

JOB STRESS: A COMPARATIVE STUDY OF HIGH AND LOW PAID INDUSTRIAL WORKERS

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Abstract:

Background: This study focuses on the effect of salary (High and low paid job workers) on job stress. **Aim:** To study the effect of income or salary (High and Low paid job workers) on job stress with high risk and low risk categories. **Methods:** The Occupational Stress Index developed by Srivastava and Singh (1981) was administered on 200 workers of Tata Motors Ltd, Jamshedpur. **Results:** Result has clearly indicated that income or salary (high and low) played a significant role in creating stress in workers. Low paid workers clearly showed greater stress compared to high paid workers in both high risk and low risk categories. Role overload, role ambiguity, role conflict, responsibility of persons, unreasonable group pressures, under participation, poor peer relations, low status, strenuous working conditions, intrinsic impoverishment, unprofitability were the factors which contributed more occupational stress. **Conclusions:** Low paid job workers had significantly greater stress compared to high paid job workers.

Key Words: Occupational Stress, High and Low paid salary, Nature of jobs, Industrial workers.

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Introduction: -

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 employers satisfaction and performance as linked to coronary hearts disease, a reduction in stress is expected to improve quality of work. "Stress is defined an adaptive response to an external situation that result in physical, psychological and or behavioral deviations for organizational participants." 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). 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. The ever increasing number of conference, stress management centers and university courses are devoted to the topic – may be because the ill effects of stress are seen on the physical and mental health of the employees (Behar 1976, Cobb 1974, French & Caplan 1970, 1980 house, 1974 and Kernhauser 1965) and on the smooth functioning of the organizations too.

Job dissatisfaction, absenteeism, turnover, accident, low productivity, lack of motivation and alienation are found many investigators to be related with stress (Ahmad 1922, Behar & Newman 1978, Pestingee and Singh 1987, Schuler 1970, Sharma & Sharma 1981, and surti 1983). The study by Chandraiah et al 2003 revealed that individual's lower position and age are positively correlated with high job stress and low job satisfaction. In another study Chandraiah et. al (1996) found that senior mangers reported higher job satisfaction and lower occupational stress.

Occupation stress causes major problem for both individual employees and organization. It is estimated that the financial loss by organizations as a result of stress related illness is around \$60billion (Mattesen & Ivancenich, 1987). It is also reported by many researchers that the lower job satisfaction was associated with high stress (Hollingworth, et. al 1988, Abdul Halim, 1981, Keller et al, 1975, Leigh et. al 1988, Chandraiah et . al 1996).

Occupational stress, maladjustment has been labeled as one of the most serious occupational problems of the modern time (Jamal & Baba 2000). A number of recent services on job stress have highlighted the importance of understanding job satisfaction & occupational adjustment for the well being on the employees & the employing organization.

The modern world, which is a world of achievements, is also a world of stress. One finds stress everywhere whether it is within the family, business organization or any other activity. Different people have different view about it as stress can be experienced from a variety of sources. Coping with occupational & other stress has been reported to be the clearest motive with the development of personality related problems.

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).

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

Therefore building general awareness about occupational stress is the first step in 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 organization climate.

Review of literature

The pioneer scientific study in relation to mental health and distress of individual workers was conducted by Kornhouser (1964), he found that a worker's performance at his task is closely related to his mental health

Since then, many attempts have been made in this regard (Beehr & Newman 1987; Srivastava 1991; Samanta and Singh 1993; Mohanty et al 1998; Mittal et al 2000; Aggrawal & Divakara, 2003; Kar et al 2003).

The psychological aspects of job stress have captured much attention in recent times in behavioural research. There has been rapid growth 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 in their study 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 is turn affects the General well-being of the individual. The researchers concluded that higher the occupational stress lower is the General well-being.

Khalid & khalique(2012) examined the effect of nature of job (High risk / low risk) on occupational stress of 200 workers. 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. He found that high risk job workers had significantly greater stress compared to low risk job workers.

Objectives of the study

The present research had the following specific objectives:

- To study the effect of income (high and low) on job stress among the industrial workers in high and low risk jobs categories.
- 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 had been formulated:

- Low paid workers compared to high paid workers will have higher job stress.

Methodology

Sample: A sample of 200 workers was selected from the TATA Motors Ltd., Jamshedpur.

