CHAPTER – II

REVIEW OF RELATED STUDIES

Stress is an ubiquitous problem. Stress management is a major aspect of the crusade against stress of every description. It is such a multi dimensional problem that its origin and growth cannot be comprehended in the right perspective, unless all shades of thought about it are thoroughly examined. This chapter embodies a vivid portrayal of the singular aspects of stress explained by researchers and critical thinkers in their epoch - making books and thought-provoking articles published in journals of national and international renown.

2.1 Stress and the allied problem of Burnout

Stress has been subjected to numerous definitions. In the opinion of Koske and Koske, “Stress is a force that affects an individual”. But while dealing with stress as related to the work and work place of an individual, he highlights the negative effects of stress and says that it can easily combine with an individual’s characteristics and impact the health and well-being of an individual in any work place. Speil Berger et al (1994)1 go a step further and hold that stress is a problem which breaks out when an individual’s abilities do not mach with his/her job demands. This idea has been upheld by Gupta and Beehr. In the opinion of Mattesan and Ivancevich, Stress is perceived as “an

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adaptive response to circumstances which result in an unusual demand on an individual”. To put it in the words of Minter, “Stress is 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”. In the opinion of Hendrix et al. (1991) it could be defined as an “uncomfortable cognitive state resulting from exposure to a stressor. This definition is upheld with examples by Parasuraman and Alchitts (1981) Going deeper into this definition Bhalle, Jones and Alynn (1991) add that it is nothing but “an individual’s perception of unpleasant and potentially harmful aspects of life.

Burnout has been explained, by Freudenberger and Hubert (1974) as something related to the emotional and physical exhaustion resulting from work conditions. In the opinion of Wolfgang, Veninge and Spadley burnout is a debilitating psychological condition brought about by unrelieved work stress. Farber, while dealing with it, adds that it is unmediated stress. In other words it is an acute form of stress experienced without buffers or support systems. Dwelling at length on Ratiff Nancy (1988) holds that burnout could be easily identified by symptoms such as the withdrawal of workers from their jobs in order to get away from stress.

2.2 Lack of Fitness and Stress

In the opinion of Van Harrison R. (1978)\(^7\) there is every possibility for the occurrence of stress, when there is an obvious lack of fitness between the needs, goals and ability of an individual to cope with any job assigned to him. This opinion has been strongly upheld by Fisher (1986) who asserted that stress will occur when there is no balance between the needs and abilities of an individual.

2.3 Stress Polarities

Stress is a very powerful force. According to Selye (1956)\(^8\) it could be divided into two polarities on the basis of its positive and negative effects. Positive stress it otherwise known as Eustress. It can stimulate and augment the activities of the body and mind. Hence, it is needed to stimulate an activity and bring relaxation to both body and mind. But negative stress is very harmful to the body and mind of any individual. If it is not identified and got rid of scientifically in time, it can result in chronic illness like cardiac problems and ever so many other psychological and physical ailments. The investigator could see in the course of his survey, how software professionals are haunted by negative stress when they reel under the weight of heavy workloads. Selye holds that negative stress could be treated for all purposes as a dependent variable, if viewed from this standpoint.

\(^7\) Van Harrison R. 1978, Person – Environmental Fit and Job Stress, New York, Willey.

\(^8\) Selye (1956), Stress of Life: New York, Mc Graw Hill.
2.4 Employment decides identity and so stress needs to be overcome

According to Winefield et al (1993)\textsuperscript{9}, the identity and personality of any individual depend solely on the position held by him/her. The software professionals enjoy a place of respect in the society to which they belong because of their material affluence that goes with the position they hold in internationally reputed software firms. Their work is very tough and they are left with a very poor work-life balance. But, according to Szymanski, in these days of frightful global competition, work every where has turned out to be stress-ridden and risk-prone. So one has to scorn delight and live laborious days to shoot into prominence. So, according to him stress management is necessary for every software professional, who aspires for a challenging position with a covetable salary.

2.5 Stress and Permanent Demands

Cranwell (1990)\textsuperscript{10} treats stress as an external factor or force. In his opinion, stress is a potential stimulus in any work environment. He interprets the negative effects of stress in a highly memorable and practical way with an engineering model. He explains how any building which is subjected to excessive stress, would naturally suffer a permanent damage which can not be repaired. He goes on to add that this will be the fate of any person whose stress burden exceeds tolerable limits.

