

**AN ASSESSMENT OF EMPLOYEE PERCEPTION
REGARDING WORKPLACE STRESS-CAUSES AND
REMEDIES:
EVIDENCE FROM SOFTWARE INDUSTRY**

Dr. Jolly Sahni*

ABSTRACT

In the wild chase of success, power and wealth we are pushing ourselves beyond the limits. Recent studies have shown that the challenges faced in the workplace and the continuous demands of personal life results in an imbalance and this ultimately leads to stress. However there is a huge gap in empirical studies on work place stress in software industry, particularly in the Indian context. Moreover the research has been done mainly on the causes of stress and no remedies have been identified. Literature was reviewed and the aspects related to stress were identified and captured in a survey instrument which was later administered to employees of software companies in Delhi region. The purpose of this research is three fold; first it identifies the perceived job stress levels among software professionals, second, identifies the most significant stressors related to job and third, it identifies the most appropriate approaches to effectively cope with stress relevant for software industry. The findings suggest that the software professionals are definitely under stress be it moderate or high. In addition the number one stressor at work place was found to be 'work-family imbalance' followed by 'work overload'. One of the important finding emerged; a little amount of stress is required to feel motivated to work in this industry. Employees perform better if they are moderately aroused/ stressed. As a result of these findings there are strong implications for management and employees of software industry interested in applying and improving the effectiveness and efficiency of employees by reducing the stress levels.

Keywords: Job Stress, employee satisfaction, stress management, work-life balance Organizational Stressors.

*** Assistant Professor, College of Business Administration,, Prince Sultan University, Riyadh, Kingdom of Saudi Arabia**

I. Introduction

Stress is prevalent in all facets of life be it personal or professional. It has become a part of the modern working world especially when we are living in information age. Today change is occurring at an ever increasing speed. Thus the challenges faced in the work place and the continuous demands of personal life results in an imbalance which leads to stress. Stress is an emotional state which occurs due to the imbalance between expectation and capabilities. Stress at the workplace is becoming most serious health issues in this fast growing technology world. The employee is not always capable to fit the changing requirements and conditions at work which results into job stress. The U.S Department of Health has defined Job Stress as "The harmful physical and emotional responses that occur when the requirements of a job do not match the capabilities, resources or needs of the worker".

Job Stress is not always bad or damaging. Stress releases a kind of hormones that speed up your heart rate and give you burst of energy. A mild stress may lead to improvement in an employee's performance but a higher level of stress experienced for a long period of time may affect the health as well as performance of an employee. Therefore it becomes imperative to differentiate between the positive and negative stress depending on the intensity of it. This paper aims to assess the prevailing stress levels in the Industry and analyze the most significant causes and effects of the same. An attempt is also made to recommend important approaches to overcome stress with respect to software professionals and the kind of work they do.

The software Industry involves various professional like business developers, project managers, system analysts, programmers, coders, and quality assurance people involved in the software development cycle. Unlike other professions, the work culture at Software Company typifies with long working hours, odd shifts, working on holidays, conflicts with deadline etc. serve as organizational stressors in the workplace. Software Industry being human-intensive industry is very much reliant on the quality of inputs provided by employees working to develop software. Therefore the psychological well-being of professionals working in this industry becomes all the more important.

II. Literature Review

Stress is perceived differently by students, employees, employers and elderly people. In a layman's language stress is tension, nervousness, headache, unrealistic deadlines and so on but these are only the effects of stress and not stress itself. Stress means anything that requires you to respond, to make a change or an adjustment. One of the early research on stress and its effect was by Richard Rahe and Holmes, 1967 developed a questionnaire measuring life changes and studied whether there was a relationship between the number, seriousness and pervasiveness of changes and frequency of illness. The questionnaire was named "Holmes-Rahe Life readjustment scale" which is an important instrument for determining the level of stress. The increasing competition is marked with age where everyone wants to be ahead, there is also found to be high levels of demand in job, leading to stress and thereby increased negative effect, psychological distress and anxiety (Dua, 1994).

