rendering services.
- Health camps can be organized at regular intervals
- Leveraging the existing public health facilities

Funding

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

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

This study has the limitation of sampling only a smaller number of participants from a very variegated industry. Still, it highlights the key challenges and areas for action that may inspire efforts from empathetic stakeholders going forward. We propose the following call to action to them:

Truck Drivers

 Improve awareness on self-care and entitlements by engaging with fellow truckers and transport associations.

- Acquire necessary skills for negotiating through en route harrassments
- Develop financial and digital literacy for empowerment

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 standardize approaches to truckers and consignments and minimize customization 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 works for the wellbeing of truck drivers
- Transport organizations, 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 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 empaneled truckers/ fleet owners as well as design schemes that go beyond those empaneled.
- 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 business plan that can be demonstrated for learning and replication.
- Launch a public behaviour change management campaign for dignified treatment of the truckers in the 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 standardizing truckers' experience across the country.
- Mobilize resources for Public-Private Partnership models with Ministry of Road Transport and Highways of India, NHAI and private sectors.
- Define a strategy to get essential information while drivers are on move.

The Society at large

- Appreciate the role of truckers as critical levers in the supply chain and logistics sector, and as important contributors to national growth.
- Treat truckers and their families with respect & care.

While focus on operational and administrative efficiency is essential, it should be complemented with increased attention to the quality of life experienced by the truckers. Standardization 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 harmonized strategic support to the health and well-being of the truckers across stakeholder constituencies. Initiatives must be co-designed with centricity on the

truck drivers and with their involvement, and scaled up with mobilization of whole-of-society and sectorwide patrons.

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