

Effect of Tension on it Experts in Software Company

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Abstract

The tension level is raising at a phenomenal rate. The factors that contribute to tension 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 S/W professionals in India. The sample was drawn from the various S/W hubs in India to make it more representative of the S/W professional's population. Through the pre-tested questionnaire used in the survey, data were generated on the respondents' demographics, their perceived organizational tensionors, their self-assessed tension levels, job satisfaction, intention to quit and their tension coping strategies.

The findings of this study would contribute significantly in better understanding of the tension in S/W sector by the academicians and the practitioners. Finally, this study enriches the literature on tension management with respect to the sunshine company of India.

Introduction

Software company in India has played a key role in putting India on the global map. S/W company in India has been one of the most significant growth contributors for the Indian economy. The company 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 company has helped India transform from a rural and agriculture-based economy to a knowledge based economy. In the S/W company 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 tension 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 'Tension', 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 tension may turn a person vulnerable and even lead to the suicide of the person. The work tension 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 tensionful, the very affected are the S/W 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 tension, 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 S/W Company.
2. To measure the level of occupational tension among the S/W professionals.
3. To examine the impact of organizational tensionors considered with the occupational tension level of the S/W professionals.

4. To suggest suitable measures for reducing occupational tension to the S/W Companies

Literature review

Definitions of Tension

Before defining the occupational tension, it is mandatory to define tension. The various popular definitions of tension 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)*. Tension 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. Tension 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 tension 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 tensionors for employees in an insurance company and to assess the relationships between occupational tension, ill health and organizational commitment. A cross-sectional survey design was used with a sample of 613 employees in an insurance company. An Organizational Tension Screening Tool (ASSET) was used as measuring instrument. The results showed that job insecurity as well as pay and benefits were the highest tensionors in the insurance company.

Aniza et al. (2010) conducted a cross-sectional study on organizational factors that influences job tension 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 tension was higher in the private hospitals compared to the government hospitals. Further found all the three organizational factors were significantly associated with job tension.

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

Hypothesis

H₀: *There are no significant relationship between organizational tensionors and occupational tension*

Methodology

The present study considered top seven S/W companies according to the estimate by the National Association of Software and Services Companies (NASSCOM, 2013). A convenience sample of 700 S/W professionals are used in the present study, A total of 700 questionnaires (100 questionnaires to each S/W 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 S/W hubs in India. The sample size taken may be inadequate to throw accurate figure on the tension levels and its impact in S/W company.
- 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 Analysis

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: (1) 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 S/W 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 tension of S/W professionals were analysed by using their self- assessment on factors such as self-analysis, tension related behavior, tension 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, behavioural symptoms, psychological symptoms and negative thoughts were used to examine the individuals occupational tension 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 be more successful in 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 tension level of the respondents was neither at low level nor at high level.

b)Tension Related Behavior :

The respondents do not like to spend overtime at workplace. Even though, the respondents agreed that they are having tension, still they are quite normal in doing the work and maintaining family relations. Most of the respondents agreed that people notice their tension 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 tension related behavior scale.

c) Tensiones and habitual changes:

The tension and habitual changes scale was designed to examine the effect of tension 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 tension*' (mean=1.80) and '*Alcohol consumption is a tension reliever*' (mean=1.90). The overall mean is 2.75 for tension and habitual changes scale. This made it clear that respondents prefer family and friends as tension 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 tension 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 tension factor for S/W professionals. The nature of S/W 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 S/W professionals more tensionful in performing their job related tasks.

Table1: Overview of Respondents Occupational Tension

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

Objective 3 findings:

The linear regression analysis was performed to examine the statistical significant relationship between the tensionors considered and tension 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 2. Regression Model Testing between Organizational Tensionors and Occupational Tension – 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 Tension

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 3. Regression Model Testing – ANOVA Results on Occupational Tension

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 Tension

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

Table.3 displays the ANOVA Test results of the model tested by using the linear regression analysis. The analysis of variance conducted by considering occupational tension level as dependent variable (a) and all the organizational tensionors 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 tension level i.e. dependent variable.

Table 4. Model Testing – t test Results on Occupational Tension

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(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

1	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 tension

Table.4 shows the t test results conducted in Regression model testing. From the table it can be noted that all the considered organizational tensionors 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 tensionors considered in the present study with the occupational tension level of the S/W professionals. **Hence, H_0 (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 tensionors that were considered in the present study. Respondents revealed routine hassle at work as the biggest contributor for their occupational tension. Respondents displayed neither agreement nor disagreement on their occupational tension.

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

Suggestions:

Based on the major findings of this study, the researcher has made several recommendations for implementing effective tension management strategies in the S/W Company to make the S/W employees work in tension-free environment and to achieve work life balance.

1) Tension 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 tension faced by the professionals.

3) S/W Company should minimize the chances of employee tension 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 tension can be reduced and organizational tensioners 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 tensioned individuals. The organisations shall have training calendar and adhere to it strictly.

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

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