

AN EVALUATION OF EMPLOYEES PERCEPTIONS OF WORKPLACE STRESSORS AND SOLUTIONS: DATA FROM THE SOFTWARE SECTOR

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ABSTRACT

Our relentless pursuit of wealth, power, and success is pushing us to the brink, causing stress due to work challenges and personal life demands. Despite this, there's a notable lack of empirical research on workplace stress in India's software industry, with existing studies often focusing on stress causes rather than solutions. To bridge this gap, a survey was conducted among software professionals in Chennai, aiming to assess their perceived job stress levels, identify major stressors, and explore effective coping mechanisms. The survey revealed that software professionals, regardless of their stress levels, are indeed experiencing stress. The main source of stress that was noted was "career-family disparities," promptly followed by "work stress." Interestingly, the study also highlighted that a certain level of stress is necessary for professionals in this field to stay motivated and perform optimally. Mild arousal or anxiety can enhance productivity. These findings hold significant implications for both management and employees in the software sector. Understanding and addressing workplace stress can lead to improved worker effectiveness and efficiency. Companies can benefit from a healthier and more productive work environment that benefits individuals as well as the organisation as a whole by putting stress-reduction measures into practice.

Keywords: Job Stress, Employee satisfaction, Stress management, Work-life balance
Organizational Stressors.

INTRODUCTION

Stress has become an omnipresent aspect of life, whether in personal or professional spheres. In today's information age and rapidly changing work environments, stress has become particularly pervasive. The pace of change is accelerating, leading to challenges in both work and personal life that often result in an imbalance, causing stress. This emotional state arises from the mismatch between expectations and capabilities.

The modern working world, especially in fast-growing technological sectors, faces significant issues related to job stress. Employees often struggle to keep up with the evolving demands and conditions at work, leading to stress. It's important to note that not all stress is negative; moderate stress can enhance performance by triggering hormones that boost energy. However, prolonged high levels of stress can negatively impact both health and performance.

The main aim of this paper is to evaluate the present stress levels in the industry, delve into its primary causes and effects, and propose effective strategies to manage stress, particularly for software professionals. The software development cycle involves a variety of roles, including

business developers, project supervisors, software analysts, developers, the programmers, and quality assurance staff. The work culture of the software business is different from that of several other professions in that it frequently involves long hours, unpredictable shifts, working during holidays, and deadline pressure, all of which act as organisational stresses.

Given that the software industry relies heavily on the expertise and input of its human resources, the psychological well-being of professionals in this sector becomes crucial. Therefore, it's essential to identify and address stressors effectively to ensure a healthy and productive work environment for software professionals.

II LITERATURE REVIEW

Stress is perceived differently across various demographics such as students, employees, employers, and elderly individuals. In simple terms, stress manifests as tension, nervousness, headaches, and unrealistic deadlines, among other effects; however, these are outcomes of stress rather than stress itself. Stress refers to any situation that demands a response, necessitating a change or adjustment.

Richard Rahe and Holmes conducted early study in 1967 on the effects of stress. They created a questionnaire to quantify life changes and investigated the association between the seriousness and the incidence of sickness.

As competition intensifies with age and the desire to stay ahead grows stronger, there is a corresponding increase in job demands, leading to stress and consequent negative effects such as psychological distress and anxiety (Dua, 1994). Renowned stress expert Hans Selye, a Canadian scientist, famously stated that "Stress is the spice of life," likening it to a seasoning that can enhance experiences. Yet, like using the wrong spice or too much of it, excessive stress can have adverse effects.

A 1979 study by Kobasa, who demonstrates that stress-induced physiologic and psychological arousal may have some positive effects, lending credence to Selye's theory. Stress may not always be harmful, unless it is persistently overwhelming and excessively stimulated. The significance of achieving an ideal stress level for peak performance is emphasised by the study. According to study by Stanton and colleagues (2001), job stress is defined as anything that causes discomfort in the workplace because it is perceived by employees as demanding or threatening.

Other definitions of work-related stress include:

1. Job stress is defined by the US NIOSH (1999) as the detrimental reactions arises when the requirements of job don't match with worker capabilities, potentially resulting in injury and ill health.
2. Stress is defined by the Directorate-General for Employment and Social Affairs of the European Commission as behavioural, physiological, emotional, and cognitive reactions to unfavourable features of work settings.
3. According to the United Kingdom Health and Safety Commission (1999), stress is a person's response to undue demands or pressures at work.

