

# **SANITATION: AN OCCUPATIONAL HEALTH HAZARD AMONG LOCO-PILOTS IN MALDA DIVISION OF EASTERN RAILWAY**

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**Background:** Occupational Health and Safety is among those areas within health which has been constant concern but specific and limited focus has been provided only in the wake of accidents and disasters. There is a dynamic within the specific domain that informal sector concerns are prioritized and rightfully so but that does not translate to the absence in other sectors. Transportation has an interplay of both informal and formal sector concerns of workers. Loco-Pilots are an important component of rail transportation, in the formal sector and essential to the operational functioning of Indian Railways. **Aim:** This paper tries to understand the availability and accessibility of restrooms of loco-pilots who are on-duty functioning as part of their occupational requirement. **Methodology:** The study was conducted in the Malda Division and data was collected through questionnaire and interviews for quantitative and qualitative respectively. The study was a small sample study wherein the universe was 24 and 18 respondents responded to the questionnaire and 8 interviews were conducted. **Results and Conclusion:** The study resulted in thematic findings that Locomotive Cabs do not have the availability of in-built Restrooms due to which Loco-Pilots miss a major health and sanitation component in their immediate occupational setting and environment. The accessibility of restrooms is a concern because there is limited source of restrooms which they can use and, they cannot afford to use restrooms because there is limited halt time unless it is a major halt. This trivecta of problems directly affects their health considering the factors of age, probability of bladder control and associated risk of disease.

**Keywords:** Occupational Hazard, Sanitation, Availability, Accessibility

## **INTRODUCTION**

Railways are important transportation systems, enabling the movement of people and goods efficiently across vast distances. The functioning of trains requires a dedicated workforce, including locomotive pilots, who operate the locomotives to help keep the traffic moving. These pilots, commonly known as train drivers, play a critical role in ensuring the safe travel of passengers and cargo. However, locomotive pilots face various challenges including sanitation hazards, which

can significantly impact their health and overall well-being. This article aims to shed light on the sanitation hazards faced by locomotive pilots in railways.

India boasts one of the world's largest and busiest railway networks, connecting diverse regions and facilitating the movement of millions of people, essential and valuable cargo daily through passenger and freight (goods) trains. The Loco-Pilot was earlier used to refer to the occupation in the railways

when there was a colonial context but gradually with time there has been a change from loco-man (who used to operate the then steam powered locomotive) to loco-pilot which is a designation in the contemporary context. The conceptual understanding that needs to be encompassed here that it is a designation which needs to be reached through promotion through the years of service and experience. This further must be conceptualized with age of joining the job and the age of becoming a loco-pilot are completely different. The operational clarity can be obtained if it is argued that the loco-pilot is a senior career designation.

The literature generates thematic insights about the problems that locomotive pilots face while operating shift duty. One of the main challenges locomotive pilots' encounters is the limited access to restroom facilities during their journeys. Trains often run for extended periods, and pilots may not have easy access to restrooms during long-distance trips. This can lead to discomfort, inconvenience, and even health issues, as pilots may have to hold their urge to use the restroom for extended periods.

Restrooms are available on trains but not in locomotive cabs and the cleanliness and hygiene of these facilities can be a significant concern. (Ranjan & Prasad, 2013) Due to the constant movement of trains and limited resources for maintenance, restrooms may not always be adequately cleaned and sanitized. Unsanitary conditions can expose pilots to health risks and contribute to the spread of infectious diseases. An example from the functional practice would be that in Indian Railways, immediately attached behind locomotive is a guard cum parcel cum brake van which has an in-built restroom but it can be entered through and often it is not clean because it is locked when the guard is not functioning from there. Further, the

disposal of waste generated during train journeys can pose sanitation hazards. With limited options for proper waste disposal on trains, waste can accumulate, causing foul odour and unhygienic conditions within the locomotive cabins.

The gaps in the existing literature that the in-depth explanation of the challenges and the integrative and interdependent conceptualization of availability and accessibility create a scope for research which this paper wants to discuss and address.

## **MATERIALS AND METHODS**

The research design of this study was mixed method, exploratory and descriptive by nature. The quantitative data was collected through questionnaire and qualitative data was collected through in-depth interview. The site for data collection was Malda Division Headquarters which is beside Malda Town railway station, Malda District, West Bengal. The necessary permissions were taken from the authorities and the Combined Crew Lobby Malda Town (CCL/MLDT) and Crew Running Room, Malda Town were visited to collect qualitative data. The universe of the study was 24 because the data obtained that there were 24 loco-pilots in Malda Division. The sampling was simple random and purposive for quantitative and qualitative respectively. The number of participants in the study were 18 and 8 for quantitative and qualitative respectively. The study was conducted with the ethical consideration consisting of informed consent and anonymity since respondent were identifying problems and lack of redressal which were the shortcoming of the management.

