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**Title**

**NATURE OF JOB AND OCCUPATIONAL STRESS:  
A STUDY OF WORKERS OF AN INDUSTRY**

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**ABSTRACT:**

The study examined the effect of nature of job (High risk / low risk) on occupational stress of 200 workers of Tata Motors Ltd, in Jamshedpur. These workers were divided on the basis of nature of job (high / low risk) and salary (high / low paid). Thus, there were four sub-groups and each sub-group there were 50 cases. The Occupational Stress Index developed by Srivastava and Singh in 1981 was administered on these 200 workers. Results clearly indicated that nature of job (high and low risk) played a significant role in creating stress in workers. Workers doing high risk jobs showed greater stress compared to workers doing low risk jobs in both high paid and low paid categories. Role overload, role ambiguity, responsibility of persons, unreasonable group pressures, under participation, poor peer relations, low status, strenuous working conditions, unprofitability were the factors which contributed more occupational stress. **Conclusion:** High risk job workers had significantly greater stress compared to low risk job workers.

**Keywords:** Occupational Stress, Nature of jobs, Industrial workers.

**INTRODUCTION:**

The modern world, which is a world of achievements, is also a world of stress. One finds stress everywhere. Different people have different views about it as stress can be experienced from a variety of sources. Occupational stress & maladjustment are labeled as one of the most serious occupational problems of the modern time (Jamal & Baba, 2000). About 15% of all occupational disability is stress related (Sadok, 1995). Work is not always seen as a source of satisfaction and need fulfillment but rather a source of stress, discontentment and humiliation. The negative orientation towards work has probably made occupational stress a focal point of interest. The interest in this area has reflected itself in state of research on occupational stress and coping strategies. Job dissatisfaction, absenteeism, turnover, accident, low productivity, lack of motivation and alienation are found by many investigators to be related with stress (Ahmad, 1992; Beehr & Newman, 1978; Pestongee and Singh 1982; Schuler, 1980; Sharma & Sharma, 1984; and Surti, 1983).

Occupational Stress can be defined as the harmful physical and emotional responses that occur when the requirements of the occupation do not match the capabilities, resources or needs of the individual. Job Stress leads to poor health and even injury. Why we study job stress in the organization because stress is an independent variable influencing employees' satisfaction and performance as linked to coronary heart disease. A reduction in stress is expected to improve the quality of work. Stress is an adaptive response to an external situation that result in physical, psychological and or behavioral deviations for organizational participants. "Stress may be either physical or psychological or both. Just as a bridge is structurally capable of adjusting to certain physical stresses, the human body and mind are normally able to adapt to the stresses of new situations. However, this ability has definite limitations beyond which continued stress may cause a breakdown."(Khalique, 2011).The nature of work is changing at whirlwind speeds. Perhaps now, more than ever before, job stress poses a threat to health of workers. Stress has long been associated with the onset of significant physical and mental health problems. Stress began to be implicated in areas beyond the bounds of physical and mental health as far back as the 1980's. In the Organizational environment, stress has been implicated in the deterioration of performance efficiency by both managers and subordinates. When performance efficiency suffers the quality of the overall organizational environment and productivity deteriorates. A deterioration of the organizational environment is accompanied by deterioration in organizational communication (Gilberg, 1993).

The primary sources of occupational stress within an organization originate from four areas. These include task demands, physical demands, role demands and interpersonal demands. "Any demand either of a physical nature or psychological nature, encountered in the course of living is known as a 'Stressor'. A stress response will occur as a result of individual's interaction with and reaction to the stressor (Knotts, 1996).

Task oriented stress is directly related to the specific characteristics of the job itself. This type of stress involves role ambiguity, conflicting task demands, work overload or under load, inadequate resource support, no provision for meaningful participation in decision-making and insecurity, among others (Knotts, 1996).

Physical demands of the work place are another source to be considered. Environmental-factors such as temperature variations, noise vibrations and lightings may affect individual stress.

Role demands are external to the task associated with a job. This particular type of stress typically develops as a result of flawed organizational structures, ineffective organizational development, the inability of an individual to successfully pursue achievement goals within an organization, or some combination of all the three. The final source area of occupational stress relates to interpersonal demands. Interpersonal stress at work is concerned with the demands that are placed on us in developing, working relationships with other people in organizations (Knotts, 1996)

A separate class of stress research has emphasized the determination of how stressors develop in organizations, as opposed to the identification of additional stressors or the assessment stressor quality or quantity (Schaubroeck. 1993). This research identified three groups of Occupational Stressor antecedents. These antecedent groups are contextual variables, role variables and task variables.

Contextual variables were associated with the organizational sub-system, role variables were associated with job levels and task variables were associated with autonomy, complexity, interdependence, reutilization and closeness of supervision (Schaubroeck, 1993).

The industrial workers who are doing high risk and low risk nature of jobs in the industry today may get stress. The industrial workers expected to put in long hours of work, they are average paid and they have very less time for families and relative's interactions and leisure time activities may give rises to stress both physically and psychologically.

Therefore, building general awareness about occupational stress is the first step to prevention. Securing top management commitment and support for the programme will only lead to more positive results. Reduction in occupational stress improve productivity, moral and over all organizational climate.

## **REVIEW OF LITERATURE:**

The psychological aspects of job stress have captured much attention in recent times in behavioural research. There has been rapid growth in researches in the area of organizational stress since world war II and much research on the subject is currently being carried out by both medical and social scientists. Presently, in Europe alone 21 out of 8, Psychology Departments

are conducting major stress studies; 7 located in West Germany, 5 in U.K., 3 in Netherlands and 2 in Sweden (De wolff, 1988). International associations like the European Community, the WHO, US Government have all carried out research in this field. Four of these are worth mentioning in the present context.

