AN EMPIRICAL STUDY ON STRESS LEVELS AMONG SOFTWARE PROFESSIONALS IN THE CITY OF CHENNAI INDIA

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ABSTRACT
Stress is not only a phenomenon of western world but also in Asia. India ranks only after Vietnam, South Korea, Thailand, China, Singapore and Japan at the rate of 6.1 on a ten-point rating scale. Stress in India can take many forms, for example, executive stress, marital stress, unemployment stress, job stress, etc. People working in the field of IT, termed as Gold-collar employees, go through a lot of anxiety, depression and loneliness because of work environment and often exhibit feeling of inadequacy, lowered self-esteem and dissatisfaction. This results in various health hazards like simple headache to severe heart problems. An attempt has been made in this paper to study the relationship between stress and self-esteem and impact of job stress on personal health of the employees working in IT industry. Study results show employees with high and medium self-esteem experience high level of stress. Long working hours, work pressure, erratic food intervals, Anxiety were found to be the reasons affecting personal health.

Keywords: Gold Collar employee, Stress, Self-esteem, Personal Health

INTRODUCTION
One finds stress everywhere, whether it be within the family, business organization or any other social or economic activity. Right from the time of birth till the last breathe drawn, an individual is invariably exposed to various stressful situations. Stress is a subject hard to avoid. The term is discussed not only in our everyday conversations, but, has become of a public issue to attract widespread media attention.

With the advent of the information revolution, knowledge has become the means to sustain competitive advantage and knowledge employees, by this virtue, the mainstream resource. This gold collar category of employees (software professionals), with their high level of skill and expertise are extremely valuable to their companies and therefore has created their own demand in this society. Driven by the new ideas and creations, they place a high priority to individual goals and professional growth. As a result, they have a different set of needs,
aspirations and expectations than the other categories of employees. This brings greater challenges for the knowledge organizations to adopt innovative people management approach, which can attract, motivate and retain them.

Life in the fast lane, business competition, deadlines and staff constraints stresses out a majority of corporate employees. About 70% of these employees coping the work pressure suffer more from mental stress than physical strain.

Stress in not something new in 21st century. Stress has been experienced since time immemorial, but its toll is higher than ever before.

Concept of Stress
The word, “STRESS” has been derived from Latin word, “Stringere” which means to draw tight. The term is used to refer to hardship, strain, adversity or affliction. Various terms have been synonymously used with stress such as anxiety, frustration, and pressure.

Arnod (1960) “Stress is any condition that disturbs normal functioning”
Selye (1974) “Stress is a non-specific response of the body to any demand”
Beehr & Newman (1978) “Stress is a condition arising from the interaction of people and their jobs and characterized by changes within people that force them to deviate from their normal functioning”

REVIEW OF LITERATURE
It is evident from the review of research that many researchers have studied the concept of stress among employees in different industries. Recently some researchers are trying to study the stress level among IT professional and its impact on their health. Three studies on computer professionals conducted by pestonjee and singh (1983, 1987) and Singh (1987) have been discussed here. In general, the findings of these studies are in contrast to the findings of similar studies conducted abroad. For example, Couger and Zawacki (1978) predicted that job dissatisfaction and the rate of turnover is on an increase among computer professionals. On the contrary none of the three Indian studies reported such findings. Instead, the mean Job Satisfaction score of computer professional was found to be within the range of satisfied to highly satisfied in all the three Indian studies.

Pestonjee and Singh (1983) study the psychodynamics of people working in the field of computers as software or hardware personnel. In this study job satisfaction and morale were taken, as dependent variables and alienation, participation, involvement and role stress were independent variables. It was hypothesized that personas scoring high on the role stress measure would be less satisfied and obtain lower scores on the morale measure in comparison to those who scored low on the role stress measure.

Pestonjee and Singh (1987) noted a general consensus among foreign researchers that Job dissatisfaction and the rate of turnover is on an increase among computer professionals.

