

### **3.1. STATEMENT OF THE PROBLEM**

The industry of aviation has a high level of capital concentration. Inaccessibility of commercial pilots, ATF air terminal fees, higher capital costs, and strict work restrictions are only a few of the main issues that all airline organizations are currently facing. The aviation industry is similarly labor-intensive to power. Extremely skilled workers to untalented workers are the two extremes of the aviation industry's workforce. The workforce is split and complex by its very nature. The management of any airline firm finds it challenging to manage a variety of staff. The Indian aviation business faces several challenges, and there is growing resistance to keeping staff in light of their knowledge, specialized skills, and talents.

Employers have incorporated relationships between employees' levels of engagement, JS, and WLB as an important human asset strategy (Sharma et al. 2022). All three are thought to be important factors that affect organizational performance. It is absolutely necessary for organization to run smoothly. The competition in Indian aviation business is fierce, thus it's essential to retain talented workers in order to develop core competencies and gain a competitive edge. Being a service business, aviation plays a significant role in identifying and meeting traveller demands. It demands that employees be committed to and enthusiastic about their work, which may be achieved by regularly establishing and maintaining a healthy WLB, which in turn increases JS. A contented employee provides their all for the company. This worry stems from two factors. This worry stems from two factors. First, to help retain employees, and then to raise their level of performance.

Employees play crucial role in performance of service organizations like airlines. Airlines companies make an effort to provide the greatest service in order to increase profits, and ultimately happy customers result in larger industry profits. However, these organizational goals are achieved thanks to contented workers. The aviation industry can achieve high organizational viability with an idea of flourishing, an ethical life, and the

accomplishment of goals with job happiness. Organizations should start an employee engagement programme and maintain a nature of work life to accomplish JS. The relationship between EE, WLB, and JS has not been the focus of research. Focusing on the impact of employee engagement, WLB and JS is necessary to hide the totality. This study aims to explain how WLB and EE affect job satisfaction in the aviation sector.

### **3.2 OBJECTIVES OF THE STUDY**

Major objective of study is to explore the effect of EE and WLB on JS, with one dependent variable as: JS and two independent variables as: EE and WLB. Objectives of present study are:

Objective 1: To study difference of demographic variable among Indian aviation industry employees

Objective 2: To study significant relationship between EE and JS in aviation Industry.

2.1. To study the significant relationship between vigor and dimensions of JS(salary, promotion, supervision, benefits, contingent rewards, operating procedure, co- workers, nature of work, communication) in the aviation industry.

2.2. To study the significant relationship between dedication and dimensions of JS in the aviation industry.

2.3. To study significant relationship between absorption and dimensions of JS in the aviation industry.

Objective 3: To study the significant relationship between WLB and JS in the aviation industry.

3.1. To study significant relationship between WPLS and dimensions of JS in aviation industry.

3.2. To study the significant relationship between Personal life to work strains (PLWS) and dimensions of JS in aviation industry.

3.3. To study significant relationship between WPLG and dimensions of JS in aviation industry.

3.4. To study the significant relationship between Personal life to work gains (PLWG) and dimensions of JS in aviation industry.

Objective 4: To study that employee engagement will significantly predict job satisfaction in aviation industry.

4.1. To study that vigor will significantly predict dimensions of JS in aviation industry.

4.2. To study that dedication will significantly predict dimensions of JS in aviation industry.

4.3. To study that absorption will significantly predict dimensions of JS in aviation industry.

Objective 5: To study that work life balance will significantly predict dimensions of JS in aviation industry.

5.1 To study that Work to personal life strains (WPLS) will significantly predict dimensions of JS in aviation industry.

5.2 To study that Personal life to work strains (PLWS) will significantly predict dimensions of JS in aviation industry.

5.3 To study that Work to personal life gains (WPLG) will significantly predict dimensions of JS in aviation industry.

5.4 To study that Personal life to work gains (PLWG) will significantly predict dimensions of JS in aviation industry.

### **3.3 HYPOTHESES**

The investigation has been initiated in order to test the hypothesis listed below:

H1. Demographic variable makes no significance difference towards job satisfaction among Indian aviation industry employees.

H2. There is significant and positive relationship between EE and JS in aviation industry.

H2a. There is significant relationship between vigor and dimensions of JS (salary, promotion, supervision, benefits, contingent rewards, operating procedure, co-workers, nature of work, communication) in aviation industry.

