

Chapter-II

Survey of Existing Literature

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Key Terms:

- 1) **Type 'A'**: *People who are excessively competitive and always seem to feel a sense of urgency.*
- 2) **Locus of control**: *Individual's perception of the source of his control either internal or external.*
- 3) **BOSS**: *Burnout Stress Syndrome.*
- 4) **GAS**: *General Adoption Syndrome.*
- 5) **IBS**: *Irritable Bowel Syndrome.*

2.1 Introduction

As such there is no universally agreed upon meaning of the term 'Stress' among the behavioral scientists. Some of them have used the term to describe the environmental characteristics thought to affect people adversely. For instance, *McGrath (1976)*¹ said that there is a potential for stress when an environmental situation is perceived as presenting a demand which threatens to exceed the person's capabilities and resources for meeting it, under conditions where he/she expects a substantial differential in the rewards and costs from meeting the demand versus not meeting it.

Some other like *Beehr, (1976)*²; *Kahn et al., (1964)*³ described Stress as an adverse Psycho-physical condition what people has to go through during their interaction with their work. On the other hand, some belonging to the school of thought of *Selye, (1975)*⁴ described the term 'Stress' as general bodily response to any demand in excess to the capacity of the incumbent.

*Agarwala U.N et al., (1979)*⁵ believed that the confusion in defining the term is primarily due to the fact that scholars of different disciplines use the same term variously. In psychology however, the very term refers to a particular kind of state of organism resulting from some interaction between him/her and the environment.

*Pestonjee, (1999)*⁶ attempted to present diagrammatically the nature and consequences of stress phenomenon. According to him there are three basic sectors of life in which stress originates: a) job and the organization, b) the social sector, and c) Intra-psychic sector.

*Agarwal, R. (2001)*⁷ perhaps rightly stated that 'Stress is not something new, not anything unknown. Stress has been experienced since time immemorial, but its toll is higher than ever before.'

In reviewing various concepts of Stress, it can be said that stress is neither stimulus response nor intervening variable, but rather a collective term for an area of study- an area of study, which, in its broadest sense, is differentiated from other problem areas in that it deals with any demands which tax the system, whatever that system may be (a psychological system, a social system or a physiological system) and the responses of that system to the taxing demands.

*Beehr and Newman, (1978)*⁸, however, projected three perspectives for viewing job stress-employee health phenomena that are readily discernable. According to them the first can be called the personal characteristics perspectives. The second perspective sees environmental factors as the casual agents in stress-health events. The third perspective is however; of viewing job stress in the person-environmental interaction perspective. Thus it views stress-health phenomena as an interaction of the characteristics of individuals and their environment. Implicit in this perspective is the concept of person-environment fit or misfit.

2.2 Personal Characteristics

The Personal characteristics includes any characteristics of the human being that influences an individual's perception of stressful events, interpretation of such events as stressful, and/or reaction to these stressful events.

*Researchers like Kahn, et al., (1964)*⁹; *House, (1974)*¹⁰ believed that personal characteristics moderate the relationship between job stress and employee health (or behavior), but the number of published studies successfully unfolded such effects are modest. *House, (1974)*¹¹ maintained however, the evidence that a result does not generalize across major demographic groups suggests that there are important individual (physiological or psychological) or social environmental variables mediating the relationship in the question.

*Cohen and Margolis (1973)*¹² report that individual differences (especially in stress tolerance) is one category of research, reflecting their belief that characteristics of the focal person are the most important factors in job stress-employee health phenomena.

Various scholars while contributing the literature in this section have identified few major factors like Age, ability, personality/needs, physical condition, locus of control and neuroticism-stability etc as major contributing variables of human stress and in the next section above variables are discussed.

2.2.1 Age

*Theorell (1976)*¹³, in a study of middle aged construction workers found that groups of employees with high scores on a measure of discord (unfortunately, this was a combination of job stressors, non-job stressors, personality and demographics) and on a life changes scale had higher blood pressure than other groups, and that this observation was more striking for employees age 41-56 than among the employees age 56-65. Tests of the statistical significance of this difference were not reported, however. This is therefore, only suggestive evidence that age may perform a moderating role in job stress-employee health phenomena.