Singh (1987) conducted another study related to computer professionals. While reviewing the literature, he noted that there are very few studies on computer professionals and foreign researchers using foreign samples conduct all of them. All such studies have reported that
job dissatisfaction, high role stress and high rate of turnover are common phenomena related to computer professionals.

Mishra et al (1997) studied the nature and inter relationship between motivation and role stress on entrepreneurs in and around Delhi. The major findings of the study revealed that women entrepreneurs scored higher on the motivational variables namely safety, belongingness, self-esteem and self-actualisation as compared to role stagnation, role isolation and role ambiguity. Self-esteem was associated positively and significantly with role overload.

Sharma et al (2001) found that gender related unequal division of domestic duties when coupled with a job, may not result in more severe psychological or subjective health impairments. It was found that job provides women with means of feeling useful and important and provides an opportunity to interact with people and this could be the important source of satisfaction for women. The study also revealed that paid work enhances the status of the employee resulting in enhanced self-esteem.

Watson Wyatt’s (2002/2003) ‘Staying@Work Canada’ survey indicated that psychological conditions (depression, anxiety, stress and other conditions that affect the psychological health of employees) were the leading cause of short-term disability (STD) claims, while 73 percent confirm that these conditions are also the leading cause of long-term disability (LTD) claims. The same survey estimated that most companies spend 2 to 3 per cent of their payroll on short-term disability claims, of which half may be stress-related.

Stephen Palmer and Kristina Gyllensten (2005) did a study of review of literature to evaluate research relating to the role of gender in the level of workplace stress. A further aim was to review literature relating to stressors of particular relevance to working women. These stressors included, multiple roles, lack of career progress and discrimination and stereotyping. Much of the research indicated that women reported higher levels of stress compared to men. However, several studies reported no difference between the genders. Furthermore, the evidence for the adverse effects of multiple roles, lack of career progress and discrimination and stereotyping was inconsistent. Their review concluded that the evidence regarding the role of gender in workplace stress and stressors was inconsistent. Limitations of the research were highlighted and implications for practice were discussed.

The study conducted by Oginska et al., (2005) which was aimed to explore the relationship between emotional intelligence and perceived stress in the workplace and health-related consequences in human service workers, confirmed an essential, but not very strong, role of emotional intelligence in perceiving occupational stress and preventing employees of human services from negative health outcomes. They concluded that the ability to effectively deal with emotions and emotional information in the workplace assists employees in coping with occupational stress therefore, it should be developed in stress managing trainings.

Matthews et al. (2006), in his study compared EI and the personality factors of the Five Factor Model (FFM) as predictors of task-induced stress responses. Results confirmed that low EI was related to worry states and avoidance coping, even with the FFM statistically controlled. However, EI was not specifically related to task-induced changes in stress state.

Studies conducted by Montes-Berges et al., (2007) with nursing students have shown that emotional intelligence is a skill that minimizes the negative stress consequences. They
examined the role of perceived emotional intelligence (PEI) measured by the Trait Meta-Mood Scale, in the use of stress-coping strategies, in the quantity and quality of social support and in the mental health of nursing students. The results indicated positive correlations between clarity and social support, social support and repair, and social support and mental health.

Naidoo et al., (2008) has conducted a survey to gain some understanding of the explanatory factors for stress and an evaluation of the role that emotional intelligence (EI) plays in the experience of perceived stress (PS) in first year dental students. The finding revealed that low EI is associated the stress.

A 2009 company survey by researchers from the University of Liège shows that Belgian companies still have a long way to go in developing a systematic, integrated stress management system. Time and money constraints are significant obstacles in this regard, as well as restructuring and organisational change. Strong involvement by top management and other hierarchical levels represent positive factors in developing a full system of diagnosis, action and evaluation.

It was found that there is no study so far among Gold Collar employees to find the relationship between self-esteem and stress, personal health and stress and Demographic characteristics like gender, marital status etc. and stress. To fill this gap, this study has been undertaken.