H2b. There is significant relationship between dedication and dimensions of JS in aviation industry.

H2c. There is significant relationship between absorption and dimensions of JS in aviation industry.

H3. There is significant relationship between WLB and dimensions of JS in aviation industry.

H3a. There is significant relationship between WPLS and dimensions of JS in aviation industry.

H3b. There is significant relationship between PLWS and dimensions of JS in aviation industry.

H3c. There is significant relationship between WPLG and dimensions of JS in aviation industry.

H3d. There is significant relationship between PLWG and dimensions of JS in aviation industry.

H4. Employee engagement will significantly predict dimensions of JS in aviation industry.

H4a. Vigor will significantly predict dimensions of JS in aviation industry.

H4b. Dedication will significantly predict dimensions of JS in aviation industry.

H4c. Absorption will significantly predict dimensions of JS in aviation industry.

H5. Work life balance will significantly predict dimensions of JS in aviation industry.

H5a. WPLS will significantly predict dimensions of JS in aviation industry.

H5b. PLWS will significantly predict dimensions of JS in aviation industry.

H5c. WPLG will significantly predict dimensions of JS in aviation industry.

H5d. PLWG will significantly predict dimensions of JS in aviation industry

### **3.4 RESEARCH DESIGN**

The researcher can conduct their research more effectively with the help of the research design. According to Thyer (1994), "A research design can be thought of as either a blueprint or a more in-depth plan for the execution of a research investigation. This includes making the variables measurable by operationalizing them, choosing an interesting sample to investigate, gathering data to serve as a foundation for testing hypotheses, and analysing the findings of the research project."

Present research is focused on examining the relationship and influence of JS on EE and WLB of employees in the Indian aviation industry. As a result, a causal research design has been used based on the nature of study's aims. EE and WLB are considered as the IV in the current study, while JS is treated as the DV. Using the appropriate statistical tools, the impact of IV dimensions on DV has been further examined in relation to the relationship of the IV with DV.

Based on data type, it is quantitative research. In terms of time perspective, this study is cross-sectional research as only one time data is gathered from respondents. In terms of research approach, this study is deductive as conceptual framework is developed through literature and this framework is being tested with primary data (Saunders et al. 2009).

### **3.5 POPULATION**

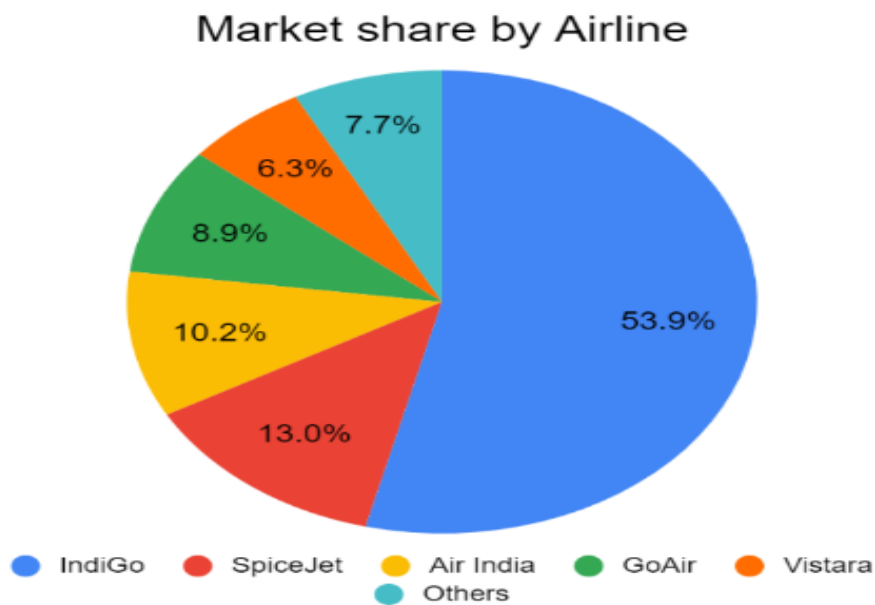
Employees working in various Indian aviation industries has been taken as the population of the study. India has a total of 464 airports, 125 of which are managed by the

country's Airport Authority of India (AAI). AAI is responsible for over 78% of all passenger travel on a national level and 22% of all passenger traffic on an international level. For the purpose of the study, AAI was chosen.

Formulating as a sample frame top 6 airlines industry was chosen on the basis of their market capitalization. The Table 7 shows the list of Indian aviation industry included in the study.

