A Comparative Analysis on the Causes of Occupational Stress among Men and Women Employees and its Effect on Performance at the workplace of Information Technology Sector, Hyderabad

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Abstract: *The research study presents the outcome of a comparative analysis on causes of occupational stress among the Men and Women employees and its effect on the employee performance at the workplace of Information Technology Sector (ITS), Hyderabad. A survey of 200 employees consisting 110 Men and 90 Women working in the IT sector was carried out to assess the six independent stress causing factors Job related, Organizational Related, Career, Physiological, Behavioral and Individual factors and its effect on employees' Performance a dependent factor. The descriptive analysis, correlation techniques and parametric statistics like t-test, F-test and multiple regression analysis carried out to arrive at the conclusions. To measure the reliability of the scale used for this study, and internal consistencies of the survey questionnaire, the reliability static Cronbach's alpha (C-alpha) and Spearman-Brown split-half reliability statistics were estimated. The overall C-alpha is 0.89 whereas the Spearman-Brown split half statistic is 0.83. The C-alpha values ranged from 0.62 to 0.76 for Men and 0.60 to 0.74 for Women, for all the 6 independent and one dependent factor. The results of the study indicate that the medium level occupational stress exists at the workplace in general, effecting the performance moderately. Health-wise, some employees developed chronic neck and back pain, an effect of long sitting hours at work. The study confirms that Women will have more stress than Men, however the factors causing the stress among the Men and Women are not similar.*

Keywords: *Occupational Stress; Cronbach's alpha; Spearman-Brown split-half reliability; Performance*

1. INTRODUCTION

Stress is man's adaptive reaction to an outward situation which would lead to physical, psychological and behavioral changes. The environment, social stressors, physiological and thoughts from are the four basic sources, the where one can experience the stress (Matthews, 2001)[21]. The modernization, urbanization, globalization and liberalization which resulted in stiff competition lead to the increased stress. Occupational stress is the stress experienced from job, is inescapable for the employees as work place is becoming an stress enterprise for most employees – the as the Age of anxiety and panic reactions. Though stress harms human beings in several ways, not all the stresses are destructive in nature. Reasonable amount of stress can actually trigger one's passion for work, taps the latent abilities and even ignite inspirations. Occupational stress is a dynamic condition at work place where an employee is confronted with an opportunity, demand, or resource related to what the individual desired and for which the outcome is perceived to be both uncertain and important (Schuler,1980)[31].

The occupational stress is caused due to job where the assignments and work environment of the employees result in psychological reactions in turn distress and illness (Sumathi and Nandagopal, 2015)[34]. The researchers agree that occupational stress is a serious problem in many organizations (Cooper and Cartwright, 1994[8]; Varca 1999[37]; Ornelas and Kleiner, 2003)[23]. Occupational stress is defined as the perception of a discrepancy between environmental demands (stressors) and individual capacities to fill these demands (Topper, 2007[35]; Vermut and Steensma, 2005[38]; Ornels and Kleiner, 2003)[23]. Occupational stress often shows high dissatisfaction among the employees, job mobility, burnout, poor work performance and less effective

interpersonal relations at work (Manshor, Rodrigue and Chong, 2003)[19]. Johnson (2001)[14] similarly argued that interventions like identifying or determining the signs of stress, identifying the possible causes for the signs and developing possible proposed solutions for each signs are required.

The psychological stressors influence the health through emotional, cognitive, behavioral and psychological factors (Levi, 1998)[18]. The role ambiguity, role overload, role conflict, lack of resources and strenuous working conditions have positive relations and are the common causes of the stress (Chand and Sethi, 1997)[6]. Tread Gold (1999)[36] argued, that the type of work assigned to an employee is also one of the stress factor and those engaged in work related to them able to cope the stress better than those who are assigned unrelated and uninterested work. The occupational stress is an environmental factors or stressors such as work overload, role conflict, role ambiguity, and poor working conditions associated with a particular assignment or job (Cooper and Marshall, 1976)[7].

2. REVIEW OF LITERATURE

Hans Seyle, an Austrian born Endocrinologist, first introduced the concept of stress in to the life sciences in 1936. .The General Adaptation Syndrome has been widely held has a comprehensive model to explain the stress phenomenon (Hans Seyle, 1956)[33]. Calpan *et al.* (1975)[3] view of an individual, two role systems the role space and role set. The dynamic interrelationship between the self and various roles an individual occupies, and among these roles, the role space and role set is expectations of significant roles. Those individuals experiencing multiple roles experience considerable stress based on the situations.

