Original Article

Knowledge, Attitude and Perceptions of Indian long-distance Train Travellers Towards Medicinal Drugs, Healthcare, and Hygiene while Travelling: A Questionnaire-based Survey

Pranjit Santonu Bhajoni, Girish Gulab Meshram*

ABSTRACT

Background: Although a large population uses the Indian Railways for long-distance journeys, data about their knowledge, attitude, and perception towards medicinal drugs, healthcare, and hygiene while travelling, is sparse. **Methods:** We conducted a cross-sectional survey from March 2016 to December 2016 among 114 randomly sampled long-distance train passengers. A self-administered questionnaire, directed towards knowledge, attitude, and perception of passengers towards medicinal drugs, healthcare, and hygiene while travelling, was administered. The completeness of the questionnaire was validated by an interview. The association between the type of coach and the various variables mentioned in the questionnaire was calculated by the chi-square test or the Fisher's exact test. **Results:** Of the 114 respondents (77.19 % males, 22.81 % females), 61.4 % carried medicines with them while travelling. The most common class of drug carried by the respondents was non-steroidal anti-inflammatory drugs (NSAIDs). Although 61.4 % of the participants claimed to consult a doctor before consuming any drug, 43.85 % of them had no knowledge of either the indications or the adverse effects of the drugs that they consumed. 32.45 % of the respondents complained of being physically/psychologically stressed during/after the journey. A majority of the travellers (93.85 %) believed that hygiene and cleanliness had a role in preventing illness while travelling. Only 2.69 % of the respondents were aware of the healthcare facilities provided by the Indian Railways. A significant (p < 0.05) association was found between the type of coach and the method of obtaining drug information, feeling stressed, and food preference. However, due to the small sample size these findings cannot be generalized. **Conclusion:** There is a need to create awareness about common over-the-counter drugs among long-distance train travellers in India. Healthcare facilities provided by the Indian Railways must be publicized.

Key words: Attitude, Drugs, Healthcare, Knowledge, Long-Distance Train Travel, Perceptions.

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INTRODUCTION

The railway network in India is the one of the world's largest.[1] More than 13 million passengers use the Indian Railways every day.[2] A total of 8224 million passengers used the Indian Railways and covered more than 1147190 million passenger km in the year 2014-15.[3] The trend of passengers using railways in India, as a mode of transportation for long distances, is increasing rapidly in the past few years.[3]

Long-distance travelling in trains predisposes passengers to several medical conditions. First, transmission of several infectious diseases is common in closed settings such as in trains.[4] Second, food and water consumed while travelling could expose passengers to gastrointestinal diseases.[5] Third, long-distance travel is associated with a group of transient negative effects, collectively referred to as 'travel fatigue'.[6] Fourth, travelling in trains for several hours may lead to immobility and predispose travellers to deep vein thrombosis.[7,8] Fifth, several pre-existing cardiovascular, respiratory diseases could exacerbate due to the strain involved during long-distance travel.[8] Since drugs play a major role in alleviating the signs and symptoms of most of the medical conditions that passengers encounter during their train journeys, inadequate knowledge about them could decrease their preparedness before a journey, decrease their ability to counter anticipated travel-related illnesses, and decrease reporting of adverse drug events. Also, following poor personal hygiene could increase the transmission rate of common gastrointestinal and respiratory diseases. Lack of information about the healthcare facilities provided by the Indian Railways could affect their attitude of seeking help in case of emergencies.

Despite the large number of passengers using the Indian Railways, data about their knowledge, attitude, and perception towards medicinal drugs, healthcare, and hygiene while travelling, is sparsely documented. Hence, the aim of the study, conducted between

March 2015 to December 2015 and recruiting 114 participants, was to obtain a preliminary understanding of the knowledge, attitude, and perceptions of Indian long-distance train travellers about medicinal drugs, healthcare, and hygiene while travelling, through a questionnaire-based survey, which could provide further insight in planning and developing strategies for local health education purposes.

