IMPACT OF STRESS ON IT PROFESSIONALS IN INFORMATION TECHNOLOGY INDUSTRY- A SELECT STUDY

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ABSTRACT

In the current lifestyle of utmost complexities, the stress level is raising at a phenomenal rate. The factors that contribute to stress not only differ between cultures, but also within the culture itself, from a sophisticated to a normal class family, the ultimate necessity is the job, may it be a business or a salaried job.

This research work is an analytical, empirical study based on survey of IT professionals in India. The sample was drawn from the various IT hubs in India to make it more representative of the IT professional's population. Through the pre-tested questionnaire used in the survey, data were generated on the respondents' demographics, their perceived organizational stressors, their self-assessed stress levels, job satisfaction, intention to quit and their stress coping strategies.

The findings of this study would contribute significantly in better understanding of the stress in IT sector by the academicians and the practitioners.   Finally, this study enriches the literature on stress management with respect to the sunshine industry of India management with respect to the sunshine industry of India.
Key words: IT industry, Professional, sunshine industry , India

INTRODUCTION:

Information technology (IT) industry in India has played a key role in putting India on the global map. IT industry in India has been one of the most significant growth contributors for the Indian economy. The industry has played a significant role in transforming India's image from a slow moving bureaucratic economy to a land of innovative entrepreneurs and a global player in providing world class technology solutions and business services. The industry has helped India transform from a rural and agriculture-based economy to a knowledge based economy. In the IT industry majority of the population, around 81.5% are in the age group between 20 to 25 years and the mean age of the employees is 24 years. The requirement of night shift has been receiving unfavorable media coverage, causing social problems for the employees working in this sector.

Factors like lack of advancement in career, high workload, employee morale, risk involved in decision making, and organization climate leads to stress among them. They have high aspirations for career, expectations from job and are ready to take risk.

RESEARCH PROBLEM

The study throws light on the wide spread silent problem by name 'Stress', which gave raise to acute dysfunctions and are called diseases as per medical terminology, especially the heart related diseases, if left uncared the extremity of stress may turn a person vulnerable and even lead to the suicide of the person.The work stress is found in all the professions, and it's the fact that every job has its own complexity and at times the job profile itself may be stressful, the very affected are the IT professionals who are highly target driven, highly pressured on results, and are squeezed both physically and mentally to the maximum on their roles and loads.

RESEARCH OBJECTIVES

The present study was designed to analyze the various factors influencing occupational stress, job satisfaction and coping strategies of the information technology professionals   in   India,   with   following   specific objectives:-

1. To study the demographic profile of the respondents   in the select IT Industry.
2. To measure the level of occupational stress among the IT professionals.
3. To examine the impact of organizational stressors considered with the occupational stress level of the IT professionals.
4. To suggest suitable measures for reducing occupational stress to the IT Companies

LITERATURE REVIEW

Definitions of Stress

Before defining the occupational stress, it is mandatory to define stress. The various popular definitions of stress that has been gathered from different research articles are discussed as follows:
"A dynamic activity wherein an individual is confronted with an opportunity,

Constraint or demand" - Selye (1936). Stress as the state in which an individual's well-being is perceived to be endangered and they think it necessary to divert all their energies to protect themselves.
-    Coffer and Appley (1964)

Appley and Trumbull (1967) have posited a similar set of factors. According to them the intensity of the reaction varies from person to person even under exposure of the same environmental event. Stress proneness of the person may be determined on the basis of the motivational structure and prior history. Where motivational are not accessible, prediction of the stress proneness may be made on the basis of what the person holds important, the types of goals that may lead to anxiety are   aversive-defensive   behavior.

Coetzer and Rothmann (2006) conducted a study to identify occupational stressors for employees in an insurance company and to assess the relationships between occupational stress, ill health and organizational commitment. A cross-sectional survey design was used with a sample of 613 employees in an insurance company. An Organizational Stress Screening Tool (ASSET) was used as measuring instrument. The results showed that job insecurity as well as pay and benefits were the highest stressors in the insurance industry.

Aniza et al. (2010) conducted a cross-sectional study on organizational factors that influences job stress among Medical Laboratory Technologists (MLT) in Klang Valley's Hospitals. Three organizational factors that were measured in the study are interpersonal factor, job condition and career development. A total of 249

respondents participated in this study, 126 were from the private hospitals and 123 from the government hospitals. The study found prevalence of stress was higher in the private hospitals compared to the government hospitals. Further found all the three organizational factors were significantly associated with job stress.