The workers were divided into two categories namely 'High Paid' workers and 'Low Paid' workers and further these workers were sub-divided into two categories, that is, 'High Risk' and 'Low Risk jobs' 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:

Sample Design

Nature of Job	Income/Salary	
	High Paid Job Workers	Low Paid Job Workers
High Risk	50	50
Low Risk	50	50
Total	200	

TOOLS

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

1. 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.

2. 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 level of payment and natures of jobs have been compared by t-test.
- The percentage and mean scores have also been graphically shown where felt necessary.

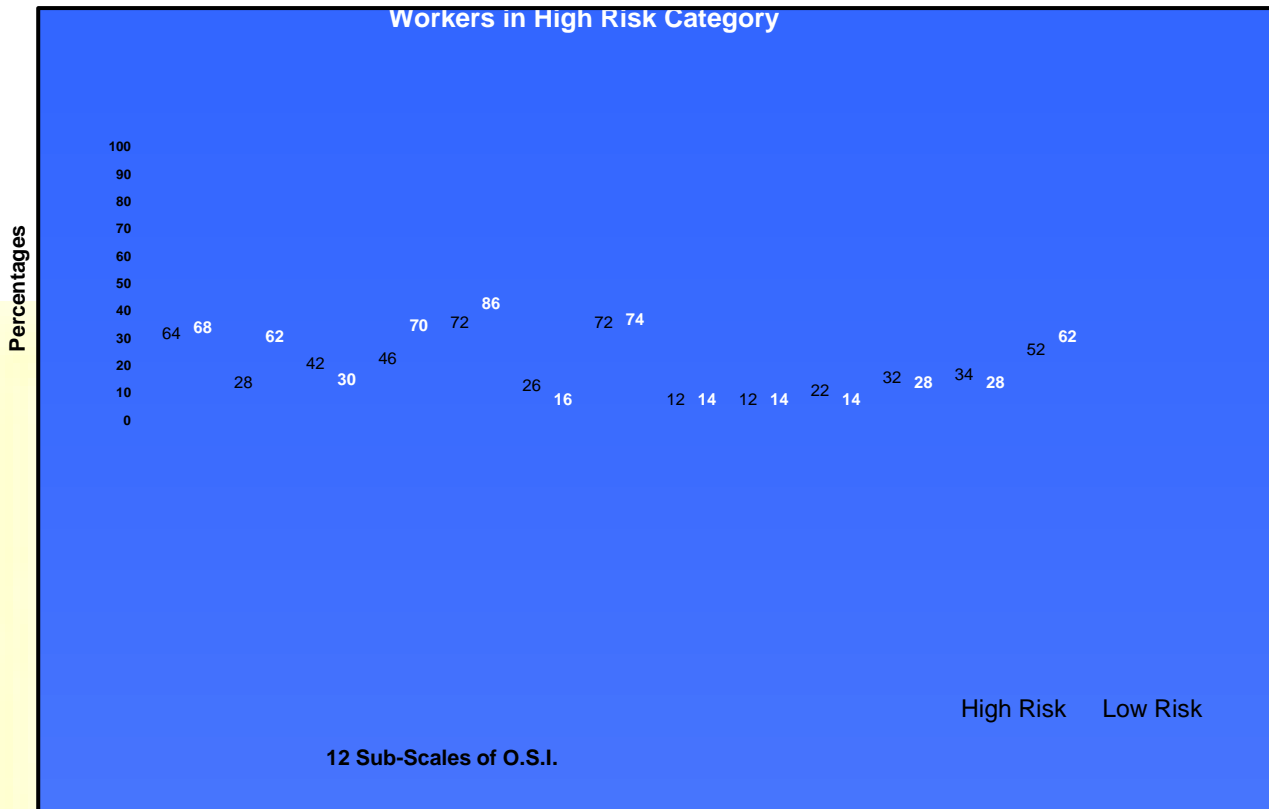
Results: A comparison of high paid and low paid workers of high risk job category on the basis of low, moderate and high levels of occupational stress is given in Table 1.

Table 1

Percentage of Low, Moderate and High Level on Occupational Stress Index (OSI) and its sub-scales: comparison of High Paid and Low paid workers of High Risk Job category.