Several theories were proposed to stress and its effects. Osipow and Spokane (1987)[24] described six work roles that they felt were stressful regardless of an individual's actual vocational choice. Role Overload (RO) which measures the extent to which job demands exceed resources (personal and workplace) and the extent to which the individual is able to accomplish workloads (Calpan 1975[3], Osipow, 1998)[25]. Role overload can result in an employee experiencing anger and frustration toward persons believed responsible for the overload in work (Marini, Todd and Slate, 1995)[20]. Cercarelli and Ryan (1996)[5] indicated that, fatigue involves a diminished capacity for work and possibly decrements in attention, perceptions, decision making, and skill performance, perhaps must simply put, fatigue may refer to feeling tired, sleepy, or exhausted (NASA, 1996).

Vishal Smartha *et al.* (2013)[39] in their comparative analysis using regression analysis concluded that thee no differences on effects of stress on employees among public and private banks. Jayanthy Nair and Joseph (2013) highlighted the prevalence of various job stresses in policing and their consequences in terms of job relate

and affective strains using correlation analysis. Yahaya *et al.* (2010) reported that the occupational stress do not have director effect on job satisfaction, absenteeism, and turnout from the place of work. A comparative analysis reported the differences in overall job stress and level of permanent employees in private and public sector banks (Khurram Zafar and Faisal Jamil, 2012).

A study on the effect of stress on performance of employees in Commercial bank of Ceylon concluded that stress is having an impact on bank employee's performance at the same the influence of organizational related stress is higher than the job and individual related stress (Karunanithy and Ponnampalam 2013)[15]. A study on causes of stress among the employees and its effect on the employees' performance at the workplace in an international agricultural research institute at Hyderabad Metro reported moderate impact on employees' performance of the institute (Prasad *et al.* 2015)[27]. A comparative study of job stress of among Government and Private Employees reported that the private employees have more job stress than the Government employees (Rajubhai Rana, 2014)[29]. A comparative study on the cause of stress among the employees in IT sector with reference to International Agricultural Research Institute, Hyderabad reported that the job related stress in general and the stress factor the job security in particular effects the employee performance as employees experience medium level stress in IT sector (Prasad *et al.* 2016)[28].

A multiple regression analysis approach to identify the occupational stress among the Executive Officers in the Governmental and Non-governmental Organizations of Nepal illustrating 12 stressors brought out many finer aspects and the realistic picture of the stresses felt by the employees (Kayastha, Krishna Murthy and Adhikary, 2013)[16].

The significance differences in the factors causing stress like workload, time pressure, work culture and threat of unemployment were reported using a comparative study between HDFC and SBI bank employees (Poonam Negi, 2013)[26]. Dwayne Devonish (2014)[10] examined workplace bullying as a potential moderator in the relationship between job demands and physical, mental and behavioural strain and the results revealed that workplace bullying significantly exacerbated the effects of job demands on physical exhaustion, depression, and uncertified absenteeism. Ramesh Kumar and John Paul (2015) explored the aspects contributing organizational stress and the coping strategies adapted by individuals using a comparative study of job stress in Men and Women with special reference to middle level managers.

Dodi Irawanto, Noermiyati and Diana Primasari (2015)[9] concluded that stressors and occupational stress significantly influence the performance of the female employees either simultaneously or partially and the study concluded that demographic factors have a role in moderating the relationship of stressors and occupational stress with the performance of female employees.

3. OBJECTIVES AND HYOTHESES

3.1 Background and cause for the study

This research study was conducted in the Hyderabad city among IT sector employees using a survey questionnaire, where employees spend considerable time on their job at least > 12 hours. The data was collected only from the National Association of Software and Services Companies (NASSCOM), where NASSCOM is a trade association of Indian Information Technology and Business Process Outsourcing industry.

3.2 Research question

What are the main sources of occupational stress, and if there are any differences in the said six stress factors i.e., Job related, Organizational Factors, Career, Physiological, Behavioral and Individual factors among the Men and Women at the workplace of the Informational Technology Sector and how do they influence performance among Men and Women?

3.3 Objective

The objective of the study is to present the main sources of stress at the workplace and to observe any differences in stress factors among the Men and Women their influence on employees' performance with the objectives:

- To identify the causes of stress and its effect on performance at their workplace among the Men and Women

- To assess how work related stress factors effecting the performance at the workplace and suggest work life balance coping strategies.

Based on the identified problem, research question and the objectives the following hypotheses were formed:

H_1: There are no significant differences among Men and Women in job stress levels due to six independent occupational stress related factors

H_2: Women employees experience equal level occupational stress to Men at workplace due to Occupational stress

H_3: The occupational stress causing factors for both Men and Women are similar.