OBJECTIVES OF THE STUDY

- To study the level of stress among the Gold collar employees in Chennai city.
- To study the relationship between self-esteem and stress.
- To ascertain the impact of job stress on personal health of employees.
- To give some suggestions for future studies

METHOD OF INVESTIGATION

Descriptive research design has been adopted in this study. The purpose of choosing descriptive design is to achieve new insights into the phenomenon of stress, to formulate a complete and comprehensive picture of stress affecting the well being of gold collar employees.

The study focuses on stress experienced by Gold Collar Employees (IT Professionals). Judgment Sampling has been adopted in this study. The purpose of choosing judgment sampling is to exercise judgment or expertise, in choosing the elements to be included in sample because researchers believed that they are representative of the population of interest. A total of 300 Gold collar employees were selected for the study. The study was undertaken in Chennai which is a capital city of Tamil Nadu, where may top notch IT companies are located and from which data has been collected.
Instruments Used In the Questionnaire

In order to measure the job stress and other selected variables, the following standardized instruments were found to be appropriate. Hence, they were used for soliciting information from the IT professionals –

- Self-esteem scale developed by A.H. Eagly and adapted from J.R. Robinson and P.R. Shaver, Measures of Social Psychological Attitudes
- Personal Health Questionnaire developed by Debra Allcock, 1995

HYPOTHESIS

The Hypotheses may be stated as:

1. There is a relationship between the profile of the respondents and the level of job stress.
2. There is a relationship between self-esteem and stress.
3. There is a relationship between Gender and Personal health.
4. There is a relationship between marital status and personal health.

ANALYSIS AND DISCUSSION

Profile of Respondents and Level of Job Stress

1. Out of 300 employees, 228 are male and 72 are female. The percentage of male (76%) is more than female (24%) in IT industry.

2. 72% of the employees are in the age group of 20-25, 18% are in age of 26-30, 6% are in 31-35 and only 4% of the employees are in age of 35-40 years. Thus the majority of the employees are young.

3. It is found that 88.7% of the employees are unmarried, 11.3% of employees are married. It shows that majority of the employees are single.

4. 58% of the employees have experience of less than 1 year, 12% of them have 1-3 years of experience, 24% of employees have 3-7 years of experience and 6% of them have more than 7 years experience.

5. Employees are categorized based on three levels of stress – low stress, medium stress and high stress. It is inferred from the research that 34% of the employees have low stress, 66% have high stress and none of them have medium stress.

(a) Gender and level of stress: From the data collected, 63.16% of male respondents have high level of stress and 36.84% of males have low stress levels. Most of the female respondents (75%) have high stress levels and 25% have low stress levels.

It can be inferred that both male and female employees experience high levels of job stress.

(b) Marital status and level of stress: From the data collected, 65.42% of the respondents who are unmarried, have high stress while 34.58% of them have low stress. Also, 70.58% of married have stress and 29.42% have low stress.
It can be inferred that married employees comparatively experience high stress than unmarried.

**c) Experience and level of stress:** From the data collected, 75.86% of the respondents having less than 1 year experience, have high stress and 24.14% have low stress. In the category of 1-3 years of experience, 33.34% have low stress and 66.66% have high stress. In the category of 3-7 years of experience, 50% have low stress and 50% have high stress. Respondents with more than 7 years of experience, 66.66% feel low stress and 33.34% feel high stress.

It can be inferred that respondents with less experience have high levels of stress.

Based on chi-square test, chi-square value is 0.000 which is significant. Hence, null hypothesis is rejected, and so, it can be inferred that there is significant relationship between experience and stress.

**d) Age and level of stress:** Of those in the age group of 20-25, 30.55% of respondents feel low stress and 69.45% of them feel high stress. In the age group of 26-30, 44.44% feel low stress and 55.56% feel high stress. In the age group of 31-35, 33.33% feel low stress and 66.67% feel high stress. While the respondents in the age group of 36-40, 50.0% feel low stress and 50.0% feel high stress.