		HIGH PAID			LOW PAID		
		N = 50			N = 50		
12 SUB-SCALES OF O.S.I.		LOW	MODERATE	HIGH	LOW	MODERATE	HIGH
I.	Role Over Load	6%	30%	64%	4%	28%	68%
II.	Role Ambiguity	24%	48%	28%	10%	28%	62%
III.	Role Conflict	16%	42%	42%	14%	56%	30%
IV.	Unreasonable Groups and Political Pressure	14%	40%	46%	6%	24%	70%
V.	Responsibility for A Person	6%	22%	72%	2%	12%	86%
VI.	Under Participation	22%	52%	26%	14%	70%	16%
VII.	Powerlessness	10%	18%	72%	8%	18%	74%
VIII.	Poor Peer Relations	14%	74%	12%	14%	72%	14%
IX.	Intrinsic Impoverishment	14%	74%	12%	28%	58%	14%
X.	Low Status	10%	68%	22%	6%	80%	14%
XI.	Strenuous Working Conditions	14%	54%	32%	2%	70%	28%
XII.	Unprofitability	10%	56%	34%	10%	62%	28%
TOTAL OSI		12%	36%	52%	8%	30%	62%

Figure 1



It may be observed in the table that the percentages of low scorers were higher in the case of high paid workers on OSI and its sub-scales. On the other hand the percentages of high scorers on OSI and its sub-scales were more in low paid workers compared to those in high paid workers. However, in a few of the measures of OSI, such as, role conflict, under participation, low status, strenuous working conditions and unprofitability the percentages of high scorers were slightly greater in high paid workers compared to low paid workers. The highest difference had been observed in the case of role ambiguity, unreasonable groups and political pressure, responsibility for person. The differences were very high where low paid workers had obtained higher percentages of high scorers compared to high paid workers. Here it can be seen that both high paid and low paid workers were doing high risk jobs and high risk factors had also its effects on low paid workers while low payment had an effect on high risk jobs. However, the magnitude of difference had indicated that the stress level of low paid workers seemed to be higher than high paid workers.

The percentage of low and high scorers in OSI and its sub-scales of high paid and low paid workers had also been graphically represented in Figure 1 which clearly showed the trends reported in the Table 1. The bars showing the percentage of higher scorers were bigger for high paid workers and lower for paid workers.

It has been mentioned earlier that as the sample is based on a 2x2 factorial design, analysis of variance has been computed for occupational Stress Index (OSI) as well as for its sub- scales. The role of the factor namely, the level of payment (high paid and low paid workers) is being

discussed here. F-ratios for determining the role of the level of payment for the OSI and its sub-scales have been given in Table 3. Here it has been noted that out of 13 F-ratios 8 were not statistically significant when only 4, that is, unreasonable group and political pressure, responsibility for a person, under participation, intrinsic impoverishment were statistically significant only at .05 level. It was only role ambiguity where F-ratio is significant at .01 level. Thus the role of level of payment was not very clear. It has shown partial effect. The mean scores of high paid and low paid job workers have been given in Table 4.

It can be seen in this table that in the sub-scales where F-ratios were statistically significant the low paid groups had obtained significantly higher mean scores which explained the fact that low paid workers had greater stress in these areas compared to high paid workers. The tables discussed above have been also graphically depicted in Figure 3.

Table 2

Percentage of Low, Moderate and High Level on Occupational Stress Index (OSI) and its sub-scales: comparison of High Paid and Low paid workers of Low Risk Job category.

12 SUB-SCALES OF O.S.I.		HIGH PAID			LOW PAID		
		N = 50			N = 50		
		LOW	MODERATE	HIGH	LOW	MODERATE	HIGH
I.	Role Over Load	18%	34%	48%	26%	28%	46%
II.	Role Ambiguity	40%	42%	18%	34%	30%	36%
III.	Role Conflict	30%	22%	48%	24%	32%	44%
IV.	Unreasonable Groups and Political Pressure	20%	52%	28%	14%	28%	38%
V.	Responsibility for A Person	8%	44%	48%	8%	52%	40%
VI.	Under Participation	34%	54%	12%	38%	46%	16%
VII.	Powerlessness	6%	40%	54%	10%	40%	50%
VIII.	Poor Peer Relations	42%	50%	8%	38%	52%	10%

IX.	Intrinsic Impoverishment	36%	56%	8%	26%	44%	30%
X.	Low Status	32%	50%	18%	26%	56%	18%
XI.	Strenuous Working Conditions	52%	40%	8%	40%	50%	10%
XII.	Unprofitability	28%	54%	18%	28%	60%	12%
	TOTAL OSI	52%	30%	18%	44%	38%	18%