4. METHODOLOGY

4.1 Conceptual Framework

The proposed framework was adopted based on the past research by Seley (1993)[32], Ferris, Bergin and Wayne (1988)[11] and Karunanithy and Ponnampalam (2013)[15] and Prasad *et al*. (2015)[27] and Prasad *et al*. (2016)[28]. The independent factor stress, in this research is further sub-divided into 6 factors– Job related, Organizational climate, Career, Physiological, Behavioral and Individual factors and the dependent factor Performance. The following frame work is formulated on the objectives to be achieved shows the linkages of the factors in this study (Figure 1).
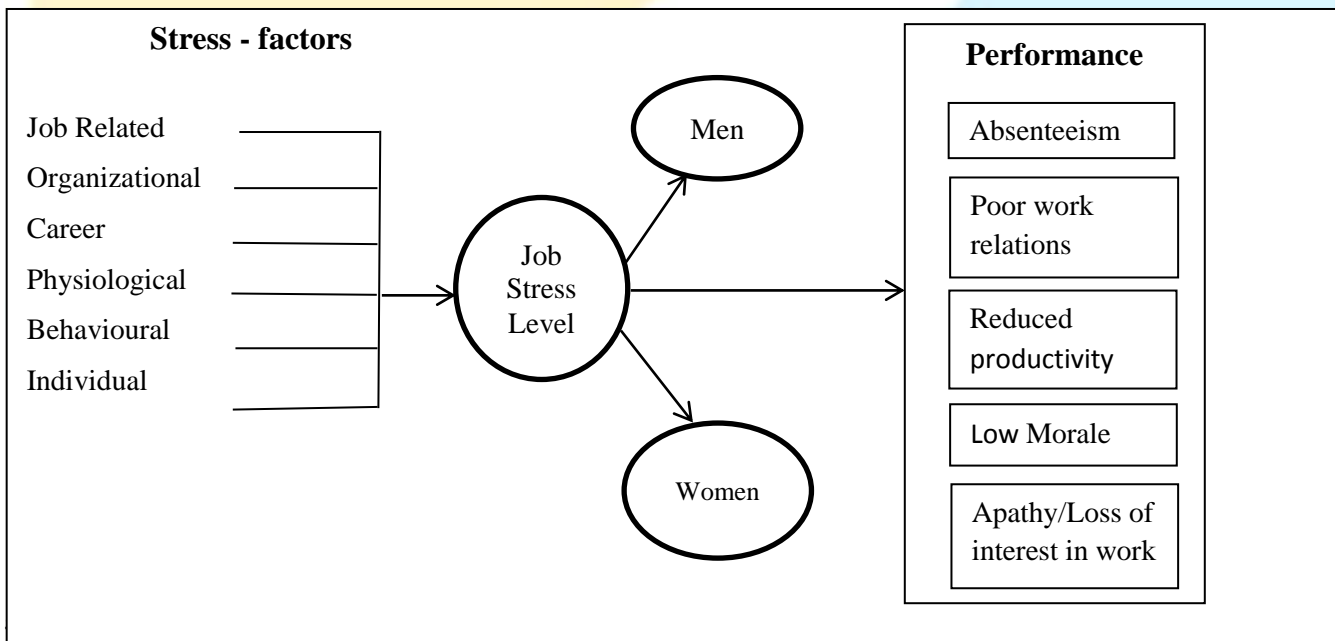

Figure 1. Conceptual framework

4.2 Sample Size

A sample size of 200 employees consisting of 110 Men 90 Women from the IT companies around Hyderabad was considered and data was collected using a survey questionnaire. The demography and sample descriptions are presented in sections 4.2 and 4.3.

4.3 Demography of Sample

Gender	Frequency	Percent

Men	110	55
Women	90	45
Total	200	100

Source: Primary data

4.4 Sample Description

Age Group	No of respondents
20-29	51
30-34	59
35-39	42
>40	48

Source: Primary data

4.5 Research Instrument

The research instrument used for the survey is a structured undisguised questionnaire—a main source for the primary data collection. Secondary data was collected from various published books, websites and records

pertaining to the topic. The questionnaire was divided into 2 sections – in the Section I, background information/personal details of the respondent were collected. The Section II of questionnaire was used to find out the occupational stress levels of the employees and impact of the stress on performance. This part contains 45 questions related to six stress causing independent factors as described earlier and employee performance. The respondents were asked to choose the most appropriate 'top of- the-mind' response for each statement. To measure each factor, a range of 5-10 questions were given but all these questions were mixed systematically. The researcher has identified 45 factors that cause stress in employees at the institute. The factor analysis was used to reduce the factors to 7 factors with the help of SAS 9.4 ver (Table 1).