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\textsuperscript{10} Cranwell (1990), Thriving on Stress, London, Lawrence, Erlbaum.
2.6 Stress Reactions

In the opinion of Greenberg J.S. (1990)\textsuperscript{11} there are three more types of stress reactions. They could be viewed as reactions, resistance and exhaustion. Alaram reaction, according to Greenberg, refers to the immediate changes which could be seen on the body of an individual, as a natural outcome of the problem of stress encountered. He adds that bodily changes characteristic of the alarm will disappear once the body starts resisting the stress problem. He concludes that resistance to stress, if continued beyond a tolerable limit will lead to loss of energy resulting in exhaustion which is a harbinger to death.

2.7 Burnout

According to Reichell and Neumenn Y. (1993)\textsuperscript{12} burnout is a syndrome or a state of physical, emotional, and mental exhaustion as well. If it is not kept at bay in time, it will result in death. He deviates from his main line of analysis and holds that work-related strain leads to emotional stress. It manifests itself in the general loss of feelings, concern, trust, interest and spirit. Emotional stress triggers out what is called emotional exhaustion, which leaves any one with no option other than feeling depressed, trapped and hopeless. He concludes his analysis of this point by asserting that role stressors like role conflict or role ambiguity could be treated as the predictive variables of burnout.

\textsuperscript{11} Greenberg J.S. (1996), Comprehensive Stress Management (3\textsuperscript{rd} ed.) Dubuque A. Win. C. Brown Publishers.

2.8 Perceptual Changes and Stress

The gravity of the problem of stress is basically related to how it is perceived by an individual. Hendrix et al (1991)\textsuperscript{13} believe that it changes from individual to individual. They hold that stress is an uncomfortable cognitive state, resulting from exposure to stress. They are of the view that perceptions of unpleasant, irritating, and potentially harmful aspects of life have a tendency to vary from individual to individual and from time to time. The point they seek to drive home is that it is not possible to establish a functional relationship between age groups and stress. Similarly, it is also meaningless to hold that there is a functional relationship between work overload and stress. In their opinion stress perceptions could be changed by carefully launching the job stress management programmes in all the software firms. Farber (1983) goes a step further and maintains that it could be treated as unmeditated stress as well.

2.9 Measurement of Stress

Stress could be measured, by using a “Troubling occurrences” survey in which, points are given based on the number of stressors that any given respondent has experienced in his/her work environment. This is an unassailable opinion of Koskr and Koskey (1993)\textsuperscript{14} Similarly, the Heath Stress inventory of Wolfgang and Alan P. (1991)\textsuperscript{15} uses common work situations that

\textsuperscript{13} Hendrix et al. op cit
health professionals are likely to experience as a job stress measure. But, recent studies have made it clear that these are poor measures of stress because they are in fact measuring only conditions and situations that may lead to stress. However, in the job stress survey of Speil Berger and ReReiser (1994)\textsuperscript{16} respondents rate the intensity of stress they experience from 30 different job stressors and the frequency at which the job stressors occur. This survey has been found to be better than the ones referred to above because even though it is composed of potential stressors, the respondents’ identifications of how much perceived stress these potential stressors cause is also considered.

2.10 Person – Environment Fit Model

There are numerous stress study models. The most popular one is called the person-environment fit model brought out by French, Caplan and Harrison (1982). In the opinion of Kristof Antony L (1996)\textsuperscript{17} this model could also be called Person-organisation fit model. This model considers the compatibility of goodness of fit between the characteristics of individuals and the characteristics of organizations in which they work.

Henry postulates that the workers wellbeing may be harmed when the demands of their job do not match their needs or if there is a striking conflict between their expectations and their experiences in their respective organizations. He has emphatically stressed that when there is no agreement


\textsuperscript{17} Kristof Antony L. (1996), Person Organisation, Fit An Integrative Review of the Conceptualization, Measurement and Implications, Personal Psychology, 49, pp. 1-4.
between the values of a person and the requirements of their organization, the natural outcome will be an astounding job stress. The point which deserves a special mention in this content is that their model has become a basis for ever so many other stress-related concepts and models. The noteworthy among them is the professional bureaucratic model.