Figure 2

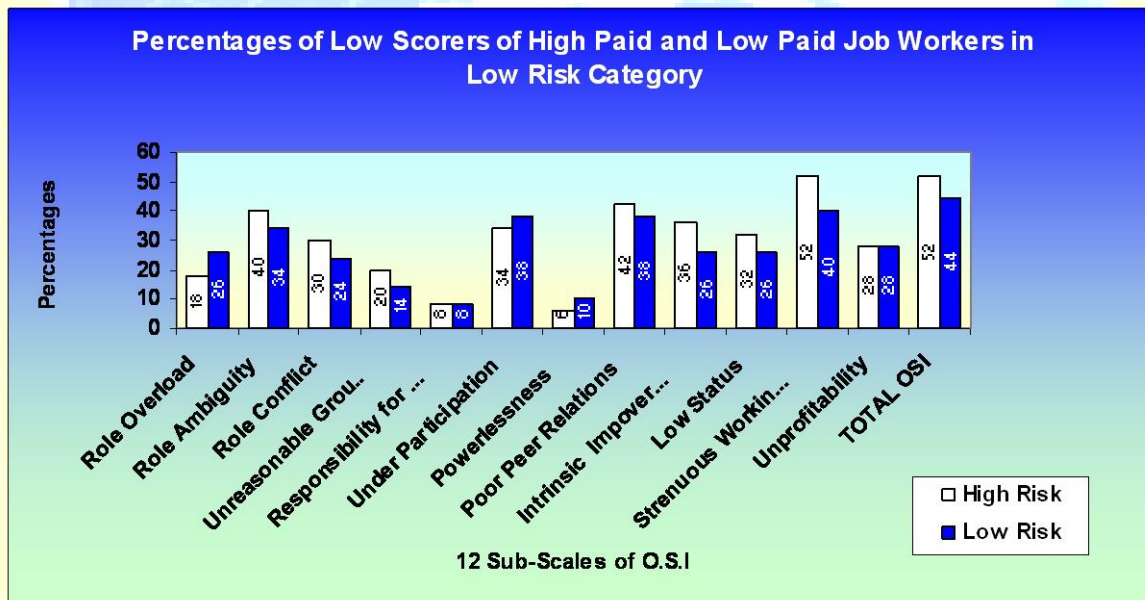


Figure 3

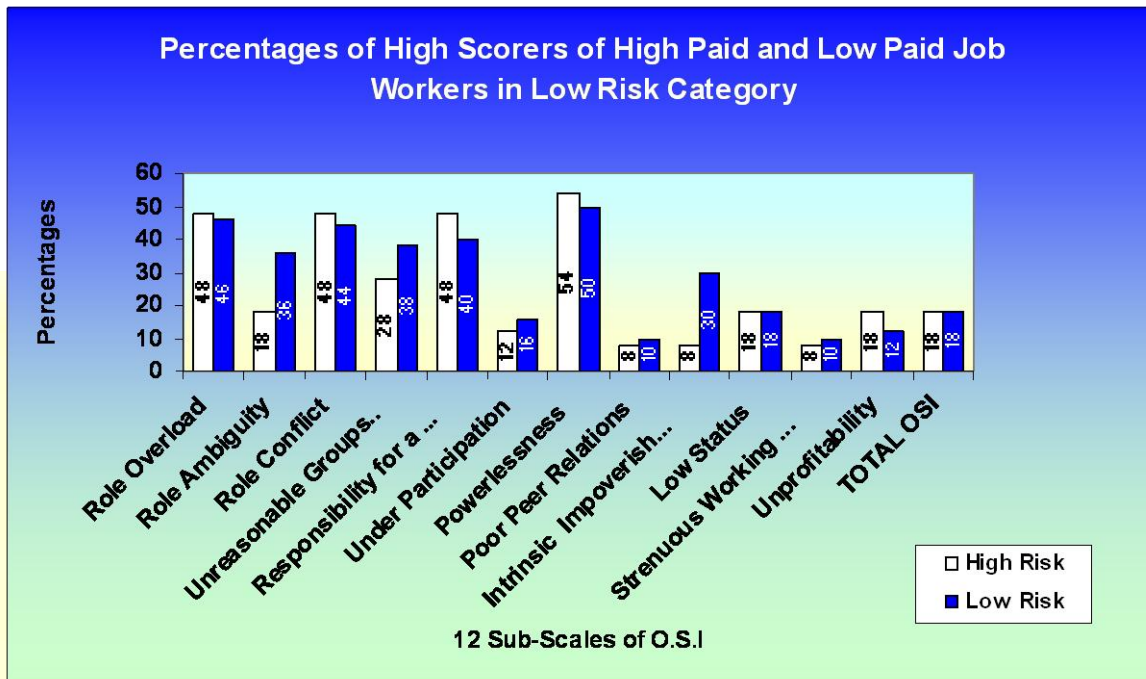


Table 3

Analysis of variance of scores on Occupational Stress Index (OSI) and its sub-scales: Level of Payment.