## **RESULTS**

**Availability of Restroom in Locomotive Cabs: No = 1, Yes = 2**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	100.0	100.0	100.0

**Table 1: Availability of Restroom Cabs in Locomotive Cabs**

The availability of restroom in the locomotive cabs is not present. The results displayed are that all 18 respondents who have responded mention that there is no restroom. The implication is that loco-pilots do not have restroom in their immediate occupational space or setting where they can urinate and/ or defecate.

The absence of restroom implies that loco-pilots do need to access restrooms even if it not be in the immediate occupational space or setting. The understanding of accessibility of the restrooms is essential

Crosstabulation

		Halt Time Sufficient to Access Restroom: No = 1, Sometimes = 2, Yes = 3		Total
		1	2	
Access to Restroom: Restroom in Train = 1, Restroom at Station = 2, Others = 3	1	2	1	3
	2	4	0	4
	3	11	0	11
Total		17	1	18

**Table 2: Crosstabulation between Access to Restroom and Sufficiency of Halt Time**

The results from the above table depict, 11 respondents mentioned that Others under Access and No Sufficiency of Halt Time, 4 respondents mentioned Restroom at Station under Access and No in Sufficiency of Halt Time, and 2 respondents mentioned using Restroom in Train under Access and No in Sufficiency of Halt Time. There was only 1 respondent who mentioned Restroom in Train under Access and Sometimes in Sufficiency of Halt Time. The insight from this stands that respondent mainly mentioned Other and on qualitative inquiry the conceptual understanding was generated that accessing restroom (urinal and toilet for the specific purposes) was not possible at all stations thus most respondents mentioned Other. The respondents provide the insight that how only at Major Halt (halt time of 10 minutes and

Train Restroom Cleaned and Sanitized: No = 1, Sometimes = 2, Yes = 3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	16	88.9	88.9	88.9
2	2	11.1	11.1	100.0
Total	18	100.0	100.0	

above) access is possible. If in halts below 10 minutes, respondents try access the restroom and cannot depart on time despite starter signal being provided at the station delay would be due to their actions thus it would be upon them.

**Table 3: Cleanliness of Restroom**

The presence and accessibility of restroom is the infrastructural and technical by nature but there is another major factor which tends to affect the socio-behavioural component of individuals and that is cleanliness. The data displayed in the above table directly provides the insight that 16 out 18 respondents believed Train Restrooms were not cleaned and sanitized properly while they are on shift-duty, and the remaining 2 respondents believed sometimes Train Restrooms were cleaned and sanitized. The qualitative enquiry revealed a thematic finding that even locomotive pilots would manage till the major halt than use train toilet in the general compartment at a minor halt. This also has implications to

Correlations

		Halt Time Sufficient to Access Restrooms (No = 1, Sometimes = 2, Yes = 3)	Train Restrooms Clean (No = 1, Sometimes = 2, Yes = 3)
Halt Time Sufficient to Access Restrooms (No = 1, Sometimes = 2, Yes = 3)	Pearson Correlation	1	.686**
	Sig. (2-tailed)		.002
	Sum of Squares and Cross-products	.944	.889
	Covariance	.056	.052
	N	18	18
Train Restrooms Clean (No = 1, Sometimes = 2, Yes = 3)	Pearson Correlation	.686**	1
	Sig. (2-tailed)	.002	
	Sum of Squares and Cross-products	.889	1.778
	Covariance	.052	.105
	N	18	18

\*\*. Correlation is significant at the 0.01 level (2-tailed).

PILOTS IN MALDA DIVISION OF EASTERN RAILWAY understood that possibility of major stops is completely dependent upon type of train the respondent is operating on a given day thus the schedule is not a fixed one.

**Table 4: Correlation between Halt Time Sufficient and Train Restrooms Clean**

Furthermore, from the table above it can be interpreted that there is moderate positive correlation between the variables of halt time sufficient and train restrooms clean with a coefficient of .686 and significant at 0.01 level.