**Table 7: Indian aviation industry selected for the Study**

S. No	Name of Indian aviation industries
1	Indigo
2	Spice Jet
3	Air India
4	Go Air
5	Vistara
6	Others



**Figure 14: Market share of various airlines**

### 3.6 SAMPLE TECHNIQUE

Non-probability sampling was recommended by (Saunders et al. 2009) for use in business and management research, particularly when studying huge populations. The study

used a non-probability sampling technique. Since they have relevant knowledge and experience in the field, the top middle level and junior level management workers are picked for this study. These sampling techniques make it possible to get data from all Indian states. The samples were from several of Indian states, including Delhi, Karnataka, Tamil Nadu and Maharashtra, UP, Andhra Pradesh, West Bengal, Uttarakhand and Gujarat.

### 3.7 SAMPLE SIZE

For identifying the appropriate sample size for this study three criteria were used by the researcher:

#### **Criteria 1: Determining the sample size on basis of number of population.**

The population size is determined to be more than 1,00,000 in Indian aviation industry. Israel (2013) in his study has determined that the 400 sample size is considered to be an appropriate number for the population size of more than one lakh with the precision level of 5% and confidence level 95% (exhibited in table). As 95% confidence level is often used in the management research (Rumsey, 2016), 739 samples is considerable for this study.

**Table 8: Sample Size required from a given population**

<b>Population size</b>	<b>Sample size for precision of <math>\pm 5\%</math></b>
500	222
1,000	286
5,000	370
10,000	385
15,000	390
20,000	392
25,000	394
50,000	397
100,000	398
>100,000	400

*Source: Israel, G.D. (2013)*

#### **Criteria 2: Sample size on basis of number of observed variables**

The sample size is calculated on basis of the number of observed variables. Data which are normally distributed, Bentler & Chou (1987) have proposed that a ratio of five cases per variable is more than enough when working with data that has a normally distributed distribution. According to the rule of thumb, it is sufficient to set a lower bound on sample size with a minimum of five cases or observations for each indicator variable (Nunnally, 1967). Because there were 79 variables that were observed during the course of this research, the recommended sample size is 395.

### **Criteria 3: Sample size on basis of formula suggested by Cochran (1963)**

Minimum sample size for study was also calculated based on formula given by Cochran (1963) which is

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where:

- e is desired level of precision (i.e. the margin of error),
- p is (estimated) proportion of the population which has attribute in question,
- q is 1 – p.

Z- values found in Z table.

\* A 95 % confidence level gives us Z values of 1.96, per the normal tables, so we get

$$((1.96)^2 (0.5) (0.5)) / (0.05)^2 = 385.$$

By using this formula the minimum sample size calculated to conduct this research at 95 % confidence level, margin of error 5 %, population proportion of 0.5 for unlimited population size.

### **Criteria 4: Sample size on basis of (Altunisik et al. 2005) recommendations.**

In general, sample size between 30 and 500 at 5% confidence level is sufficient



for social science researches (Altunisik et al. 2005). Sample size of 500 is chosen for this study based on the recommendation of Altunisik et al. (2005).

Thus, fulfilling the entire criteria, the researcher has taken 739 as sample size for this study.

Total of 873 questionnaires were distributed, aiming to receive 750 responses to the survey. The return rate was 89.1%, which was calculated based on the fact that 778 out of 873 questionnaires were found. The researcher considered 39 of the total 778 responses to be incomplete and therefore removed them from consideration. Therefore, 739 responses were used for the study questionnaires.

### 3.8 DEMOGRAPHIC PROFILE OF THE RESPONDENTS:

It play a vital role to know about the human population and states that how population are structured and change. It offers a basis for determining whether individual chosen in study is illustrative sample of chosen population for the purpose of generalization. As types of demographic variables, this study makes use of subjects' ages, genders, levels of designation, educational qualifications, and years of professional experience. Table 9 displays descriptive statistics for the demographic factors of interest (gender, age, educational degree, work experience, marital status, and designation)

**Table 9: Demographic variables frequency table**

<b>Demographic Variable</b>	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>		
Male	405	54.8
Female	334	45.2
Total	739	100
<b>Age</b>		
20-30	158	21.4
31-40	276	37.3
41-50	187	25.3
51-60	118	16.0
Total	739	100
<b>Educational Qualification</b>		
Diploma	150	20.3
Graduation	403	54.5

Post-Graduation	186	25.2
Total	739	100
<b>Work Experience (years)</b>		
Below 5	140	18.9
5-10	289	39.1
11-15	203	27.5
Above 15 years	107	14.5
Total	739	100
<b>Marital Status</b>		
Married	408	55.2
Unmarried	331	44.8
Total	739	100
<b>Designation</b>		
Senior level	137	18.5
Middle level	382	51.7
Junior level	220	29.8
Total	739	100

### 3.9 Hypothesis testing on Demographic variable through ANOVA Test

H0(1): Demographic variable makes no significant difference towards JS among Indian Aviation Industry employees.