Jian li wang (2007) examined the effect of job-stress in the high strain job workers and found that incidences of depression were lower among people who considered their job stress levels to be relatively low.

Kavanagh, Hurst and Rose (2006) found that the workplace was a source of potential stressors, e.g., role conflict and ambiguity, and the relationship between these stressors and job satisfaction had been empirically demonstrated. The relationship between job satisfaction and health, however, had not been clearly established empirically.

The large scale project on organizational stress in the area of industry was conducted by Kahn et. al (1964) and was described in the book, "Organizational Stress". The most important finding of the study was the prevalence of role ambiguity and role conflict, both of which were shown to be the most important sources of job related stress.

Srivastava (1991) conducted a study on 300 employees of supervisory cadre from life insurance Corporation to examine the relationship between employees role stress and mental health. The analysis indicated that employees role stress and mental ill-health positively correlated ( $r=.84$ ).

Barkat (1998) discussed the role of physical and social environment in determining and shaping the behaviour of the individual. A stressful and unhealthy environment can lead to several behavioural problems such as anxiety, depression, phobias, and school failures. Psychotherapy can help alleviate some of the behavioural problems. The study has emphasized the need for environmental stress management.

Khalique and Khalid (2009) studied the effect of occupational stress and general well-being. The study is conducted on sales & marketing professionals working in various top most companies. The Occupational Stress Index developed by Srivastava and Singh along with the PGI-General well-being measure developed by Verma and Verma were administered to sales professionals. It was found that role ambiguity, role conflict, unreasonable group pressures, impoverishment, low status, strenuous working conditions, unreliability and responsibility of persons are the factor

which contributes more occupational stress which in turn affects the general well-being of the individual. The researchers concluded that higher the occupational stress lower is the general well-being. There is a great dearth of such studies in Indian context, particularly on the relationship of nature of job and occupational stress. Against this background the present study was conducted with the following objectives:

To study the effect of nature of job (High risk job workers and Low risk job workers) on job stress.

- To study the effect of job stress on industrial workers.
- To find out the important factors that plays a key role on job stress.

**Hypothesis**

In pursuance of the above mentioned objectives, the following hypothesis has been formulated:

- Workers doing high risk jobs will have higher job stress compared to those doing low risk jobs.

**Methodology:**

**Sample:** A sample of 200 workers was selected from the TATA Motors Ltd., Jamshedpur. The workers were divided into two categories namely ‘High Risk’ workers and ‘Low Risk’ workers and further these workers were sub-divided into two categories, that is, ‘Low Paid’ and ‘High Paid’ workers. The sample was based on a 2x2 factorial design. Therefore, there were four sample sub-groups and each sub-group was represented by 50 workers, making a total of 200. The sample design is given below:

**Figure 1. Sample Design**

	Nature of Job	
Remuneration	High Risk Job Workers	Low Risk Job Workers
High Paid	50	50

<b>Low Paid</b>	50	50
<b>Total</b>	200	

**TOOLS USED:**

The following tools have been used in the present study for the collection of data:

**Personal Data Sheet:**

Personal Data Sheet was specially designed for the present study which include data related to personal identification of the workers, specially their names, addresses, factories in which they are working, designation, nature of the job and salary etc.

**The Occupation Stress Index Scale:**

Perceived stress among the automobiles workers were measured by using the Occupational Stress Index Scale. This scale was developed by Srivastava & Singh in 1981. This test measures the extent of stress which employees perceive arising from various constituents and conditions of their job. This scale may conveniently be administered to the employees of every level operating in context of industries or other non-production organizations. The scale consists of 46 items with 5 alternative responses. It is a paper pencil test and self report measure. Out of 46 items 28 are "true keyed" and 18 are "false keyed". The items related to almost all relevant components of the job life which cause stress in some way or the other. Each item has 5 alternative responses such as strongly agree, agree, undecided, disagree and strongly disagree, which indicates the degree of severity.

The scale has 12 sub-scale related to 12 dimensions of job life viz. role overload, role ambiguity, role conflict, unreasonable group and political pressure, responsibility for persons, under participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions and unprofitability. In addition to these 12 sub-scale scores, the scale yields a composite stress scores. For preparing the norms of the scale three methods were adopted i.e. normal distribution, percentile point and division of upper and lower halves.

**Statistical Analyses:**

The following statistical techniques have been used in the analysis of obtained data:

- Percentage of low, moderate and high scorers in O.S.I. and its sub-scales have been calculated.
- As the data is based on a 2x2 factorial design the analysis of variance (ANOVA) have been used to examine the effect of factors.
- The sub-groups based on the nature of jobs have been compared by t-test.
- The percentage and mean scores have also been graphically shown where felt necessary.

