Job Stress and Productivity: A Conceptual Framework

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Abstract—
The Indian IT industry has seen an increase of 1.3 million women employees in 2016. The study is about job stress and employee productivity. From the various review of literature we have identified the factors affecting Job Stress and Productivity. The literature is collected from the year 1974 to 2016 on various areas like the definition of the concepts to various factors influencing the Job Stress and productivity. The various sectors covered on which job stress and productivity factors are studied include construction, banking sector, education institution, financial institution, IT, Call center, and Private hospital. The variables/indicators that can be identified in the existing literature to study job stress are workload, role ambiguity, gender discrimination, interpersonal relationship. The variables/indicators for measuring employee productivity are identified as work schedule/timings, competence of supervisor, compensation, systems and procedures, group dynamics, absenteeism and presenteeism. The paper also throws light on meaning of various indicators mentioned above. In addition, the conceptual framework models the relationship between job stress and productivity.

Keywords—Job Stress, IT industry, Women employees, Productivity.

I. INTRODUCTION
Information Technology (IT) Industry is a multi-billion dollar industry which is, according to the American Heritage Dictionary (2005), the development, installation, and implementation of computer systems and applications. The U.S. Department of Commerce identifies the information technology workforce more broadly. In a report on information technology, the Department defines workers in information technology occupations as those who design, manufacture, operate, maintain, and repair information technology products and provide related services across all industries.

Globalization in 1990s has paved way for growth of IT industry in India. It has given rise to various business opportunities and in the economic development of the country. The major benefits include creating employment opportunities.

The men and women in the IT industry have careers such as Computer engineer, computer programmer, computer scientist, computer user, database administrator, database specialist, interface designer, network specialist, software engineer, statistician, systems analyst.

The Indian IT-BPM industry has seen the number of women employed increase to over 1.3 million, which is more than a third of the total workforce. Women constitute more than half of the current entry-level hires. (NASSCOM report). World over with changing times, work has become essential for both men and women. More so in India after liberalization, the opportunities for work have enhanced. Therefore the tradition system on men as bread winner of the family is true but the role of women has changed. More number of women are employed in organizations. Women play multi-roles, in the family as well as in the work environment. They are working round the clock, where the work and life balance has become very challenging. Dedicating herself equally to the family and to the organization is the biggest challenge that she faces today. With added responsibilities women employees are facing a lot of stress, which leads to many problems in the family, organization and affects her health also.

Stress is inevitable in work environment. But considering stress in a more positive way leads to higher productivity and improved performance whereas the negative stress leads to many problems in the organization and at work. So it is important for the organizations to know about their employees and make an attempt to help them overcome the Job Stress.

Job stress is a situation where employees’ skills, knowledge and abilities do not match with organizational requirement.

Selye (1974) has done considerable research on stress, has viewed stress as the non- specific response of the body to any demand made upon it. According to him, stress is an adaptive response mediated by individual characteristics and/or psychological process, i.e., a consequence of any external action, situation, or event that places special physical and/or psychological demands upon a person. Job Stress is 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.

According to Beehr and Newman (1978), a condition arising from the interaction of people and their jobs is called as Job Stress (JS) and is characterized by changes within people that force them to deviate from their normal functioning.

Productivity is a measure of the efficiency of a person, machine, factory, system, in converting inputs into useful outputs. Output can be goods or services and inputs include the labour, efforts, time and skills. Productivity is a critical determinant of cost efficiency.
II. LITERATURE REVIEW

The literature review examines the studies related to factors affecting job stress, productivity. Stress management at different segments and the influence of job stress on the employees’ productivity and their performance in the organization is observed.

Donald, Taylor (2005) drew a large sample of 16001 employees across 15 organizations in UK. ASSET questionnaire is used to collect the data on employee stress perceptions, health and organization commitment. The sub scales measured by ASSET consists of work relationships, work life balance, overload, job security, resources and communication, pay and benefits, organization commitment and health. The regression analysis suggests that higher employee productivity is associated with better psychological well-being, greater perceived commitment from the organization and greater access to resources and information. The research supports relationship between well-being and productivity, commitment and productivity. No direct relationship between stressors and productivity was found except for resources.