2.11 Job autonomy and Stress

Autonomy is one of the most shining characteristic features of professional work. Engel (1970)\(^{18}\) has firmly established that autonomy has a tendency to facilitate the use of discretion by any professional in controlling his/her performance. This idea has been upheld by Wallace in 1995. According to him, autonomy is very important for professionals for it permits them to use their sense of judgement, obtained from their experience and training. Researchers in stress have welcomed this idea on all hands. In their opinion, lack of self control and provisions for the use of discretion in one’s job well result in disastrous stress problems. This idea has been upheld by Hendrix et al (1991)\(^{19}\) and Gulerman and Jayaratne (1994).\(^{20}\) It is from this notion a hypothesis that “more autonomy results in less job stress” has been evolved by Wallace 1995.\(^{21}\)

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2.12 Bureaucratic conditions and Stress

Any work environment based on a bureaucratic setting, according to Davies (1983)\(^{22}\) can create problems of stress for its professionals. The hierarchies of positions present therein, create automatically functional divisions among the professionals. It is in this context there becomes necessary a well-organized system of coordination and control. As time passes by this will bring in professional – bureaucratic conflicts leading to job stress. An indepth study of the extent to which such stress problems can grow in gravity and dimensions has been carried out by Scott (1966)\(^{23}\) and Sorensen E. (1967).\(^{24}\) They have found out that the behaviours expected from professionals by any organization are guided by bureaucrats. Professionals will be under compulsion to subjugate one set of behaviours for the other. This idea has been upheld by Aranya and Ferris (1984).\(^{25}\) The involvement of a bureaucratic setup in the day to day functioning of any software firm brings in what is called formalization of work and organizational behaviours. Aiken and Hage (1966)\(^{26}\) believe that formal rules and procedures depersonalize employee activities and routinise their work. It is widely believed that formalized rules and procedures


tend to threaten the autonomy of software professionals. As professionals deal with varied clients hailing from different nations around the globe, they are called upon to use innovations and different solutions under different conditions, to keep them duly satisfied. In software companies formalization will curb the freedom of professionals to innovate.

2.13 Stress and its Basic Traits

According to Bartar J.C. (2000) stress is nothing but a force. It is a pressure, strain or strong effort which is taking its toll on an individual’s mental or physical process. He asserts that a steady and constant build-up of stress will ultimately result in problems of fatigue, anxiety, tension and extreme irritability. He goes on to add that if it is not taken care of promptly, it will result in a major health breakdown and irritable depression. Cohen S. and Edwards J.R. (1999) while dealing with stress have pointed out that stress could be viewed as a problem which entails an abundant imbalance between demand and response capabilities. As they have rightly put it, it stems from the inability of an individual to rise up to the expectations in a new work environment. Further, they dwells at length on its positive and negative aspects. Positive stress according to them can easily stimulate an individual to enhance his work performance. Negative stress on the other hand can seriously tell upon the worker’s health and work performance. They maintain that stress

is present in various degrees among workers. A small amount of stress may positively encourage workers to work harder. However, when it grows in magnitude its negative effects will become quite apparent.

2.14 Environment related stress

According to Lazarus R.S. (1966)\(^{28}\) factors intrinsic to various kinds of jobs would generally include too much or too little work, time pressures and deadlines and having to make too many decisions. These, according to him are the characteristic features of a typical work environment. Against these backdrops, he holds that poor mental health could be always related to unpleasant work conditions. The necessity to work fast during inconvenient working hours would result in problems of acute stress. It is his considered opinion that stress could be, by and large, attributed to work load.

2.15 Role Specifications of Individuals in Organisations and Stress

It is widely believed that an individual’s role in work could be treated as a major source of stress. Stress is bound to arise when there is an ambiguity about one’s role at work. Role ambiguity could be usually attributed to employees’ uncertainties and lack of information about job role expectation and responsibilities. According to Mc Grath J.E. (1983)\(^{29}\) those who are confronted with role ambiguity, usually experience lower job satisfaction, high

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job related tension, and lower self esteem. He adds that it can be empirically associated with a person’s role at work as well. He asserts that role ambiguity is an outcome, of the uncertainties of employees, their lack of information about job role and their expectations and responsibilities.

**2.16 Relationship at Work and Stress**

A trailblazing study on stress among software personnel has been conducted by Joseph M.I. (1989).\(^\text{30}\) In his study, he focuses his attention on stress emanating from the strained relationship between workers and managers. He argues that lack of considerate behaviours on the part of supervisors tends to contribute significantly to feelings of job pressure. Further, problems such as office politics and rivalry among colleagues generate the most dreaded problem of stress among the employees.