**RESULTS:**

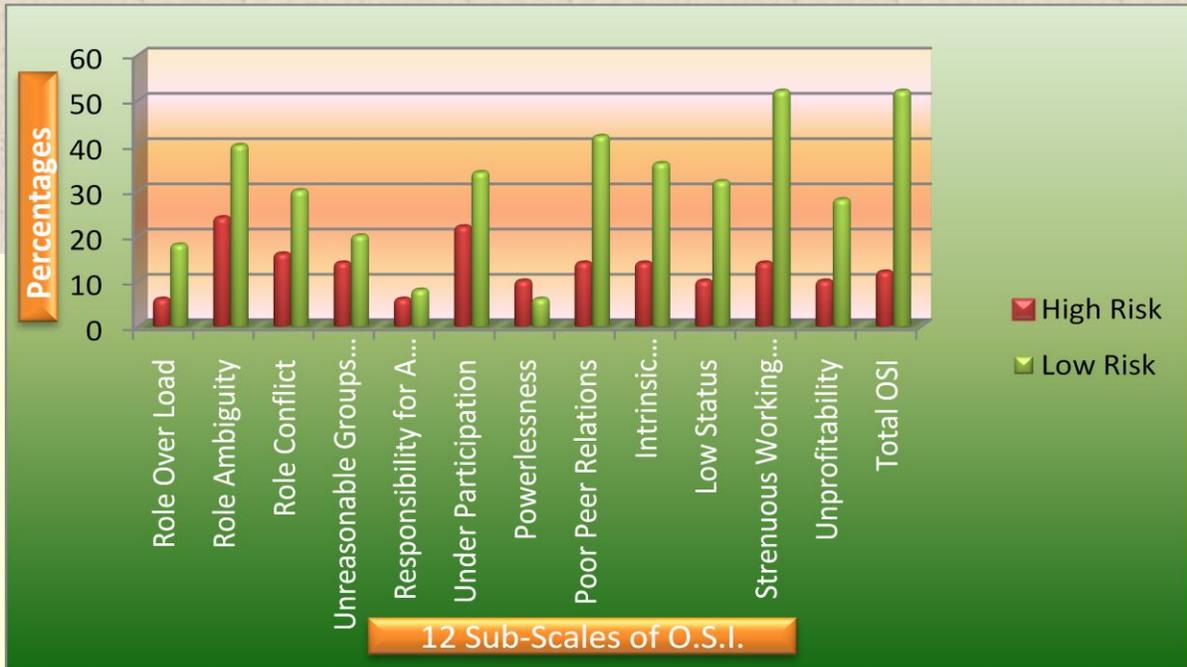
The main aim of the present research was to study job stress among the industrial workers. The finding of this research showed that the risk factors (high and low risk jobs) played a significant role in creating stress on industrial workers. High risk job workers had higher percentage of high stress scores as compared to low risk workers (Tables 1 and 2, Figures 1 to 4).

**Table 1.** Percentage of Low, Moderate and High Level on Occupational Stress Index (OSI) and its Sub-Scales: Comparison of High Risk and Low Risk Job Workers of High Paid Category

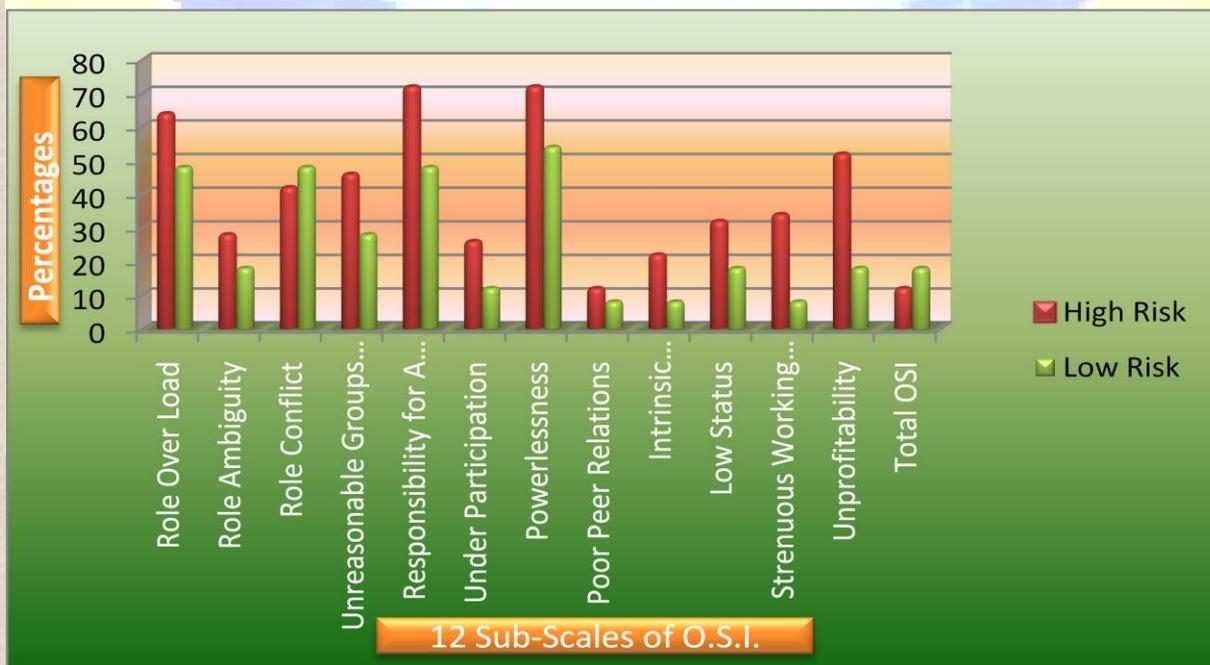
		HIGH RISK			LOW RISK		
		N = 50			N = 50		
12 SUB-SCALES OF O.S.I.		LOW	MODERA TE	HIGH	LOW	MODERA TE	HIGH
I.	Role Over Load	6%	30%	64%	18%	34%	48%
II.	Role Ambiguity	24%	48%	28%	40%	42%	18%
III.	Role Conflict	16%	42%	42%	30%	22%	48%

IV.	Unreasonable Groups & Political Pressure	14%	40%	46%	20%	52%	28%
V.	Responsibility for A Person	6%	22%	72%	8%	44%	48%
VI.	Under Participation	22%	52%	26%	34%	54%	12%
VII.	Powerlessness	10%	18%	72%	6%	40%	54%
VII I.	Poor Peer Relations	14%	74%	12%	42%	50%	8%
IX.	Intrinsic Impoverishment	14%	74%	12%	36%	56%	8%
X.	Low Status	10%	58%	22%	32%	50%	18%
XI.	Strenuous Working Conditions	14%	54%	32%	52%	40%	8%
XII.	Unprofitability	10%	56%	34%	28%	54%	18%
	<b>TOTAL OSI</b>	<b>12%</b>	<b>36%</b>	<b>52%</b>	<b>52%</b>	<b>30%</b>	<b>18%</b>