Table 1: Stress causing factors (109 and performance factors used in the study)

Factor	Description	Factors
1	Job related factors	10 factors – excessive work pressure, demanding work, time management, Unclear explanation of role, role ambiguity, role overload, etc.
2	Organizational factors	6 factors – Relationship with boss, co-workers, harassment, etc
3	Career	6 factors – Successional planning, career progress, job security, development, etc.
4	Physiological	6 factors – Nervousness, pains, bloating stomach, nausea, dizziness, etc.
5	Behavioral	6 factors - Eating more or less, Sleeping disorders, Isolating yourself from others, Using alcohol, cigarettes, or drugs to relax, Nervous habits (e.g. nail biting, pacing)
6	Individual	6 factors – Income levels, financial constraints, ability to relax etc.
7	Performance	5 factors –Experiencing stress, effect on output, absenteeism, poor work relations, etc.

5. DATA ANALYSIS

In our empirical investigation we have applied statistical techniques to analyze the data for drawing inductive inferences from our research data. To ensure the data integrity the authors have carried out necessary and appropriate analysis using relevant methods on our findings. The descriptive statistics are used to summarize the data and to investigate the survey questionnaire, formulating the hypotheses the inferential statistics were employed. To measure the central tendency such as means, variance and standard deviation we used the dispersion methods.

5.1 Reliability methods

To measure the internal consistency reliability of our research instrument, the survey questionnaire and to maintain similar and consistent results for different items with the same research instrument, we used the reliability methods Spearman Brown split-half reliability static where items are randomly divided the items into two groups. After administering the questionnaire to a group of people the total score each divided group was calculated to estimate the correlation between the total scores (William Trochim, 2006)[40]. To further confirm, the reliability of our research instrument we have used the C-alpha reliability statistic and Spearman-Brown split-half reliability static was measured. The Statistical Analytical System (SAS) was used to measure the central tendency, measures of variability, reliability statistics, correlations, parametric tests and to predict the dependent factor training program effectiveness based on

independent factors multiple regression analysis carried out (SAS Institute, 2008)[30].

5.2 Reliability test of the Questionnaire

The Likert-type scale with items 1-5 was used (where 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly agree) in this study. The reliability statistic C-alpha coefficient value was calculated to test the internal consistency of the instrument, by determining how all items in the instrument related to the total instrument (Gay, Mills, and Airasian, 2006)[12]. This instrument was tested on a pilot group of 40 employees each among both men and Women. They were asked to fill out the 50-questions, and requested to select the appropriate answer on 5-point Likert Scale. After analysing their responses from the pilot study with SAS program, the C-alpha statistic was found to be 0.65 and 0.75 respectively for Men and Women with overall C-alpha 0.80, suggesting a strong internal consistency. Three months later, the same instrument was used with 200 employees, 110 Men and 90 Women to collect the responses. Five questions were dropped out from a set of 50 questions because of unsatisfactory C-alpha coefficient

values. The C-alpha values for the six independent and one dependent factor ranged from 0.63 to 0.76 for Men and from 0.60 to 0.73 for Women, whereas the overall C-alpha values are, 0.89 and 0.74 for respectively for Men and Women. The increase in C-alpha values is an effect of dropping the five questions with low C-alpha values.

A second reliability measure called Spearman-Brown Split-Half Reliability Coefficient and Spearman Brown Prophecy were computed to further assure the overall reliability of the scale items. The obtained overall Spearman Brown Split-Hall Reliability for Men was 0.83 and Women 0.73, whereas and Spearman-Brown Prophecy was 0.90 for Men and 0.84 is for Women, suggesting strong reliability of the instrument. The overall C-alpha, Spearman Brown split-Half and Spearman Brown Prophecy values for Men and Women, for all the six independent and one dependent factors are presented in the Table 2 (William Trochim, 2006)[40]. The combined overall values (both Men and Women) of C-alpha: 0.84, Spearman Brown Split-Half static: 0.78, and 0.88 also suggested the internal consistency and reliability of the questionnaire.