**2.17 Career Development in Stress**

According to Fisher S. (1983)\(^\text{31}\) software personnel are very often confronted with two major problems. One of them is that job insecurity resulting from the fear of redundancy or earlier retirement. Secondly there is what is called status incongruity resulting from over promotion and frustration at having reached one’s career ceiling. When managers reach their career ceiling, there arises the fear of demotion, or obsolescence or early retirement.

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As managers are called upon to keep pace with changes in technology for years, they have to run faster than before to keep their jobs and overcome the fear of insecurity in their position. In companies, due to technological changes, the most conspicuous tendency is to go in for young and technological savvy personnel to fill key positions. Unless a manager rises up to the expectations of the company, keeping himself or herself abreast of the latest technologies he or she will naturally become obsolete in the organization and gets steeped in stress of one form or another.

2.18 Stress as related to Organisation, Structure and Climate

According to Selye H. (1953)\(^{32}\) the organizational structure itself is a potential source of stress. He has found out from his studies that people who get greater and better opportunities report significantly greater job satisfaction with low job-related feelings of threat and higher feeling of self esteem. He adds that non participation at work results in strain and job-related stress. In his opinion human behaviour is nothing but an outcome of the interaction of an individual with others or the psychological environment which is prevalent in his work place. Going deeper into the problem, he shows how the organizational climate in a company is influenced by factors such as span of control, rules, and procedures and hierarchy. He holds that organizational climate brings about a link between the interactions of humans with their

\(^{32}\) Selye H. (1953), Stress of Life, New York, Mc Graw Hill.
environment. He defines organizational climate as a set of measurable properties of work environment as perceived directly or indirectly by people who live and work in the environment. Organizational climate could be measured on the basis of environmental factors such as structure, responsibility, reward, risk, warmth, support, standards and conflicts. Structure refers to the feeling of employees about constraints, rules, regulations procedures and red tape in the organizations. Responsibility refers to the feeling of ones own boss. Reward, on the other hand, refers to the feeling of being rewarded for the work done. Risk is the feeling of insecurity and challenges facing the job. Warmth is the feeling of good fellowship that prevails in the organization. Support refers to the perused helpfulness of managers and other colleagues. Standards refer to the implicit and explicit goals and the performance standards expected of the staff.

2.19 Speed of Technological Change and Stress

Software professionals see changes in technology as a pre-requisite for their existence. But it cannot be denied that the speed of such changes can have profound psychological effects. In their studies, Tomcox, et al. (2000) argued that it is important to measure the stress among computer professionals. Their articles summarize and report the presence of stress among these professionals. They have further talked about the different factors associated

with quality of working life and turnover. They add that work and family life, can create different psychological demands and cause stress and depression. The other causes and consequences of stress have also been assessed by them. Significantly, they have mentioned that stress is present in almost all phases of software development.

2.20 Strict Avoidance of Narcissism

Narcissism contributes abundantly to the growth of stress. According to Cooper C.L. (1983)\textsuperscript{34} as long as it is not overcome, the pangs of stress will be haunting its victim fiercely. According to him, things like jogging, aerobic classes and diets are no answer for the problem of stress. They only relieve the symptoms of stress such as anxiety, poor physical conditions and the like. In fact, they do nothing to alleviate the causes of the problems of stress. Cooper goes on to add that all the energy we exert in the name of health and the glorification of the self, is diverting and snapping us of all the energy we need to come to terms with what the real problems are. The only way, therefore, is to think more about other people and less about ourselves. As we think of others and get associated with them deeply, burden of stress will automatically get lightened.

2.21 Anticipatory Stress

Anticipatory stress is arousal, stimulated by an expected stressor. It could be seen when the mind and body of a person prepare in advance for change, crisis or challenge. According to Lazarus having a warning of an upcoming harm is a powerful adoption tool, especially in humans who are able to think in terms of past, present and future and to engage in anticipatory coping. As he rightly pointed out, anticipatory stress can be positive stress, useful in preparing one’s body and mind for events that are about to happen. Lazarus concludes by saying that such stress increases the sharpness and motivation of an individual.

2.22 Software Houses and Stress

Arunkumar T.S.\textsuperscript{35} has made an extensive study on software houses and stress. According to him, continuing streams of information technology innovations, are transforming the business world from traditional work process to IT-enabled integrated environment. The impact of this change according to him has brought about many challenges to software personal and developers, working in organizations as ‘in house programmers’ and developers. As it is well-known, software houses are fulfilling the demands of various industries. They are providing customized software, according to the needs and requirements of the client organizations, by using latest available technology.