MATERIALS AND METHODS

The questionnaire-based survey was conducted between March 2015 and December 2015. The study was approved by the Institutional Ethical Committee of Postgraduate Institute of Medical Education and Research and Dr. Ram Manohar Lohia Hospital. The study was conducted in accordance with the International Ethical Guidelines, and the Declaration of Helsinki, as revised in 2013.

The North-East Express was selected as the suitable train for conducting the study as it comprised of mixture of both AC and non-AC coaches (total passenger-coaches were 22 in number), and it covered a distance of 1880 km in approximately 34 h with 2210 passengers.

The study population included Indian passengers of more than 18 years in age, travelling ≥ 1000 km in a long-distance train, and able to fully understand the language of the questionnaire. These criteria were checked by the investigator. Passengers who did not meet these criteria were not included in the study or their responses were excluded from the final analyses.

In order to calculate the sample size for the study, prevalence of knowledge about medicinal drugs, healthcare, and hygiene among long distance railways passengers was not available from published literature. Therefore the proportion of 46.5 % (population size of long-distance train travellers was assumed to be 3719 million as per the Indian Railways database of 2014-15)[3] was considered for calculation. The confidence level was set as 95 % and the acceptable margin of error was set as 10 %. Using Epi Info Version 7.2 (Centres for disease control and prevention, GA, USA) the sample size was calculated to be 94, using the following formula.

Sample size = $\dfrac{Z^2 x\ (p)\ x\ (1-p)}{c^2}$

Z is the z value i.e. 1.96 for 95 % confidence level, p is the prevalence/proportion of the event of interest (expressed as a decimal), and c is the confidence interval/ margin of error (expressed as a decimal).

A self-administered, anonymous questionnaire was distributed to the passengers included in the study after obtaining their verbal consent by the investigator. The language of the questionnaire was English. The investigator travelled with the passengers in the same train. Passengers travelling in both air-conditioned (AC) and sleeper coaches participated voluntarily without any incentives. The questionnaire was split into two parts. The first part of the questionnaire included six questions about the demographic details of the passengers [Table 1]. The second part of the questionnaire comprised of 25 questions. The first 12 questions dealt with the knowledge, attitude, and perceptions of passengers towards medicinal drugs [Table 2]. The next three questions focussed on obtaining information about the various medical conditions which passengers encounter while travelling in long-distance trains and how they manage them [Table 3]. The next ten questions dealt with the knowledge, attitude, and perceptions of passengers towards hygiene while travelling in long-distance trains [Table 4]. The respondents were then interviewed to understand their current knowledge about the healthcare facilities provided by the Indian Railways to passengers on long-distance trains and their suggestions to improve the same. The details about the pre-existing acute/chronic health conditions that they suffered from and the medications that they carried were also discussed during the interview. While

collecting the questionnaire back from the participants the investigator checked the completeness of the responses, and answered relevant queries if necessary.

The data of the completed questionnaire was evaluated using SPSS 21 (IBM Corporation, NY, USA). A chi-square test of independence or a Fisher's exact test was performed to examine the relation between the type of coach i.e. AC or Sleeper and the various variables in the questionnaire. $P < 0.05$ was considered statistically significant.
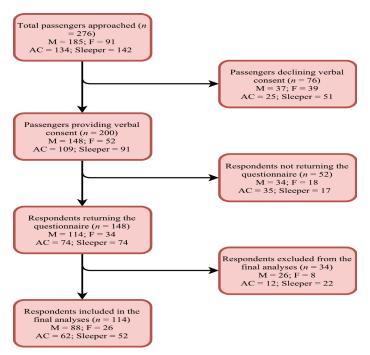
RESULTS

The investigator approached 276 passengers of which 76 (27.54 %) declined to provide verbal consent for the study. The reasons for declining verbal consent were a lack of interest, language barrier, and the lengthiness of the questionnaire. Of the 200 questionnaires distributed, 148 (74 %) were received back by the investigator. The investigator could not retrieve 52 (26 %) of the distributed questionnaires as some of the respondents had lost the questionnaires in transit or were unwilling to complete the questionnaire. Of the 148 questionnaires received, 34 (22.97 %) respondents did not fulfil the inclusion criteria and were excluded from the final analyses. The demographic characteristics of the respondents included/excluded at each stage of the study are mentioned in Figure 1.