**Figure 1.** Percentages of Low Scorers of High Risk & Low Risk Job Workers in High Paid Category



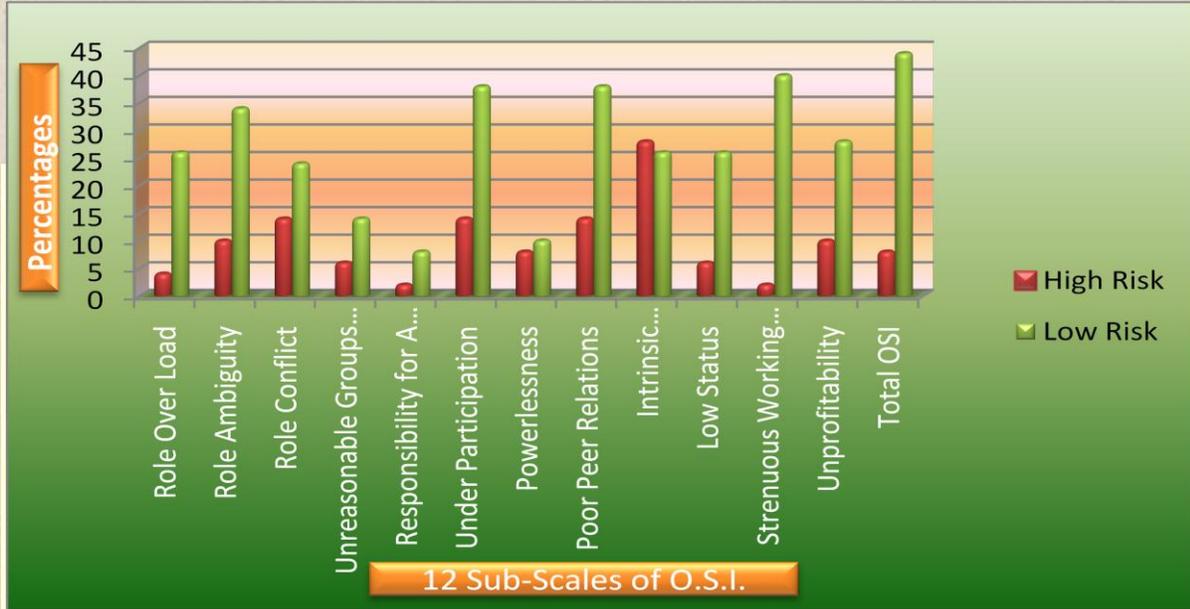
**Figure 2.** Percentages of High Scorers of High Risk & Low Risk Job Workers in High Paid Category



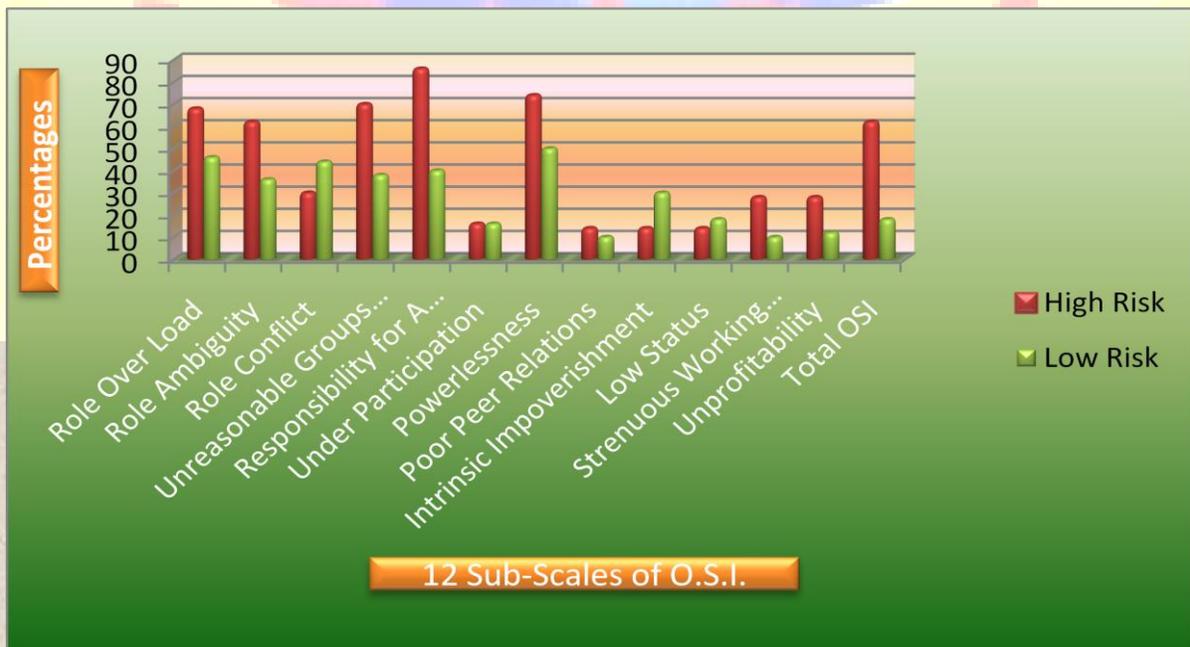
**Table 2.** Percentage of Low, Moderate and High Level on Occupational Stress Index (OSI) and its Sub-Scales: Comparison of High Risk and Low Risk Job Workers of Low Paid Category