Moustaka et al. (2010) conducted a research on occupational stress in the nursing staff with a comparison between capital and regional hospitals in Europe and identified the differences in factors related with stress in both samples under investigation. The study sample consisted of 140 nurses and nursing assistants, selected with a randomization technique. The study used the occupational stress scale of Kahn et al (1964) and a general information questionnaire. The study found that nurses suffer from occupational stress without any significant differences between the two samples. Increased work overload and conflict between professional and family roles contribute to the development of stress.

HYPOTHESIS

H$_0$:   **There are no significant relationship between organizational stressors and occupational stress.**

METHODOLOGY

The present study considered top seven IT companies according to the estimate by the National Association of Software and Services Companies (NASSCOM,
2013). A convenience sample of 700 IT professionals are used in the present study, A total of 700 questionnaires (100 questionnaires to each IT company) were distributed physically, through web links and emails to professionals employed in the selected software companies operating in different city locations in India. The sample was drawn from both men and women software professionals holding positions ranging from trainees or fresher's to middle management.

LIMITATIONS OF THE STUDY

Any study based on the consumer survey through a predesigned questionnaire suffers from the basic limitation of the possibility of difference between what is recorded and what is truth, no matter how carefully the questionnaire has been designed and field study has been conducted.

☐ Non-Probabilistic (Convenience) Sample was used in conducting the survey covering various prominent IT hubs in India. The sample size taken may be inadequate to throw accurate figure on the stress levels and its impact in IT industry.

☐ Evaluation is based on the primary data gathered through questionnaire and accuracy of the findings entirely depends on the accuracy of the responses given by the customers.
☐ The respondents were sometimes reluctant to answer the question and the response may be biased.

DATA NALYSIS

Demographic profile of the respondents

Gender

The final sample (N=482) was composed of 272 males (56.4 %) and 210 females (43.6 %). Gender – composition of the sample is realistic and representative with almost equal distribution of male and female ratio.

Age the age of the respondents are grouped into four categories: (l) less than

25 years, (2) 25 – 30 years, (3) 31 – 35 years and (4) above 40 years.103 (21.4%) respondents are in age group of 'less than 25 years', 176 (36.5%) in '25 to 30 years', 145 (30.1%) in '30 – 35 years', and 58 (12%) in 'above 35 years'.

Education

The pilot study conducted before arriving at final questionnaire has made it clear that IT sector is having only graduates and post-graduates. Hence, the final questionnaire was limited with two options. The final sample represented 63.1 % (n=304) of graduates and 36.9 % of post graduates (n=178).

Marital Status

With regard to marital status of the respondents, both married and unmarried were equally distributed representing 229 singles or unmarried (47.5%) and 253 married (52.5 %) software professionals.

Spouse Occupation

Further spouse occupation was asked in the survey to know their family conditions and culture. It was found that 148 (30.7 %) respondents have working life partners and 105 (21.8 %) have home makers.

Family Size

Family size was recorded with options such as 'less than 2 members', '3

– 4 members' and 'above 4 members'. From the survey, it was found that there are very few respondents (18.3%) who are having 'less than 2 members' in their family. Majority of the respondents (43.4) have '3 – 4 members' in their family and 38.4 % of respondents have a family size above 4 members.

Annual Income

The other important variable in the present study is family income. The income of the respondents was categorized as: 'below 2 lakhs', '3 – 5 lakhs', '5 – 10 lakhs' and 'above 10 lakhs'. Majority of the respondents were in '3 – 5 lakhs' category i.e., 167 (34.6%). The next major group found was '5 – 10 lakhs' i.e., 148 (30.7 %). 103 respondents were in the category 'less than 2 lakhs' and only 64 (13.3 %) respondents were in the category 'above 10 lakhs'.

Work Experience

Majority of the respondents, 177 (36.7 %) are at entry level with less than 2 year experience, and 136 (28.2 %) have 2 to 4 year experience.

73 respondents (15.1 %) are team or project leaders at the middle level with 4 to 7 year experience and 96 (19.9 %) are technical or functional heads with more than 7 years of work experience.