\textsuperscript{35} Arunkumar, T.S. Stress Management Among IT Professionals, Ph.D. Thesis, University of Kerala, Trivandrum, Kerala, India.
and skills in the market. However, as he has rightly pointed out technology is changing so swiftly that it is becoming difficult for professionals to keep abreast of the upcoming technology along with the daily chores of the workplace. Having said this, he goes a step further and points out that software industry is a human capital-intensive industry and it is based largely on the knowledge of workers with technology concentrated environment. Further, as software development process is a learning and communication process, it requires greater interaction with the clients, deep understanding of the business progress around, clear and timely communication with people involved in the development process and insight into technical innovations. He concludes that it is a peculiar situation which puts pressure on professionals in software houses which is treated for all practical purposes as stress.

2.23 Measuring of Occupational Stress

As Stephen Williams and Cary L. Coper (1998)\(^{36}\) have rightly put it, stress is a highly elusive and an oft misused term. Consequently, any measurement of it would certainly require a structure and language that facilitate a proper understanding of it. In their opinion, researchers on occupational stress have not been able to progress with speed and scientific fervor, due to the lack of consistency in the measurement tools which have been hitherto evolved. To put it in a slightly different way, the absence of

reliable and standard measuring instruments, has rendered studies of occupational stress highly problematic. This view of Stephen Williams and Cary L. Coper has been loudly acknowledged by Love and Beeher in 1981. They go on to add that this lack of standardization in approaches to the measurement of stress has resulted in the introduction of certain occupational stress indicators. These indicators would according to them bring into use standardized, reliable, compact and comprehensive instruments for measuring stress. Copper and Williams end their analysis by stating that the advent of such instruments of measurement would provide a link between theoretical and empirical results.

2.24 Pressure Measurement Indicators (PMI)

Stress arises out of the pressure exerted on an individual. It is widely believed that stress could be treated for all practical purposes as the negative consequences of pressure. According to Williams, S. (1994)\(^{37}\) pressure measurement indicators would cover everyone in an organization. So the questionnaires designed to evolve the PMI should cover all the employees, who are usually classified under the heads, white collar and blue collar. According to Williams, it is precisely this characteristic feature of the pressure measurement indicators that keeps it free from organizational bias. Another strength of the pressure measurement indicators is that they work across

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cultural boundaries. Reports on pressure measurement indicators have proved that they have been developed in two stages. The first stage is involved in improving the psychometric properties of organizational stress indicators. The second stage includes the use of organizational commitments, job security and decision latitude which were not covered by occupational indicators. Williams closes his study by stating in unequivocal terms that PMI as a pressure measurement indicator is a new instrument and only a very few researchers on stress have taken recourse to it.

2.25 Gender Differences in Job Stress

It has been pointed out by Cohan S. & Edwards J.R. (1984)\textsuperscript{38} and Fisher S. (1989)\textsuperscript{39} in a male dominated profession like information technology, women generally try to prove themselves more capable than men. So, they invariably endeavour to maintain a higher standard for themselves. In line with such thinking, the female IT professionals have reported higher mean score on stress. As Jick and Mitz, have justifiably pointed out that women every where feel a greater pressure to achieve and prove that they are more knowledgeable and competent in a profession which is generally male-dominated.

2.26 Negative affectivity of Occupational Stress

Occupational stress has been viewed as a major health hazard. To all intents and purposes, it has proved itself to be a serious challenge to the


effective operation of any company. According to Lambros Lazuras et al. (2009)\textsuperscript{40} on an individual level, higher levels of stress at work can have a direct impact on the immune system. It results in low bowel syndrome, head aches and muscular and skeletal pain. As a result, employees who are prone to higher job stress report more frequent illness symptoms. They very often apply for leave for medical visits. Further, they attempt to draw heavily on the company’s health care and treatment resources. As it has been estimated by Viven K.G. et al. (1999)\textsuperscript{41} the overall cost of stress at work, would be in the range of 20 billion Euros in the European Union and more than 150 billion dollars in the US. In view of these effects, health professionals have been endeavouring to identify the potential sources of work stress and the variables that may influence the relationship between occupational stress and health outcomes. Lampros and Lazuros et al., contend that negative affectivity of occupational stress has got a nuisance effect.