1.1 Gender makes no significance perceptual difference towards job satisfaction in Indian aviation industry.

**Table 10: ANOVA test on gender basis**

Gender	N	Mean	F Value	Sig.
Male	405	3.64	1.71	0.19
Female	334	3.71		
Total	739	3.67		

The results of ANOVA shows, since ( $F=1.71$  and  $p=0.19 > 0.05$ ), the null hypothesis is accepted. Therefore, inference can be taken that there is no significant perceptual difference towards JS with respect to gender in Indian aviation industry. However, not much difference in level of JS among employees in terms of gender.

1.2 Age makes no significance perceptual difference towards job satisfaction in Indian aviation industry.

**Table 11: ANOVA test on age basis**

Age	N	Mean	F Value	Sig.
20-30	158	3.6592	0.73	0.53
31-40	276	3.7026		
41-50	187	3.7047		
51-60	118	3.5887		
Total	739	3.6757		

The results of ANOVA as shown in table 11. Since ( $F= 0.73$  and  $p= 0.53 > 0.05$ ), the null hypothesis is accepted. Therefore, it can be inferred that there is no significant perceptual difference towards JS with respect to age in Indian aviation industry. The result shows that employees under age group 31-50, are having higher job satisfaction. It is because they are more enthusiastic to work and since they know their work efficiently and perks that come with maintaining a long career, including higher salaries, better benefits and success in the workplace.

1.3 Educational qualification makes no significance perceptual difference towards job satisfaction in Indian aviation industry.

**Table 12: ANOVA test on education basis**

Educational Qualification	N	Mean	F Value	Sig.
Diploma	150	3.5867	1.27	0.27
Graduation	403	3.6955		
Post-Graduation	186	3.7044		
Total	739	3.6757		

The result of ANOVA shows, since ( $F= 1.27$  and  $p= 0.27 > 0.05$ ), null hypothesis is accepted. Therefore, inference can be taken that there is no significant perceptual difference towards JS with respect to educational qualification in Indian aviation industry. The results show that employees who have completed their post-graduation were having higher level of job

satisfaction. This is because higher educated people get better jobs than lower educated people and are more satisfied.

1.4 Experience makes no significance perceptual difference towards job satisfaction in Indian aviation industry.

**Table 13: ANOVA test on experience basis**

Experience	N	Mean	F value	Sig
below 5 yrs	140	3.6238	2.01	0.11
5-10 yrs	289	3.7597		
11-15 yrs	203	3.6381		
above 15 yrs	107	3.5877		
Total	739	3.6757		

The results of ANOVA as shown in table. Since ( $F= 2.01$  and  $p= 0.11 > 0.05$ ), null hypothesis is accepted. Therefore, inference can be taken that there is no significant perceptual difference towards JS with respect to experience in Indian aviation industry. The employees having the experience between 5-10 yrs observed higher level of JS. These employees are more punctual, productive, committed, and satisfied in their lives. They have less family responsibility and progressive for their jobs so their dedication level is more.

1.5 Marital status makes no significance perceptual difference towards job satisfaction in Indian aviation industry.

**Table 14: ANOVA test on marital status basis**

Marital Status	N	Mean	F Value	Sig.
Married	408	3.6544	0.7	0.4
Unmarried	331	3.7018		
Total	739	3.6757		

The results of ANOVA as shown in table. Since ( $F= .070$  and  $p= 0.40 > 0.05$ ), null hypothesis is accepted. Therefore, inference can be taken that there is no significant perceptual

difference towards JS with respect to experience in Indian aviation industry. The unmarried employees have observed more job satisfaction. This is because employees who are married value their family relationships more than their careers, while employees who are single value their careers.

