

## A Study on Occupational Stress and Job Satisfaction among Railway Loco Pilots with Special Reference to Age and Experience

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### ABSTRACT

The current study was designed to determine the relationship between Occupational Stress and Job Satisfaction among Railway Loco Pilots with particular reference to Age and Experience. To assess Occupational Stress, the OSI (Occupational Stress Index) questionnaire developed by Dr. A.K. Srivastava and Dr. A.P Singh was used while to assess the Job Satisfaction “Job Satisfaction Questionnaire” (JSQ-OH) by Hardeo Ojha was used. The sample for the study was gathered by the Random Sampling method. A sample of 500 Loco Pilots was selected from the Northeast Frontier Railway (NFR). The collected data were analyzed statistically by using mean, SD, and correlation techniques. The results of this analysis show that Occupational Stress and Job Satisfaction are significantly correlated. Regarding variable, Age and Experience it is established by the study that while age levels are not a determining factor of Job Satisfaction of the Loco Pilots, experience levels play a significant role in the determination of their Job Satisfaction.

**Keywords:** *Occupational Stress, Job Satisfaction, and Loco Pilots*

**O**ccupational Stress-Occupational Stress can be described as excessive physical, mental, and emotional draining of energy in the workplace. It manifests itself in different forms, including anxiety, aggression dependency, or withdrawal. Building up of Occupational Stress can lead to increasingly destructive habits ranging from dissatisfaction with the job and reduced self-esteem to increased absenteeism, reduced work output, and harmful coping measures such as drinking and smoking. In this fast-moving and constantly connected twenty-first century world, employees and professionals, working in all types of organizations across sectors and geographies, whether large or small, public or private, are affected to a significant degree by Occupational Stress, which is not only causing negative effect on employee productivity, mental and emotional health but is also leading to reduced efficiency and financial loss to the organization.

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**Job Satisfaction**-Job Satisfaction or Employee Satisfaction may be defined as a perceived feeling of an employee towards his work. In the simplest terms, it denotes how satisfied a person is with their employment, whether or not they like the position itself or certain features of their work, including the kind of work or supervision. Job Satisfaction as explained by Locke (Lutharans, 2002) is a “**pleasurable or emotional state resulting from the appraisal of one’s job experience**”. Job satisfaction often results from a worker's insight into whether his job gives him the results he considers significant, and it is evaluated by how well the job's results meet or surpass the employee's expectations. In such a situation, excessive job-related stress can negatively affect the satisfaction one derives from the job.

**Railway Loco Pilots**- The term ‘Loco Pilot’ refers to the engine drivers of the Indian Railways. Among all the categories of Railway employees in India, the job of the Loco Pilot is considered to be one of the most demanding and stressful due to the high physical and psychological demands of work and the high degree of responsibility. The Loco Pilot is responsible to carry the train safely to its destination, along with maintaining punctuality and comfort of the passengers. Any lack of concentration on the part of the Loco Pilot may lead to a situation of Signal Passing at Danger (SPAD), which can cause accidents potentially leading to the deaths of hundreds of passengers. The Loco Pilots can be divided into four broad categories or levels based on their role and seniority within the organization-

1. The first level is the **Assistant Loco Pilot (ALP)**, which is the initial post held by newly recruited railway drivers. They are usually not involved in driving the train but assist the main driver in several ways including calling out signals, monitoring the status of the locomotive, etc.
2. The next level is the **Loco Pilot (Shunting)**, who are mainly deployed to carry out shunting activities in railway yards-attachment/detachment of coaches and placement of trains on platforms etc.
3. The third level is the **Loco Pilot (Goods)**, which carries out the movement of freight trains.
4. The final level is the **Loco Pilot (Passenger & Mail)**, who are the senior Loco Pilots, deployed to carry out the movement of passenger-carrying trains. Each category or level has its own set of unique working conditions, which are likely to affect the levels of Occupational Stress, Job Motivation, and Job Satisfaction in different ways.