Demographic parameters of the 114 participants included in the final analyses are mentioned in Table 1. A large chunk of the respondents were males (77.19 %). The majority of the respondents belonged to the young age group (50 %), followed by the middle age group (25.44 %), and then followed by the old age group (24.56 %). A majority of the participants

Table 1: Demographic parameters of participants included in the final analyses.

No.	Parameters	Number (n)	Percentage
1	Gender		
	Male	88	77.19
	Female	26	22.81
2	Age		
	18-35 years	57	50
	36-55 years	29	25.44
	56 and above	28	24.56
3	Frequency of long-distance train travel		
	Once a week	2	1.75
	Once a month	28	24.56
	Once a year	34	29.82
	Others	50	43.86
4	Planned or Unplanned (Tatkal) journey		
	Planned		77.19
	Unplanned		22.81
5	Travelling for medical reason		
	Yes	7	6.14
	No	107	93.86
6	Suffering from a chronic condition		
	Yes	34	29.82
	No	80	70.17
7	Type of coach		
	Air-conditioned	62	54.39
	Sleeper	52	45.61

Figure 1: Flowchart depicting the demographic parameters of passengers included/excluded at each stage of the study according to their gender and type of coach.

planned their journeys in advance (77.19 %) and had variable travelling frequencies. A very few of the participants (6.14 %) were in transit for medical reasons despite the fact that 29.82 % of them were suffering from a chronic health condition (Table 1).

34.21 % of the participants usually carried medicines along with them during their day-to-day life, of which 88.11 % suffered from a chronic illness. 70 participants (61.40 %) were carrying medicines with them while travelling in the train. Of these 70 participants, 36 participants (51.43 %) were suffering from a chronic/acute medical illness. The common pre-existing medical ailments that these 36 participants were suffering from were hypertension, diabetes, hypercholesterolemia, and thyroid disorders. The medications carried by them to specifically counter these disorders are enumerated in Table 5, the details of which were obtained from them during the interview. The common drugs carried by this group of travellers were antihypertensives, lipid-lowering agents, and antidiabetics. 28 participants (77.78 %) of these 36 participants correctly described the indications of all of the drugs that they carried to treat their pre-existing acute/chronic medical condition, while only 4 (11.11 %) enumerated the adverse effects (Table 5). Also, 17 (47.22 %) of these 36 participants were carrying drugs to counter medical ailments that they probably might encounter during the train journey, in addition to the drugs that they were carrying for treating their pre-existing illness. These drugs are enlisted in Table 6. The most common class of drugs consumed in this group of passengers was NSAIDs. Of these 17 participants, 14 participants (82.35 %) accurately described the indications of the agents that they carried, while only one participant (5.88 %) knew about the adverse effects (Table 6).

The rest of the 34 participants (48.57 %), of the 70 participants carrying medicines, were healthy participants carrying drugs to counter anticipated ailments during the journey. The drugs carried by this group of participants are enumerated in Table 7. The most common class of drugs carried by them was NSAIDs. 20 (58.82 %) of these 34 participants enlisted the correct indications of the drugs that they carried, while only 3 participants (8.23%) enumerated the adverse effects (Table 7). 44 par-

ticipants were travelling without any medicines and had no history of suffering from any acute/chronic ailment.

31.58 % of the participants said that the medicines that they carried were to treat a chronic health condition (Table 2). Almost half of the respondents did not carry medicines while they were travelling via another mode of transportation. Although, most of the respondents (61.4 %) claimed to consult a doctor before consuming any medicinal drug, 40.35 % of them agreed to have consumed drugs in the past without any professional consultation. Most of the respondents (43.85 %) said to have no knowledge of either the indications or the adverse effects of the drugs that they consume. 87.72 % of the participants did not understand the term 'over-the-counter (OTC) medicines', while 54.39 % of them did not know the difference between generic and branded drugs. 40.38 % of the of the respondents, who claimed to know the difference between generic and brand names, thought that branded drugs were cheaper than generic drugs. 40.35 % of the respondents consumed herbal medications. A majority of the respondents (84.21 %) did not have faith in the knowledge of pharmacists about the drugs at pharmacies located at railway stations and did not prefer to buy medications from them (Table 2).