Though all stress is not bad as one of the best known expert on stress a Canadian scientist named Hans Selye, rightly said "Stress is the spice of life" that can add flavors to your food but the wrong spice or too much spice can make you sick. Stress can help motivate you to perform and meet the challenges you will face (Selye, 1956). The same is explained in a study (Kobasa, 1979) which suggests that the physiological and psychological aspects of the arousal produced by stress can be useful, and unless you very routinely overloaded and aroused, stress may not necessarily harm you. The study suggested that the optimum level of stress is required to perform at best.

Stanton, et al., (2001) defines Job stress in their study as something in the work environment that is perceived as threatening or demanding, or is something in the workplace which gives an individual an experience of discomfort. Other stress definition of work-related stress includes:

- "Job stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury." (*United States National Institute of Occupational Safety and Health, Cincinnati, 1999.*)
- "The emotional, cognitive, behavioral and physiological reaction to aversive and noxious aspects of work, work environments and work organizations. It is a state characterized by high

levels of arousal and distress and often by feelings of not coping."(*Guidance on work-related stress: Spice of life - orkiss of death,*

European Commission, Directorate-General for Employment and Social Affairs)

- "Stress is the reaction people have to excessive pressures or other types of demand placed on them." (Managing stress at work: Discussion document, United Kingdom Health and Safety Commission, London, 1999).

There can be many reasons of stress at work; Rajeswari and Anantharaman (2003) have identified ten most important factors that are crucial in determining the job related stress among professionals. These factors are: fear of obsolescence, individual and team interaction, client interaction, work-family interface, role overload, work culture, technical propensity, family support towards career, workload, and technical propensity. Typically workers are required to accept certain goals, often imposed as task demands arising from their job description. This is one of the aspects that are a normal requirement of a job, but when there is too much of it, it can be experienced as stressful (Warr, 1987). The researches have also highlighted the causal relationship between stress and job satisfaction and also the psycho-social aspects of job. The relationship between psycho-social aspects of the job and the health and well-being of workers has been well documented (Dollard and Metzer 1999). High job pressure is inversely and significantly related to satisfaction (Ducharme and Martin, 2000).

Many studies have classified job stress into organizational stress, task related stress, work environment related stress, personnel stress (Enshassi et al 2015) also in terms of physical environment; role stressors, organizational structure, job characteristics, professional relationships, career development, and work-versus-family conflict (see Burke, 1993). A recent study by Enshassiet al (2015) on occupational stress among construction employees identifies the forms of stressors, job burnout and the impact of stress and job burnout and safety performance. They categorized all Job-related stressors in four forms; Organizational stressors, Task stressors, Personnel stressors and Work environment stressors. The study reports that organizational stressor is the major contributor to physical stress, behavioral stress and job burnout. Moreover it revealed that construction professionals suffered from emotional stress and invisible burnout.

The ill effects of negative stress including an individual's lack of coping resources or use of ineffective strategies to cope with stress have been highlighted in many studies (Lazarus & Folkman, 1984; Stanton, Balzer, Smith, Parra, & Ironson, 2001). Cooper & Davidson (1982) have reported that 71% of their sample of managers in the United Kingdom felt that their psychological health problems were related to stress at work. The most notable is that of Cooper (see, Cooper & Marshall, 1976).

In a study by Loscocco and Roschelle, (1991), work-related stress and the relationship between work and non-work life domains have also been identified as factors that should conceptually be included in quality of work life. According to Loscocco and Roschelle the most common assessment of stress is the individual attitudes. This is because individual work attitudes are important indicators of type of quality of work life. The ways that people respond to their jobs have consequences for their personal happiness, the effectiveness of their work organizations and even the stability of society. Individuals selectively perceive and make attributions about their jobs in accordance with the expectations they bring to the workplace.