Working Hours

From the pilot study, it was found that the IT professionals are having eight to ten hours of work shifts based on their project deadlines and company   policies. The final sample represents a majority of professionals working nine hours per day i.e., 248 (51.5 %) and reasonable good number of professionals was working 10 hours per day i.e. 153 (31.7 %). Only 81 respondents (16.8 %) reported their work shift as eight hours.

OBJECTIVE-2 FINDINGS

The occupational stress of IT professionals were analysed by using their self- assessment on factors such as self-analysis, stress related behavior, stress and habitual changes and routine hassles at work. The scale items were formulated from   the self-assessment test   originally   developed by two American   psychologists Holmes and Rahe ('the social readjustment rating scale' Psychosomatic Medicine, 1967). A total of forty three statements that reflects on physical   symptoms, emotional symptoms, behaviouralsymptoms,   psychological symptoms and negative thoughts were used to examine the individuals occupational stress levels. Each statement was given with the anchors 1 – strongly disagree, 2 – agree, 3 – neutral, 4 – agree and 5 – strongly disagree. This section deals with a detailed discussion on the sample responses collected from the questionnaire survey.

a)Self Analysis
, it can be noticed that the respondents are not satisfied with their present enjoyment in life. They realized that they could improve their relationship and performance. The high mean was observed for the statement 'I could   bemore successful my   relationships'   (mean=3.63)and the comparatively lower mean was observed for the statement 'I have less confidence and self-Esteem than I would like to' (mean=2.14). The overall mean is 2.92 for self-analysis scale which indicates that the stress level of the respondents was neither at low level nor at high level.

b) Stress Related Behaviour : the respondents do not like to spend overtime at workplace. Even though, the respondents agreed that they are having stress, still they are quite normal in doing the work and maintaining family relations. Most of the respondents agreed that people notice their stress easily (mean=3.29). The least mean was recorded to the statement 'I like to spend most of the time at Work place' (mean=2.49). The overall mean is 2.84 for stress related behavior scale.
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c) Stresses and habitual changes:
The stress and habitual changes scale was designed to examine the effect of stress on individuals diet habits, smoking and drinking habits. A total of five statements were asked with five point scale it can be noticed that high mean was observed for the statement 'Spending time with family and friends will keep me happy and peaceful' (mean=4.13) and low mean was observed for the statement 'Smoking relieves stress' (mean=1.80) and 'Alcoholconsumption   is   a   stress   reliever' (mean=1.90). The overall mean is 2.75 for stress and habitual changes scale. This made it clear that respondents prefer family and friends as stress relievers than cigarettes and liquor. Moreover, the food habits found to be neutral with no strong agreement or disagreement.

d) Routine Hassles at Work
A total of twelve statements were asked to the respondents on a five point scale to answer. , it can be noticed that the

occupational stress is high as overall scale mean is 3.29. The high mean was observed for the statement 'The job requires learning new things' (mean=3.73) and the low mean was observed for the statement 'The job requires lot of physical effort' (mean=2.03).

 it can be inferred that continuous learning i.e. updating the skill set is a major stress factor for IT professionals. The nature of IT job is demanding professionals to be multi skilled, creative and to work in a faster way with unrealistic deadlines. Though the physical efforts are less, the mental efforts are high which is making IT professionals more stressful in performing their job related tasks.

Overview of Respondents Occupational Stress

S No	Scale	No of Items	Mean	S.D.
1	Self-Analysis	18	2.92	0.603
2	Stress Related Behaviour	8	2.84	0.699
3	Stress And Habitual Changes	5	2.75	0.687
4	Routine Hassles at Work	12	3.29	0.482
Overall Occupational Stress			2.99	0.468

OBJECTIVE 3 FINDINGS:

The linear regression analysis was performed to examine the statistical significant relationship between the stressors considered and stress levels by 'Enter' method. Regression is based on correlation, but allows a more sophisticated exploration of the interrelationship among a set of variables.

Table also   displays   the "Durbin-Watson test for autocorrelation" which is a statistic that indicates the likelihood that the deviation (error) values for the regression.

Table 4.34   Regression Model Testing between Organizational Stressors and

Occupational Stress – Model Summary[b]

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.670[a]	.450	.438	.35086	1.799

a. Predictors: (Constant), RIN, RE, IRD, PI, RS, RI, REC, RA, SRD, RO

b. Dependent Variable: Overall Stress

The Durbin-Watson statistic is always between 0 and 4.   A value of '2' means that there is no autocorrelation in the sample. Values approaching '0' indicate positive autocorrelation and values toward '4' indicate negative autocorrelation. The Durbin-Watson value is close to '2' which represents no autocorrelation which means the values are independent.