32.46 % of the respondents found themselves to be stressed physically or psychologically during/after a long-distance train journey. The most common medical condition that the participants complained of during/after a train journey was fatigue followed by headache (Table 2). A fraction of the participants (24.56 %) would not seek any treatment if they fell ill during a train journey.

A majority of the respondents preferred bottled water (75.44 %) and pantry-food (52.63 %) while travelling in long-distance trains. Most of the respondents (73.68 %) claimed to not fall ill after consuming pantry-food. 93.86 % of the respondents believed that cleanliness and hygiene played an important role in preventing diseases and illnesses, while 90.35 % of them believed that the process of cleanliness starts from the self. Majority of the respondents used the right hand for eating food (83.33 %), the left hand for wiping their rectum after bowel evacuation (50.88 %), and the right hand to close the tap water after using the toilet (81.58 %).

During the interview it was found that a majority of the participants (97.31 %) were unaware that there is a first-aid kit available in the train in case of an emergency. Only one respondent knew that there is a doctor on call at main train junctions. The main themes suggested by the respondents to improve the healthcare facilities in long-distance trains were recruitment of a doctor in long-distance trains, improvement in the hygiene of food/water, and cleanliness of toilets.

A significant ($P < 0.05$) relationship was found between the type of coach and the method of seeking drug information (Table 2). Also, we observed passengers travelling in an AC coach were more likely to feel stressed than were passengers in a sleeper coach ($P < 0.05$) (Table 3). Also, the relationship between the food preference and the type of coach was significant ($P < 0.05$) (Table 4).

DISCUSSION

The results of the study indicated that the knowledge about drugs amongst passengers travelling in long-distance trains was not satisfactory, despite a substantial number of them had long-standing ailments, carried medicines with them while travelling, and suffered from physical or psychological stress during the travel. Most respondents followed some hygienic practises while travelling and indicated a willingness to improve the cleanliness of the railways. A vast majority of the respondents had no information about the healthcare facilities provided by the Indian Railways to its passengers in long-distance trains.

Table 2: Part of the questionnaire to assess the knowledge, attitude, and perceptions of passengers towards medicinal drugs.

No.	Questions	AC (n)	Sleeper (n)	P value	Total (n)
1	Do you generally carry medicines with you?				
	a) Yes	21 (33.87)	18 (34.62)	> 0.05*	39 (34.21)
	b) No	41 (66.13)	34 (65.38)		75 (65.79)
2	Do you carry medicines with you while you are travelling in a train?				
	a) Yes	43 (69.35)	27 (51.92)	> 0.05*	70 (61.40)
	b) No	19 (30.65)	25 (48.08)		44 (38.60)
2.1	If yes, are these medicines for a chronic health condition or specifically for the travel?				
	a) Chronic health condition	21	15	> 0.05*	36 (31.58)
	b) Travel purpose	31	20		51 (44.4)
3	Can you enumerate the names of the medicines which you are carrying?				Table 5
4	Do you carry medicines while you are travelling via any other mode of transportation?				
	a) Yes	32 (51.61)	26 (50.00)	> 0.05*	58 (50.88)
	b) No	30 (48.39)	26 (50.00)		56 (49.12)
5	Do you generally seek medical advice from:				
	a) Doctor	46 (74.19)	24 (46.15)	< 0.05*	70 (61.40)
	b) Non-doctor (Nurse, pharmacist, paramedic)	4 (6.45)	10 (19.23)		14 (12.28)
	c) Both doctor and non-doctor	12 (19.35)	18 (34.62)		30 (26.32)
6	Have you ever consumed medicines without consulting a medical professional?				
	a) Yes	22 (35.48)	24 (46.15)	> 0.05*	46 (40.35)
	b) No	40 (64.51)	28 (53.85)		68 (59.65)
7	Do you know about the indications and the adverse effects (side effects) of the medicines that you consume usually?				
	a) Know indications only	20 (32.25)	4 (7.69)	< 0.05**	24 (21.05)
	b) Know adverse effects only	2 (3.23)	8 (15.38)		10 (8.77)
	c) Know both	12 (19.35)	18 (34.62)		30 (26.32)
	d) Know nothing of some	28 (45.16)	22 (42.31)		50 (43.86)
8	Do you understand the term 'over the counter medicines'?				
	a) Yes	10 (16.13)	4 (7.69)	> 0.05**	14 (12.28)
	b) No	52 (83.87)	48 (92.31)		100 (87.72)
9	Do you know that medicines can be generic or branded?				
	a) Yes	30 (48.39)	22 (42.31)	> 0.05*	52 (45.61)
	b) No	32 (51.61)	30 (57.69)		62 (54.39)
	If yes, do you know which of them is cheaper?				
	a) Generic	14 (46.67)	13 (59.10)	> 0.05*	31 (59.62)
	b) Branded	16 (53.33)	9 (40.90)		21(40.38)
10	Do you consume herbal/natural medicines?				
	a) Yes	24 (38.71)	22 (42.31)	> 0.05*	46 (40.35)
	b) No	38 (61.29)	30 (57.69)		68 (59.65)
11	Do you purchase your medicines from the pharmacies in the railway station?				
	a) Yes	8 (12.90)	10 (19.23)	> 0.05**	18 (15.79)
	b) No	54 (87.10)	42 (80.77)		96 (84.21)
12	Do you think that the pharmacists in railway stations have a good knowledge of the medicines that they are selling?				
	a) Yes	14 (22.58)	4 (7.69)	> 0.05**	18 (15.79)
	b) No	48 (77.42)	48 (92.31)		96 (84.21)