It can be inferred that young employees experience more stress than aged employees.

**Self Esteem and Level of Stress**

From the data collected, respondents with low self-esteem, 44.44% feel low level of stress and 55.56% feel high stress. Among respondents with medium self-esteem 30.31% feel low stress and 69.69% feel medium stress. On the other hand, among respondents with high self-esteem, 37.5% feel low stress and 62.5% feel high stress.

It can be inferred that employees with all levels of self-esteem contribute more to high stress than low stress.

Based on chi-square test, chi-square value is 0.129, which is not significant. Hence the stated hypothesis “There is no significant relationship between self-esteem and stress” is accepted. That is each variable doesn’t influence each other.

**Personal Health and Gender**

Stepwise Multiple Regression Analysis was carried out to determine which of the Personal Health variables among males explain more about stress. \( R^2 \) value is 0.374 which means 37.4% of variants on stress is explained by Beer, Painkiller, Pan Pouches, Food Overweight, Safety and First aid. The most contributed variable is Beer. Beta value is 0.375, the obtained “t” value is 6.079 is highly significant. Therefore, the hypothesis “there exists a significant difference between Personal health and stress among male is accepted.”

Stepwise Multiple Regression Analysis was carried out to determine which of the Personal Health variables among females explain more about stress. \( R^2 \) value is 0.753 which means 75.3% of variants on stress is explained by time spent with family, TV, exercise, Pain killer, long hours and desk work. The most contributed variable is time spent with family. Beta value is 0.556, the obtained “t” value is 5.590, is highly significant. Therefore, the
hypothesis “there exists a significant difference between Personal health and stress among female is accepted.”

**Personal Health and Marital Status**

Stepwise Multiple Regression Analysis was carried out to determine which of the Personal Health variables explain more about stress among unmarried. $R^2$ value is 0.261 which means 26.1% of variants on stress is explained by Beer, Cigarettes, Long hours, Sleep, Stairs climbed, Fall sick, Pan Pouches, Hard Liquor and Depression. The most contributed variable is Beer. Beta value is 0.290, the obtained “t” value is 4.916 is highly significant. Therefore, the hypothesis “there exists a significant difference between Personal health and stress among unmarried is accepted.”

Stepwise Multiple Regression Analysis was carried out to determine which of the Personal Health variables explain more about stress among married. $R^2$ value is 1.000 which means 100% of variants on stress is explained by Long working hours, Time spent with family, Anxiety, Task completion, TV, Pain killer, Cigarettes, Sleep, Exercise, Pan Pouches and Depression. The most contributed variable is Long hours of work. Beta value is 0.726, the obtained “t” value is 5.980 is highly significant. Therefore, the hypothesis “there exists a significant difference between Personal health and stress among married is accepted.”

**SUGGESTIONS**

To overcome stress, the gold collar employees could cope with role stress by adopting ‘approach’ strategies, which confronts the problem of stress of a challenge, and increase the capability of dealing with it.

Social and emotional support should be made available to employees. They should be allowed to maintain close interpersonal relationships with peers, immediate boss, subordinates and family, which would help them to effectively cope with stress.

IT companies should play a charismatic role in envisioning, empowering and energizing their employees.

**CONCLUSION**

Stress is the concept given much importance in any organization because it creates high impact on the individual performance and the overall performance of the organization. Roles are critical in integrating employees with their organization. The study reveals that organizational role stress contributes high stress among IT professionals. In the present day gold collar employees are constantly best with problems of stress and strain in everyday life, because of high-pressure environment of working and living and they easily fall victims to disease and illness. Therefore these employees need to be treated differently. HR strategies must be relaxed and should be designed with proper understanding of their expectations and unique preference that demonstrates proactive strategy. With proper stress combating techniques individuals as well as organizations can become happy and healthy.

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