Various factors contribute to job-related stress, as identified by Rajeswari and Anantharaman (2003). These elements include stress overload, work-life balance, career advancement and development, obsolescence and organisational culture.

Stress can be motivational in moderation, but too much stress can have unfavourable effects. Research by Selye (1956) and Kobasa (1979) emphasizes the importance of an optimal level of stress for performance. Nonetheless, research also indicates that stress has a detrimental effect on one's physical health, psychological health, and level of job satisfaction (Dollard and Metzger, 1999; Ducharme and Martin, 2000; Enshassi et al., 2015).

According to Enshassi et al. (2015), there are several ways that job stress might appear, including organisational stress, related to the task stress, workplace stress, and personnel stress. Organizational stressors have been found to be major contributors to physical and behavioural stress, burnout, and emotional strain among professionals, particularly in industries like construction (Enshassi et al., 2015).

The importance of addressing stress in the workplace is evident, as highlighted by Cooper and Davidson (1982) and Loscocco and Roschelle (1991). Work-related stress not only affects individual well-being but also impacts job satisfaction, organizational effectiveness, and overall quality of work life.

In conclusion, the literature on stress in the workplace is extensive and diverse, with contributions from researchers worldwide. This study aims to add to this body of knowledge by identifying major stressors in a highly stressful industry and proposing proactive and reactive stress management approaches at both organizational and individual levels.

III RESEARCH METHODOLOGY

3.1 Objectives

This study looked into the complexities of stress and software workers' understanding of their own stress levels. The main aim of the study was to:

- (1) determine the levels of stress among the workers working in the software concerns;
- (2) identify the prior sources of stress in the software sectors; and
- (3) offer effective different techniques to reduce stress.

3.2 Design of the Research and Collection of Data

The methodology adopted for this study is a blend of exploratory and descriptive research approaches. Drawing from a thorough literature review, including insights from multiple research studies, a questionnaire was developed and utilized to gather data. The data collection process involved surveys, observations, and interviews. In particular, a set of 23 structured questions was created, together with demographic information, and sent to a number of software companies in the Delhi area. Both quantitative and qualitative techniques were used for assessment after the data was collected. Detailed graphical representations and tabulations were created to gain a comprehensive understanding of the prevalent job stress scenario in the industry. Using a Likert scale with five points, which goes from 5 (strongly concur) to 1 (strongly disagree), participants answered the survey questions. To take part in the poll, 600 workers of software firms were chosen at random to be contacted. A total of 362 complete and usable answer sheets were obtained out of which an approximate 60% response rate was obtained and analysed. Table 1 provides an overview of the 362 participants, including their gender, age, employment history, educational background, and marital status, illustrating the sample's demographic makeup. Furthermore, 68% of workers come from nuclear families, and 32% come from joint

families. These statistics represent the young demography of the software industry workforce, as 90% of workers are under 40 years old.

3.3 Instrument

A structured questionnaire was used to assess stress levels among software professionals, drawing on extensive research and literature review. Numerous topics were examined in the poll, including workload, financial difficulties, job fulfilment, possibilities for learning, balance between work and life, role clarity, stress levels, leadership, communication, training, and workplace discrimination. It also covered organisational elements that affect how workers feel about their workplace, such as management style, opportunity for engagement, and other elements. Applying Cronbach's Alpha Coefficient (α) in SPSS 22, the questionnaires reliability was evaluated; Cronbach's alpha coefficient is .705.

Table 1

Profile of the respondents

Employee type	Number	Percentage
GENDER		
Male	234	64.4
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. Software professionals' perceived stress levels

Levels of stress in individuals are determined by their perception of excessive pressures and feeling stressed in their work environment. Higher agreement and mean values in

responses to stress-related questions indicate a greater perceived pressure or stress level. Out of a total of 362 employees surveyed, 205 (57%) reported experiencing high stress levels at work, while 139 (38%) indicated experiencing moderate stress levels occasionally, and only 5% reported no workplace stress. Additionally, respondents were asked about the specific reasons at work that contribute to their stress levels. These reasons were in three groups: work related stress, organization specific stress, and individual stress. These categories were established based on a thorough literature review and expert discussions. Table 2 outlines these three causes of workplace stress.