* Chi-square test. ** Fisher's exact test. P < 0.05 is statistically significant. AC is air-conditioned. Total is passengers in both AC and sleeper coaches. Values in parenthesis represent percentage.

Table 3: Part of the questionnaire to assess the knowledge, attitude, and perceptions of passengers towards various medical conditions which they encounter while travelling in long-distance trains .

No.	Question	AC	Sleeper	P value	Total
13	Are you stressed physically or psychologically while travelling in trains for long hours?				
	a) Yes	29 (46.77)	8 (15.38)	< 0.05*	37 (32.46)
	b) No	33 (53.23)	44 (84.62)		77 (6.54)
14	Which is the most common medical condition that you feel during/after your train journey?				
	a) Nil	55 (88.71)	34 (65.38)	> 0.05**	89 (78.07)
	b) Fatigue/Exhaustion/Tiredness	10 (16.13)	8 (15.38)		18 (15.79)
	c) Headache	2 (3.22)	1 (1.92)		3 (2.63)
	d) Sleepiness	1 (1.61)	2 (3.85)		2 (1.75)
	e) Cough	0 (0.00	2 (3.85)		2 (1.75)
15	What do you do when you feel unwell during a long-distance train journey?				
	a) I get off the train to seek treatment	4 (6.45)	0 (0.00)	> 0.05**	4 (3.51)
	b) I take the medicines that I bring with me	26 (41.94)	24 (46.15)		50 (43.86)
	c) I take the help of other passengers	4 (6.45)	6 (11.54)		10 (8.77)
	d) I enquire with the train collector	10 (16.13)	12 (23.08)		22 (19.30)
	e) Do nothing and hope for the best	18 (29.03)	10 (19.23)		28 (24.56)

* Chi-square test. ** Fisher's exact test. P < 0.05 is statistically significant. AC is air-conditioned. Total is passengers in both AC and sleeper coaches. Values in parenthesis represent percentage.

Table 4: Part of the questionnaire to assess the knowledge, attitude, and perceptions of passengers towards hygiene while travelling in long-distance trains.