In another study *Misra, P.K, et al, (2003)*¹⁴ mentioned that while measuring the level of job stress among a group of Indian Air Traffic Controller, the distribution of mean scores of various age groups on role stress show interesting patterns. Significant differences have been observed among various age groups of the focused people on seven variables of role stress as well as on total role stress.

It was reported that respondents in the age group of 23-30 experienced minimum level of inter-role distance and this had happened as per the authors

due to the fact of the inability of the respondents to combine the demands of organization with the same originated from their respective family. In contrast the respondents in the age group of above 6 reported lowest level of Inter role distance what as per the view of the scholars is due to the fact that the people of this age group had adopted a skill to make a balance between the demands of organization and the family. It is therefore observed that the age is perhaps inversely related with the level of stress faced by the job occupants. *Sen (1981)*¹⁵ in his study on Indian bank professionals had also made same observations in the line of *Misra, P K et al., (2003)*¹⁶.

2.2.2 Ability

Published reports of employees' abilities as moderators are also scarce. The research on role-overload may be interpreted in this context, however. One part of the role conflict index in the early study by *Kahn (1964)*¹⁷ was overload (i.e., too much work to do in the time available. *French and Caplan (1973)*¹⁸ suggested such 'quantitative' overload to be interpreted in terms of the ability of the employee as well as in terms of time available. It is reported by them that objective quantitative overload is negatively related to self-esteem and positively to tension and heart rate.

In another study by *French, (1973)*¹⁹ it is reported that quantitative overload was related to low self-esteem in administrators but not in professors, while qualitative over-load was related to low self-esteem in professors, but not in administrators.

2.2.3. Personality Needs

This is the most active area of research in the field of Personality characteristics. *Lyons (1971)*²⁰ found that need for clarity at personal level appeared to moderate the relationship between perceived role ambiguity and job related tension. In his study, the moderating effects were however, stronger

for voluntary turnover, propensity to leave and dissatisfaction. However, most talked about personality variable in the field of stress research is the basic psychological character of a person i.e. Type A/B behavior.

Type 'A' behavior has been of great interest to researchers studying stress and coronary heart disease. People who are excessively competitive and always seem to be experiencing a chronic sense of time urgency are called personality with type-'A' behavior. A person with type-'A' personality is "aggressively involved in a chronic, incessant struggle to achieve more and more in less and less time, and, if required to do so, against the opposing efforts of other things or other person" ²¹. In the modern culture, such characteristics tend to be highly prized and positively associated with ambition and the successful acquisition of material goods. The behavioral pattern of type-'A' personality may consists of following characteristics or any combination of that. The characteristics so far identified are; They always move, walk, and eat rapidly, feel impatient with the rate at which most events take place, strive to think or to do two or more things at once, cannot cope with the leisure time, they also observe their performance with the number of achievements.

In contrast another major personality, which has been talked widely in the field of organizational psychology, is type-'B' personality. *M. Friedman, R. H. Rosenman, (1974)* ²² have defined this particular personality as follows "they rarely harried by the desire to obtain a widely increasing number of things or participate in an endless growing series of events in an ever- decreasing amount of time". Type- B personalities may have the following qualities or any combination of such characteristics; they never suffer from a sense of time urgency with its accompanying impatience, feel no need to display or discuss either their achievements or accomplishment unless such exposure is demanded by the situation, play for fun and relaxation, rather than to exhibit their superiority at any cost, can relax without any guilt.

Type – A's operate under moderate to high levels of job stress. They subject themselves to more or less continuous time pressure, creating for themselves a life or deadlines. These characteristics result in some specific behavioral outcomes. For example, type – 'A's are fast workers, because they emphasize quantity over quality. In managerial position, type – 'A's demonstrate their competitiveness by working long hours and, not infrequently, making poor decisions because they make them too fast. They are also rarely creative because of their extreme concern about quantity and speed. They rely on their past experiences when they are faced with the problems. They will not allocate the time that is required to develop unique solutions to a new problem. They rarely vary in their milieu, hence, their behavior is easier to predict than that of type – 'B's.