Fernando et al (2011) examine a model focusing on two workplace stressors- interpersonal conflict and work overload. The study finds the relationship with role stress, emotional exhaustion, job attitude, working smart, job performance and turnover intentions. A model is tested using responses of sales employees working for four financial institutions in South Africa. Their findings indicate the work overload and interpersonal conflict mediate the impact of role stress on emotional exhaustion, job attitudes and behaviour.

Shilpa, et al (2010) studies about organizational role stress of employees of public and private bank employees. Their study concludes that there is significant difference between the role stress of public and private bank employees. The private bank employees experienced higher organizational role stress than the public bank employees. But there is no difference in certain aspects like role expectation conflict, role isolation, personal inadequacy and role ambiguity.

Umeh (2016) explores that after IT revolution the stress levels have increased. He uses occupational stress index developed by Srivastava and Sing (1983) to access the level of stress. He identifies job design, physical environment, role ambiguity, interpersonal relationship, authority and power, role overload and social support are the variables that are discussed in the study.

Ronald (2002) emphasizes on the study about the relationship of several work stressors like physical demands, job insecurity, hazards, work family conflict with measures of satisfaction and well-being in a large sample of employed women. These findings extended the understanding of job demands and women’s health by including considerable numbers of women in low occupational status jobs and introducing work stressors that assessed aspects of the physical environment as well as physical demands present in these jobs.

Van et al (2013) aims to investigate the relations among negative emotional reactions and behavioural reactions to job insecurity. Convenience sampling of employees working in a private hospital in Gauteng, South Africa is selected for the study. The measuring instruments included the job insecurity inventory, the organizational commitment questionnaire, the experience of work and life circumstances questionnaire and the COPE questionnaire. The results showed that job insecurity was associated with job related stress. Experiences of effective job insecurity, job stress and low organizational commitment were associated with use of avoidance coping strategies.

Zahid et al (2011) explores the issue of gender discrimination in workplace and its impact on the satisfaction and motivation, commitment and enthusiasm and stress level of employees. Their findings show that females are discriminated more than males in private sector than in public sector. The results show that gender discrimination decreases satisfaction, motivation, commitment and enthusiasm level of employees and increases the stress level of employees.

Gbolahan and Catherine, (2012) examines the relationships between perceived stress and performance appraisal discomfort with core self-evaluations and gender as moderating variables. Neither core self-evaluations nor gender significantly moderated the relationship between performance appraisal discomfort and perceived stress. Women earned less income and their perceived stress was significantly higher than men’s. The findings suggest that HR practitioners need to consider individual characteristics more than organizational policy in effective implementation of performance appraisals and stress reduction strategies and as a consequence worker-related interventions may be particularly pertinent.

Cryer, et al (2003) say that too much stress can affect health, relationships and productivity at work. The effective ways to manage stress for physical well-being is discussed.

Jin-Feng Uen, et al, (2009) explore the relationship between young managers’ interpersonal stress and various management development practices. Practices in different aspects of their work include workflow planning, team work, interpersonal communication etc.

Shree Raja and Murali (2015) in their paper critically reviewed major factors affecting labour productivity, grouping of factors and methods to evaluate it. The major factors that affect the labour productivity were supervision, skill of labour, change of job, absenteeism, tools and equipment and financial constraints. The grouping of factors were done and named as technological group and administrative group. Based on the relative ranking it was observed that human group and management group have high impact on labour productivity in countries like UK, India and Spain. In India and Gaza the group such as project technology, motivational, quality and safety have adverse impact on labour productivity. In this sector inefficient management of construction resources can result in low productivity.