		HIGH RISK			LOW RISK		
		NO = 50			NO = 50		
12 SUB-SCALES OF O.S.I.		LOW	MODERATE	HIGH	LOW	MODERATE	HIGH
I.	Role Over Load	4%	28%	68%	26%	28%	46%
II.	Role Ambiguity	10%	28%	62%	34%	30%	36%
III.	Role Conflict	14%	56%	30%	24%	32%	44%
IV.	Unreasonable Groups and Political Pressure	6%	24%	70%	14%	28%	38%
V.	Responsibility for A Person	2%	12%	86%	8%	52%	40%
VI.	Under Participation	14%	70%	16%	38%	46%	16%
VII.	Powerlessness	8%	18%	74%	10%	40%	50%
VIII.	Poor Peer Relations	14%	72%	14%	38%	52%	10%
IX.	Intrinsic Impoverishment	28%	58%	14%	26%	44%	30%
X.	Low Status	6%	80%	14%	26%	56%	18%
XI.	Strenuous Working Conditions	2%	70%	28%	40%	50%	10%
XII.	Unprofitability	10%	62%	28%	28%	60%	12%
<b>TOTAL OSI</b>		<b>8%</b>	<b>30%</b>	<b>62%</b>	<b>44%</b>	<b>38%</b>	<b>18%</b>

**Figure 3.** Percentages of Low Scorers of High Risk & Low Risk Job Workers for Low Paid Category on OSI & its Sub-Scales



**Figure 4.** Percentages of High Scorers of High Risk & Low Risk Job Workers for Low Paid Category on OSI & its Sub-



This finding has also been confirmed by F-ratios (Table 3), mean scores (Table 4) and t-test (Table 5). As is evident from F-ratios the high risk job workers had significantly higher stress compared to low risk job workers (Table 3). Since the F-ratios had been found significant, t-test were calculated which showed that high risk job workers had obtained significantly higher mean scores in Occupational stress index (OSI) and its sub-scales as compared to low risk job workers (Tables 4 and 5). Therefore, the hypothesis that "workers doing high risk jobs will have higher job stress compared to those doing low risk jobs" has been fully confirmed. The graphs have clearly shown the trend reported above. The bars presenting the mean scores of high risk jobs are greater than those of low risk jobs (Figures 1-4).

Considering the significance levels of F-ratios on occupational stress and its sub-scales the sub-groups of high risk job workers and low risk job workers have also been compared on t-tests. These comparisons have been done separately for high paid workers and low paid workers. Tables 5 and 6 presents the comparisons of high risk job workers and low risk job workers in high and low paid categories respectively. The table contains the mean scores, Standard Deviations and t-values comparing workers in two different risk jobs.

**Table 3.** Analysis of variance of scores on Occupational Stress Index (OSI) and its sub scales.

Source of Variation Risk Factor		SUM OF SQUARES	df	Mean square	F - ratio
12 SUB SCALES OF OSI.					
I.	Role Over Load	380.880	1	380.880	16.672**
II.	Role Ambiguity	162.000	1	162.000	13.485**
III.	Role Conflict	.005	1	.005	0.000
IV.	Unreasonable Groups & Political Pressure	198.005	1	198.005	13.517**
V.	Responsibility for A Person	417.605	1	417.605	54.080**
VI.	Under Participation	121.680	1	121.680	22.059**

VII.	Powerlessness	15.680	1	15.680	1.513
VIII.	Poor Peer Relations	192.080	1	192.080	21.975**
IX.	Intrinsic Impoverishment	24.500	1	24.500	3.282*
X.	Low Status	121.680	1	121.680	18.301**
XI.	Strenuous Working Conditions	300.125	1	300.125	49.652**
XII.	Unprofitability	70.805	1	70.805	19.988**
<b>TOTAL O.S.I.</b>		<b>21424.500</b>	<b>1</b>	<b>21424.500</b>	<b>45.648**</b>