Table 2.Cronbach's alpha values for factors used in this study

Sl. No	Factor	C-alpha	Spearman Brown split-Half	Spearman Brown Prophecy	C-alpha	Spearman Brown split-Half	Spearman Brown Prophecy
		Men			**Women**		
		0.89	0.83	0.90	0.74	0.73	0.84
1	Job related	0.76	0.65	0.74	0.68	0.59	0.70
2	Organizational climate	0.68	0.64	0.70	0.61	0.63	0.77
3	Career	0.62	0.61	0.74	0.56	0.57	0.70
4	Physiological	0.70	0.66	0.79	0.63	0.59	0.70
5	Psychological	0.63	0.59	0.66	0.60	0.53	0.66
6	Individual	0.63	0.61	0.73	0.68	0.59	0.71
7	Performance	0.65	0.62	0.74	0.64	0.60	0.72
Combined values (Men and Women) Overall Cronbach's alpha: 0.84 Over all Spearman Brown Split-Half static: 0.78 Overall Spearman Brown Prophecy: Overall 0.88							

The overall mean and standard deviation were estimated from the responses. The overall means was 3.07 and standard deviation was 0.66. Based on this rating score

for Low, Medium and High stress levels determined (Tables 3-4).

Table 3. Determination of the level of occupational stress Mean and Standard deviation (Over all)

Mean	Standard Deviation
X̄ = 3.07	σ =0.66

For any distribution which is nearly symmetric, the expected range is to be 6 times of standard deviation (σ) and better approximation makes it a normal distribution. For our research data the observed range is in near normal distribution and is nearly equal to the 6 times of standard distribution (Andre Francis 2008, Sumathi and

Nandagopal, 2014). In our study the sources of occupational stress has 45 questions where in 6 questions are reverse keyed and range values for these questions are between 1 and 5, hence, the minimum range 45 (1*45) and the maximum range value is 225(5*45) the range is the difference between minimum and maximum values –

180 for 45 questions. After adjusting the values of reverse keyed questioned of our study the overall range is 3.88 which is near to the 6 time standard deviation (0.66).

For the overall Mean (3.07), the Standard Deviation (0.66) is added and the maximum ceiling for the higher stress is set. The difference between mean and standard deviations calculated to find out the minimum ceiling for low level of occupational stress and whereas the level between minimum and maximum is set as medium occupational stress level.

Table 4: Rating of the Score for occupational stress	
Total rating range of the score	Level of influence
$(\bar{X} + \sigma) = 3.07 + 0.66 = 3.73 \ (> 3.73)$	High Level
$(\bar{X} - \sigma) = 3.07 - 0.66 = 2.41 \ (< 2.41)$	Low level
2.41 to 3.73	Medium Level

6. RESULTS

To assess the independent stress factors effect on the dependent factor Performance based on 6 factors – Job related, Organizational, Career, Physiological, Behavioral, Individual and the 7th factor Performance, the primary data gathered through questionnaire was analyzed. The stress was determined by the independent factors and the dependent factor performance was measured by absenteeism, poor-work relations, reduced productivity, low morale and apathy/loss of interest in work. The Table 5 presents the calculated Mean, Standard Deviation and Standard Error Values for Men and Women, for the primary data collected from the respondents (n=110, Men and n=90, Women). From the results of Table 5, it was observed that the objective to find out the source and level of stress is fulfilled and the results also indicate that the stress exists among the employees of the both the stressors and effects performance at medium level. The values of Standard Errors from the Table 5 for Men and Women are relatively small, indicating that the means are relatively close to the true mean of the overall population.

The overall mean value of stress and mean values for all the six factors (Overall Mean = 3.07) indicates a medium level stress and these values and falls under the range 2.41 to 3.73 effecting the employees performance moderately (Mean for Men=2.03; for Women 1.8), and when compared with the low performance value Women will have more stress. The Job related factors have higher mean score for both Men (3.5) and Women (3.43) (Table 5).

Table 5. Mean, Standard Deviation and Standard Error in mean responders on factor scale				
Dimensions	Mean	SD	SE	Level of stress as per the rate of scoring
Job Related				
Men	3.5	0.89	0.04	Medium
Women	3.43	0.91	0.04	Medium
Organizational Climate				
Men	3.2	0.86	0.06	Medium
Women	3.14	0.89	0.06	Medium
Career				
Men	2.9	0.93	0.06	Medium
Women	2.76	0.95	0.06	Medium
Physiological				
Men	2.9	0.89	0.04	Medium
Women	2.84	0.89	0.05	Medium
Psychological				
Men	2.8	0.82	0.04	Medium
Women	2.7	0.80	0.04	Medium
Individual				
Men	3.2	0.97	0.05	Medium
Women	3.7	0.95	0.06	Medium
Performance				
Men	2.03	0.98	0.06	Medium
Women	1.8	0.76	0.05	Medium
Source: Primary data				

6.1 Correlation Studies

Men: All the stress causing factors Job related, Organizational, Career, Physiological, Behavioral and Individual factors were negatively correlated with the performance (r = -0.43, -0.30, -0.42, -0.52, -0.50, -0.92)

and all the Independent stress factors positively correlated (Table 6). Overall the correlations are moderate and with the available data we cannot conclude that the differences in means are statistically significant (Table 6).