2.27 Stress and Negative Attitudes

Occupational stress, according to Daniel C.M. Tan \textsuperscript{42} will ultimately affect the mind set and attitudes of even high profile technical personnel. In their opinion, individuals with high scores on measures of negative affectivity,

\begin{itemize}
\item \textsuperscript{40} Lambros Lazuras, Angelos Rodafinos, Georgios Matsigkos, Alexander Stamatoulakis – Perceived Occupational Stress, Affective and Physical Well-being Among Telecommunication Employees in Greece – Social Science & Medicine 68 (2009), pp. 1075-1081.
\item \textsuperscript{42} Daniel C.M. Tan – The Relationship between the Perceived Threat from Information Technology Outsourcing and Job Satisfaction of Information Technology Professionals – IBIMA Publishing – Journal of Outsourcing and Organisational Information Management, p.15.
\end{itemize}
which is an outcome of occupational stress are likely to experience distress, dissatisfaction, focus on failures and shortcomings. Such people, generally, see the negative side of the world. They tend to hold a negative view of the self and to feel dissatisfied with their lives. This kind of a negative attitude according to Watson and Clark will ultimately pave the way for retrogression in any company.

2.28 Software outsourcing and its impact on job satisfaction

Information technology outsourcing is generally defined as contracting internal SW functions to external vendors. The various reasons why organizational leaders choose to outsource the information technology functions generally include, cost savings, access to new technologies, scalability, improved performance and risk diversification. The idea behind cost savings or cost reduction arises from the belief that vendors have lower overheads, greater economies of scale and focused expertise, compared to the client. The bearing of SW outsourcing has been dealt with at length by Daniel C.M. Tan.43 According to him, SW outsourcing has the potential to increase the job satisfaction of SW professionals, since it can complement and strengthen their capability. Even an SW vendor is able to grow technologically and financially by ushering in a slew of better welfare programmes for his SW professionals. This will enhance the job satisfaction of the in house SW staff.

43. Ibid. p. 17.
As Tan has rightly pointed out, the inhouse staff usually remains the first point of contact for the system users.

2.29 Software Professionals and the Factors influencing their Job Satisfaction

The Software professionals are known for their unique characteristic features. They belong to the elitist class all over the world. They are prone to stress because, the satisfaction they derive out of the work they do, is influenced and conditioned by demographic factors, psychological factors, organizational factors and job specific factors. The most dominating demographic factors that seem to influence job satisfaction include factors such as age, educational background and gender. Similarly, it has been found out that an individual’s core self evaluation which forms his psychological nature is a significant predictor of job satisfaction. To be precise, the individual’s perceptions of self, his ability to control emotions and take personal responsibility are related to, how one will perceive a situation and react to it. According to Tan\textsuperscript{44} the most important job specific factors which impact job satisfaction are autonomy, challenge, creativity, and clarity. Tan adds that an ubiquitous trait of information technology professionals is that they invariably prefer jobs which provide them with adequate challenges, responsibilities and a chance to use their creative skills. Tan holds that role ambiguity and role conflict can grievously affect job satisfaction. Tan has established, through his

\textsuperscript{44} Ibid. p. 18.
illustrious studies, beyond any shadow of doubt, that job satisfaction is important in any IT industry because of its relationship with performance, organizational commitment, organizational citizenship behaviour, life satisfaction, mental health and physical health.

2.30 Work Environment and Job Stress

According to Lars Gorgan Wallgren and Jan Johansson Hanse (2010) job stress among SW professionals could be attributed mostly to their work environment. As they have rightly pointed out, SW professionals are the pioneers of the new technology infused in the private and public arenas. For their success, the SW professionals depend on their ability to stay current with the latest technology. SW professionals’ behaviour as employees of their respective organizations and as SW consultants is so complex that it always tends to be stressful. In a sense, their work environment is such that they have to work long hours, according to tight schedules. They are often in a crisis mode, where the projects and the technology may change quickly. To put it in simple terms, they have to face the problems of voracious user demands and deadlines and the threat of the technology becoming obsolete overnight.

Goran Wallgren and Jan Johansson Hanse conclude that the work environment of SW professionals will always tend to be stressful as competition among sectors, depending on the SW profession, keeps increasing at an incredible speed.