1.6 Designation makes no significance perceptual difference towards Job Satisfaction in Indian Aviation Industry.

**Table 15: ANOVA test on designation basis**

Designation	N	Mean	F Value	Sig.
Senior level	137	3.59	0.97	0.37
Middle level	382	3.68		
Junior level	220	3.71		
Total	739	3.68		

The results of ANOVA shows, since ( $F= 0.97$  and  $p= 0.37 > 0.05$ ), null hypothesis is accepted. Therefore, inference that there is no significant perceptual difference towards job satisfaction with respect to designation in Indian Aviation Industry. Employees at senior level of organizational hierarchy were found to be less satisfied with job as compared to junior level. Middle-level workers are more satisfied with their jobs than executives or people in competitive entry-level roles. In the aviation industry, both public and private sectors were found to be exhibiting this pattern. Higher life quality and job satisfaction are associated with middle positions. The reasons included: less accountability and the possibility of being "hauled up," greater flexibility in organising one's workday, management with more reasonable and modest expectations, working hours that do not require long shifts and carry over after official work hours, more possibility to take time off, improved reporting and debriefing procedures. Whereas senior positions have more tension and stress because of their total accountability, they were accountable to several superiors who went above and beyond a straightforward hierarchical structure, round the clock. Longer working hours, greater goals to meet with expectations that most believed were unreasonable, the lack of a

personal life, and the inability to balance their priorities were some of the factors that contributed to their declining JS.

The majority of frontline staff members were female. According to industry standards, the majority of participants were aware of the organizations' vision and goals. Positive performance assessments from their various airline industries have motivated many of the participants, and the reviews themselves are impartial and fair. When given the right incentives and benefits, employees' job satisfaction was often rather high. In order to carry out their jobs efficiently, flight attendants must cooperate with team leader and other team members as well as communicate properly with them. Pilots and air traffic controllers experience lower levels of work satisfaction as their stress levels rise. Employees in the aviation industry have higher job satisfaction because their jobs and responsibilities are more clearly defined and they are paid more than those in other industries.

### **3.10 SAMPLE**

The research was conducted on representative sample of 739 employees working in airlines sector. This represented staff at all levels, including management and non-managerial positions. This would encompass both the Airline Industry and the AAI, which stands for the Airports Authority of India. Indigo, Air India, Go Air, Spice Jet, Vistara, and other airlines would be included in the Airlines Industry. The participants were selected in order to provide a sample that was convenient and purposive.

### **3.11 INSTRUMENTS**

The information needed for the study was obtained by having participants use three different measuring tools. Following is a brief overview of each test that has been provided for your convenience:

#### **3.11.1 Personal Information Sheet**

On the sheet collecting personal information were number of questions, including ones about the person's name, age, gender, marital status, educational qualification, designation, and work experience. Appendix A contains a copy of the Personal Information Sheet that was provided.

### **3.11.2 Employee Engagement**

EE pertains to the degree of zeal and commitment a worker has for their employment. Considering its connections to staff morale and job satisfaction, it can be extremely important to a business's success. EE makes it more likely that performance and output will get better. Employers can get EE by talking about job advancement, giving rewards, and communicating clearly.

A scale with 16 items has been adapted to measure the level of EE. The scale can distinguish between three different dimensions“The first is vigor which is given by (Ariani, 2013), the second is dedication by (Schaufeli et al. 2006), and the third is absorption by (Ferreira & De Oliveira 2014). Items under the measures have helped in measuring; where 6, 5, and 5 items are belong to vigor, dedication, and absorption respectively. Items under the measurements have helped in measuring. The coefficients for Vigor, Dedication, and Absorption are respectively 0.67, 0.83, and 0.56 respectively. The items were evaluated using a scale with five points, and the ratings range from 1 which denotes strongly agree to 5 which denotes strongly disagree. The overall reliability of the scale was determined to have a coefficient of 0.85, and the Cronbach Alpha reliability of each subscale is provided inside the brackets. Employee engagement scale has been shown in Appendix B.

The dimensions of employee engagement have been defined as under:

- 1 **Vigor:** High levels of energy and mental toughness are characteristics of this type of person, who not only has the desire but also the physical stamina to put in extra effort.

It is the state of being willing to use one's best effort in one's task and remaining steadfast in the face of adversity.

2 **Dedication:** It entails being deeply invested in the task and having feelings of difficulty, pride, inspiration, and relevance. Employee is motivated to work harder because of his enthusiasm for the company, its aim, and his capacity to contribute to the team and overall objective.

