

# Job Satisfaction and Job Stress in Software Companies: A Review

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**Abstract**—In the above paper a review analysis has been carried out to analyse what has been done so far in last 10 years about job satisfaction and job stress and where there is a need to carry the research further with this respect in software companies in India. In these review articles chosen, most of the article taken have got analysis from SPSS method software used as statistical tool.

**Keywords:** job satisfaction, job stress, software development, worklife balance, SPSS method

## 1. INTRODUCTION

The concept of job satisfaction has been developed in many ways by many different researchers and practitioners. One of the most widely used definitions in organizational research is that of Locke (1976), who defines job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences". Others have defined it as simply how content an individual is with his or her job; whether he or she likes the job or not. A more recent definition of the concept of job satisfaction is who have noted that job satisfaction includes multidimensional psychological responses to an individual's job, and that these personal responses have cognitive (evaluative), affective (or emotional), and behavioral components. Job satisfaction scales vary in the extent to which they assess the affective feelings about the job or the cognitive assessment of the job. Affective job satisfaction is a subjective construct representing an emotional feeling individuals have about their job. Hence, affective job satisfaction for individuals reflects the degree of pleasure or happiness their job in general induces. Cognitive job satisfaction is a more objective and logical evaluation of various facets of a job. Cognitive job satisfaction can be unidimensional if it comprises evaluation of just one facet of a job, such as pay or maternity leave, or multidimensional if two or more facets of a job are simultaneously evaluated. Cognitive job satisfaction does not assess the degree of pleasure or happiness that arises from specific job facets, but rather gauges the extent to which those job facets are judged by the job holder to be satisfactory in comparison with objectives they themselves set or with other jobs. While

cognitive job satisfaction might help to bring about affective job satisfaction, the two constructs are distinct, not necessarily directly related, and have different antecedents and consequences. Job satisfaction can also be seen within the broader context of the range of issues which affect an individual's experience of work, or their quality of working life. Job satisfaction can be understood in terms of its relationships with other key factors, such as general well-being, stress at work, control at work, home-work interface, and working conditions. According to the fifth edition of the Randstad Award 2015, while choosing an employer, Indian workforce gives the utmost importance to competitive salary and employee benefits, followed by long-term job security. The top five influencing factors are salary and employee benefits (54%), long-term job security (49%), work-life balance (39%), pleasant working atmosphere (39%) and financial health of the company (38%). The survey noted that the top three most attractive sectors are IT and Communication (72%), followed by FMCG and retail (68%) and automobile (67%), respectively. Google has emerged as the most attractive employer in the country followed by Sony, according to leading human resource consultancy Randstad. Microsoft India, which topped the list consecutively for the past four years, has been inducted into the 'hall of fame' category this year. The sector-specific special recognition awards this year has been awarded to Tata Steel for manufacturing, P&G for FMCG and Honda India for automobile verticals. Besides these firms, some of the other most attractive companies in India include, Cognizant Technology Services, Hewlett-Packard, HPCL, IBM, Infosys, L&T, ONGC, Samsung, SBI, Taj Group of Hotels, TCS, Tata Motors, Toyota and Wipro. Randstad India CEO, Moorthy K Uppaluri said that as Indian economy and job market continues to gain momentum, it is putting pressure on corporate India to retain and attract best talent.

## 2. LITERATURE REVIEW

Glimmer. et.al [1] observes in their research that there are two type of attitude about job the first one is positive attitude and

the second one is negative attitude about job. It states that a person is more satisfied about job and the second attitude is a negative attitude which means a person is not satisfied about job. Abdulla et. al. [2] examines the relationship between job satisfaction and environmental and demographic factors and found environmental factors like salary, promotion and supervision and these are better predictors of job satisfaction as compared to demographic factors like sex, age and education level as well as other factors related to their work experience, like job level, shift work, and years of experience. Calisir et al. [3] found a very strong influence of job satisfaction on organizational commitment whereas job stress and role ambiguity indirectly influence the willingness of employees to leave their jobs. Siddique and Y.A. Farooqi [4] have been signified a strong positive relationship existing between job satisfaction and motivation. A. Ismail A. Y. (2009) conducted a study to analyze the relationships between occupational stress and job satisfaction of the private school employees.