Despite the hard work of the type – 'A's, the type – 'B's are the ones who appear to make it to the top. Great salespersons are usually type – 'A's, senior executives are usually type – 'B's. *M. Friedman, R. H. Rosen man, (1974)*²³ stated, " usually go to those who are wise rather than to those who are hasty, to those who are tactful rather than to those who are hostile, and to those who are creative rather than to those who are merely agile in competitive strife"

There are certainly no common personality types for a given set of socio-economic and geographical specification. It is easy to find high and low risk takers in every culture or society as a whole. Still the existing culture of a particular society has a dominant bearing in developing the personalities of the concerned society. Consequently, the pattern of job stress has also shown some sort of similarities among the stress occupant people. There is evidence that cultures differ in terms of people's relationship to their environment²⁴. The prevalence of type-'A' personalities will be somewhat influenced by the culture in which a person grows up. There are type-'A's in every society, but there will be more in capitalistic societies, where achievement and material success are highly valued. For instance, it is estimated that about 50% of the North

American population is of type-'A'. This percentage should not be too surprising. The United States and Canada both have a high emphasis on time management and efficiency. Both have cultures that stress accomplishment and acquisition of money and material goods. In the cultural milieu it prevails as in India, France, Bangladesh, where materialism is less revered, we would predict a smaller proportion of type-'A' personalities.

The job requirements as such gradually moderate the relationship between job performance and personality constrains. The model developed by *John Holland (1985)*²⁵ is one of the best-articulated models in this direction where personality and job requirements are tried to match. The whole theory is based on the notion of a fit between an individual's personality and his or her occupational environment.

In his model Holland developed six different combinations of personalities along with their preferable occupation, which will fit their job environment. Holland's model also argue that satisfaction is highest and turnover is lowest when personality and occupation are in agreement. It is therefore; wise to say that congruent matching between personalities and job requirement may have a better impact on reducing stress out of job but at the same time this stagnant proposition might have a serious impact on job performance. So it will be an encouraging combination to allow some sort miss-fit among the employees, which will ultimately indulge some healthy stress that in turn will maintain the crucial productivity.

In number of studies, researchers have dealt with type -'A' pattern of behavioral orientation while studying organizational/ role stress. In one such study *Pestonjee, (1987)*²⁶ analyzed role stress in relation to type A behavioral disposition and state- trait anger. He decided to study three different categories management personnel, namely, top management, middle management and few IAS officers as because the stressors vary from one job to another depending on the personality of the focal person. He even had made an attempt

to understand whether the relationship between role stresses and personality variables were affected by the age of different job categories of management personnel. A set of three psychometric- tools – the ORS Scale *Pareek, (1983c)*²⁷, Can you type your behavior?²⁸ and State trait anger Scale²⁹ – was administered to the sample population to assess ten different elements of role stress variables as well as over all role stress. Pestonjee commented that all ten ORS factors were subject to correlation analysis with type – ‘A’ behavior, state and trait anger in the three job categories. Type – ‘A’ behavior was associated significantly with eight ORS in case of IAS officers, with six factors with for the top and middle management group; state of anger correlated significantly with eight ORS factors in the case of the top and middle management groups followed by two for IAS officers and all the ORS variables correlated significantly in the case of the top and middle management groups followed by six for IAS officers with trait of anger.

In the end he also stated that a comparison of coefficient of correlation among role stress variables in age wise dichotomized data sets for this three management groups showed that a large number of coefficient of correlation were statistically significant for the higher age groups as compared to the lower age groups. Similarly, a large number of coefficient of correlation between role stresses and type – ‘A’ behavior and role stresses and ‘state trait anger’ were found to be statistically significant for the lower age groups as compared to higher age group.

2.2.4 Physical Condition

Physical condition is a logical predictor of illness. *Hennigan and Wortham (1975)*³⁰ have shown that men in good physical condition and non-smoker are able to maintain a low heart rate during normal stresses of the workday, whereas stress is more likely to increase the heart rate for other people.

Arun *et al.*, (1993)³¹ studied whether 'irritable bowel syndrome' (IBS) patients differ from normal controls in the perception of stressful life events. The findings revealed that the IBS patients perceived significantly greater number of stressful events in comparison to the non-IBS respondents.

Saigeetha and Kalanidhi (1995)³² examined the stress and coping response of Diabetic patients. Results indicated a significant difference between diabetics and non-diabetics in the personal area of stress than in the conventional areas of stress.