Table 6. Correlations among the study factors –Men

Stress Causing Factor	Job related	Organizational	Career	Physiological	Psycho-logical	Individual	Performance
Job related	1.00						
Organizational	0.44**	1.00					
Career	0.44**	-0.06	1.00				
Physiological	0.62**	0.14	0.33*	1.00			
Behavioural	0.52**	0.19	0.17	0.68**	1.00		
Individual	0.55**	0.26*	0.37*	0.55**	0.58**	1.00	
Performance	-0.57**	-0.30*	-0.42**	-0.52**	-0.50**	-0.92**	1.00

**Correlation is significant at prob < 0.01; *significant at prob <0.05; Source: Primary data

Women: The five stress causing factors Job related, Career, Physiological, Behavioral and Individual factors were negatively correlated with the performance (r = -0.43, -0.11, -0.40, -0.15, -0.48) and all the Independent stress factors positively correlated (Table 7) except Organizational factors. Overall the correlations are weak

to medium level and with the available data we cannot conclude that the differences in means are statistically significant (Table 7). According to Alvin C Burns and Ronald F Bush (2005) the relationship among the factors from Men and Women are moderate to weak (Table 6 and 7).

Table 7. Correlations among the study factors –women

Stress Causing Factor	Job related	Organizational	Career	Physiological	Psycho-logical	Individual	Performance
Job related	1.00						
Organizational	0.03	1.00					
Career	0.05	0.11	1.00				
Physiological	0.64**	-0.20*	0.27	1.00			
Behavioural	0.28*	-0.03	0.00	0.41**	1.00		
Individual	0.42**	-0.03	0.15	0.34*	0.21	1.00	
Performance	-0.43**	0.26*	-0.11	-0.40**	-0.15	-0.48**	1.00

**Correlation is significant at prob < 0.01; *significant at prob <0.05; Source: Primary data

6.2 Multiple regression analysis

The multiple regression analysis was carried out to predict the value of a dependent factor outcome, Performance based on the value of 6 independent factors, and to measure the cause and effect relationship between independent and dependent factors (Table 8). The

regression analysis is performed separately for Men and Women. All the 6 factors has 87% influence on occupational stress for Men and 37% influence for Women respectively and effect the performance (Table 8.)

Table 8: Results from Multiple Regression Analysis (Analysis of variance)

Gender	Model	R	R Square	ANOVA F value	P value
Men	1	0.933677	0.871754	50.98118	<.000
Women	1	0.610146	0.372278	4.052591	<.000

Source: Survey data

In case of Women with the p-value of zero to four decimal places, the model is statistically significant. The R-squared is 0.37, meaning that approximately 37% of the variability of performance is accompanied for the factors in the model and even after taking into account the number of predictor factors in the model (Table 8). The coefficients of each factor indicates the amount of change one could expect in Performance given a one-unit change in the value of that factor, given that all other factors in the model are held constant. In case of Women, if we consider the individual stress factor, we would expect a decrease of 0.92 units in the Performance score for every one unit increase in Individual Stress Factor assuming that all other factors in the model are held constant (Table 9) and similarly in case of career an increase of 0.06 units in the Performance assuming that all other factors in the model are held constant and so on. For Men, the Job Related factor, we would expect a decrease of 0.30 units in performance when all other factors in the model are held constant. In the same way we expect an increase of 0.19 units in performance when improvement in the Organizational Factors happen. To compare the strength among the coefficients the standardized beta coefficient values computed (Table 9). For Women, the Psychological factor has factor has larges beta value (0.05) and Individual Factor has smallest beta value (-0.89). Considering the beta value of Individual factor for Women, one standard deviation decrease in Individual factors, such decrease in income, decrease in ability to relax leads to 0.89 standard deviation decrease in predicted Performance, with the other factors held constant. In the same way one standard deviation increase improved psychological factors leads to 0.05 standard deviation increase in Performance with other factors in

the model held constant, and so on (Table 9). For Men, the Organizational Factor has larges beta value (0.20) and Individual Factor has smallest beta value (-0.34). Considering the beta value of Individual factor for Men, one standard deviation decrease in Individual factors, such decrease in income, decrease in ability to relax leads to 0.34 standard deviation decrease in predicted Performance, with the other factors held constant. In the same way one standard deviation increase improved Organizational Factors leads to 0.20 standard deviation increase in Performance with other factors in the model held constant, and so on (Table 9).