\*\* = Significant at above .01 level

\* = Significant at .05 level

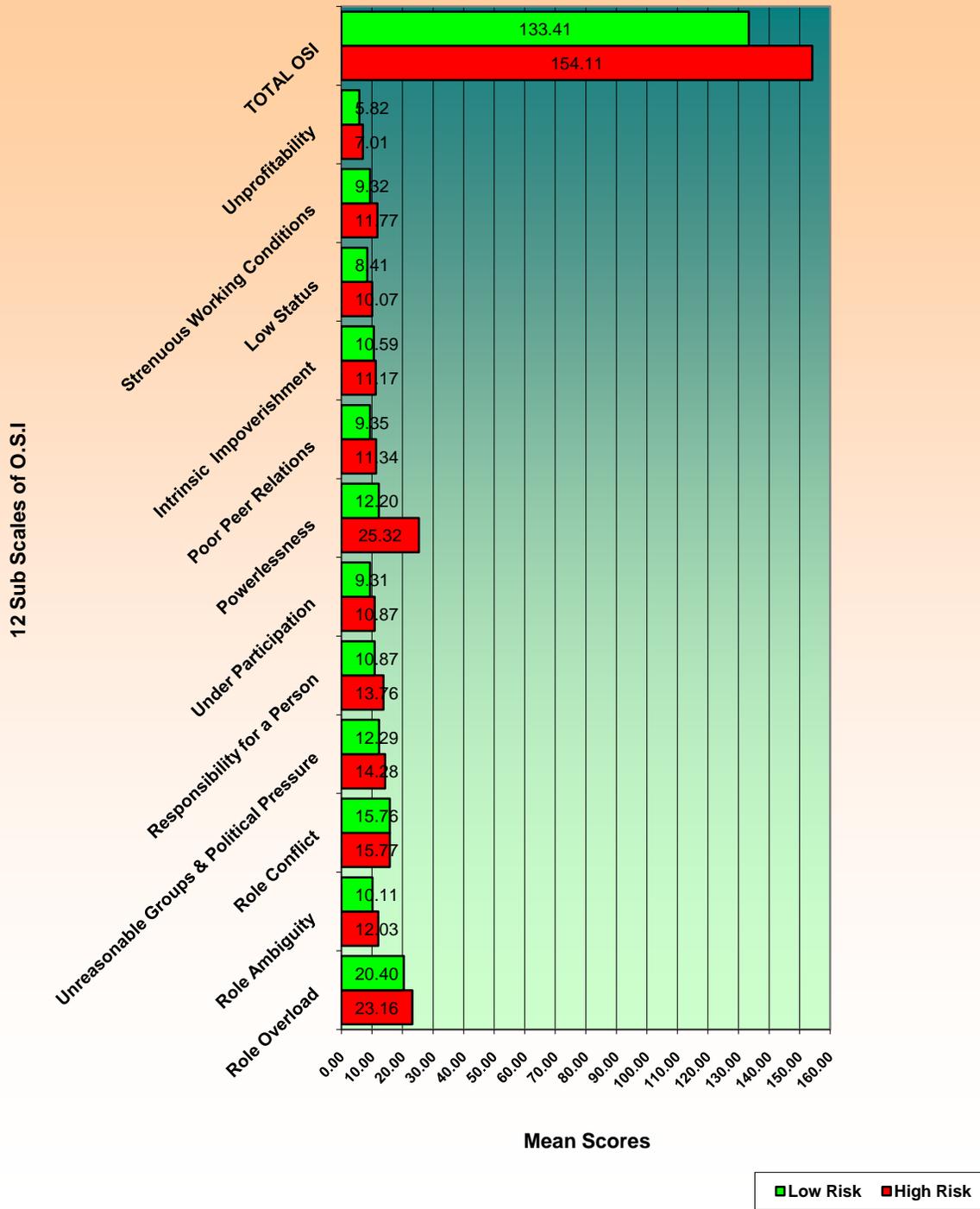
**Table 4.** Mean Scores of High Risk and Low Risk Job workers on O.S.I & its Sub-scales

		HIGH RISK	LOW RISK
		N = 100	N = 100
<b>12 SUB SCALES OF O.S.I.</b>		<b>MEAN</b>	<b>MEAN</b>
<b>I.</b>	<b>Role Over Load</b>	<b>23.16</b>	<b>20.4</b>
<b>II.</b>	<b>Role Ambiguity</b>	<b>12.03</b>	<b>10.11</b>
<b>III.</b>	<b>Role Conflict</b>	<b>15.77</b>	<b>15.76</b>
<b>IV.</b>	<b>Unreasonable Groups and Political Pressure</b>	<b>14.28</b>	<b>12.29</b>
<b>V.</b>	<b>Responsibility for A Person</b>	<b>13.76</b>	<b>10.87</b>

<b>VI.</b>	<b>Under Participation</b>	<b>10.87</b>	<b>9.31</b>
<b>VII.</b>	<b>Powerlessness</b>	<b>25.32</b>	<b>12.2</b>
<b>VIII.</b>	<b>Poor Peer Relations</b>	<b>11.34</b>	<b>9.35</b>
<b>IX.</b>	<b>Intrinsic Impoverishment</b>	<b>11.17</b>	<b>10.59</b>
<b>X.</b>	<b>Low Status</b>	<b>10.07</b>	<b>8.41</b>
<b>XI.</b>	<b>Strenuous Working Conditions</b>	<b>11.77</b>	<b>9.32</b>
<b>XII</b>	<b>Unprofitability</b>	<b>7.01</b>	<b>5.82</b>
<b>TOTAL O.S.I.</b>		<b>154.11</b>	<b>133.41</b>



Mean scores of High Risk and Low Risk Job Workers on O.S.I and its sub-scales



**Table 5.** Comparisons of High Risk and Low Risk Job workers of High Paid Category on OSI and its sub-scales: t-values

12 SUB SCALES OF O.S.I.		HIGH RISK		LOW RISK		t-VALUES
		N = 50		N = 50		
		MEAN	S.D.	MEAN	S.D.	
I.	Role Over Load	22.64	4.17	20.66	5.13	2.11*
II.	Role Ambiguity	11.02	2.99	9.64	3.73	2.03*
III.	Role Conflict	16.5	4.54	15.92	5.72	0.56
IV.	Unreasonable Groups and Political Pressure	13.48	3.54	11.92	4.38	1.97*
V.	Responsibility for A Person	12.94	3.09	10.96	2.52	3.47**
VI.	Under Participation	10.42	2.36	9.08	2.49	2.79**
VII.	Powerlessness	13.02	3.51	12.64	3.07	0.58
VIII.	Poor Peer Relations	11.04	2.52	9.04	3.27	3.45**
IX.	Intrinsic Impoverishment	11.36	1.96	9.82	2.64	3.28**
X.	Low Status	10.02	2.16	8.28	2.86	3.48**
XI.	Strenuous Working Conditions	11.7	2.43	9	2.82	5.09**
XII	Unprofitability	7	1.94	5.94	1.89	2.72**
<b>TOTAL O.S.I.</b>		<b>151.34</b>	<b>17.55</b>	<b>131.88</b>	<b>25.55</b>	<b>4.44**</b>