V. Samaranyake and C. Gamage [6] had worked on "Employee perception towards electronic monitoring at workplace and its impact on job satisfaction of software professionals in Sri Lanka". In this study, Perceived relevance of work and personal judgment of effectiveness which were two variables used to measure perception of electronic monitoring were positively correlated with job Satisfaction. This means that the software professionals, who view electronic monitoring as something which is relevant to their work as well as which uplifts the quality of their work, are satisfied in their jobs. Perceived Invasion of Privacy was negatively correlated to Job Satisfaction, which sheds some light in organizational electronic monitoring policy making. Also, Perceived Task Satisfaction was negatively correlated to Job Satisfaction. This means that the software professionals, who thought that working in an electronically monitored environment makes their tasks more complex, are rather dissatisfied with the job. Also, it has appeared that the impact of electronic monitoring at work place on the job satisfaction of software professionals becomes less significant along with higher professional experience. F. Hutagalung and Zahari Ishak [7] worked on "Sexual harassment: a predictor to job satisfaction and work stress among women employees". This study gives the predictions on sexual harassment experience towards job satisfaction and work stress among female employees at three universities in the Klang Valley, Malaysia. A questionnaire consisting of four sections has been used for this research. The four sections have measured sexual harassment experience, job satisfaction, and work stress and respondents information. A total of 1423 participants were selected through simple random sampling technique. Results have showed that more than half of the sample has had sexual harassment experience. Female employees aged between 26 to 39 years, married, and having length of service less than 5 years had more sexual harassment experiences. Another result observed was that a significant negative relationship between

sexual harassment experience with job satisfaction and significant positive relationship between sexual harassment experiences with work stress was the key finding of this research. Results also indicated that sexual harassment can be a predictor of job satisfaction and work stress.

N. Arshadi and H. Damiri [8] worked on "The Relationship of Job Stress with Turnover Intention and Job Performance: Moderating Role of OBSE". The aim of this research was to investigate the relationship of job stress with turnover intention and job performance, considering the moderating role of organization-based self-esteem (OBSE). Data had been collected from 286 employees of Iranian National Drilling Company (INDC), who were selected by simple random sampling method. Pearson correlation and Moderated regression analysis through SPSS 19 software package were used for data analysis. Findings indicated the negative relationship between job stress and job performance and positive relationship between job stress and turnover intention. In addition, organization-based self-esteem (OBSE) significantly moderated the relationship between job stress with turnover intention and job performance. W. Pedrycz, et al [9] worked on "A model of job satisfaction for collaborative development processes". Modern software development relies on collaborative work as a means for sharing knowledge, distributing tasks and responsibilities, reducing risk of failures, and increasing the overall quality of the software product. Such objectives have been achieved with a continuous share of the programmers' daily working life that inevitably influences the programmers' job satisfaction. One of the major challenges in process management is to determine the causes of this satisfaction. Traditional research models job satisfaction with social aspects of collaborative work like communication, work sustainability, and work environment. This study have reflected on existing models of job satisfaction in collaborative environments, creates one for modern software development processes, and validated it with a retrospective comparative survey run on a sample of 108 respondents. In addition, the work has investigated the impact on job satisfaction and its model of the agile practice of Pair Programming that pushed job sharing to the extreme. With this intent, the questionnaire also has collected feedback from pair programmers whose responses were used for a comparative analysis. The results demonstrated that Pair Programming has actually a strong positive effect on satisfaction, work sustainability, and communication.

J. Pereira and J. Verner [10] worked on "What do software practitioners really think about project success: A cross-cultural comparison". Due to the increasing globalization of software development there was a need to discover if there exist significant cultural differences in practitioners' definition of a successful software project. This study has presented the results of a survey in which Chilean software practitioners' perceptions of project success are compared with previous research with US practitioners. Responses from both groups of practitioners indicated that there was a relationship between