3 **Absorption:** It refers to an employee that is happily immersed in their work and fully interested in it. When the employee is working in this situation, time goes by quickly and it is challenging for him to step back from the task. The objective is to complete the work in the best manner feasible, not to complete it as quickly as possible.

### 3.11.3 Work Life Balance

To have a good WLB, your personal and professional lives need to be in sync. Giving yourself time and money to take care of your personal and work obligations while putting your health first and taking care of yourself is what it means. Your entire well-being, including your physical, emotional, and mental health, can be enhanced by maintaining a work-life balance.

WLB measurements have been adapted by 26 items from different studies. The scale identifies 4 dimensions: WPLS, PLWS, WPLG and PLWG. Items in each dimensions was used for measuring, where WPLS has 9 items which is derived from the study of (Marshall et al. 1993), PLWS has 5 items which is derived from the study of (Sari Mansour Diane-Gabrielle Tremblay 2016), WPLG has 6 items (Marshall et al.1993). PLWG included 6 items (Dawn S. Carlson et al.2005). The coefficient alpha for WPLS, PLWS, WPLG and PLWG are 0.90, 0.85, 0.85 & 0.77 respectively. The items were evaluated using a scale with five points, and the ratings range from 1 which denotes strongly agree to 5 which denotes strongly disagree. The overall reliability co-efficient of the scale was found as 0.95 and the Cronbach



Alpha reliability of each subscale has been described within the parentheses. Work Life Balance has been shown in Appendix C.

1. **Work Personal Life Strain (WPLS):** This circumstance arises when family duties and responsibilities become challenging due to work commitments and obligations. There is the issue of work overload on employee.
2. **Personal Life Work Strain (PLWS):** This situation occurs when family obligations and demands makes it more difficult to fulfill WLB requirements and responsibilities
3. **Work Personal Life Gain (WPLG):** In this case, work is having a positive impact on personal life. Personal life contentment is the result.
4. **Personal Life Work Gain (PLWG):** This circumstance has a positive impact of personal life on work. It promotes JS and supports employees in their work.

#### **3.11.4 Job Satisfaction**

JS refers to people's overall feelings about their jobs. It is the satisfaction and well-being of a person in relation to how well they function in the workplace. It may serve as a highly reliable gauge of a company's productivity. Workplace culture, employee disposition, and the standard of an organization's output can all have a big effect on JS. The contentment of employees in their jobs must be given top priority by organizations. Employee satisfaction can stimulate creativity, optimism, and a greater desire to succeed. The job satisfaction scale has been adapted from Paul E.Spector with 36-items scale. The scale can differentiate between nine different dimensions. These factors include: Salary, Promotion, Supervision, Benefits, Contingent rewards, Operating Procedure, Co-workers, Nature of work, Communication. The findings of Paul E. Spector's research (1985) served as the basis for these things. It was discovered that the coefficient alpha for each dimension was correspondingly 0.92, 0.90, 0.79, 0.86, 0.87, 0.85, 0.83, 0.85, and 0.68. This was a Likert scale with five points, and the ratings ranged from 1 to 5, with 1 = strongly agree and 5

= strongly disagree. The overall reliability of the scale was determined to have a coefficient of 0.96, and the Cronbach Alpha reliability of each of the subscales has been stated in brackets. The results of the Job Satisfaction survey can be found in Appendix D.

1. **Salary:** A predetermined amount of money or another form of payment that is given to an employee by their employer in consideration for services done by the employee.
2. **Promotion:** This is the raising of a worker's position or rank within a hierarchical system.
3. **Supervision:** The act, process, or occupation of supervising; particularly, a critical eye for detail when observing and guiding (as in activities or a course of action).
4. **Benefits:** A benefit or gain from a job. Both monetary and non-monetary rewards may result.
5. **Contingent rewards:** This is a motivation-based approach that pays people for achieving their set objectives by giving them praise for a job well done.
6. **Operating procedure:** This is a certain methodology or approach to carrying out the work. It guarantees that the worker is acting in a planned and organized way.
7. **Co-workers:** Co-workers are a group of individuals who collaborate on projects. Someone that you collaborate with at work is your co-worker.
8. **Nature of work:** The greatest way to describe an employee's work nature is by the type of work that he performs. This can be used to describe the fundamental daily responsibilities performed as part of a job.
9. **Communication:** The process of transmitting information from one location, person, or group to another. It can also refer to the information produced.