Freedberg (1996) in his study on the negative effects of stress on white collar employees in Miami, US highlights that insurance companies have been plagued by a nationwide epidemic of sick, disabled and wealthy professionals- specially doctors, but also accountants, architects, insurance agents and Lawyers- filling claims for disability due to stress related disorders.

The level of stress faced by software employees is comparatively higher than employees in other private companies (Kumari G et al 2014). Though stress is not confined to particular type of industry but its inescapable now, it's all pervasive. But the type of industry, work and sector of employment also play an important role in perceived stress. As seen in a latest study by Elizabeth and Zakkariya (2015) job stress and job satisfaction are compared in different banking sectors, the result show that public sector banks have lower job-related stress as compared to private sector banks and new generation banks.

Software Industry being more human-driven, therefore the satisfaction of employee and its retention in general is important; however, the retention of software personnel is vital for business successes (Acton and Golden, 2002). In addition, the imperative of measuring stress and identifying the causes of stress among computer professionals has been emphasized in many studies before (Kleiner and Geil, 1985; Fujigaki, 1993).

To sum up, the literature related to stress is vast and in detail with key contributions from many researchers across the globe (Danna & Griffin, 1999; Cartwright & Cooper, 1997; Borg, 1990; Hiebert & Farber, 1984). Furthermore Kasl (1992) has suggested that many reviews in this area are an attempt either to “paint the big picture” or to present a detailed evaluation of a specific hypothesis. Therefore the former researches can suffer because they are too superficial and the latter can suffer simply because they fail to place the hypotheses of concern in their wider context and, hence, fail to make an evaluation on the basis of the whole picture.

The present study contributes to the existing body of literature on work-related stress by identifying major stressor in an industry which is considered to be most stressful to work in. It tries to fill in the gap by linking the most significant causes of stress with approaches to manage stress, at both, organizational level and individual level by adopting proactive and reactive approaches to stress management.

III. Methodology

3.1 Research Objectives

The purpose of this study was to explore the dynamics of Stress and the cognizance of the stress levels among software professionals. The objective of the study is to (1) measure stress levels among software employees, (2) identifying the major causes of stress and (3) proposing effective stress management techniques. A secondary purpose was to add to the scientific body of research related to stress and its management in this type of industry.

3.2. Research Design and Data Collection

The approach is a combination of Exploratory and Descriptive research approach. Based on the literature review, and with particular emphasis on the several research studies, items were

adapted and incorporated in the schedule which was used to collect the data. Data was collected mainly by way of a survey, in combination with observation and interviews as well. A structured questionnaire, comprising of 23 questions, along with demographic factors, was designed and distributed in various software houses all over Delhi region. After the data were collected, it was then compiled into usable form and both qualitative and quantitative techniques were applied to it. A detailed graphical representation and tabulation of data helped to understand the prevailing situation of job stress in the industry.

Responses to the scale were measured on a five-point Likert-type scale ranged as follows: 5 strongly agree, 4 somewhat agree, 3 neutral 2 disagree, and 1 strongly disagree. A random sample of 600 employees working in software companies was contacted to fill the questionnaire for the survey. Out of these, 362 useable response sheets were returned and analyzed, yielding a response rate of approximately 60%. Table 1 presents a summary of 362 respondents; their gender, age, tenure, qualification, marital status. It shows the demographics of the sample. The total sample size is 362 with 35 percent women and 65 percent men. The average age is 30 years and also men being older to women. 68 percent of employees have a nuclear family and only 32 percent are still living in a joint family. The workforce in software industry is young population with 90 percent employees of less than age of 40 years.

