

Occupational hazards faced by railway assistants in railway industry

■ Savahat and Promila Sharma

Received: 28.12.2017; Revised: 22.04.2018; Accepted: 09.05.2018

■ **ABSTRACT :** In present study an assessment of demographic profile of railway assistants of Delhi and their health status was conducted. The railway assistants carried trunk, trolley bags, suitcases and cartons etc weighing with the weight ranging from 20 kg to 60 kg on daily basis. They used to travel from ½ km to 1 km in a day. Approximately they used to make the trip between 2 to 4. It was observed that preferable mode of load carrying was head and back. The quantum of load varied between 20-40 kg as reported by railway assistants. It was found that maximum number of railway assistants were between the ages of 30-50 years old. Various type of chronic illness as diabetes mellitus, respiratory disease, BP problem, stiffness in hand; cuts and wounds, burns, numbness in body and tingling in hand were reported by railway assistants.

■ **KEY WORDS:** Railway assistants, Load carrying, Numbness

■ **HOW TO CITE THIS PAPER :** Savahat and Sharma, Promila (2018). Occupational hazards faced by railway assistants in railway industry. *Asian J. Home Sci.*, 13 (1) : 334-337, DOI: 10.15740/HAS/AJHS/13.1/334-337. Copyright@ 2018: Hind Agri-Horticultural Society.

See end of the paper for authors' affiliations →

Savahat

College of Home Science, G.B.
Pant University of Agriculture,
Pantnagar, U.S. Nagar
(Uttarakhand) India
Email : sabahatwc.amu@gmail.
com

Railroads once made a significant impact on Indian transportation and commerce and improved the lives of millions of people who needed a cheap, efficient way to move around a big city. The presence of railroads brought economic prosperity to cities. It is a back-breaking job and railway assistant have to be healthy and strong enough to take the luggage up the stairs and walk along the platform. They are the ones on whose head and shoulders rest our bag and baggage, while we endlessly walk from one platform to another. Following us up and down the cross-platform bridges with tens of kilos of weight on their heads, it is certainly not an easy day for the licensed railway assistants. The railway assistants experience a higher rate of accident due to the heavy load carrying in their head and back.

The job of coolies is a back-breaking job. So, special attention in this field is must to avoid the risk and protect the railway assistants from the injuries.

There was an urgent need to conduct research on important issues that is the requirement of railway assistants for easy manual material handling, load carrying and avoid risks and accident to increase their lives. Keeping the above issues in mind, following objectives were inconsideration to find out the demographic profile of railway assistants, load carrying, mode of load carrying and health status.

■ RESEARCH METHODS

A demographic survey of the railway assistants was conducted. An interview schedule was prepared to assess

the various type of load carrying and associated health problems. Each railway assistants were interviewed for assessment of demographic profile and health status. Descriptive research design was used and one twenty railway assistants were interviewed. Descriptive statistical was used to analyze the data.

■ RESEARCH FINDINGS AND DISCUSSION

Out of 120 railway assistants, 37 railway assistants were from age group 31 to 35 years, 53 railway assistants from age group 36-40 years and 30 railway assistants from age group above 40 years. From Table 2 it is clear that that maximum number of railway assistants were between the ages of 36-40 years old.

Educational qualification :

It was found that the majority of the railway assistants were illiterate *i.e.* 38.33 per cent. Majority of the railway assistant who were having the age above 40 were illiterate. They were never attending any school.

Thus it can be concluded that the literacy rate among the railway assistant who were having the age above 40 years were very high.

Family type :

It was found from the Table 3 that the majority of the railway assistants were belongs to the nuclear family

i.e. 74.16 per cent. About 20.83 per cent belong to the joint family and rest 5 per cent railway assistants belong to the extended family.

Family size:

The small, medium and large families were noted as 32.5, 42.5 and 25 per cent, respectively. From the Table 4 it was revealed that majority of the railway assistants belong to the medium family.