Karuna and Viswanadham, (2011) discuss about stress among educators. The main findings revealed the major stressful factors were overcrowded class rooms, working for more hours and high expectations from parents. Lack of resources, students lack of goal were also found challenging by the educators.
William and Christophe (2010) study the impact of time congruity on sales persons role stress. Time congruity a form of person-job fit, is said to exist when there is a match between the temporal requirements of a particular job (job time personality) and temporal requirements of the person holding the job (individual time personality). The model helps to understand the relationship between time congruity, role stress and work outcomes. The paper shows how salespeople’s individual time personalities, their job time personalities and the person-job fit concept can be used to create time congruity and enhance an organizations’ recruiting strategies.

George and Dimitrios (2012) conducted a study by using a random sample of 425 employees in the private and public sector. They investigated the effects of stress and job satisfaction on the functioning of a company. The factors that affect stress and job satisfaction are work hours, good relations between management and employees, good function of the group and work related to employees’ area of education. Tests like factor analysis, correlation and logistic regression is done. Their studies revealed that increased stress leads to reduced productivity and increased satisfaction leads to increased productivity.

Manjari (2011) conducted an exploratory study mentions the relationship between certain independent variables like personal values of executives, work values of organization and dependent variables are positive job outcome (satisfaction) and negative job outcome (stress and anxiety) was studied. Demanding job conditions have negative impact on professionals as it leads to perception of stress, anxiety and dissatisfaction among professionals. The study also suggests that organizations need to help their employees by setting realistic demands and by training them for stress coping strategies.

Ming Chu Yu (2009) explores employees’ perception of organizational change among employees from Taiwanese governmental departments undergoing change. The results showed that organizational change had a significant negative influence on employees trust and job involvement. Stress management workshops are suggested to provide strategies for stress relief and to improve employees’ organizational identification and job involvement.

Abdullah, Faridahwati et al (2013) studied the effect of job stress and organizational support on the relationship between job demand-resources and job performance among nurses. The model was based on job demand and resources on performance. Job stress and organizational support are considered to have mediating effect. The study confirms partially the significance of organizational support in mitigating the effect of stress on job performance.

Nagesh et al (2008) says that IT call centers employees in Mysore city are stressed mainly due to non-regular sleep/working hours affects physical and psychological health. Also employees are stressed due to time pressure, monotonous work, night shifts, and safety for women employees and public view about call center employees. They suggest that employees’ awareness about stress management will help in higher productivity and help in employee retention.

Curtis, (2006) found that the result of out-of-balance life leads to stress. The changes in sleeping habits, eating habits, relationships, physical and mental health gives a clue to out-of-balance and if this is not checked properly leads to stress. Exercises, Set business hours, effectively handling people are some ways to control stress.

Prathibha (2010) investigates the relation between distress level and quality of life. The sector selected for the study was banking in Chandigarh city. The results show that quality of life improved after stress management intervention and distress level decreased significantly. The stress management training module includes,

- defining stress and its effects on mind and body
- stress management approaches were described
- mental relaxation approaches
- yoga and controlled breathing practices.

Indumathi and Thirumakkal (2015) investigated the impact of stress on productivity of employees at the Pothys boutique, a textile showroom. Stress related illness has been a leading score for low productivity levels in the workplace. Immense pressure at work is the major stressor. The total population size is 800 employees hence sample size is 80 respondents. The stress factors for the study is lack of recognition and financial rewards, inflexible work hours, personal issues, work family conflicts, low control over work environment, livelihood facilities, physical strain, psychological risk factors, career and job burnout. The productivity factors are work performance, behavioural changes, work engagement, loss of productivity, labour turnover. The occupational stress and productivity are strongly positively correlated. From their studies it is said that, positive stress can improve the organizational effectiveness and efficiency.

Nabil (2010) identifies the factors affecting productivity as environmental, Organizational, Group dynamics and personal factors. The factors were later grouped based on perception survey as timings, competence of supervisors, salaries, materials, systems and procedures, group dynamics and climatic conditions. The findings reveal that 15% of overtime hours can increase productivity whereas night shifts would reduce productivity. Competence of supervisor and team member, increase in salary, timely availability of materials, systematic procedure, skilled members and pleasant climate can increase productivity in UAE construction industry.