3.3 Instrument

Stress among software professionals has been measured through a structured questionnaire which is based on detailed study and review of past work in literature. The survey includes questions regarding feelings of stress, job fulfillment, and opportunities for learning and advancement (not just promotional advancement) work life balance, role ambiguity, deadlines, communication, leadership, training, workload, financial difficulties, job satisfaction and discrimination at work place etc. It also includes questions about participation opportunities, treatment by management and other organizational issues that can affect the employee's perception of his or her work environment. The reliability of the entire scale was estimated with the help of internal consistency method requiring the application of Cronbach's Alpha Coefficient (α) using the SPSS 22 application. The scale's cronbach's alpha coefficient is calculated to be .705.

Table 1

Profile of respondents

Employee Type	Number	Percentage
GENDER		
Male	234	64.64
Female	128	35.36
TENURE		
0-1 Years	84	23.20
1-3 Years	174	48.07
3-5 Years	75	20.72
More than 5 Years	29	8.01
AGE		
Under 21 Years	0	0.00
21-30 Years	164	45.30
31-40 Years	168	46.41
41-50 Years	29	8.01
51 or Older	1	0.28
MARITAL STATUS		
Un Married	130	35.91
Married	221	61.05
Divorcee/ Separated	11	3.04
Widow	0	0.00
JOB ROLE		
Business Analyst	101	27.90
IT Designer/ Programmer	138	38.12
IT Tester	36	9.94
Any Other	87	24.03

IV. Results and Discussion

a. Perceived Job Stress among software professionals (Stress Levels)

The stress level is determined by the extent to which an individual perceives they have excessive pressures and feel stressed at work. Note that for the stress questions higher agreement and a higher mean value indicates more perceived pressure or stress. Responding to various questions related to their feeling of stress, out of total 362 employees 205 which is 57 percent of employees experienced stress at work (high stress level), whereas 139 employees, 38 percent of employees said they experience stress sometimes (moderate stress) and only 5% of employees felt no stress at workplace. The respondents were also asked about the various reasons at workplace which leads to create stress in them. The causes of stress among professionals can be categorized into three; job related stress, organization related stress and individual stress. This is based on the detailed review of literature and the discussions with experts. Table 2 represents these three categories of causes of workplace stress.

Table 2
Causes of Stress at Work

Job Specific	Organization specific	Individual
Work overload	Poor communication	Family problems
Role ambiguity	unclear supervision	Work-family imbalance
Unclear Job expectations	Organizational changes; mergers & acquisitions,	Financial difficulties
Time pressures	Leadership style	Coping skills
Misfit between skills and job demands	Reward System	Fear of obsolete (constant technology up gradation)
Lack of training	Job insecurity	
Working conditions	Discrimination at work place	

b. Causes of stress

The causes of stress can be categorized into three: job specific, organization specific and individual. After analyzing the data on different causes of stress and applying statistical procedures on these variables, six most significant causes or stress were identified and listed in the table below. Table 3 is a summary of statistics of data collected. It can be seen that the causes

of stress scored high mean value depicting higher stress among employees. The mean value for all the stressors is close to more than 3. The most important causes of stress were identified to be work-family imbalance, work overload, job insecurity and role ambiguity. These are interconnected, long work hours add to the work-family conflicts and therefore work-family imbalance results. Many working parents are sandwiched between caring for children, themselves, and their parents.

Table 3

Descriptive statistics

Causes of Job Stress among software professionals

	Job Specific		Organization specific			Individual
	Work overload	Role ambiguity	Un realistic Deadlines	Leadership style	Job insecurity	Work-family imbalance
Mean	3.81	3.26	2.78	3.04	3.67	3.96
Standard error	0.19	0.53	0.18	0.57	0.17	0.16
Median	3.4	2.87	2.67	3.34	3.5	3.60
Mode	4.2	2.87	2.90	3.40	4.20	4.56
Standard Deviation	1.01	1.24	1.78	1.89	1.20	1.07

V. Stress Management at work

Stress is a critical factor in the determination of employee health and wellbeing and also has important implications for organizational effectiveness. The health can be affected because of the constant use of computers, results in fatigue, eye strain, arm and shoulder pain, and backache. The stress if prolonged and not managed properly can lead to various other psycho-somatic diseases. This is a stage for concern for the management to control the stressors that produce stress at workplace and improve the health and wellbeing of its employees.