### 3.12 ADMINISTRATION AND SCORING

The individuals were given the reassurance that the data collection was done solely for academic purposes and had nothing to do with their personal lives. They were also given the promise that the responses would be kept private. Although there was no set amount of time to complete the surveys, it took the subjects around the hour to complete all three. All of the subjects received the same instructions and administration methods, which were exactly as described by the test's authors. According to the guidelines provided in the manuals for each questionnaire, the scoring was completed.

### **3.13 STATISTICAL ANALYSIS**

A number of statistical analyses that were relevant to the research goals of the study were performed on the data that was obtained. The prime basis of this section is on the application of Pearson's Product Moment Method and Stepwise Multiple Regression Analysis to investigate the connection between JS and EE as well as the importance of maintaining a healthy WLB for workers in the Indian aviation domain. In addition, scales were analysed using Principal Component Analysis (PCA) with Kaiser's Promax Rotation in order to investigate the factor structure of the measures that were utilized in research. In conclusion, the statistical software SPSS 22.0 version was utilized for the analysis in order to perform Pearson's correlation, Stepwise Regression Analysis, and Factor Analysis. For the research, we made use of pie charts, percentages based on demographic characteristics, and one-way ANOVA.

#### **3.13.1 Factor Structures of the Measures**

After that, the scales of EE, WLB, and JS were put through PCA, and the Promax Rotation Method was suggested as best way to interpret the results. A factor analysis was performed on employee engagement scale, and out of the 16 components that comprised it, 13 of those items were eliminated since their factor loadings were higher than .45. As a result, the research on EE among those working in the aviation industry included a total of thirteen

different factors. The communalities varied from a low of .27 to a high of .69 and the scale explained 33.74 percent of the total variance. Table 16 contains presented solutions for rotated factor.

**Table 16: EE Rotated Pattern Matrix**

Variable	Component			h2
	1	2	3	
V1	.437*			.314
V2	.466			.346
V3	.621			.438
V4	.427*			.274
V5	.721			.492
V6	.645			.421
A1		.817		.654
A2		.811	.804	.694
A3		.733		.655
A4		.800		.647
A5	.487			.413
D1	.714			.444
D2	.542			.376
D3	.450*			.436
D4				.676
<b>D5</b>			.785	.641
<b>Eigen Value</b>	5.399	1.303	1.219	
<b>% of Variance</b>	33.742	8.145	7.622	

*Note: Items marked with the symbol (\*) have factor loadings less than 0.45 and have been excluded from analyses. V=Vigor, A= Absorption, D= Dedication.*

The first factor, which is index Vigor, had low loadings on the two items i.e. V1 and V4. The second factor, which is index Absorption, had high loadings on all the five items. The third factor, which is index Dedication, high loading on 4 items and low loading on one item i.e. D3. Finally EE scale carries 13 item for further analysis. Similarly, for the factor analysis of work-life balance, the four dimensions were analysed using Principal Component Analysis, with the Promax Rotation method being recommended. Because each of the 27 items has a factor loading that is more than .45, they are all retained for the further study. The scale explained 44.48 percent of the total variation, and the communalities fell in the range of 0.37 to 0.63. Table 17 contains the presented solutions for the rotated factor.

**Table 17: Work Life Balance Rotated Pattern Matrix**

Variable	Component			h2
	1	2	3	
<b>WPLS1</b>	0.759			.562
<b>WPLS2</b>	0.761			.581
<b>WPLS3</b>	0.658			.549
<b>WPLS4</b>	0.677			.576
<b>WPLS5</b>	0.797			.621
<b>WPLS6</b>	0.709			.576
<b>WPLS7</b>	0.684			.541
<b>WPLS8</b>			0.507	.637
<b>WPLS9</b>	0.512			.550
<b>PLWS1</b>	0.719			.582
<b>PLWS2</b>	0.630			.509
<b>PLWS3</b>	0.753			.548
<b>PLWS4</b>	0.757			.564
<b>PLWS5</b>	0.810			.582
<b>WPLG1</b>	0.741			.581
<b>WPLG2</b>	0.647			.530
<b>WPLG3</b>	0.721			.528
<b>WPLG4</b>	0.562			.540
<b>WPLG5</b>	0.641			.464
<b>WPLG6</b>	0.651			.494
<b>WPLG7</b>	0.490			.370
<b>PLWG1</b>		0.678		.578
<b>PLWG2</b>		0.739		.628
<b>PLWG3</b>			0.502	.516
<b>PLWG4</b>		0.687		.589
<b>PLWG5</b>		0.562		.433

<b>PLWG6</b>			0.799	.626
<b>Eigen Value</b>	12.011	1.672	1.173	
<b>% of Variance</b>	44.485	6.191	4.346	

Note: Items marked with the symbol (\*) have factor loadings less than 0.45 and have been excluded from analyses. WPLS= Work Personal Life Strain, PLWS= Personal Life Work Strain, WPLG= Work Personal Life Gain, PLWG= Personal Life Work Gain.