Railway workers and train drivers were the subjects of a 1994 study of job stress by **Shah Alam and Ansari**. According to the results of the study, there were differences between guards and drivers w.r.t some of the stressors and overall job stress. Study of Occupational Stress among Railway Engine Pilots, a 2011 paper, has been published. In her 2016 study, **Chatterjee Pooja** examined the job satisfaction, stress levels, and mental health of employees in the banking and IT sectors, two professions that work in both the public and private sectors. For this reason, Dr. B.C. Muthayya developed the Job Satisfaction Questionnaire, while Dr. A.K. Srivastava and A.P. Singh developed the OSI. It purports to determine the level of stress employees experience in relation to 12 different areas.

### ***Significance of the study***

The main objective of the current study is to identify the different levels of Occupational Stress and Job Satisfaction in relation to Work Experience and Age. The influence of some moderating variables like Age and Work Experience are also studied in relation to the

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selected variables. Apart from this, the correlation between Occupational Stress & Job Satisfaction has also been further studied in this present study.

### **MATERIALS AND METHODS**

#### ***Statement of the Problem***

The current study seeks to explore "Occupational Stress and Job Satisfaction among Railway Loco Pilots with special reference to Age and Work Experience".

#### ***Objectives***

The objectives of the study are –

1. To assess the Loco Pilot's Occupational Stress levels in relation to their Age and Work Experience.
2. To assess the Loco Pilot's Job Satisfaction levels in relation to Age and Work Experience
3. To assess the relationship between Occupational Stress and Job Satisfaction of the Loco Pilots

#### ***Hypothesis***

1. There exists no significant difference in Occupational Stress of the Railway Loco Pilots in relation to their age and work experience
2. There exists no significant difference in Job Satisfaction of the Railway Loco Pilot in relation to their age and work experience
3. There exists no significant relationship between Occupational Stress and Job Satisfaction of the Railway Loco Pilot.

#### ***Variables***

1. Dependent Variables- Occupational Stress
2. Independent Variables- Job Satisfaction and
3. Moderating Variables-Age and Work Experience

#### ***Population and sample***

The population of the present study comprised a total of 1460 Loco Pilots working in the Indian Railways in Northeast Frontier Railway (NFR). From 1460 Loco Pilots only 500 Pilots were selected using a systematic random sampling technique.

#### ***Tools***

In the study, Occupational Stress Index (OSI) by Dr. A.K. Srivastava and Dr. A.P. Singh and Satisfaction "Job Satisfaction Questionnaire" (JSQ-OH) by Hardeo Ojha was used to assess the Occupational Stress and Job Satisfaction of the Loco Pilots.

#### ***Procedure***

Before collecting data from the Loco Pilots, working in the Indian Railways, the researcher took permission from the General Managers and Divisional Senior Managers of the Northeast Frontier Railway (NFR) to contact the Loco Pilots included in the sample of the study. Then the researcher approached each member of the sample personally and gave the questionnaire to them. They were provided with proper instructions to complete it. They were given one month to complete the questionnaires and after one month the questionnaires were collected from them.

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**Statistical Techniques**

The data collected with the help of the questionnaire from the sample are subjected to relevant statistical analysis, such as Correlation, Inferential Statistics (t-test), and Descriptive Statistics (Mean, Standard Deviation).

**TABLES AND GRAPH**

**Table No 1: Occupational Stress in relation to Age Level and Work Experience Level of the Loco Pilots**

Levels of Occupational Stress	No and % of Loco Pilots in Age Levels			Total	No. and % of Loco Pilots in Experience Levels		Total
	Average	High	Low		High	Low	
<b>High</b>	14 (10.22%)	4 (1.58%)	4 (3.64%)	22 (4.4%)	18 (4.23%)	4 (5.40%)	22 (4.4%)
<b>Low</b>	66 (48.18%)	119 (47.04%)	63 (57.27%)	248 (49.6%)	202 (47.42%)	46 (62.16%)	248 (49.6%)
<b>Moderate</b>	57 (41.61%)	130 (51.38%)	43 (39.09%)	230 (46%)	206 (48.36%)	24 (32.43%)	230 (46%)
<b>Total</b>	137	253	110	500	426	74	500