Table 4.35   **Regression Model Testing –**
              ANOVA Results on Occupational Stress

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	47.343	10	4.734	38.459	.000[b]
Residual	57.980	471	.123		
Total	105.324	481			

a. Dependent Variable: Overall Stress

b. Predictors: (Constant), RIN, RE, IRD, PI, RS, RI, REC, RA, SRD, RO

Table 4.35 displays the ANOVA Test results of the model tested by using the linear regression analysis. The analysis of variance conducted by considering occupational stress level as dependent variable (a) and all the organizational stressors considered as independent variable (b) displayed significance value less than 0.000 ($p<0.05$) with F value as 38.459. This shows that the model displayed statistical significant relationship between the predictors' i.e. independent variables and the occupational stress level i.e. dependent variable.

Table 4.36   **Model Testing – t test Results on Occupational Stress**

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.475	.095		26.115	.000
IRD	.354	.035	.516	10.217	.000
RS	-.278	.041	-.441	-6.751	.000
REC	-.268	.048	-.407	-5.580	.000
RE	-.080	.041	-.128	-1.976	.049
RO	-.234	.062	-.319	-3.764	.000
RI	.233	.053	.318	4.420	.000
PI	.183	.040	.294	4.564	.000
SRD	.306	.043	.596	7.074	.000
RA	.272	.037	.508	7.399	.000
RIN	-.258	.062	-.389	-4.153	.000

a. Dependent Variable: Overall Stress

Table 4.36 shows the t test results conducted in Regression model testing. From the table it can be noted

that all the considered organizational stressors has shown significant values of p ($p < 0.05$) and overall model tested has shown fair amount of variance and significant p values in ANOVA test employed. Thus, it can be stated that there is statistical significant relationship between the organizational stressors considered in the present study with the occupational stress level of the IT professionals. **Hence, H_08 (i.e. null hypothesis) is rejected.**

SUMMARY

In the sample of 482 respondents, 56.4% are males and 43.6% females. The marital status of respondents is equally distributed in groups. 21.4% of the respondents are having age below 25 years, 36.5% are in the age group of '25 -30 years', 30.1% are in '30 - 35 years' and 12% are above 35 years. Respondents displayed low mean distribution in all the organizational stressors that were considered in the present study. Respondents revealed routine hassle at work as the biggest contributor for their occupational stress. Respondents displayed neither agreement nor disagreement on their occupational stress.

One hypothesis framed relating organizational stressors and occupational stress were tested using appropriate statistical tools. The study found no significant relationship of gender and marital status on occupational stress. By conducting z test and analysis of variance, the study found age, education, experience, working hours and income having significant relationship with occupational stress. By employing linear regression model testing, it is found that 45% of variance in occupational stress can be explained by the ten organizational stressors considered in the present study.

SUGGESTIONS:
Based on the major findings of this study, the researcher has made several recommendations for implementing effective stress management strategies in the IT Industry to make the IT employees work in stress-free environment and to achieve work life balance.
1) Stress management programs should be developed in organizations to acquaint the employees with various techniques such as meditation, yoga, relaxation training and managing of lifestyle.

2) The freedom given to plan the work, weightage given to the views and opinions, participation in decision making, sense of belonging, free and fair communication and sympathetic approach towards personal problems will definitely reduce the stress faced by the professionals.

3) IT Industry should minize the chances of employee stress caused by various factors like overuse of computers and also safeguard employees' health from musculoskeletal disorders by using ergonomically designed peripherals at the workplace.

4)The weekly schedule and the work load have to be equally distributed on all days of the week using PDCA (Plan - Do - Check - Act) method, so that the work is accumulated at the end of the week or at the start of the week.

5) The organization should offer flexible work options to its employees enabling them to work for a fixed number of hours, spread as per their convenience.

6) The occupational stress can be reduced and organizational stressors can be minimized if the selection and assigning of positions match the competencies of the employee.

7) The training programs shall be conducted by the experts in the specific area of treating the stressed individuals. The organisations shall have training calendar and adhere to it strictly.

8) Social support is an important way to cope with stress that everyone can practice by maintaining friendship. Therefore, the IT industry should facilitate social support by providing opportunities for social interaction among employees as well as their families.

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