No.	Question	AC	Sleeper	P value	Total
16	What type of water do you drink while travelling on a train?				
	a) Home brought water	10 (16.13)	8 (15.38)	> 0.05**	18 (15.79)
	b) Bottled water	50 (80.66)	36 (69.23)		86 (75.44)
	c) Taps of railway stations	2 (3.23)	8 (15.38)		10 (8.77)
17	How do you manage your food while travelling?				
	a) Homemade food	30 (48.39)	18 (34.62)	< 0.05**	48 (42.11)
	b) Vendors on the platform	0 (0.00)	6 (11.54)		6 (5.26)
	c) Pantry	32 (51.61)	28 (53.85)		60 (52.63)
18	Does pantry-food make you ill by anyway?				
	a) Yes	20 (32.26)	10 (19.23)	> 0.05*	30 (26.32)
	b) No	42 (67.74)	42 (80.77)		84 (73.68)
19	Do you think that cleanliness has some value in preventing diseases?				
	a) Yes	60 (96.77)	47 (90.38)	> 0.05**	107 (93.86)
	b) No	2 (3.23)	5 (9.62)		7 (6.14)
20	Do you think that cleanliness starts with you picking up your litter and throwing it in the dustbin?				
	a) Yes	58 (93.56)	44 (84.62)	> 0.05**	103 (90.35)
	b) No	4 (6.45)	8 (15.38)		11 (9.65)
21	Do you think it is safer to drink water from the cup of your hands or directly from the bottle?				
	a) Cup of hand	10 (16.13)	10 (19.23)	> 0.05*	21 (18.42)
	b) Directly from bottle	52 (83.87)	42 (80.77)		93 (81.58)
22	Do you bring your own cutlery/utensils while travelling in long-distance trains?				
	a) Yes	20 (32.26)	16 (30.77)	> 0.05*	36 (31.58)

	b) No	42 (67.74)	36 (69.23)		78 (68.42)
23	Which hand do you use for eating your food?				
	a) Right	50 (80.65)	45 (86.54)	> 0.05*	95 (83.33)
	b) Left	12 (19.35)	7 (13.46)		19 (16.67)
24	Which hand do you use for wiping after bowel evacuation?				
	a) Right	26 (48.94)	30 (57.69)	> 0.05*	56 (49.12)
	b) Left	36 (58.06)	22 (42.31)		58 (50.88)
25	Which hand do you use for opening/closing the water tap during and just after bowel evacuation?				
	a) Right	48 (77.42)	44 (84.62)	> 0.05*	93 (81.58)
	b) Left	14 (22.58)	8 (15.38)		21 (18.42)

* Chi-square test. ** Fisher's exact test. P < 0.05 is statistically significant. AC is air-conditioned. Total is passengers in both AC and sleeper coaches. Values in parenthesis represent percentage.

Table 5: Drugs carried by participants for countering pre-existing medical conditions (acute/chronic) (n = 36).

Medical condition	Drugs specifically countering the pre-existing medical condition (acute/chronic)	Reasons for carrying the medicine as described by the participants	Knowledge of adverse effects
Hypertension (11)	Enalapril (4) Captopril (1) Hydrocholorothiazide (3) Amlodipine (2) Losartan (1)	Reduces BP (8) No knowledge (3)	No knowledge (11)
Hypercholesterolemia (6)	Atorvastatin (6)	Reduces cholesterol (3) No knowledge (3)	No knowledge (6)
Diabetes (6)	Metformin (5) Glipizide (1)	Brings sugar levels down (4) No knowledge (1)	Bloating sensation (2) No knowledge (3)
Chronic gastritis (6)	Pantaprazole (4) Ranitidine (2) Aluminum hydroxide + Magnesium hydroxide combination (2)	Reduces acidity and burning sensation in stomach (8)	No knowledge (8)
Thyroid disorders (4)	Methimazole (3) Levothyroxine (1)	Reduces thyroid problem (4)	No knowledge (4)
Osteoarthritis (3)	Diclofenac (2) Calcium (2) Vitamin D (1)	Reduces joint pain (2) Makes bones stronger (2)	No knowledge (5)
Allergic rhinitis (3)	Levocetrizine (3)	Reduces secretions from nose (3)	No knowledge (3)
Asthma (2)	Salbutamol (2) Pholcodine syrup (1)	Breathing improves (2) Reduces cough (1)	Tremor (1) No knowledge (2)
Vitamin deficiency (2)	Vitamin B-12 + Folic acid combination (2)	No knowledge (2)	No knowledge (2)
Contraception (1)	Ethynyl estradiol + levonorgestel combination (1)	Prevent pregnancy (1)	Headache (1)
Substance dependence (1)	Methadone (1)	For reducing craving (1)	No knowledge (1)
Diarrhoea (1)	Paracetamol (1) Norfloxaxin-Tinidazole combination (1)	Reduces diarrhoea (1) No knowledge (1)	No knowledge (2)

Some participants carried more than one medication or had more than one pre-existing ailment.