**Table No. 2: Chi-Square Test of Significance**

Variables	Pearson Chi-Square	N	df	Significance	Remark
<b>Age</b>	2.891 <sup>a</sup>	500	4	.576	N.S
<b>Experience</b>	8.933 <sup>a</sup>	500	2	.011	Sig. at .01

**Table No 3: Job Satisfaction in relation to Age Level and Work Experience Level of the Loco Pilots**

Level	Age Level			Total	Experience Levels		Total
	Average	High	Low		High	Low	
HD	0	0	1	1	1	0	1
HDS	1	2	2	5	3	2	5
HS	30	70	39	139	107	32	139
MDS	62	25	7	94	87	7	94
MS	18	57	25	100	80	20	100
VHDS	1	6	0	7	7	0	7
VHS	25	93	36	154	141	13	154
<b>Total</b>	137	253	110	500	426	74	500

**Table No 4: Chi-Square Test of Significance**

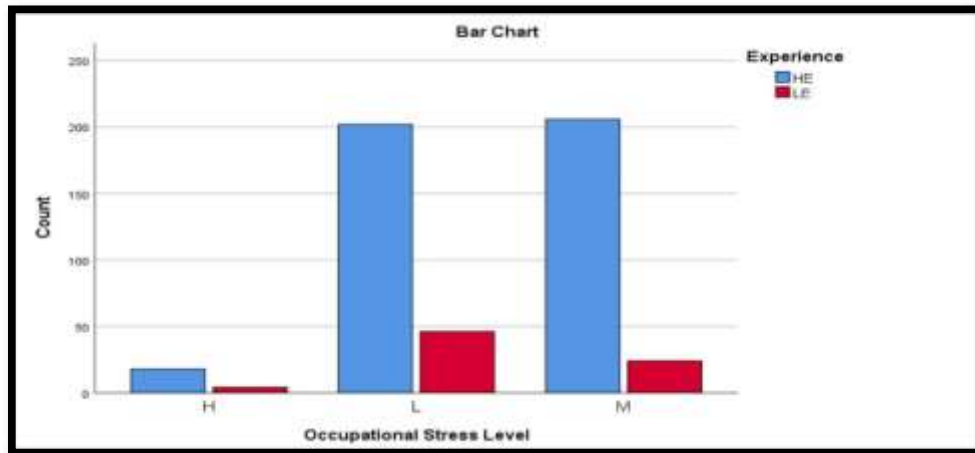
Variables	Pearson Chi-Square	N	Df.	Significance	Remark
<b>Age</b>	2.891 <sup>a</sup>	500	4	.576	N.S
<b>Experience</b>	8.933 <sup>a</sup>	500	2	.011	Sig. at .01