team-work and success. The results also indicated that there were similar perceptions related to the importance of job satisfaction and project success. However, Chilean responses suggested that if a practitioner was allowed too much freedom within the work environment, job stress results; this in turn is reflected in increasing demands for both job satisfaction and good environmental conditions. This may indicate the potential for the attribution of failure to conditions outside the team, thus preventing a search for problematic team issues and technical problems. In contrast, the data suggested peer control inside the US teams indicating a less stressful environment. S. Raz and B. Gorjian [12] worked on "Survey of employers' attitudes concerned with the effects of national and religious vacation and holiday types on job satisfaction". The study has examined the effects of vacation and the kinds of holidays (i.e., national and religious) on 330 employers' job satisfaction. Research had showed that vacation, religious and national holidays (i.e., joyful) did not have any effect on job satisfaction, but in religious holi (Tassoa and Ashora) the job satisfaction in employees have increased after vacation, and their views toward work have been improved. Vacation not has got very marginal effect on increasing the job satisfaction but lacking of this opportunity can result in dissatisfaction in work and resulted in bringing about difficulties for organizations (Herzberg Theory). S.G. Herreroand and D. O. Ritzel [13] worked on "Influence of task demands on occupational stresses and gender differences". The results of this study has revealed that the indicators studied significantly increased stress levels, women initially had higher stress levels than men, and when exposed to determined task demands, stress differences between genders tended to increase. Impact on Industry: Companies need to consider the gender of their workers when assigning tasks in high demand/stress jobs.

S. Beecham and N. Baddoo [14] reviewed the status of motivation in software engineering. The literatures on motivation in software engineering have presented a conflicting and partial picture of the area. Although models of motivation in software engineering are reported in the literature, further research is needed for the effects of changing roles and the environment. Overall, the findings have indicated that there is no clear understanding of the software engineers' job, what motivates software engineers and how they are motivated. P. Trivellasa and V. Gerogiannis [15] worked on "Exploring workplace implications of Emotional Intelligence (WLEIS) in hospitals: Job satisfaction and turnover Intentions". This paper has presented a field survey conducted in five private health care organizations which operate in the city of Larisa, Greece. The PLS approach based on 145 valid questionnaires, confirmed strong relationships among Emotional intelligence, Job Satisfaction, and Turnover intentions.

GeetaKumari and Dr.K.M.Pandey [16] worked on analysis of an individual, sbehavior in work environment for better output; this research explores the cause variables which affect employee involvement. According to the empirical research

finding, high-intensity internal marketing generates positive impact upon employee involvement and low-intensity internal marketing results in negative impact upon employee involvement; the effect of sentimental relationship upon employee involvement is prominent and positive; employees with personality traits of internal control reveal higher level of involvement than those with external control. Mainly this paper briefly narrates what has been studied so far on lazy people. Geeta Kumari and K.M. Pandey [17] studied on stress management problem of Avtar steel industries, Chennai, India. Their main findings are the followings. A sample size of 100 is taken for the purpose of analysis made from primary and secondary data. Out of the total sample most of the respondents are male and many are between 50 and above. Most of the respondents are under graduate and have professional qualification. Most of the respondents have 10-15 years of long association with the organization. Almost all the respondents are satisfied with the physical and psychological working condition of the organization, and only fewer respondents are dissatisfied with the psychological working condition of the organization. The opinion about the training programs conducted by the organization is almost better, according to majority of the respondents. Geeta Kumari and K.M.Pandey[18] worked on Job Satisfaction in Public Sector and Private Sector: A Comparison. Their main findings are given below: Public Sector versus Private Sector comparisons is a debate which seems to be a never ending topic. It is very difficult to take stand for either of these two forms of administration. The reason behind that is not unknown but obvious as both provide scopes in different ways. Job satisfaction describes how content an individual is with his or her job. The happier people are within their job, the more satisfied they are said to be. This paper surveys both the sectors in most of the aspects of analysis.. As the current findings show, jobholders vary regarding the extent of ambivalence experienced with respect to their attitude toward their job. The current findings also open up opportunities for further research regarding the consequences of job ambivalence. For instance, the present findings imply that job performance of individuals with high versus low job ambivalence may fluctuate such that job performance is comparatively high when positive beliefs and affective experiences are salient and thus predominate at a certain point in time but that their performance may be comparatively low at other times when negative beliefs and affective experiences are salient and predominate. In this respect, research could, for instance, collect manager perceptions of performance consistency. Future research should aim to replicate the present findings with larger and more diverse samples as well as profit from the use of multiple-item scales to measure job performance

Geeta Kumari, Vittesh Bahuguna and Krishna M. Pandey[19] Worked on Studies on job satisfaction: a case study of Engineers India Limited . Their main findings are stated here. This paper has analysed the survey about Engineers India

Limited, which is a Public Sector Undertaking in India. This paper shows employee's satisfaction in working place not only reduces one's temptation to switch over the Job but also makes organisation to flourish in return enabling it to recruit more. EIL hired employees consistently and that may be called only PSU in India which did not feel any significant setback in their performance instead rise to success during the period of recession. It can be concluded that the EIL is performing very nice(Published in JAMI).