Job stress is one of the most important workplace health risk for employees in developed and developing countries (Paul,2002; Danna and Griffin,2002). It is important to develop the skills to

cope with stress effectively. Individuals may cope with the same stressor in vastly different ways. The study by Payne (1988) on stress allows for individual differences in the experience of stress, and in how and how well it is coped with. Researchers have looked at different methods that individuals employ to cope with situations, and although there has been some debate about the language used to define these coping strategies, similar themes are seen throughout the coping research. There are many types of intervention found in the literature on stress management, most important being 'worker training' either in the form of health promotion or psychological skills (e.g., Lindquist & Cooper, 1999) and employee assistance (largely focused on the provision of counselling). The focus must be on proactive coping – how we perceive and react to situations on the horizon – is the important aspect that is only just starting to receive the attention it deserves from psychologists.

Stress has become one of the most serious occupational health hazards today. Stress management interventions are possible at individual as well as organizational level. The management of stress can be done in various ways, like keeping the workload reasonable, let employee use the skills freely, make the deadlines realistic and not putting excessive pressure on the employees.

Suggestive approaches

Stress has become one of the most serious health hazards and especially in the software Industry where work is very demanding. Looking at the stress levels in the software industry which depicts an alarming situation for the management and the society as well, the researcher proposes a set of solutions in the form of coping skills for the industry. These can be divided into two types, first organizational approach and second individual approach.

Organization Approaches

The study shows that this industry is characterized with high level of stress therefore organizations need to be more proactive to the situation so that the stress levels among employees can be reduced or kept to the minimum. For this the management needs to be more proactive in its approach towards managing stress rather the following approaches if implemented can help in balancing the work life of employees thereby not increasing the stress levels. Establishing work schedules that are compatible with demands and responsibilities

outside the job and offering supportive services can help reduce stress. Here are some key strategies:

Flex time: Allowing workers to start or end the workday earlier or later can reduce work/life stress, especially for working parents. Flex time can also reduce the stress of commuting in rush hour traffic.

Job sharing: This allows at least two people trained to perform each job, enabling each employee to have time off without losing productivity.

Work from home: Working from home results in higher morale and job satisfaction and lower employee stress and turnover, according to an analysis of two-decades of studies involving nearly 13 thousand employees, conducted by researchers at Pennsylvania State University. The prime reason is that working at home provides employees more control over how they do their work. Moreover Working from home also helps workers better manage work/family demands.

Stress management workshops: Scheduled workshops that educate employees about the sources of stress, effects on their health and how they can reduce stress can be effective if backed by practical stress management techniques that employees can use on and off the job.

Support groups: Stress can be alleviated when employees share concerns about work issues, life crises, family issues, care-giving and stress management methods. These support groups can be ongoing and include employees at all levels.

Employee assistance program are offered as part of the employer's health insurance plan to assess and address personal issues that affect employee performance and productivity. Issues can range from substance abuse to family problems, and EAPs often include counseling benefits. Studies show that EAPs for substance abuse can reduce workers' compensation claims, employer healthcare costs, and absenteeism. In a study involving 50 companies, EAPs reduced absenteeism by 21 percent, decreased workplace injuries by 17 percent and increased productivity by 14 percent.

Eldercare support: Many companies have begun to contract with geriatric care specialists to help with issues such as finding doctors to address age-related diagnosis, and arranging transportation to medical appointments.

Individual Approaches-Managing stress at work is a challenge for employees though it is the prime responsibility of the employer to provide a conducive, healthy and stress free environment to work in. It is said that maintaining an optimum level of environment for employees is the responsibility of employer but employees also need to learn and develop the coping skills for managing their stress levels, hence it is a dual responsibility of employer and employee. Following are some of the key individual approaches towards managing stress:-

Exercise and relaxation techniques: can all help lower the stress response in the body and improve well-being. One study shows that physical activity at work can increase productivity. Providing two, half hour breaks twice a week resulted in employees with healthier weight, lowered blood pressure, increased energy, better sleep schedules and improved stress management skills, in just eight weeks, according to a study conducted by the Baptist Health System in Mississippi.