Source of Variation Payment Factor		SUM OF SQUARES	df	Mean square	F - ratio
12 SUB SCALES OF O.S.I.					
I.	Role Over Load	3.380	1	3.380	0.148
II.	Role Ambiguity	92.480	1	92.480	7.698**
III.	Role Conflict	39.605	1	39.605	1.832
IV.	Unreasonable Groups	68.445	1	68.445	4.673*

	and Political Pressure				
V.	Responsibility for A Person	26.645	1	26.645	3.451*
VI.	Under Participation	23.120	1	23.120	4.191*
VII.	Powerlessness	24.500	1	24.500	2.364
VIII.	Poor Peer Relations	16.820	1	16.820	1.924
IX.	Intrinsic Impoverishment	24.500	1	24.500	3.282*
X.	Low Status	.320	1	.320	0.048
XI.	Strenuous Working Conditions	7.605	1	7.605	1.258
XII	Unprofitability	.605	1	.605	0.171
TOTAL O.S.I.		924.500	1	924.500	1.970

*/** = Significant at above .05/.01 level

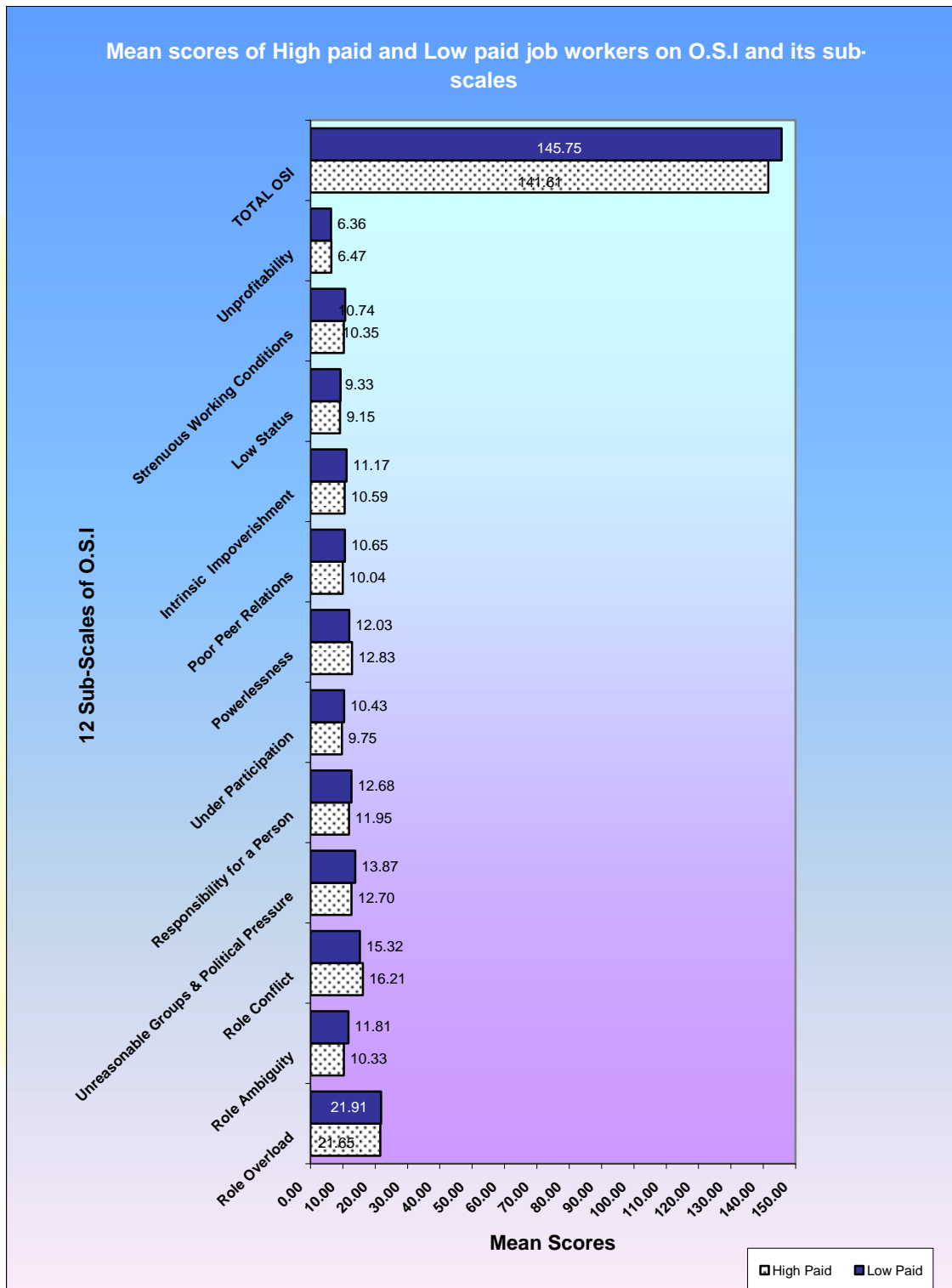
Table 4

Mean Scores of High Paid and Low Paid Job workers on O.S.I & its sub-scales.

		HIGH PAID	LOW PAID
		N = 100	N = 100
12 SUB SCALES OF O.S.I.		MEAN	MEAN
I.	Role Over Load	21.65	21.91
II.	Role Ambiguity	10.33	11.81
III.	Role Conflict	16.21	15.32
IV.	Unreasonable Groups and Political Pressure	12.7	13.87

V.	Responsibility for A Person	11.95	12.68
VI.	Under Participation	9.75	10.43
VII.	Powerlessness	12.83	12.03
VIII.	Poor Peer Relations	10.04	10.65
IX.	Intrinsic Impoverishment	10.59	11.17
X.	Low Status	9.15	9.33
XI.	Strenuous Working Conditions	10.35	10.74
XII	Unprofitability	6.47	6.36
TOTAL O.S.I.		141.61	145.75

Figure 4



It was marked that the bars of low paid workers were greater in the sub scales of OSI than those of high paid workers where the F-ratio were significant. On other hand in the sub-scales where F-ratios were not statistically significant the trend of bars showing mean scores were not clear for low and high paid workers.

Considering the trend of significance of F-ratios the high and low paid sub groups had been compared through t-test separately for high risk job workers and low risk job workers on OSI and its sub-scales. Table 5 presents the t-values comparing the high paid and low paid sub groups of the workers doing high risk jobs.