In the Public Health England has mentioned Presenteeism as one of the key issues to measure labour productivity. It is to know if individuals are putting in productive hours on job.

**Major findings from literature review**

Following are the major findings after reviewing the literature, An extensive study has been conducted on various causes of stress have been identified in different sectors from research scholars and experts. Their studies have thrown light on the importance of employees’ health to overcome the negative influence.
Some research papers discuss about the impact of stress on employees. The impact is on the physical, mental and behavioral aspects of the employees.

Physical, emotional and behavioral problems which arise due to stress affects employee in their careers, interpersonal relationship with people within organization, family members and within the society they live.

Stress has positive influence and negative influence. Positive influence enhances productivity, commitment, job satisfaction. The negative influence will affect the health, psychological behaviors’, low morale, absenteeism.

III. RATIONALE OF THE STUDY

From the above literature review, the gaps identified are:

- A limited number of researches on job stress and its impact on employee productivity are available.
- A few research papers were found on studies on women and stress.
- Lack of holistic framework on job stress and its impact on women employee productivity.
- Lack of research on women employees at different levels in the organization.

IV. CONCEPTUAL FRAMEWORK

Based on literature review, conceptual framework has been developed. (See Fig 1)

**STRESSORS**

- Workload
- Job Security
- Role Ambiguity
- Change of Job
- Job Involvement
- Job Satisfaction
- Role Fit
- Worklife Balance
- Resource Constraints
- Organizational Commitment
- Interpersonal Relationship
- Organizational Support
- Gender Discrimination

**PRODUCTIVITY FACTORS**

- Timings
- Competence of Supervisors
- Compensation
- Systems & Procedures
- Group Dynamics
- Absenteeism
- Presenteeism

Fig 1: Proposed framework on Job stress and Productivity.

**Parameters for Job Stress and Productivity**

The present study attempts to describe about stressors on employees’ through researchers in the subject area and current existing practices. The study prepares an exclusive frame work to identify the various gaps and develop the research model in a more systematic manner.

- **Workload**: Hart and Staveland (1988) describe workload as the perceived relationship between the amount of mental processing capability or resources and the amount required by the task. According to Wickens (1984), the main objective of assessing and predicting workload is to achieve evenly distributed, manageable workload and to avoid overload or underload.

- **Role Ambiguity**: Srivastav, A. K. (2010) opines that Role Ambiguity arises when the role occupant is not clear about expectations from his/her role.

- **Job Security**: is the probability that an individual will keep their job; a job with a high level of job security is such that a person with the job would have a small chance of becoming unemployed.

- **Gender Discrimination**: Siva Kumar M (2008) describes that Gender discrimination is not biologically determined but it is determined by socially and the discrimination can be changed by the proper and perpetuate efforts. Denial of equality, rights and opportunity and suppresment in any form on the basis of gender is gender discrimination. Gender is a common term whereas gender discrimination is meant only for women, because females are the only victims of gender discrimination.
• Interpersonal Relationship: Degree of support from colleagues, peers and managers. The interpersonal relationship among employees in the organization will help them to maintain good team dynamics, improved communication, work/knowledge sharing etc..

• Change of Job: George and Dimitrios (2012) state that Change of work areas, if the initial design was not correct or if the introduction of changes and re-classifications leads to a recasting of the work area (e.g. the company used to have two employees in the accounts department, but due to development the same space must now accommodate four people).

• Resource Constraints: Srivastav, (2010) defines resource constraints as the results when the role occupant encounters inadequacy of the available resources, equipment and tools for performing his/her role.

• Role Fit: Work-role fit is defined as the perceived fit between an individual’s self-concept and his or her role. (May et al., 2004).

• Job Satisfaction: Job satisfaction is defined as the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs” (Spector, 1997, p. 2). This definition suggests job satisfaction is a general or global affective reaction that individuals hold about their job. While researchers and practitioners most often measure global job satisfaction, there is also interest in measuring different "facets" or "dimensions" of satisfaction. Examination of these facet conditions is often useful for a more careful examination of employee satisfaction with critical job factors. Traditional job satisfaction facets include: co-workers, pay, job conditions, supervision, nature of the work and benefits. (Williams).