Table 2
Reasons for work-related stress

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 (technology upgradation)
Lack of training	Job insecurity	
Working conditions	Discrimination at work place	

b. Stress-Related Issues

Three categories were used to categorise the elements that contribute to stress: specific to the job, organization-specific, and individual-specific. Six primary stressors were found by statistically evaluating the data regarding these stressors, and the results are shown in the table 3 below. The statistical data from the gathered data is summarised in the table, which demonstrates that the above stressors have significant mean values, indicating that employees' stress levels were increased. All stressors had mean values that were either near to or higher than 3. Work-family conflicts are a result of extended work hours, which in turn cause work-family imbalance. These stressors are interrelated. Stress levels are increased when working parents have to balance obligations to their parents.

Table 3
Reasons for workplace Stress among the Professionals in the Software Sector

	Job specific		Organizational specific			Individual
	Work Overload	Role Ambiguity	Unrealistic Deadlines	Leadership Style	Job Insecurity	Work-family Inequalities
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

c. Work Stress Management

In addition to having a substantial impact on employee health and wellbeing, stress has a major impact on an organization's ability to function effectively. Long-term computer use can significantly impact an employee's health by causing weariness, blurred vision, elbow and shoulder discomfort, and backaches. Unmanaged stress can further result in various psychosomatic diseases, highlighting the need for management to address workplace stressors and enhance employees' health and well-being. Job stress is a major workplace health risk globally, and it's essential to develop effective stress coping skills. Different individuals may cope with stressors differently, as highlighted by Payne's (1988) study on stress and coping. Various interventions for stress management exist in the literature, with worker training, health promotion, psychological skills development, and employee assistance programs being crucial aspects. Proactive coping, focusing on how individuals perceive and respond to upcoming situations, is gaining attention from psychologists. These days, one of the biggest risks to one's health at work is stress, and organisations and individuals can both benefit from stress management strategies. Setting realistic deadlines, letting workers use their skills efficiently, keeping workloads acceptable, and preventing undue pressure on staff are all examples of stress management techniques.

Stress has emerged as a critical health risk, particularly in demanding sectors like the software industry. The escalating stress levels in this industry present a concerning scenario for both management and society at large. In response, the researcher suggests a range of coping strategies tailored specifically for the software industry. These solutions are categorized into two main approaches: organizational interventions and individual coping techniques.

d. Organization Approaches

The research underscores the high stress levels prevalent in the software industry, urging organizations to adopt proactive measures to mitigate employee stress and maintain a healthy work-life balance. Implementing the following strategies can aid in achieving this balance without exacerbating stress levels:

1. Flexibility in work schedules: It lowers stress associated with commute and work-life conflicts, particularly for parents.
2. Job sharing: Enabling multiple trained individuals to share job responsibilities ensures continuity and productivity while allowing employees to take time off without increasing stress levels.
3. Remote work options: Allowing employees to work from home has been linked to higher morale, job satisfaction, and lower stress levels, as it provides greater control over work methods.
4. Stress management seminars: Conducting seminars that educate employees will help in reducing overall stress levels.
5. Support groups: Encouraging employees to participate in support groups where they can discuss work and personal challenges, along with stress management methods, can foster a supportive environment and alleviate stress.
6. Employee assistance programs (EAPs): Offering EAPs as part of health insurance plans provides employees with resources to address personal issues affecting performance and productivity, leading to reduced absenteeism and improved well-being.

Additionally, individual employees can also adopt strategies to manage their stress levels effectively:

1. Regular exercise and relaxation techniques: Engaging in physical activity and relaxation methods can help lower stress responses and improve overall well-being, contributing to increased productivity.
2. Incorporating exercise breaks: Incorporating short breaks during the workday can refresh employees, reduce stress, and enhance productivity.

By implementing these organizational and individual approaches, employers and employees can collaboratively address stress and create a healthier work environment in the software industry.

VI CONCLUSION

The study findings indicate a high overall stress level within the surveyed software companies. Interestingly, it was observed that companies with higher stress levels are experiencing rapid growth both nationally and internationally, indicating a more demanding work environment.

Key findings from the study include:

- Work-life balance emerged as a significant predictor of work-related stress, highlighting the urgent need for improved flexibility in the workplace to enhance employees' work-life balance.
- A significant majority (89%) of employees in software companies reported feeling stressed at work.
- 25% of employees acknowledged experiencing gender discrimination in the workplace.

These results provide important new information about initiatives to reduce employee stress in software companies. The study offers insightful data on how workers view their stress levels and work environment. Despite certain limitations inherent in behavioural studies, the fairly large sample size and thorough analysis aim to provide reliable conclusions regarding job stress.

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