**Table No 5: Correlation between Job Satisfaction and Occupational Stress**

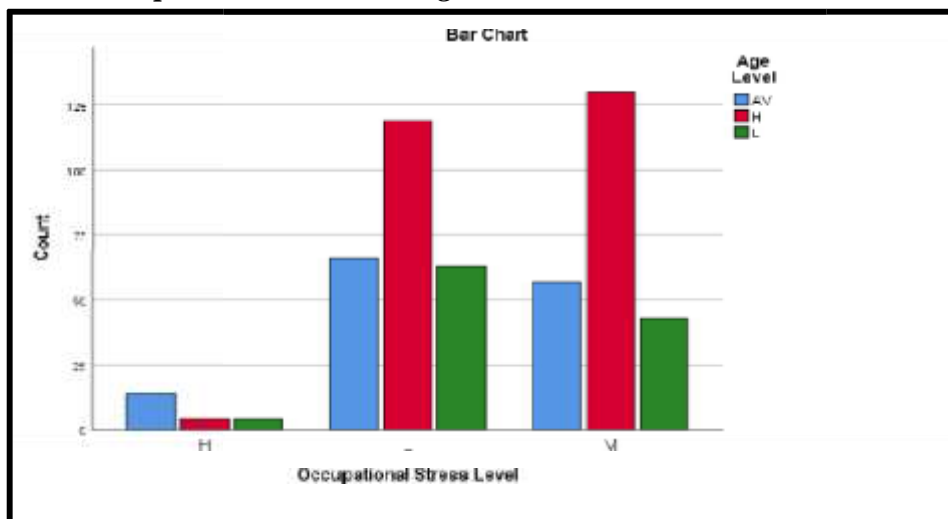
	Mean	Std. Deviation	N	Pearson Correlation	Significance	Remark
O. S	123.3860	19.18962	500	.069	.126	N. S
JSS	21.6660	6.10615	500			

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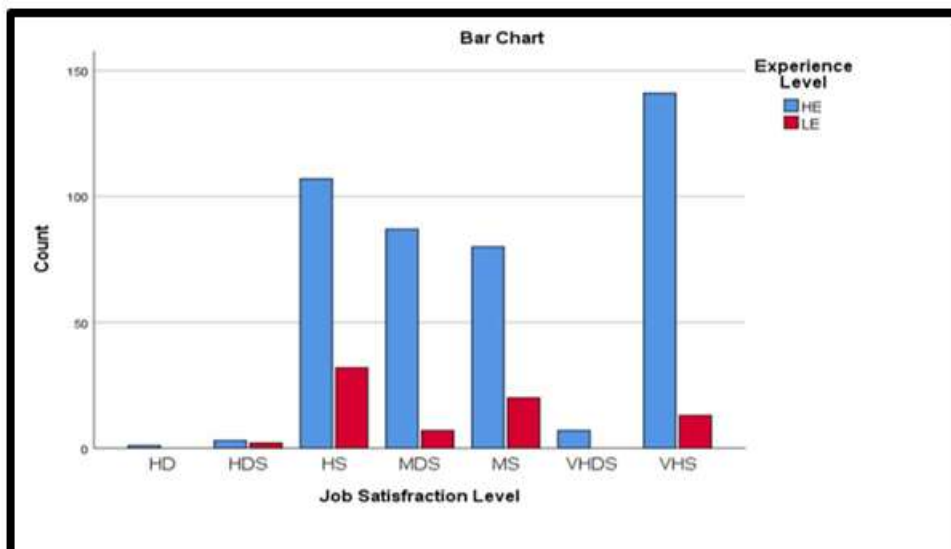
**Fig.No.1: Occupational Stress and Experience**



**Fig.No.2: Occupational Stress and Age**

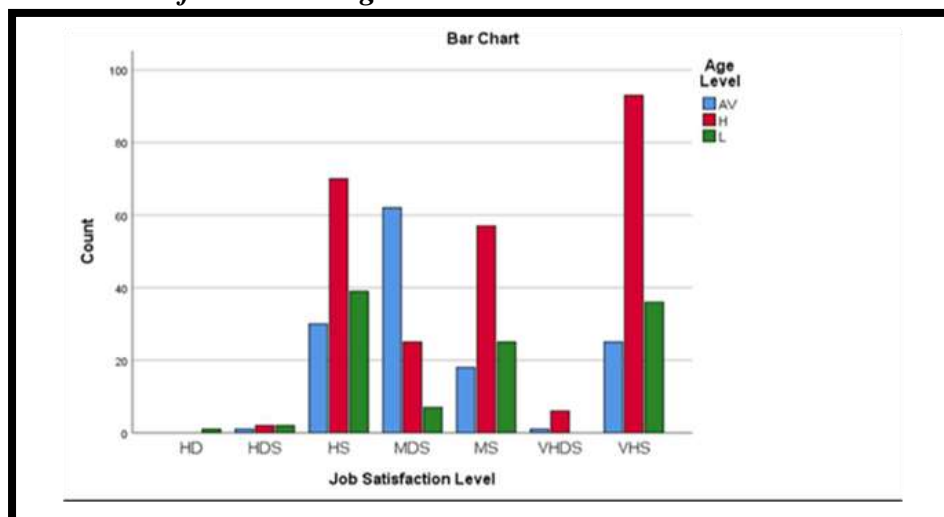


**Fig.No.3: Job Satisfaction and Work Experience**



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**Fig.No.4: Job Satisfaction and Age**