Build in exercise breaks: Research has found that light to moderate exercise such as a walking or yoga can lower the cortisol levels that can lead to stress. A short walk each day may refresh employees during the work day, reducing stress and increasing productivity.

VI. Conclusion

Managing and coping with the work-related stress is essential to ensure the well-being of both employee and the organization to safeguard the performance of business. The findings suggest that the overall stress prevailing in the set of software companies is high. Interestingly finding shows that the companies where the stress levels are high, they are growing at a faster pace both nationally and internationally and therefore the job is more demanding. Some of the important findings of this study are summarized below:-

- The work life balance that was depicted in this study as significant predictor of stress at work, there is a strong and urgent need to improve the work life balance of employees by having more flexibility at the work place.
- The majority of workers (89%) feel stressed at work in the software companies.
- 74% of employees are juggling go maintain a work life balance.
- 52% of employees are feeling underpaid for the work they do.
- 25%, one-fourth of the employees agreed to the practice of gender discrimination at workplace.

The findings provided some insights in efforts to improving the stress levels of employees among software companies. This study provides valuable information about how employees view their work environment and stress levels. Taking an overall picture, and in the view of fairly large sample (number of employees) and the nature of analysis, it is hoped that, in spite of the limitations, some of which are inherent to all behavioral studies, the study would provide some reliable conclusion regarding the job stress. Finally, future researchers are recommended to utilize instruments other than questionnaires (such as interview and checklist), and compare their findings with this research.

References

1. Acton, T. and Golden, W. (2002) 'Training: The way to retain valuable IT employees', *Proceedings of Information Science (Cork), June 19-21, pp 1-12.*
2. Adnan Enshassi Yasmine El-Rayyes Suhair Alkilani , (2015),"Job stress, job burnout and safety performance in the Palestinian construction industry", *Journal of Financial Management of Property and Construction, Vol. 20 Iss 2 pp. 170 – 187*
3. Borg,M.G.(1990) Occupational stress in British educational settings: A review.*EducationalPsychology,10(2)103-126.*
4. Cooper, C.L.& Cartwright, S.(1997) An intervention strategy for workplace stress. *Journal of Psychosomatic Research,43(1), 7-16*
5. Cooper, C.L., & Marshall, J.(1976)Occupational sources of stress: are view of the literature relating to coronary heart disease and mental ill health. *Journal of Occupational Psychology,49,11-28.*

6. Cooper, C.L., & Davidson, M. (1982) *High Pressure: Working Lives of Women Managers*. Fontana, London.
7. Danna, K. & Griffin R.W. (1999) Health and well-being in the workplace :A review and synthesis of the literature. *Journal Of Management, Vol.25, No.3, pp.357-384*
8. Dollard, Maureen F. and Jacques C. Metzger. 1999. "Psychological research, practice, and production: The occupational stress problem." *International Journal of Stress Management, October, Vol.6, no.4, p.241-253.*
9. Dua, J., K. (1994). Job stressors and their effects on physical health, emotional health and job satisfaction in a university. *Journal of Educational Administration, 32(1), 59-78. doi:10.1108/09578239410051853.*
10. Ducharme LJ, Martin JK. Unrewarding work, coworker support, and job satisfaction: A test of the buffering hypothesis. *Work and Occupations. 2000;27:223–243.*
11. Elizabeth George, Zakkariya K.A. , (2015) "Job related stress and job satisfaction: a comparative study among bank employees", *Journal of Management Development, Vol. 34 Iss: 3, pp.316 – 329*
12. Freedberg, S. (1996). "Mounting cost of white collar stress." *Miami Herald* (Nov 17), 1B.
13. Fujigaki, Y. (1993) 'Stress analysis: A new perspective on people ware', *American Programmer, July, pp. 33-38.*
14. Geeta Kumari, Gaurav Joshi & K.M. Pandey, (2014), "Job Stress in Software Companies: A Case Study of HCL Bangalore, India", *Global Journal of Computer Science and Technology: Software & Data Engineering, Volume 14 Issue 7*
15. Holmes, T.H., & Rahe, R. H. (1967) The Social Readjustment Rating Scale. *Journal of psychosomatic Research, 11, 213-218.*
16. Hiebert, B. & Farber, I. (1984) Teacher stress: A literature survey with a few surprises. *Canadian Journal of Education, 9 (1), 14-27.*
17. Kasl, S. V. (1992) Surveillance of psychological disorders in the workplace. In: G. P. Keita & S. L. Sauter (eds) *Work and Well-Being: An Agenda for the 1990s. American Psychological Association, Washington DC.*