• Organizational Commitment: Extent to which the employee feels committed to the organization and also the extent to which the employee feels wanted by the organization. It is the extent to which an employee identifies with the nature and goals of a particular organization and wishes to maintain membership in the organization.

• Job Involvement: Blau (1986) and Blau and Boal (1987, 1989) defines job involvement as the extent to which an individual identifies psychologically with his/ her job.

• Organizational Support: is the degree to which employees believe that their organization values their contributions and cares about their well-being and fulfills socioemotional needs.

• Work life balance: Extent to which the demands of work interfere with personal life.

• Timings: It is the fixed work by the employee at organization. It includes the extra time the employee spends in the organization to accomplish the tasks.

• Competence of Supervisors: Competency refers to skills, abilities and knowledge of a person. Competency refers to behavior, differentiating success from merely doing the job. It includes team with classified supervisors. Supervisors with known team members and the competency in supervisor change.

• Compensation: Compensation is defined as the total amount of the monetary and non-monetary pay provided to an employee by an employer in return for work performed as required. It is a combination of the value of the pay, vacation, bonuses, health insurance and any other perks.

• Systems and Procedure: a set of principles or procedures according to which something is done; an organized scheme or method. It includes the instructions available. The system and procedures are followed to maintain specific quality. It is the requirement to perform a particular task.

• Group Dynamics: refers to the study of human behaviour in group. It is a system of behaviours and psychological processes occurs within a social group or between social groups. It tells about groups with all skilled members, groups with mix of skilled and unskilled members, groups with unskilled members.

• Absenteeism: Robbins (2003) defines Absenteeism as the failure to report to work. It can be classified as voluntary and involuntary absence. Involuntary absence is due to factors beyond the control of the individuals. Voluntary absence reflects a conscious choice by the employee not to attend work because of reasons that are within his or her control.

• Presenteeism: Sameer and Hayter (2010), defines presenteeism as “turning up to work while ill”. In an article for HRMagazine, Professor Cary Cooper reports four different types of presenteeism:
  ➢ fully functioning presenteeism – healthy engaged employees who rarely take sick leave
  ➢ sickness presenteeism – employees who turn up to work but their health is suffering. They still attend work due to their low levels of job security, although this inevitably makes them less productive
  ➢ job dissatisfied presenteeism – these are generally healthy people but have high levels of absenteeism – possibly due to their poor engagement, low commitment or a mismatch between the worker and their role
  ➢ stressed unhealthy – this refers to those who have a combination of health problems unrelated to the job and those who have been damaged by the job

Productivity: The simple, classic view of productivity is concerned with measuring inputs in relation to outputs. It can be calculated as the amount of output generated in a given amount of time. A simple productivity equation can be seen below:

Productivity = Outputs provided by the process /Inputs consumed by the process.

The broadest approach to measuring productivity. It includes all the aspects that can influence productivity such as the quality of output, work disruptions, absenteeism, turnover, and customer satisfaction. Due to the range of factors involved, productivity can be defined and measured differently depending upon the role, organization or sector.
V. CONCLUSION

The study is an attempt to identify the variables affecting job stress and productivity. The variables for the study that are found in the existing research literature on job stress are workload, role ambiguity, gender discrimination, interpersonal relationship. The variables for productivity found in the existing literature are timings/work schedule, competence of supervisor, compensation, systems and procedures, group dynamics, absenteeism and presentism. The research work that links job stress and productivity are few in numbers. Hence research framework/model is proposed to link those two constructs to know the extent to which job stress influences productivity. Also the study will be carried out based on the data collected from the women employees. A very few research studies were done on job stress with respect to women employees. The model that would be developed would be a good decision tool for HR policy makers to focus on the key areas that improves productivity without highly increasing job stress.

REFERENCES