\* = Significant at above .05 level

\*\* = Significant at .01 level

**Table 6.** Comparisons of High Risk and Low Risk Job workers of Low Paid Category on OSI and its sub-scales: t-values

12 SUB SCALES OF O.S.I.		HIGH RISK		LOW RISK		t-VALUES
		N = 50		N = 50		
		MEAN	S.D.	MEAN	S.D.	
I.	Role Over Load	23.68	3.65	20.14	5.87	3.61**
II.	Role Ambiguity	13.04	2.59	10.58	4.35	3.46**
III.	Role Conflict	15.04	2.74	15.6	5.05	0.69
IV.	Unreasonable Groups and Political Pressure	15.08	2.77	12.66	4.38	3.32**
V.	Responsibility for A Person	14.58	2.96	10.78	2.49	6.91**
VI.	Under Participation	11.32	1.85	9.54	2.63	3.87**
VII.	Powerlessness	12.3	2.80	11.76	3.16	0.92
VIII.	Poor Peer Relations	11.64	2.42	9.66	3.46	3.30
IX.	Intrinsic Impoverishment	10.98	3.07	11.36	3.41	0.58
X.	Low Status	10.12	2.07	8.54	2.75	3.22
XI.	Strenuous Working Conditions	11.84	2.09	9.64	2.44	4.78**
XII.	Unprofitability	7.02	1.86	5.7	1.84	3.57**
<b>TOTAL O.S.I.</b>		<b>156.88</b>	<b>15.48</b>	<b>134.94</b>	<b>26.02</b>	<b>5.13**</b>

\* = Significant at above .05 level

\*\* = Significant at .01 level

In the table referred above it has been observed that 10 t-values out of 13 are statistically significant at above 0.01 levels. The remaining three t-values, in relation to role conflict, powerlessness and intrinsic impoverishment were not statistically significant. This indicated that nature of job (high/low risk) plays significant role in creating stress. Further the means score of high risk and low risk job workers have shown that in all the cases, where t-values were statistically significant, the high risk job workers had obtained significantly higher mean scores compared to those of low risk job workers. This clearly showed that high risk job workers had significantly higher level of stress in total as well as in the other areas of stress. The findings reported in the above two tables were consistent with the results reported in previous tables and figures, all indicating the presence of greater stress in high risk job workers compared to low risk job workers.

### **DISCUSSION:**

An attempt has been made to examine the relationship of the nature of job (high risk and low risk jobs) with job stress as well as its 12-sub scales. The job stress has been measured by the Occupational Stress Index Scale (O.S.I) developed by Srivastava and Singh (1981). The workers had been classified in two categories depending on the levels of risk in their jobs. To know the status of both categories of workers in occupational stress the percentages of 'Low', 'moderate' and 'high' scorers had been calculated. These percentages had been calculated for Total Occupational Stress as well as its 12 sub scales, namely, role overload, role ambiguity and role conflict, unreasonable groups and political pressure, responsibility for a person, under participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions and unprofitability. Table 1 presents the percentages of low, moderate and high scorers for high risk workers and low risk workers in high paid categories.

Low scorers were defined as those who had low degree of stress and high scorers were those who had higher degree of stress in concerned sub scales as well as in total scale. A look in the above referred table indicated that the percentage of low scorers were lesser in high risk job workers compared to those in low risk jobs. On the other hand, the percentage of high scorers were greater in high risk job workers compared to low risk job workers. In the total Scale of Occupational Stress Index (OSI) the percentage of high scorers was greater in high risk job

workers (52%) compared to that of low risk job workers (18%). It was a big difference of 34%. Similarly, the percentage of low scorers in high risk job workers was 12% which is lesser than that of low risk job workers (52%). There was a difference of 42% between them. This trend has been marked in all the 12 sub-scales of Occupational Stress Index namely, role overload, role ambiguity, role conflict, unreasonable groups and political pressure, responsibility for a person, under participation, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions and unprofitability except in one sub-scale namely, powerlessness where the percentage of low scorers was higher in high risk job workers (10%) compared to low risk job workers (6%). It has clearly indicated that the percentage of high scorers in the scale and sub-scales were higher in high risk job workers compared to low risk job workers. Thus, it can be concluded that stress is more in high risk job workers compared to low risk job workers.

The percentages depicted in Table 1 have also been graphically represented in Figure 1 and 2. Figure 1 and 2 indicated the percentage of low and high scorers in total stress scale as well as in its sub-scales in high risk and low risk job workers. It can be clearly observed that the trend shown in figure is similar to that of referred in Table 1. The bar showing the percentage of low scorers were smaller in high risk job workers than those of low risk job workers except in powerlessness where the bar representing low risk job workers was greater than that of high risk workers. On the other hand, the figure clearly depicts that the bars showing percentage of high scorers were bigger in high risk job workers compared to those of low risk worker. Thus, the trend showed the existence of higher degree of stress in high risk job workers compared to low risk job workers. A separate analysis, as reported earlier, for the high paid workers had also been done for low paid workers. Table 2 presents the percentage of low, moderate, high scorers in high risk and low risk job workers in low paid worker category.

The above trend can be marked also in Table 2. Invariably in Occupational Stress Index (OSI) scale and in all its sub-scales the percentage of low scorers in high risk jobs and low risk jobs were the same except in one sub-scale, that is, intrinsic impoverishment where the percentage of low scorers was higher in high risk jobs (28%) compared to that of low jobs (26%). On the other hand, the percentage of high scorers were higher for high risk jobs in role over load, role ambiguity, unreasonable groups and political pressure, responsibility for a person, powerlessness, strenuous working conditions and unprofitability compared to those in low risk

jobs. Reversely, the percentages of high scorers in role conflict, poor peer relations, intrinsic impoverishment and low status were lower in high risk jobs compared to those in low risk job workers. In the case of the sub-scales of under participation both the high risk jobs and low risk jobs had an equal percentage (16%) of high scorers. In some of the cases the difference of the percentage of high scorers between high risk jobs and low risk jobs is as high as 46% such as in the case of responsibility for a person the percentage of high scorers for high risk jobs (86%) was much higher than that of low risk jobs (40%). Thus, it had been seen that the trend reported in the case of low paid workers was slightly different from that of high paid job workers. Table 2 has also been depicted graphically in Figure 1 and 2. The figure showed in the percentage of low and high scorers for high risk and low risk jobs. Invariably the bars showing the percentage of low scorers were lower in the case of high risk job workers than those in low risk job workers except in the sub scale of intrinsic impoverishment where it was in reverse order. But in the case of the percentage of high scorers the trend was something different. In some cases the percentage of high scorers was greater in high risk jobs compared to low risk jobs where it was in reverse order in some of the sub scales.