2.2.5 Locus of control

Employees' locus of control has also been recognized to determine the degree of occupational stress experienced by them. Some people believe that they are masters of their own fate. Other people see themselves as pawns of fate, believing that what happens to them in their lives is due to luck or chance. The first type, those who believe that they control their destinies, have been labeled internals, whereas the latter, who see their lives as being controlled by outside forces, have been called externals³³. A person's perception of the source of his fate is termed as locus of control.

A large number of researches comparing internals with externals has consistently shown that individuals who rate high in externality are less satisfied with their jobs, have higher absenteeism rates, are more alienated from the work setting, on their jobs than the internals. Why are externals more dissatisfied? The answer is, probably because they perceive themselves as having little control over those organizational outcomes that are important to them. Internals, facing the same situation, attribute organizational outcomes to their actions. If the situation is unattractive, they believe that they have no one else to blame but himself/herself. Also, the dissatisfied internals are more likely to be stressful than the externals.

In a study on a sample of banking personnel, *Srivastava and Krishna (1992)*³⁴ noted that employees with external locus of control experience comparatively higher degree of occupational stress, and lower job satisfaction. Employees with external locus of control have also been found to be more alienated from work setting and less involved in their job.

Employees' job attributions as well as job perception are also taken as two responsible factors causing stress and strain in their job life. *Gupta (1999)*³⁵ observed that employees who are concerned about their efforts, nature of job activities, work conditions, and managerial policy and think that their success and failure are the outcome of these factors, feel higher role stress as compared to those who attributed to chance or luck for their achievements and failure of work.

2.2.6 Neuroticism-Stability

*Ahmed et al., (1991)*³⁶ examined the relationship between organizational role stress (ORS) and job satisfaction and personality dimension of neuroticism-stability and extraversion and introversion. The sample consisted of 50 middle managers of a large organization. Results indicated that ORS was significantly but negatively correlated with all factors of job satisfaction. The neuroticism-stability dimension of personality was found significantly and positively related to six variables of ORS, including role ambiguity. One variable i.e. role expectation conflict had a significantly negative relationship with extraversion- introversion.

2.3 Environmental characteristics

This area includes any aspects of the work environment that is perceived as stressful by the employee, and responded accordingly, or sensed by the human organism and responded to without the employee being cognitively aware of the cause. This area of study specially focuses on social-psychological and organizational aspects of the work environment rather than on the physical

work environment. Although the study of physical working conditions, equipment designing, etc is a traditional area within Industrial/Organizational psychology, apparently that body of knowledge has not yet fully classified or coded as stress/health-related.

Three studies stand out as exceptions to this latter observation. *Sales (1970)*³⁷ found that objective workload, as manipulated in a laboratory study of male undergraduate students, was related to perceived workload as measured by the questionnaire. *Coburn (1975)*³⁸ constructed a relatively objective index of job incongruence by comparing an employee's education with an estimate of the educational requirements of the employee's job. According to Coburn, this was a very limited index and was only weakly related to the employee's perceived incongruence (a measure of workload) for a sample of male workers in a variety of jobs in British Columbia. And *Kahn, et al., (1964)*³⁹ with a sample of male workers, obtained an 'objective' index role conflict by asking a focal employee's role senders what they would like the employee to do that he was not already doing. This was an objective only in the sense that it was a measure of the focal employee's job demands obtained via the perception of someone other than the focal employee. The assumption was that the role senders would apply pressure on focal employee if he were not doing all that was expected of him on the job. However, Kahn et al., found that this measure was insignificantly or weakly related to their measures of perceived role conflict and ambiguity.

*French and Caplan (1973)*⁴⁰ have identified two types of role overload among the job occupants. Quantitative role overload, which refers to the massive amount of work to accomplish with, on the other hand Qualitative role overload refers to the job that is too difficult for an individual. *Theorell et al., (1976)*⁴¹ suggested that quantitative role overload is usually found to be positively associated with strain.

In a study *A.P. Singh et al., (1997)*⁴² attempted to investigate the effects of organizational climate on psychological strain and coping behavior of

industrial managerial personnel. The sample consisted of 400 middle level managers from a large industrial set-up. ORS scale Pareek (1983c) ⁴³ and Organizational Climate Questionnaire Litwin and Stringer, (1986) ⁴⁴ and other relevant tools were administered to the respondents. The major findings of the study were as follows:

The managers belonging to high level of the organization, role stress scored higher on environmental frustration. The managers of highly perceived (more conducive) organizational climate, scored significantly low on job anxiety. The organizational role stress was significantly and positively associated with organizational climatic conditions.