The analysis reveals for Women have more stress from Individual Factors because of multiple roles (as mother, spouse and employee) and moderate level stress due to career. Whereas Men are experiencing more stress from Job related factors, physiological and Individual factors. We can conclude from the analysis that most of the occupational stress factors are not similar and affecting the performance among Men and Women.

Therefore, we reject the hypothesis H_1: There are no significant differences among Men and Women in job stress levels due to occupational stress and reject H_3: The occupational stress causing factors for both Men and Women are similar.

From the values of the estimated regression coefficients the sample regression equation can be written as:

Women:

$$Y = 5.25 - 0.02_{job\ related} - 0.09_{organizatinal} - 0.13_{career} - 0.04_{physiological} + 0.05_{psychological} - 0.92_{individual}$$

Men:

$$Y = 3.31 - 0.30_{job\ related} + 0.19_{organizatinal} - 0.07_{career} - 0.21_{physiological} + 0.06_{psychological} - 0.38_{individual}$$

Table 9. Results from multiple regression analysis

Factor	Description	Unstandardized Coefficients		Standardized Coefficients	t	P
		Beta	SE	Beta		
Women	(Constant)	5.25	0.28	0.00	18.88	<.0001
	Job Related	-0.02	0.09	-0.02	-0.21	0.84
	Organizational	-0.09	0.05	-0.09	-1.61	0.11
	Career	-0.13	0.07	-0.11	-1.92	<.0001**
	Physiological	-0.04	0.08	-0.03	0.84	0.40
	Psychological	0.06	0.07	0.05	-12.67	<.0001**
	Individual	-0.92	0.07	-0.89	-12.06	<.0001**
Men	(Constant)	3.31	0.83	0.00	3.99	0.00
	Job Related	-0.30	0.20	-0.26	-1.47	0.15
	Organizational	0.19	0.12	0.20	1.63	<.0001**
	Career	-0.07	0.16	-0.06	-0.42	0.68
	Physiological	-0.21	0.13	-0.23	-1..68	<0.0001**
	Psychological	0.06	0.22	0.04	0.27	0.79
	Individual	-0.38	0.12	-0.34	-3.07	<.0001**

The multiple regression analysis also carried out on overall Stress and its effect on overall Performance and the results are presented in Table 10. The parameter estimates from the regression analysis indicate that Women will have reasonably more stress and standardized beta value -0.39012 indicates that an increase one standard deviation of stress factor causes -0.39 standard deviation decrease in performance when compared to Men (standardized beta value 0.77409) a

decrease of 0.77 standard deviation in performance predicted. This indicates that the occupational stress effect on performance was more prone towards Women in this study. The parametric estimates from multiple regression confirmed and we accept the hypothesis **H$_2$**: Women employees experience more occupational stress than Men at workplace due to six independent occupational related stress factors.

Table 10: Parameter estimates from the regression analysis: Overall Stress vs Overall Performance (Men and Women)

Factor	Label	Parameter Estimate	Standard Error	T value	Pr > |t|	Standardized Estimate
Men Performance	Constant	5.40890	0.42377	12.76	<.0001	0
Stress	Stress	-1.18570	0.13713	-8.65	<0.001	-0.77409
Women Performance	Constant	4.06016	0.78706	5.16	<.0001	00
Stress	Stress	0.75430	0.26249	-2.87	0.0061	-0.39012

The chi-square test for independence is applied as the data has two categorical variables from a single population to determine whether there is a significant association between the two variables Men and Women experiencing occupational stress. The Chi square test was also used to test the hypothesis that Women employee at the workplace of Information Technology Sector experience more occupational stress than Men employees. The test revealed that there are significance differences between the Women and Men with respect to the level of occupational stress experience as calculated □2 value (11.938) is more than critical for 2 df (5.991) at 0.05% level.

The P-value, the probability that a chi-square statistic having 2 degrees of freedom is more extreme than 11.938

is estimated at P(□2 > 11.938) = 0.002. Since the P-value (0.0003) is less than the significance level (0.05), we cannot accept the null hypothesis. Therefore there is a relationship between Men and Women experiencing the levels of occupational stress at the workplace in Information Technology sector. This approach is appropriate because the sampling method was simple random sampling, the variables under study were categorical, and the expected frequency count was at least 5 in each cell of the contingency table.

Hence we reject the **H$_2$** Women employees experience equal level occupational stress to Men at workplace due to Occupational stress and conclude that Women employees experience more occupational stress than Men (Table 11).