Table 6: Drugs carried by participants with a pre-existing medical condition (chronic/acute) for countering anticipated travel-related medical problems during the journey (n = 17).

Classification	Drugs	Reasons for carrying the medicine, as described by the participants	Knowledge of adverse events
NSAIDs	Paracetamol (13) Paracetamol + Ibuprofen combination (1) Aspirin (2)	Headache (2) Malaise (2) Bodyache (7) Fever (2) Wrong indication (2)	Rash (1) No knowledge (15)
Antacids	Sodium bicarbonate sachet (1) Ranitidine (1) Aluminium hydroxide and magnesium hydroxide combination (1)	Acidity (1) Burning sensation in stomach (1) No knowledge (1)	No knowledge (3)
Herbal drugs	Mentha piperata extract (*Pudinhara*) (1) Neopeptine (1)	Bloating, gas (1) Indigestion (1)	No knowledge (2)

Values in parenthesis represent n. Some participants carried more than one medication.

Table 7: Drugs carried by participants without any pre-existing medical conditions (chronic/acute) for countering anticipated travel-related medical problems during the journey (n = 34).

Classification	Drugs	Reasons for carrying the medicine, as described by the participants	Knowledge of adverse events
NSAIDs	Paracetamol (18) Paracetamol + Ibuprofen combination (6) Nimesulide (3) Diclofenac sodium (1) Aspirin (2)	Headache (2) Bodyache (13) Pain (2) Fever (2) Wrong indication (6) No knowledge (5)	Acidity (2) No knowledge (29)
Antihistaminics	Levocetrizine (3) Promethazine (2)	Running nose due to dust (3) Motion sickness (2)	No knowledge (5)
Antacids	Ranitidine (2) Pantoprazole (2)	Burning sensation in stomach (3) Acidity (1)	No knowledge (4)
Antibiotics	Levofloxacin (1) Metronidazole (1)	Infection (1) Diarrhoea (1)	No knowledge (2)
Hypnotics	Alprazolam (2)	Sleeplessness (2)	Tiredness (1)
Antiemetics	Domperidone (1)	Vomiting (1)	No knowledge (1)
Antimotility agent	Loperamide (1)	Diarrhoea (1)	No knowledge (1)
Miscellaneous	Hydroxymethylcellulose eye drops (1) Plantago ovato extract (*Isbagol*) (1)	Dryness of eyes (1) Constipation (1)	No knowledge (2)

Values in parenthesis represent n. Some participants carried more than one medication.

The majority of the respondents belonged to the stereotype of young males on a well-planned journey. The reason for the low number of female respondents could be due to the fact that in Indian Railways women prefer to travel in the coach reserved specifically for women rather than in mixed coaches, unless they are travelling with company.[10] The reason for planning the journey in advance is scarcity of train tickets, if travel plans are spontaneous.[11]

Although a substantial number of respondents consumed medications or herbal products on a regular basis, carried medicines with them during long-distance journeys, consumed medicines with or without consultation with medical professionals, only a small percentage of them had adequate knowledge about the meaning of 'over-the-counter (OTC) drugs', branded/generic products, and the indications/adverse events of the drugs which they consumed. Also, a very small number of partici-

pants carried medicines specifically to counter medical conditions that they might encounter while travelling, despite a substantial percentage of them claimed to have suffered from some form of a physical or psychological strain during their past long-distance travels. These findings indicate a need of initiatives to educate long-distance train travellers about the indications as well as the adverse effects of common OTC drugs such as NSAIDs, which may increase their preparedness. Since most respondents had little faith in pharmacies at railway stations, their quality may be improved so as to gain the trust of the passengers. Medical professionals must also spend more time with chronic patients so as to impart more information about the indications and the adverse effect of the prescribed drugs.[12] This may lead to a cautious/well-informed consumption of drugs by the patients and an increase in the reporting rate of adverse drug events by patients to doctors. Overall, policies should be framed to

increase the knowledge of medicines in the masses, especially the more vulnerable groups like domestic travellers.