Ahmad and Meheta (1997) ⁴³ found that all ten dimensions of role stress were negatively correlated with influence, work amenities, job satisfaction and supervisory behavior. Some variables of role stress were found to be correlated with the organizational dogmatism also.

Jain Manisha et al., (2002) ⁴⁶ in their study with the measurement of effect of Type A/B behavior of a group of Indian Doctors and Engineers observed that due to introduction of new technologies into work environment, it is necessary for workers, especially blue collar workers to adopt continually to new equipments, system and as well as with the ways of functioning. This is an extra burden for the new employees trained in the latest methods to cope with a new boss trained in the conventional method of functioning

Ganster & Schaubroeck (1991) ⁴⁷ stated that prolonged exposure to certain job demands lead to a variety of pathological outcomes, including mental and physical disorders, absenteeism and thus reduce productivity.

Marilyn L Fox et al., (1993) ⁴⁸ with their prolonged examination with 136 hospital nurses tested the job demands-job control model of stress. They advocated that objectively assessed job demand were significantly associated

with blood pressure. They also predicted that elevation in physiological responses took place after individual left work, and suggesting that potentially health-impairing reactions to jobs that have high demands and low controllability might carry over to home settings and thus pose a high risk of long term health impairment.

Latack and Foster (1985) ⁴⁹ while worked with Compressed work schedule and job redesigning suggested that the compressed work week could be an intervention tailor-made for an increasingly important class of jobs in our contemporary economy in case of jobs in high technology, and in capital intensive organizations, where continuous operation are mandated to maintain efficiencies. While not physically demanding, these jobs because of technological constraints and heavy capital investments, are often the most difficult to enrich for favoring concerned workers. A compressed workweek intervention could offer a method of 'job enrichment' where it is not often otherwise possible. They also advocated involving employees in the decision making process to implement a compressed workweek to assure maximum acceptance from the part of the employee. The work redesign through this method would certainly reduce the element of stressors in the organizational work environment.

Many sources of stress today have been around for years, such as work overload; role expectation conflict; ineffective, hostile and incompetent bosses; lack of personal fit with a job; lack of recognition; lack of a clear job description or chain of command; fear, uncertainty and doubt about career progress; and prejudice based on age, gender, ethnicity or religion. The decade of 90s has ushered in some additional stressful situations that are of particular concern today. These are Competition and Change, Technological change, Increasingly Diverse Workforce, Downsizing, Work/Home Conflict, Violence in the Workplace etc.⁵⁰

*Ivancevich et al., (1998)*⁵¹ have highlighted a totally new area of stressfulness of the incumbents. Downsizing, threat of invasion of new technology, which may ultimately make working people obsolete; are the fear for the working classes. In the post Globalization era these problems have become more relevant and burning. In this context the authors have even suggested that the potential negative ramification of stress for companies and their employees are so substantial that it is crucial for the managers to act to aid their employees in the development of coping skills and to reduce stress in the work place due to environmental intervention.

2.4 Process Phenomena

This Phenomenon refers to those events within the human organism, which transform input (stimuli) and produce output (Human and organizational consequences and responses). Both physical and psychological processes are included in this phenomenon.

2.4.1 Physical Process

The physical process would include any physical, psychological, chemical or neurological events in the human organism that intervene between the onset of the stressful environmental stimulus and the final human or organizational consequences.

*Hans Selyes (1956)*⁵² in his General Adoption Syndrome (GAS) has described a comprehensive model through which it can be understood that how a stress free personality ultimately becomes a stressful one. The model suggests a three (3)-stages continuous development process that can also be called as physiological response mechanism. The first stage is called 'alarm action' which is an initial shock phase and reduces the resistance mechanism. The second phase is named as 'stage of resistance' that helps the incumbent to maximize the level of adoption and in consequence the alarm reaction

disappear. Finally, the 'stage of exhaustion' comes into force in which the adoption energy gets exhausted, the alarm reaction reappear (either in the same old form or in some other form). The organism then collapses and thus the incumbent start developing very first sense of stress and strain.