Table 11. Results from Chi Square Analysis

Gender	Frequency	Frequencies of occupational stress scores with the demands of work				□2	P Value
		Low	High	High	total		
Male	F	1658	2168	854	4680	11.938	0.002
	%	35.4	46.3	18.3	100		
Female	F	1680	1914	726	4320		
	%	38.9	44.3	16.8	100		
Total	F	3338	4082	1580	7200		
	%	37.0	45.4	17.6	100		

7. DISCUSSION

The primary data gathered to structured undisguised questionnaire with 45 questions which were sub-divided into 7 factors dimensions based on their characteristic. These findings include the two extremes of the Likert scale given in the analysis i.e. strongly disagree and strongly agree. The results indicated that there were moderate differences in the stress levels among Men and Women. This is line with the similar study conducted by Yahaya *et al*. (2010)[42], Sumathi and Nandagopal

(2014). Women are more prone towards occupational stress because of their dual roles in particular who are having infants and even some Women need to work in the shifts.

The research did not find any significant differences between the younger and older respondents, however observed the middle aged group experience more stress than the other groups. However, Women participants indicated positive attitude in survey participation than Men. Further future research may address this gender-related with large samples disparity when conducting the

survey across the IT sector. In summary authors researched the hypotheses that the 6 independent stress causing factors effect on the dependent factor performance and the results have supported the hypotheses. The medium level stress exists at workplace and this need to be addressed to further improve performance. However given the nature and scope of the study, there are some limitations to this study.

Survey research will have some problems associated with its use as these are self-reported instruments may not be complete and reliable. However it can be reported that a strong internal consistency of the instrument was confirmed by both Cronbach's alpha and Spearman-Brown split-half reliable static at overall and at independent level using ordinal data.

A major limitation to the interpretation of the results is with the instrument i.e. survey questionnaire. The questionnaire was distributed circulating hard copy and a link also provided creating the survey questionnaire at Google form. Most the Women employees submitted the hardy copy with some additional comments, however male employees prefer to use online Google form. The researcher have no idea whether who has submitted the form. The author can be only make guess based on their age. However, author is very lucky to receive honest answers on the hard copy from the younger generation both Men and Women. The authors observed the similar answers from the hard copies received from the pilot study and final survey.

8. CONCLUSIONS AND RECOMMENDATIONS

In the age of dynamic and competitive world, the mankind is exposed all kind of stresses as the stress is found in all the sectors. This research study was aimed at to study the impact of occupational stress on the employee performance at the workplace. All most all the factors mean value is within the range of 2.14 to 3.73 which shows medium level stress exist in the institute. These issues need to be addressed by the management of the institute by Ergonomics to understand the interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance. We have also observed Women will have more stress because of their dual roles working and taking the responsibility of the family at home – role conflict. Proper strategies need to be developed considering working on flexible hours, interpersonal relationship and supervision and participation of the employees in the stress management may be helpful to cope the stressors.

8.1 Recommendations

Stress issue has become contemporary, being an occupational hazard and needs to be addressed without delay. There is no "one size fits all" solution to managing stress, because it is the individual who has the still have

control over lifestyle, thoughts, emotions, and the way one deal with the problems.

8.1.1 Individual management

Some of the unhealthy methods and which reduce stress temporarily are: smoking, drinking, using pills for relax, drinking too much, sleeping too much and out bursts.

Give up complaining and blaming: Accept constructive criticism which will be helpful to improve your performance. Spend time with those who talk about ideas Find out the happiest and most intelligent people at your workplace and try meeting them on a regular basis. Give up the distractions: Learn to conserve your emotional energy. The walking will increase the heart rate and relive you from the stress. Activities that are continuous and rhythmic—and require moving both your arms and your legs—are especially effective at relieving stress (Walking, running, swimming, and aerobic classes are good choices. One should try to make a conscious effort to focus on body and the physical (and sometimes emotional) sensations experienced while moving. In addition to regular exercise, there are other healthy lifestyle choices that can increase your resistance to stress. Having a healthy diet, reducing caffeine and sugar, avoid alcohol, cigarettes and drugs may relieve the stress.

8.1.2 Organizational level

The management of the organization should also take the responsibility of employees' stress conducting stress management and coping programs at the institute level. The organization should start employee motivation, yoga and meditation. If employees are given control the job they perform, there will be job satisfaction and high quality of work, as the employee himself takes the decisions and organizes his work at optimal level. Flexible working hours, work redesign, appropriate training on the new technologies, decentralized decision making, regular health checkups will definitely help to overcome the problem of the stress. The job related issues – job insecurity need to be addressed amicably. The commonsense remedies like more sleep and eating better, find more suitable job are some suggestions. As the stress is individual oriented one himself/herself should develop the coping strategies adjust his/her life-style and food habits.

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