**Table 1** shows that the Occupational Stress level of the Loco Pilots belonging to the older group i.e., above 46 years (High Age Level) have a score of 253, which can be interpreted as they have a higher level of Occupational Stress in comparison to the Lower Age Level i.e., below 46 years (Low Age Level). The collected data shows that the Loco Pilots belonging to the higher age group have high levels of Occupational Stress than those belonging to the younger group. Accordingly, the Loco Pilots who have more work experience have scores such as High-18, Low- 202, and Moderate-206 which stands to a total of 426 and the Loco Pilots who have less work experience have a score of 4, 46, and 24 which stands to a total of 74, which can be interpreted as the Loco Pilots who have more work experience have the highest Occupational Stress level as contrasted with those who belong to the less experienced group.

**From Table No 2,** It is observed that the Chi-Square value of different levels of Age and different levels of Occupational Stress is 2.891 with a d.f of 4. It shows no significant relationship between age and the levels of Occupational Stress. In the case of the different levels of Work Experience and Occupational Stress the Chi-Square value is 8.933 with a d.f of 2. Thus, it can be concluded that Age is not a determining factor of the Occupational Stress of the Loco Pilots while Work Experience is a potential factor that determines the Occupational Stress of the Loco Pilots.

**Table No 3** reveals that the Job Satisfaction level of the Loco Pilots belonging to the older group i.e., above 46 years (High Age Level) has a score that can be interpreted as they have a higher Job Satisfaction level in comparison to the Lower Age Level i.e., below 46 years (Low Age Level). Accordingly, Loco Pilots with higher work experience report higher job satisfaction levels than those with less experience.

**Table No 4** reveals that the Chi-Square value of different levels of Age and different levels of Job Satisfaction is 97.472 with a d.f of 12. In the case of the different levels of experience and Job Satisfaction, the Chi-Square value is 22.472 with a d.f of 2. Both the Work Experience and Age show high levels of the relation between the work experience and the age of the Loco Pilots. Thus, it can be concluded that both Age and Work Experience is a potential factor that determines Job Satisfaction.

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**Table No 5** reveals a correlation of .069 which signifies a non-significant correlation. Thus, it may be inferred that the association between Job Satisfaction and Occupational Stress not considered as Job Satisfaction cannot be considered as a variable that may cause Occupational Stress.

### **DISCUSSION**

Based on the above result of the present research, it may be determined that-

1. The Occupational Stress Level Loco Pilots belonging to the older group have a higher level of Occupational Stress and the level of Occupational Stress of Loco Pilots belonging to the younger group have a lower level of Occupational Stress than the older ones.
2. The Occupational Stress level of the Loco Pilots who have high work experience have higher levels of Occupational Stress and the Occupational Stress level of the Loco Pilots who have less work experience have lower levels of Occupational Stress.
3. The Job Satisfaction level of Loco Pilots belonging to the older group have a higher level of Job Satisfaction and the level of Job Satisfaction of the Loco Pilots belonging to the younger group have a lower level of Job Satisfaction than that of the older ones.
4. The Job Satisfaction level of the Loco Pilots who have high work experience have higher levels of Job Satisfaction whereas the Loco Pilots who have less work experience have lower levels of Job Satisfaction.
5. The correlation between Job Satisfaction and Occupational Stress is not significant as Job Satisfaction is not a variable that may cause Occupational Stress.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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