2.31 Impact of Stress on Employee Productivity

In the opinion of Subha Imtiaz and Shakil Ahmad\textsuperscript{46} stress is an ubiquitous phenomenon. It is so multidimensional in character and effects that it has become a part of both social and concrete sciences. It is basically a mental strain brought about by an internal or external stimulus. Any leaning towards stress will contribute to feelings of job dissatisfaction and low organizational performance. The negative correlation between job stress and job performance will impair the average productivity of any individual. In fact, job stress is on the rise everywhere. It has become a major challenge for employers because when it exceeds a tolerable level, it results in low productivity, increased absenteeism, alcoholism, drug abuse hypertension and cardiovascular problems.

2.32 Occupational Stress and Emotional Intelligence

Occupational stress is in no way different from job or work stress. In fact, these terms could be used interchangeably. As Harrison and Larson have rightly pointed out it is a unique problem with a physiological and psychological dimension. Wallpleque (1956)\textsuperscript{47} adds that physiological stress is often viewed as physiological reaction of the body to various stressful triggers at the work place. It usually results in head ache migraine, abdominal pain,

\textsuperscript{46} Subha Imtiaz and Shakil Ahmad – Impact of Stress on Employee Productivity, Performance and Turnover; An Important Managerial Issue.

\textsuperscript{47} Wallpleque (1956), Organisational and Professional Commitment in Professional and Non Professional Organisations Administrative Science Quarterly, 40, pp. 228-255.
lethargy, back ache, chest pain, fatigue, heart palpitation, sleep disturbance and muscle ache as well as changes in eating drinking sleeping and smoking habits. Psychological stress, on the other hand, could be seen as an emotional reaction experienced by an individual. It can result in anxiety and depression; burnout, job alienation, hostility, depression, tension, anger, anxiety nervousness, irritability and frustration. If SW professionals are unable to control such stresses, their work attitudes, general behaviour, sense of commitment, productivity levels and health conditions would be terribly impaired. One’s ability to manage ones emotions which include self awareness, self regulation, motivation, empathy, and social skills, could be treated as emotional intelligence. According to Subha Imtiaz and Shakil Ahmad\textsuperscript{48} emotional intelligence will increase an individual’s competencies and this may help to decrease external demands and pressures as well as increase human well-being. This concept has been endorsed by Salovey and Meyes. According to them, emotional intelligence which can increase individuals’ competencies can increase their abilities to bring down stress and thereby increase an individual’s attitudes and behaviours.

\subsection{2.33 Stress and Job Tenure}

According to Makesan et al (1987)\textsuperscript{49} there is an intricate and inalienable relationship between job tenure and stress. Job tenure is the length of time an

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\item \textsuperscript{48} Subha Imtiaz and Shakil Ahmad, op cit.
\end{itemize}
individual has worked in a specific position in an organization. Tenure on the job can have significant impact on individual job attitudes. When an individual has been on the job for a long time, his or her investment in the job and organization could be treated as sunk cost. It will be greater than that of some one who has been on the job for a shorter period. It is natural that persons with long job tenure occupy higher positions and are paid higher salaries. Vivien K.G. Lim and Thompson S.H. Teo have found out from their studies that IT professionals with long job tenure experience more stress than junior counterparts. The ANOVA procedures they have adopted in their course of the study have proved their contention.

2.34 Work Motivation and Stress

Job stress is widely known as a global phenomenon. Its horrendous dimensions have made an indelible dent on the lives of people in the industrial sector. An extensive study has been made on it by Lars Gorgan Wallgren and Jan Johansson Hanse (2010).\(^{50}\) According to them, any work situation with both high job demands and job control could be related top a high degree of work motivation. Motivation generally stems from one’s desire to perform to the best of one’s ability. This account for the arousal, direction, magnitude, and maintenance of the effort in an individual job. The negative outcome of work motivation is stress. Lars Goran Wallgren and Jan Johansson Hanse go a

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50. Lars Gorgan Wallgren and Johansson Hanse, op cit. p.35.
step further and add that motivators can act as a partial mediator in the relationship between job control and perceived stress.

The Research works on stress, hither to, reviewed makes it abundantly clear that stress is always associated with any hard work related to achieving targets and all kinds of pioneering works needed for the noble task of nation building. In fact, there is no field under the sun where the problem of stress is conspicuous by its absence. It is the aim of the investigator to show how the problem of stress is viewed in the software industry. The idea he has gained from the reviews undertaken is that, stress is purely a psychological problem which has to be overcome as a prelude to promote the well-being of the software industry in general and the software professionals in particular.