18. Kleiner, B., and Geil, S. (1985) 'Managing stress effectively', *Journal of Systems Management, September*.
19. Kobasa, S.(1979). Stressful life events, personality and health: an inquiry into hardiness. *Journal of Personality and Social Psychology, 37, 1-13*.
20. Lazarus,
R.S.,&Folkman,S.(1984).*Stress,appraisal,andcoping*.NewYork:SpringerPublishingC
ompanyInc.
21. Lindquist T.L. & Cooper C.L.(1999)Using life style and coping to reduce job stress and improve health in 'at risk' office workers.*StressMedicine,Vol.15,No.3,pp.143152*
22. Loscocco, K. A. &Roschelle, A. N. (1991),” Influences on the Quality of Work and Non work Life: Two Decades in Review”, *Journal of Vocational Behavior, 39, 182-225*.
23. Murphy, L.R., & Hurrell, J.J.(1987) Stress management in the process of occupational stress reduction. *Journal of ManagerialPsychology,2,18-23*.
24. Payne,R.(1988) Individual differences in the study of occupational stress. In:CL Cooper & R. Payne(eds)Causes, Coping and Consequences of Stress at Work. Wiley & Sons, Chichester.
25. Rajeswari, K. S. and Anantharaman, R. N. (2003) 'Development of an instrument to measure stress among software professionals: Factor analytic study', in *Proceedings of ACM-SIGCPR Conference, 2003, Philadelphia, Pennsylvania, pp. 34-43, <http://portal.acm.org>*
26. Rosenstock, L. (1997) Work organization research at the National Institute for Occupational Safety and Health. *Journal of Occupational Health Psychology,2(1),7-100*
27. Sauter S, Hurrell J, Murphy L, Levi L. (1997) *Encyclopedia of Occupational Health and Safety*.
28. Selye, H.(1956).*The stress of life*. New York: McGraw-Hill.
29. Selye, H.(1974).*Stress without distress*. Philadelphia, PA: Lippincott.
30. Simon R.I. (1999) Chronicpost traumatic stress disorder: A review and checklist of

- factors influencing prognosis. *Harvard Review of Psychiatry*, Vol.6, No.6, pp.304-312
31. Stanton, J.M., Balzer, W.K., Smith, P.C., Parra, L.F., & Ironson, G. (2001). A general measure of work stress: The Stress in General Scale. *Educational and Psychological Measurement*, 61(5), 866-888. doi:10.1177/00131640121971455.
32. Warr, P.B. (1987) *Work, Unemployment and Mental Health*. Cambridge University Press, Cambridge.

Reports

1. Guidance on work-related stress: Spice of life- or kiss of death, European Commission, Directorate-General for Employment and Social Affairs, 1999
2. Managing stress at work: Discussion document, United Kingdom Health and Safety Commission, London, 1999
3. United States National Institute of Occupational Safety and Health, Cincinnati, 1999