The bars had depicted the trend reported in Table 2. In the second line of treatment it had been tried to examine the statistical significance of mean scores of high risk job workers with those of low risk job workers. As the sample was based on a 2x2 factorial design, ANOVA had been computed to examine the role of nature of job (high and low risks) and level of payment (high and low paid) separately and their interaction effect on Occupational stress index scale(OSI) as well as on its sub-scales. Table 3 presents the F-ratios on Occupational Stress Index (OSI) as well as on its sub-scales. Here only F-ratio examining the significance of mean differences of high risk job workers and low risk job workers has been presented.

An analysis of F-ratio indicates that all F-ratios except one were significant at above .01 level. F-ratio examining the significance level of mean differences of high risk job workers and low risk job workers in relation to intrinsic impoverishment was statistically significant only at .05 levels, the other two F-ratios in relation to role conflict and powerlessness were statistically insignificant. This explains that the nature of job had an over all significant effect on job stress and as well as on its sub-themes. Due to nature of job (high risk and low risk jobs) the workers differ in the level of stress.

Data were further examined to see the status of high risk and low risk job worker on the Occupational Stress Index (OSI) and its sub-scales, that is, which of the two groups showed statistically significant higher stress. For this purpose the mean scores of both the groups on OSI and its sub-scales had been presented in Table 4. The mean scores of both the groups in Occupational Stress Index (OSI) and its sub-scales indicated that mean scores of high risk job workers were greater than those of low risk job workers in all the dimensions of occupational stress. Thus, it was found that high risk job workers had shown significantly higher stress compared to those shown by low risk job workers. This is a clear indication that workers doing high risk jobs had more stress compared to workers doing low risk jobs. The mean scores reported in the above table had also been graphically shown in Figures 3. The graph had clearly shown the trend reported above. The bars presenting the mean scores of high risk jobs were greater than those of low risk jobs.

Considering the significance levels of F-ratios on occupational stress and its sub-scales the sub-groups of high risk job workers and low risk job workers were also compared on t-tests. These comparisons had been done separately for high paid workers and low paid workers. Table 5 presents the comparisons of high risk job workers and low risk job workers in high paid category. The table contains the mean scores, Standard Deviations and t-values comparing workers in two different risk jobs.

There were 13 t-values, out of which 8 t-values were statistically significant at above 0.01 level and three t - values in relation to role overload, role ambiguity, unreasonable groups and political pressure were statistically significant only at .05 levels while the remaining two t-values in relation to role conflict and powerlessness are statistically insignificant. This indicated that the nature of job (high and low risk) played a significant role in stress. Further the mean scores of high risk sub groups and low risk sub groups had shown that in all the 13 comparisons the mean score of high risk job sub groups were significantly greater than those of low risk sub groups. This trend had been seen in the case of high paid workers.

Similar comparisons of high risk job workers and low risk job workers had also been made for low paid job workers. This has been presented in Table 6. In this table it can be seen that 10 t-values out of 13 are statistically significant at above 0.01 levels. The remaining three t-values, in relation to role conflict, powerlessness and intrinsic impoverishment were not statistically

significant. This indicated that nature of job (high/low risk) played significant role in creating stress. Further the mean scores of high risk and low risk job workers had shown that in all the cases, where t-values were statistically significant, the high risk job workers had obtained significantly higher mean scores compared to those of low risk job workers in the case of low paid job workers. This clearly indicated that high risk job workers had significantly higher level of stress.

The findings reported in above two tables were in consistent with the results reported in previous tables and figures, all indicating the presence of greater stress in high risk job workers compared to low risk job workers. Thus, the discussions made above have indicated the presence of higher stress in high risk job workers compared to low risk job workers.

### **CONCLUSION:**

The analyses and discussions have been made to examine the relationship of the nature of job (high and low risk jobs) with overall occupational stress as well as its sub-scales. It may be recalled that a hypothesis has been formulated with this effect which reads: "workers doing high risk jobs will have higher job stress compared to those doing low risk jobs"

Let the hypothesis be examined in the light of analysis and discussions reported above while discussing the percentages of low, moderate and high scores in stress and its sub-scales for high and low risk workers (Tables 1 and 2). It can be seen that in both the cases of high paid and low paid workers the percentages of high scorers were greater in relation to the high risk job workers than the low risk job workers. Reversely, the percentage of low scorers were lesser in high risk job workers compared to low risk job workers. This indicated the presence of greater stress in high risk job workers. This trend has also been indicated by Figures (Figures 1 to 4). The F-ratios (Table 3) had also indicated the significant role of the nature of job (high risk and low risk jobs). Further it had been marked that high risk job workers had significantly greater stress compared to low risk job workers (Table 4 and Figure 3).

The sub groups of high and low risk job workers were also compared using t tests separately for high paid group (Table 5) and low paid group (Table 6). All the t-values, reported in the above mentioned two tables barring a few had indicated that nature of job (high and low risk) plays a

significant role in creating stress in workers. Workers doing high risk jobs clearly showed greater stress compared to workers doing low risk jobs. In the light of the above findings its can be concluded that the hypothesis formulated in relation to nature of job and job stress had been fully supported and confirmed.

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