The common medical conditions that the passengers suffered from during their long-distance train travel were a wide range of mild negative symptoms such as malaise, cough, headache, tiredness, sleepiness, and exhaustion. This collection of symptoms, also called as 'travel-fatigue', is also common in travellers in other modes of transportation.[6-13] Although, a majority of the participants actively sought help in case they encountered a medical problem while travelling, a substantial number did not want to do anything about it till their journey ended. This indicated that knowledge about the healthcare facilities provided by the Indian Railways and the drugs used to treat minor health problems encountered by travellers while travelling is sparse; hence, policy makers must take steps to generate more awareness about these two issues.

The Indian Railways provides a 'First Aid Box', containing essential medicines and dressing material, to the guard or train ticket collector to counter medical emergencies during the journey. Also, a helpline number '138' can be utilized by passengers to report their medical emergency while travelling. The station masters of each railway station have information about the doctors and hospitals in the vicinity, the facilities of which can be availed in case of a medical emergency.[14]

There is an increasing trend amongst Indian travellers in long-distance trains to use bottled water over home brought water as the quantity of the home brought water may be insufficient to last the entire journey and as most passengers do not prefer to refill their water bottles from the taps present at railway stations due to a risk of water-borne infections.[15,16] The age-old practise in India of drinking water by the cup of the hand is dwindling away with time, as observed in our study.

Similarly, since the majority of the passengers preferred pantry-food and a substantial number also complained of being ill after consuming pantry-food, the hygiene and cleanliness of the pantry should be adequately addressed by the Indian Railways. Also, due to the inconvenience of carrying their own utensils from home in the journey, a majority of the respondents seemed to prefer pantry-food.[17]

As majority of the passengers used their right hand for washing/wiping their rectum after passing stools, for opening/closing water taps after using the toilet, and also for eating their food, water taps present in toilets of railway coaches could be a potential source for the spread of enteric infections.[18] Hence, an adequate quantity of soap and hand sanitizer is needed in the toilets of railway coaches along with regular cleaning of the toilets at regular intervals to counter this risk.

The study had numerous limitations. First, the participants recruited in the study were few in number. Also, the study was conducted in the North-East division of the Indian Railways and included only participants who understood the English language leading to a selection bias. Hence, the inferences made in the study may have a questionable generalizability and may not represent the entire population. Second, the questionnaire designed was lengthy; hence, a substantial number of participants could not successfully complete the questionnaire. Third, although hand wash is an important component of personal hygiene while travelling, this issue was not addressed in a more direct fashion in the questionnaire. Information about the technique/timing of hand wash and whether the passengers carried hand sanitizers was not enquired. Fourth, although an association was found between the type of coach and some of the variables evaluated in the questionnaire, due to the low sample size the generalizability of this observation is questionable. However, despite these inadequacies of the study the data generated from the study is of great value as travel medicine is sparsely explored in India and data about the knowledge, perception, and attitude of the Indian population towards medicinal drugs, healthcare and hygiene while travelling in long-distance trains is absent, to the best of our knowledge. Future research targeting Indian travellers is necessary as the behavioural pattern portrayed by them may be different than those of Western travellers.

CONCLUSION

It was found that the knowledge about drugs in travellers in long-distance trains was not adequate. Hence, information about common OTC drugs needs to be delivered to the masses so as to increase their preparedness before a journey. Also, since most of the respondents had little knowledge about the healthcare facilities provided by the Indian Railways, steps need to be taken so as to create awareness about the same. Inculcating practises of improving hygiene and cleanliness while travelling will reduce the chances of acquiring infections during long-distance train travels.

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CONFLICT OF INTEREST

None to be declared

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