Basic Amenities in Locomotive 1 = Unsatisfactory, 2 = Less Satisfactory, 3 = Average, 4 = Satisfactory, 5 = Very Satisfactory

	Frequency	Percent	Valid Percent	Cumulative Percent
1	13	72.2	72.2	72.2
2	1	5.6	5.6	77.8
Valid 3	3	16.7	16.7	94.4
4	1	5.6	5.6	100.0
Total	18	100.0	100.0	

**Table 5: Rating of Basic Amenities in Locomotive**

The respondents also rated the Basic Amenities in Locomotives. The Basic Amenities were understood as Seats, Toilets, Fans, Windows etc. which along with the equipment of Locomotive is checked before the locomotive is deemed to fit operate as per guidelines. 13 out of 18 respondents rated 1 translating to Unsatisfactory as per the 5 Point Scale which has been used to measure.

Duty Hours (Less than 6 = 1, 6 to 9 = 2, 9 & More = 3)

	Frequency	Percent	Valid Percent	Cumulative Percent
2	6	33.3	33.3	33.3
Valid 3	12	66.7	66.7	100.0
Total	18	100.0	100.0	

**Table 6: Duty Hours**

Furthermore, the important question that arises is that respondents who are loco-pilots engage in long hours of shift duty so it is essential to depict the hours among these respondents because it is required for context. The above table displays that 12 out of 18 respondents mentioned that hours of work is 9 hours and more and the it needs to be

## DISCUSSION

The initial argument is the results of the study display that there is lack of availability of the restroom in the locomotive cab which creates a scenario wherein loco-pilots are not left with much of a choice but to control the urge till the station arrives, but even at the station the accessibility is a problem that arises although there are different sources of restrooms but time plays a significant role. The station where halt time is more than 10 minutes is favourable for loco-pilot to access Station Toilet but in Station with halt times less than 10 minutes it is often difficult because there is the schedule of the train which must be considered and maintained.

This discussion on restroom is not something new. The High-Power Committee Report on Review of the Duty hours of Running Staff and Safety also called Tripathi Committee in its report in 2013 takes cognizance of this hazard stating that 'psychological stresses in Loco-Pilots are mainly on account of their job demands. The report depicted that 57 per cent of them had moderate build-up of stress and only 42 per cent had mild build-up of stress.' (Tripathi, 2013) Furthermore, while discussing the sources of stress it directly notes that 'Absence of toilet in job requiring long hours of working and responsibilities of thousands of lives (75%) is one of the major reasons or sources of the problem.' (Tripathi, 2013)

The Tripathi Committee further mentions that it also visited RDSO for discussing the issues of provision of toilet in locomotives and improvements in Locomotive Cab design. The Committee has elsewhere recommended the desirable improvements in the cab design to make it more ergonomically structured, comfortable and with provisions for waterless

toilets and air conditioning etc which should help in taking away quite a bit of fatigue and stress on account of the Loco Pilots job.

The Committee has elsewhere recommended the desirable improvements in the cab design to make it more ergonomically structured, comfortable and with provisions for waterless toilets and air conditioning etc which should help in taking away quite a bit of fatigue and stress on account of the Loco Pilots job.

The gravity of the situation was also addressed by the Chairman, Railway Board during the evidence on the subject. He stated inter alia a point was made regarding toilet facilities in the locomotives. It is a very valid point. For the last 150 years, we have been running the trains and we never perhaps gave enough attention to the problem of loco toilets. It was asked as to how do we expect the loco toilets to attend to nature's call. That is only at the stoppages where it is possible in the present system but we are providing it. (Twelfth Report Standing Committee on Railways Sixteenth Lok Sabha, 2017)

The two major considerations mentioned in the literature are age, and risk of disease which are vital because with increasing age it becomes difficult for bladder and bowel control. Bladder control is important because the loco-pilots must hold on to the urge through long periods of time. Also, the allied factors like lack of hydration and disrupted schedule of consumption of food create vulnerability. These factors together make loco-pilots more susceptible to various infectious diseases or urinary disorders, urinary tract infections being one among many. This structural problem that exists must be tackled initially focussing on socio-behavioural component of social behaviour change communication on person hygiene but there needs to be a policy level change regarding restrooms in locomotives considering the Vande Bharat Express has already the way for access to toilets from

## **CONCLUSION**

The problem is intertwined with the concepts of infrastructure development and implementation wherein the concepts of source and operationalization of water as well as waste disposal arise in the design of the restroom in locomotives. The ergonomic feasibility is yet another concern which needs to be encompassed while discussing these considerations. This is an arbitrary hazard and has been a due for long. This is not a new problem; the problem has not received the constant attention and focus that it should have. The approach has to be interdisciplinary and in-line departments within the management need to integrate their work to tackle sanitation and health hazard.

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