Income (Rs. per month):

As category wise data was analysed, it was found from the Table 5 that the income of the railway assistants, maximum fall under the category of 2001-2500 *i.e.* 27.5 per cent. Thus, it can be concluded that on the bases of their income the railway assistants were very poor they were unable to continue their livelihood by their income.

Mechanical hazards :

The result regarding mechanical hazards experienced by railway assistants as shown in the table 6 revealed that majority of the railway assistants *i.e.* nearly 94.16 per cent and 100 per cent were encountering with the problem of awkward posture and forceful motion during work schedule, respectively followed by awkward grip as reported by 85.83 per cent of total railway assistants. A small proportion *i.e.* 16.66 per cent of total

Table 1 : Age profile of railway assistants (n=120)

Railway assistants information	Categories			Total
Age (years)	31-35	36-40	>40	Total
	37	53	30	120
Mean age	(30.83)	(44.16)	(25)	(100)

Figures in parentheses indicate the percentage values

Table 2 : Distribution of the railway assistants on the basis of educational qualification (n=120)

Educational qualification	Age in years			Total
	37 (31-35)	53 (36-40)	30 (Above 40)	
Illiterate	12 (10)	13 (10.83)	21 (17.5)	46 (38.33)
Can read and write only	4 (3.33)	7 (5.83)	3 (2.5)	14 (11.66)
Primary School			4 (3.33)	4 (3.33)
Middle School		2 (1.66)		2 (1.66)
High School	16 (13.33)	8 (6.66)	2 (1.66)	26 (21.66)
Up-to intermediate	1 (0.83)	4 (3.33)		5 (4.16)
Graduate	4 (3.33)	19 (15.83)		23 (19.16)
Any other please specify				

Figures in parentheses indicate the percentage values

Occupational hazards faced by railway assistants in railway industry

Table 3 : Distribution of the railway assistants on the basis of family type				(n=120)
Family type	Age in years			Total
	37 (31-35)	53 (36-40)	30 (Above 40)	
Nuclear	32 (26.66)	35 (29.16)	22 (18.33)	89 (74.16)
Joint	5 (4.16)	13 (10.83)	7 (5.83)	25 (20.83)
Extended		5 (4.16)	1 (0.83)	6 (5)

Figures in parentheses indicate the percentage values

Table 4 : Distribution of the railway assistants on the basis of family size				(n=120)
Family Size	Age in years			Total
	37 (31-35)	53 (36-40)	30 (Above 40)	
1-3 (Small)	15 (12.5)	18 (15)	6 (5)	39 (32.5)
4-7 (Medium)	11 (9.16)	25 (20.83)	15 (12.5)	51 (42.5)
>8 (Large)	11 (9.16)	10 (8.33)	9 (7.5)	30 (25)

Figures in parentheses indicate the percentage values

Table 5 : Distribution of the railway assistants on the basis of income				(n=120)
Income Rs. per month	Age in years			Total
	37 (31-35)	53 (36-40)	30 (Above 40)	
<2000	15 (12.5)	9 (7.5)	9 (7.5)	33 (27.5)
2001-2500	13 (10.83)	32 (26.66)	7 (5.83)	52 (43.33)
2501-3000	6 (5)	8 (6.66)	13 (10.83)	27 (22.5)
>3000	3 (2.5)	4 (3.33)	1 (0.83)	8 (6.66)