Almost 50 years ago Selye suggested the existence of 'first moderators' of stress, which transmit the stress message to the organs affected in the stress process. *Mason, (1975)*⁵³; suggested that this (transmission of message) could operate either via the blood stream or the nervous system. *Selye (1979)*⁵⁴ had again noted, however, that the specific chemical nature of this agent is still unknown today. But as per *Mason (1975)*⁵⁵, the "first mediator" may be the emotional arousal accompanying many stressful events, indicating that the nervous system may play an important role. *Selye (1979)*⁵⁶ debated that the messengers or "first mediators" may not always be the same. The controversy is still not resolved comprehensively.

*Tache and Selye (1979)*⁵⁷ stated " stress is the non-specific response of the body to any demand made upon it". Selye's primary concern was for the physiological mechanism and this has led to a close association between response –based and physiological models of stress. Selye's elucidation of the body's response to stress has led to a better grasp of the biochemical, anatomic, and neuro-hormonal changes that accompany adoption of stress.

*Srivastava (1999)*⁵⁸ argued, " However, Selye did not explicitly include cognitive or emotional factors and their impact on the adaptive processes. But it has also been observed that some noxious physical conditions do not produce the General Adoption Syndrome (GAS). It has now been suggested that much of physiological response is not directly determined by the actual presence of the stressor agent but by its psychological impact on the person."

*Pestonjee, D.M (1987b)*⁵⁹ had developed a person-environment paradigm emphasizes the balance rather than the absolute level of either stress

or stressors. This paradigm, however, does not assume that return to the proceeding at the steady state is the only beneficial outcome possible because too little work is as stressful for individuals as being overload with work. Stress in this regard, may be viewed as a stimulus to growth and the achievement of a new balance. Keeping in view that Stress is a personal response to certain vitiations in the environment, it is possible to conceive that same stressors can be differently perceived depending on (a) the nature and magnitude of the strategy; (b) the importance of stressors to the individual; (c) the perception of the threat element as a component to the stressor; (d) the involvement and willingness on the part of the individual 'to do something' about the state of stress.

2.4.2 Psychological Process

Among the Psychological Process, it is possible to discern the following activities: Perception of the situation, appraisal of the situation, decision-making regarding appropriate response, and perception of the outcomes of one's responses.

*Levine and Scotch (1970)*⁶⁰ indicated that whether a stimulus was stressful often depends upon its meaning to the person perceiving it. Others explicitly proposing that the stressor must be perceived in order for it to have aversive health consequences include *Kahn, et al., (1964)*⁶¹ and *House (1974)*⁶². The finding that perceptions of stressful situations are related to employee health and well being has been replicated consistently (e.g., *Beehr, et al., 1976*; *Caplan et al., 1975*;⁶³)

It is clear that the perceptions of stress are indeed related to objectively stressful situations and these perceptions are related to individual and /or organizational consequences. Except for *Sales (1970)*⁶⁴, other researchers take the view that perceptions are likely to be the prime determinant of the outcomes. *Sales* indicated that some outcomes (i.e., productivity, self-esteem, task

enjoyment and heart rate) seemed to be dependent on objective overload rather than on perceived overload.

2.4.3 Appraisal of the situation

Appraisal of the situation is closely related to the perception of the situation. However, the initial perceptual process is primarily descriptive in nature, while the appraisal process is primarily evaluative in nature and involves a comparison of perceived situation with some relevant aspects of the person (e.g., values, needs, abilities).

*French (1973)*⁶⁵ maintains that stress is often a function of person-environment fit, implying that the person's perception of his or her abilities, personality, and resources interact with his/ her perception of the situation to determine the quantity of stress in that situation. With respect to the experience of work overload, the perception process would result in a perceived amount of workload (e.g., this is a heavy workload) and the appraisal process would result in the evaluation that the work load is "over" the workload that the person is capable of or desirous of doing (e.g., this workload is too heavy). This distinction between the perceptual and appraisal process has not been a topic of much research. It however, may be important to determine how each of these processes occurs for different types of stressors and for different types of people.

2.5 Human consequences

The human consequences consist of health-related conditions that are primarily important to the individual and less important to the organization.

It must be emphasized that it is the relative importance that is assessed here; employee deaths due to heart attacks, for example, are of concern and importance to employees, but not nearly so important as they are to the victims themselves⁶⁶.

The human consequences of stress may be classified into three categories; Physical or Physiological, Psychological, and Behavioral.