Kumari, G., Bahuguna, V., & Pandey, K.M[20], worked on Studies on Some Aspects of Job Satisfaction in Engineers India Limited. Their main findings are stated below. In this paper the analysis has been done in the aspect of studies on job satisfaction: a case study of engineers India limited, A excel public Sector Company of India. Many qualitative aspects have been asked in the survey and there is one thing that now a day employees do not give importance to mere fiscal requirement but also to working environment which include many work related and non-work related aspects those have been asked in the survey. With the generation of more and more money in the market and work pressure on individual has been tantamount due to which employees seek for comfort in work and many things which may help alleviate work pressure and so their personal / social tension. During recession, when other organizations were issuing pink slips, Engineers India Limited recruited most due its demand in the market. Except some differences in few question asked in survey, in general majority seems to have similar opinion and agrees to the mportance of good working culture inclusive of aspects which treats them more than a machine.

Geeta Kumari, Gaurav Joshi and K M Pandey[21] worked on analysis of factors affecting job satisfaction of the employees in public and private sector. Their main findings are stated below. This paper attempts to find out the level of job satisfaction and its relationship with various factors in an emerging economy like India. The Survey methods were used in public and private sector firms to find out the taxonomy of job satisfaction. The important factors that are taken into consideration are incentives and hours of work, Management (Boss) & Colleagues, Availability of other better opportunities, Future prospect (promotion and job security), Difficulty of job (manually tiring, forceful overtime), Job content and interest and Prestige. AfterPost liberalization Indian economy has seen an exponential growth in GDP (approx. seven folds from 1991) and since then job market in India has been growing rapidly. The importance of job satisfaction has been supported by surveys conducted on 500 employees from different sectors in India and classified according to age, gender and region. This paper studies seven summary variables measuring job satisfaction among workers from different sectors of Indian job market.The seven factors at the end have been used to find out the answer for "who has got the good jobs" and how can the employee job satisfaction improved in a rapidly growing economy like in India.

Frequency distribution analysis shows that job satisfaction is strongly correlated with all the job quality measures.

Geeta Kumari Dr. Gaurav Joshi & Dr. K M. Pandey[22] worked on job stress in software companies: a case study of HCL Bangalore India. Their main findings are given below. In India software industry has become one of the fastest growing industries. The reason for hoosing a particular software industry and its employees is that the level of stress these employees face is comparatively higher than employees in other private companies. Any kind of a job has targets and an employee becomes stressed when he or she is allotted with unachievable targets and are unable to manage the given situation. Thus the main aim of this article is to bring to lime light the level of stress with software employees in HCL and the total sample size for the study is 100 cho sen by random sampling method in HCL. When the employees were asked how often they feel stressed while working while working at the company, 98 out 100 said they feel stressed about daily physically, mentally or emotionally. In a sample space of 100 employees, 16% of employees work for 4 -6 hours a day, 32% works for 6 8 hours, 30% works for 8-10 hours while 22% works for 10-12 hours daily. When asked about the overtime they have to do, 28% said employees saying always were mainly from age group 20 29. 54% o employees said often while 18% of employees said they worked overtimes rarely. The other few aspects have also been studied about job satisfaction.

### 3. SCOPE OF FURTHER RESEARCH

The relationship between job stress and job satisfaction of the software professional has been explored by a number of researchers but literature on motivation with respect to job satisfaction is limited. The significance of the research for researchers as well as software companies by contributing in the easting body of knowledge and provide first step initiative for future research. The study is of significance to get better understanding about the issues faced by software professionals and helping the companies to improve their outcomes. The study is significant for the researchers by providing a dimension which can be further explored by future research

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