In addition, when it came to job satisfaction, a principal component analysis was carried out to determine which variables should be removed from the research since those having factor loadings less than .45 was removed from the solution. This was done so that the findings can be more reliable.

As was indicated before, the JS scale has been divided down into nine different dimensions; additionally, there are four items in each of the nine sub-scales. Based on results of factor analysis, 35 out of total of 36 items were selected for further investigation. Every one of the components had a high loading, which is defined as being above .45, with the exception of one item from supervision, which was left out of the study. The communalities had a range of .42 to .81 and were responsible for 44.79% of the total variance. Solutions to rotating factors are listed in Table 18 accordingly.

**Table 18: Job Satisfaction Rotated Pattern Matrix**

Variable	Component						H2
	1	2	3	4	5	6	
<b>P1</b>			0.731				.725
<b>P2</b>			0.727				.782
<b>P3</b>			0.834				.819
<b>P4</b>			0.821				.772
<b>Prom1</b>		0.818					.758
<b>Prom2</b>		0.800					.759
<b>Prom3</b>		0.864					.783
<b>Prom4</b>		0.833					.753

<b>S1</b>			0.464			.587
<b>S2</b>			0.424*			.571
<b>S3</b>		0.677				.651
<b>S4</b>		0.659				.631
<b>B1</b>		0.560				.674
<b>B2</b>		0.645				.621
<b>B3</b>		0.801				.621
<b>B4</b>		0.703				.648
<b>CR1</b>				0.863		.733
<b>CR2</b>				0.774		.671
<b>CR3</b>				0.873		.784
<b>CR4</b>				0.819		.739
<b>OP1</b>	0.777					.618
<b>OP2</b>	0.787					.628
<b>OP3</b>	0.740					.617
<b>OP4</b>	0.571					.603
<b>CW1</b>				0.725		.627
<b>CW2</b>				0.788		.689
<b>CW3</b>				0.776		.662
<b>CW4</b>				0.859		.732
<b>NW1</b>	0.690					.592
<b>NW2</b>	0.649					.630
<b>NW3</b>	0.852					.672
<b>NW4</b>	0.840					.635
<b>C1</b>					0.795	.620
<b>C2</b>					0.674	.470
<b>C3</b>					0.753	.578
<b>C4</b>					0.609	.427

<b>Eigen Value</b>	16.125		1.358	1.308	1.306	
<b>% of variance</b>	44.791		3.772	3.633	2.879	

Note: Items marked with the symbol (\*) have factor loadings less than 0.45 and have been excluded from analysis. P= Pay, Prom= Promotion, S= Supervision, B=Benefit, CR= Contingent Reward, OP= Operating Procedure, CW= Co-Worker, NW= Nature of Work, C= Communication.

**Table 19: Reliability Coefficient of the Three Scales**

<b>Variables</b>	<b>Reliability(<math>\alpha</math>)</b>
<i>Employee Engagement Total Dimensions of Employee Engagement</i>	.85
Vigor	.67
Absorbtion	.83
Dedication	.56
<i>Work Life Balance Total Dimensions of WLB</i>	.95
Work Personal Life Strain	.90
Personal Life Work Strain	.85
Work Personal Life Gains	.85
Personal Life Work Gains	.77
<i>Job Satisfaction Total Dimensions of Job Satisfaction</i>	.96
Salary	.92
Promotion	.90
Supervision	.79
Benefits	.86
Contingent rewards	.87
Operating Procedure	.85
Co-workers	.83
Nature of work	.85
Communication	.68

Reliability coefficients after further analysis of all the scale have been given in table 19 for further acknowledge. After the factor analysis was completed, the hypothesis was tested using a variety of statistical methods, such as the Pearson Product Moment Correlation and the Stepwise Regression Analysis. The findings were also discussed using a scatter plot, which represented the correlation between EE, WLB and JS.