It may be observed in this table that out of 13 comparisons, only 05 t-values were statistically significant. The dimensions of OSI in which statistically significant differences were found were: role ambiguity, unreasonable groups and political pressure, responsibility for a person, under participation and role conflict and in all the four dimensions except the last one the low paid workers had significantly higher mean scores compared to high paid workers signifying the fact that low paid workers were significantly higher stress in these areas of stress than high paid workers. Though significant differences were not found in other dimensions but the trend of mean scores support the earlier finding that low paid workers had high stress as they had slightly higher mean scores compared to high paid workers.

Similar comparisons for low risk job workers have also been made by using the t-tests. The data have been presented in Table 6. It may be observed in this table that out of 13 t-values only one in relation to intrinsic impoverishment was statistically significant at .01 level where low paid sub-groups had obtained higher mean score (11.36) than the mean score (9.82) obtained by their high paid counterpart. In other dimensions of OSI, there were not much variation in the mean scores of high and low paid job workers resulting in insignificant t-values. Thus, it can be summarized that the trend of stress is not very clear in the case of high and low paid job workers in relation to stress and its sub-scales.

Table 5

Comparisons of High Paid and Low Paid Job workers of High Risk Job category on O.S.I and its sub-scales: t values

12 SUB SCALES OF O.S.I.		HIGH PAID		LOW PAID		t-VALUES
		N = 50		N = 50		
		MEAN	S.D.	MEAN	S.D.	
I.	Role Over Load	22.64	4.17	23.68	3.65	1.32
II.	Role Ambiguity	11.02	2.99	13.04	2.59	3.61**
III.	Role Conflict	16.5	4.54	15.04	2.74	1.95*
IV.	Unreasonable Groups and Political Pressure	13.48	3.54	15.08	2.77	2.54**
V.	Responsibility for A Person	12.94	3.09	14.58	2.96	2.69**
VI.	Under Participation	10.42	2.36	11.32	1.85	2.14*
VII.	Powerlessness	13.02	3.51	12.3	2.80	1.13
VIII.	Poor Peer Relations	11.04	2.52	11.64	2.42	1.20
IX.	Intrinsic Impoverishment	11.36	1.96	10.98	3.07	0.73
X.	Low Status	10.02	2.16	10.12	2.07	0.24
XI.	Strenuous Working Conditions	11.7	2.43	11.84	2.09	0.30
XII	Unprofitability	7.00	1.94	7.02	1.86	0.05
TOTAL O.S.I.		141.34	17.55	156.88	15.48	1.67