Figures in parentheses indicate the percentage values

Table 6 : Occupational hazards, accidents, risks or injury at work place						(n =120)
Are you facing any kind of hazards or accident in your work place?						Total
						(100)
Sr. No.	Type of hazards	Reasons of hazard	No. of railway assistants			
			37 (31-35)	53 (36-40)	30 (>40)	
1.	Mechanical/ ergonomically	Repetitive task	12 (10)	8 (6.66)	-	20 (16.66)
		Awkward posture	33 (27.5)	51 (42.5)	29 (24.16)	113 (94.16)
		Awkward grip	26 (21.66)	48 (40)	29 (24.16)	103 (85.83)
		Forceful motion	37 (30.83)	53 (44.16)	30 (25)	120 (100)
2.	Biological	Rashes/ allergy	8 (6.66)	10 (8.33)	4 (3.33)	22 (18.33)
		Skin infection	-	-	-	-
		Itching	6 (5)	15 (12.5)	12 (10)	33 (27.5)
3.	Physical	Lifting	36 (30)	52 (43.33)	30 (25)	118 (98.33)
		Pulling	37 (30.83)	53 (44.16)	30 (25)	120 (100)
		Pushing	37 (30.83)	53 (44.16)	30(25)	120 (100)
		Loading	30 (25)	45 (37.5)	25 (20.83)	100 (83.33)
		De-loading	15 (12.5)	20 (16.66)	10 (8.33)	45 (37.5)
		Tiring position	37 (30.83)	53 (44.16)	30 (25)	120 (100)
		Slip, trips and falls	26 (21.66)	32 (26.66)	18 (15)	76 (63.33)
4.	Environmental	Temperature	34 (28.33)	50 (41.66)	30 (25)	114 (95)
		Humidity	37 (30.83)	53 (44.16)	30 (25)	120 (100)
		Noise	31 (25.83)	49 (40.83)	25 (20.83)	105 (87.5)
		Light	-	20 (16.66)	-	20 (16.66)

Figures in parentheses indicate the percentage values

railway assistants had reported hazards with repetitive work.

Biological hazards :

Various biological hazards reported by railway assistants were rashes/ allergy, and itching which might be caused mainly due to the different type of load carrying such as metal and other luggage.

In the summative response, itching was reported by majority of total railway assistants (*i.e.* 27.5 %) followed by rashes/allergy which was reported by nearly 18.33 per cent of total railway assistants and none of them had complained the problem of skin infection.

Physical hazards :

Physical hazards are a combination of hazards from lifting, tiring position, pulling, pushing, loading, de-loading and slip trips and falls. It is evident from the Table 6 that majority of the total railway assistants *i.e.* nearly 100 per cent were suffering from physical hazards due to tiring position, pulling and pushing for longer period of time followed by nearly 98.33 per cent who were suffering from lifting and more than 50 per cent of the total railway assistants had reported physical hazards due to heavy loading of load. Less than 37.5 per cent of the total railway assistants had reported due to the de-loading of load (Jena *et al.*, 2015).

Environmental hazards :

There were many reasons for environmental hazards which include noise, temperature (cold as well as hot), light, humidity and crowded area as showed in Table 6. Majority of the total railway assistants *i.e.* 100 per cent had reported humidity as the major environmental problem faced by them and light was the least reported problem by only 16.66 per cent of total railway assistants.

The result were in the line with the finding of Lindstrom and Vuori(1984) who reported that disturbance in work performance due to noise was greater especially when estimated noise level was higher. Noise creates annoyance and distracts the mind thus chances of committing error was high.

Conclusion:

It is clear that that maximum number of railway assistants were between the ages of 36-40 years old. The literacy rate among the railway assistant who were having the age above 40 years was very high. Majority of the railway assistants were belonging to the nuclear family *i.e.* 74.16 per cent. It was also found that the majority of the railway assistants belong to the medium family. It was concluded that railway assistants faced biological, environmental, physical and mechanical hazards at their work place.

Authors' affiliations:

Promila Sharma, College of Home Science, G.B. Pant University of Agriculture, Pantnagar, U.S. Nagar (Uttarakhand) India

■ REFERENCES

Jena, S., Kumar, A. and Singh, Divison, J. (2015). Assessment of manual load carrying and health status of women farm workers of district Sonipat (Haryana), India. *J. Appl. & Natural Science*.

Lindstrom, K. and Vuori, J. (1984). Relationship between environmental factors, job satisfaction and mental strain in an open-plan drafting office. Cited in *Ergonomics and Health in Modern Offices* edited by E. Grandjean. Taylor and Francis London and Philadelphia

■ WEBLIOGRAPHY

Retrieved from <http://www.ansfoundation.org/Uploaded%20Pdf/71/229-234.pdf>

13th
Year
★★★★★ of Excellence ★★★★★