* = Significant at above .05 level

** = Significant at .01 level

Table 6

Comparisons of High Paid and Low Paid Job workers of Low Risk Job category on O.S.I and its sub-scales: t values

12 SUB SCALES OF O.S.I.		HIGH PAID		LOW PAID		t-VALUES
		N = 50		N = 50		
		MEAN	S.D.	MEAN	S.D.	
I.	Role Over Load	20.66	5.13	20.14	5.87	0.47
II.	Role Ambiguity	9.64	3.73	10.58	4.35	1.16
III.	Role Conflict	15.92	5.72	15.6	5.06	0.29
IV.	Unreasonable Groups and Political Pressure	11.92	4.38	12.66	4.38	0.85
V.	Responsibility for A Person	10.96	2.52	10.78	2.49	0.36
VI.	Under Participation	9.08	2.49	9.54	2.63	0.90
VII.	Powerlessness	12.64	3.07	11.76	3.16	1.42
VIII.	Poor Peer Relations	9.04	3.27	9.66	3.46	.93
IX.	Intrinsic Impoverishment	9.82	2.64	11.36	3.41	2.52*
X.	Low Status	8.28	2.86	8.54	2.75	0.46
XI.	Strenuous Working Conditions	9	2.82	9.64	2.44	1.21
XII	Unprofitability	5.94	1.89	5.7	1.84	0.65
TOTAL O.S.I.		131.88	25.55	134.94	26.02	0.59

* = Significant at above .05 level

Discussions

An attempt has been made to examine the relationship of the level of payment (High paid and Low paid) with job stress. 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 payment in their jobs. To know the status of both categories of workers in occupational stress the percentages of 'Low', 'moderate' and 'high' scorers have been calculated. These percentages have been calculated for Total Occupation 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. A table presents the percentages of low, moderate and high scorers for high paid workers and low paid workers in high risk and low risk categories.

Low scorers were those who have 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 indicates that the percentage of low scorers were lesser in low paid job workers compared to those in high paid job workers. On the other hand the percentage of high scorers is greater in low paid job workers compared to high paid job workers. Thus, it can be concluded that stress was more in high risk job workers compared to low risk job workers.

The trend of data suggested that low paid job workers had higher percentage of high stress scorers as compared to high paid job workers (Tables 1 and 2, Figures 1, and 2., 3). This trend had also been seen in F-ratios and t-test, though out of 13 F-ratios only 05 were significant. Similar was the case with t-test. But the mean scores supported the above trend. Therefore, we can conclude that the hypothesis that "*low paid workers compared to high paid workers will have higher job stress*" was partially confirmed.

The findings reported above all indicated the presence of greater stress in low paid job workers compared to high paid job workers.

Conclusions

On the basis of the above results and discussions it can be concluded that the salary of the workers played an important role in minimizing job stress. When the workers of both the categories, that is, high risk and low risk got handsome salaries to minimize the burden of their home chores, it will lesser their stress. They will feel fresh in their factory and that will enhance the industrial productivity.

References:

- Ahmad, S., Ahmad, H. (1992). role Stress and Work Satisfaction : A Study on Middle Managers. *Industrial Psychiatry Journal*, 5 (1), 15-21.
- Ahuja, J., Rao, K. and Subbakrishna, D.K. (1998). Perceived Job Stress in Executives : The Role of Lifestyle Related Factors, *Nimhans Journal*, (4), 107-112.
- Ahmad, S. (1991). Organizational Role Stress : A Psychological Study of Middle Managers. *Journal of Personality and Clinical Studies*, 7(1), 43-48.
- Ahmad, S. and Khanna, P. (1992) Job Stress and Job Satisfaction of Middle Level Hotel Employees. *Journal of Middle Level Hotel Employees. Journal of Personality and Clinical Studies*, 7(1), 43-48.
- Agarawal, Krishna (1998). Job satisfaction and occupational stress in relation to felt proximity with top management. *Indian Journal of Psychometry and Education*, 29(5), 113-114.
- Barkat, Shaikh Abul (1998) Managing environmental stress through psychological approach. *Indian Journal of Psychometry and Education*, 29(1), 3-6.
- Barnes, B.L. (1992). Stress Adjustment of Railway Personnel. *Journal of Personality and Clinical Studies*, 8(1), 59-61.
- Bhatia, Sanjay (1999). Stress management in the work place. *Praachi Journal of Psycho-Cultural Dimensions*, 15(2), 111-114.
- Bhatt, D.J. (1977). Job stress, job involvement and job satisfaction of teachers: A correlation study. *Indian Journal of Psychometric and Education*, 28(2), 87-94.
- Chandraiah, K., Kenswar, D.K., Prasad, P.L.S., & Chaudhuri, R.N. (1996). Occupational stress and job satisfaction among middle and senior managers. *Indian Journal of Clinical Psychology*, 23(2), 146-155.
- Choudhry, A.N. (1990). Psychological Aspects of Job Stress in Industries. *Industrial Psychiatry Journal*, 3(1), 29-36.
- Deousa, A. and Deousa, D.A. (1990). Stress in Industry. *Industrial Psychiatry Journal*, 3(1), 37-38.
- Deousa, A., Deousa, D.A., Sinorwala, A.K. and Boxwalla, S. (1999). Stress and Coping in Industrial Workers. *Industrial Psychiatry Journal*, 3(1), 70-71.
- Divakera, P.G. (1989). A Psychological Study of Job stress Among Executives Working in an Industry. The Ph.D. Dissertation, Ranchi University.
- Ferguson, D. (1974). A Study of Occupational Stress and Health : Man Under Stress, (Ed.) A.T. Welford, New York, a division of John Willey and Sons Inc., 83-98.
- Jagdish, & Singh, R.P. (1997). Hierarchical level as a moderator of the relationship between occupational stress and strain. *Psycho-Lingua*, 27(2), 95-98.

- Jena, S.P.K. (1999). Job satisfaction, and occupational stress of women. *Social Science International*, 15(1), 75-80.
- Khalique and Khalid (2009). "A study on occupational stress and general well being in sales professionals" *Behavioural Research Review*, 2009 Vol. 1(1), 56-59.
- Khalid and Khalique (2012). "Nature of job and occupational stress: A study of workers of an industry." *International Journal of Physical Social Sciences, USA*, Vol, 2. Issue, 2. Feb 2012.
- Knotts. T (1996): Workplace Stress doesn't have to kill you. *Business Journal serving Fresno & the Central San Joaquin Valley*.
- Lazarus, R.S. (1966). *Psychological Stress and the Coping Process*. New York : McGraw-Hill.
- Mohanty, Sujata, & Mishra, P.K. (1998). Occupational stress: A comparative study of public and private sector. *Social Science International Interdisciplinary Readings*, 14(1&2), 29-39.
- Pradhan, R.K., & Mishra, P.K. (1999) Organization role stress & HRD Climate: A study on public and private executives. *Social Science International*, 15(1), 44-51.
- Pramanik, K.B. (1991). Stress at Work Place. *Journal of Occupational Health Services (O.H.S. Mirro)*, 1(1), 29-32.
- Rao, S.K.R. (1963). The Conception of Stress in Indian Thought. *Nimhans Journal*, 1(2), 115-121.
- Satyanarayana, K. (1994-95). Stressors among executives and supervisors: A comparative study in a public sector undertaking. *Osmania Journal of Psychology*, 19, 1-9.
- Sekhar, S.F. Chandra (1996). Job stress and burnout experiences among nurses from different hospitals. *Management and Labour Studies*, 21(2), 114-120.
- Selye, H. (1956). *The Stress of Life*. New York : McGraw-Hill.
- Sharma, Meena, & Kumari, K. Bharathi (1998) An empirical study of stress and performance appraisal. *Praachi Journal of Psycho-Cultural Dimensions*, 14(1), 29-32.
- Singh, S. (1990). *Organizational Stress and Executive Behaviours* New Delhi. Shri Ram Centre for Industrial Relations.
- Srivastava, A.K. and Singh, A.P. (1981). *Manual of the Occupational Stress Index* Varanasi : Department of Psychology, Banaras Hindu University.
- Tharakan, P.N.O. (1991). *Organizational Stress and Executive Behaviour*, (Ed.) S. Singh, *Psychological Studies*, 36(3), 219-220.
- Welford, A.T. (1974). *Stress and Performance*. Man under stress (Ed.). A.T. Welford, New York, A division of John Wiley & Sons.