2.5.1 Physical Consequences

Paffenbarger and Hale (1975),⁶⁷ in a 22-year study of coronary mortality among longshoremen, concluded that those longshoremen whose jobs required repeated bursts of high energy were actually less likely to die from heart attack; this was found even when age controlling measurement is taken for account. In this study, there was no variable conceptualized as a job stressor. Instead the energy level required by the job was considered a protective or conditioning variable, preventing some thing else (unspecified) from causing a fatal heart attack.

Beehr and Newman (1978) while commenting on the findings of Paffenbarger and Hale (1975), stated that those employees were doing the heaviest physical labor were selected into those jobs because of their good physical health, in effect rendering their service. Therefore such conclusions are invalid.

Most job stress-heart attack research has focused on "risk factors" rather than heart attacks itself, however, simply because the rate of heart attacks among any employee sample of practical size is too low to permit efficient study in any but relatively crude retrospective design. Risk factors are variables that medical researchers have identified as contributors to contrary heart disease. *Cobb and Kasl, (1972)*⁶⁸ reported the risk factor as high blood pressure, *Reeder et al., (1972)*⁶⁹ and *Sherom et al., (1973)*⁷⁰ reported Cholesterol as the risk factor and risk factor as electrocardiogram abnormalities. *Hennigan and Wotham, (1975)*⁷¹ reported pulse rate as the key risk factor for any kind of heart attacks.

A relationship between job stress and general health has been shown by *Rahe, Gunderson, et al., (1972)*⁷² in a naval study. Sailors in the jobs that were judged a priori to be more stressful tended report for sick call and require more medical treatment than those in jobs supposed to be more stressful. However, they neither report the job stressor nor the health consequences in sufficient detail.

In addition it is worth to be mentioned that uric acid, a facto in gout [Cobb and Kasl, (1972) Sherom,et al., (1973)] Blood sugar [*Schar et al., (1986)*⁷³] and incidence of peptic ulcer are also related stressful events.

*Agarwal, R. (2001)*⁷⁴ detects a major physiological consequence is hypertension. However, she has mentioned, "Among many reasons for hypertension is the lifestyle of the person. It has generally been observed that hypertensive person have Type A behavior pattern". Obviously the author has not ruled out personality constrain in describing physical consequences.

The physiological consequences of stress are not limited to only cardiac conditions. *Lovallo, (1997)*⁷⁵ however, has reported that the human immune system to protect themselves from deadly diseases is also effected by the human stress level.

*Kiecolt-Glaser et al., (1995)*⁷⁶ also have supported the view that there is strong link between chronic stress and human immune system.

*Sternberg et al., (1991)*⁷⁷, reported that stress symptoms like depression; anxiety may have direct impact on rheumatoid arthritis. *Agarwal, R. (2001)*, interestingly commented that it seems strange but it is true that viral fever is most common to the people who are comparatively more stress prone.

There have been more studies of the physical consequences of job stress, but most of them have employed less objective measures of the physical or physiological variables, (viz. self-report measures). The best of these

measures are probably those asking the person to report only illness that were diagnosed and treated by a medical doctor, but even with these, there is some opportunity for faulty memories, misperceptions, and even lying to introduce error into the data. For checklists of self-diagnosed symptoms, these problems are multiplied. These self-reported measures may be related to actual incidence of physical illness, but it is safer to rely primarily upon the studies using more objective measures. At a minimum, however, it is probable that these self-reported illnesses are related to the person's psychological well-being, the second type of human consequences.

2.5.2 Psychological Consequences

Studies investigating the relationship between employees' psychological well-being and job stressors have usually dependent upon paper and pencil, self-report measures, and this presents the methodological problem mentioned earlier in the section of physiological consequences. So far the discussion guides us that the perceived job stressors should be closely related to the human consequences. Both perceptions physiological and psychological consequences are routinely assessed via self-reports; correlating two self-report measures, however, is likely to lead to over-estimates of the strength of the relationships between constructs, due to this common method variance. Therefore, interpretation of the results of such studies must be guarded.

The simplest and most obvious psychological effect of job stressors is dissatisfaction with the job. Studies in which this is the only psychological consequences of working conditions are not reviewed here, however, as this consequences alone is usually not sufficient (i.e., not noxious enough) for researchers to consider their work to be in the job stress employee health research domain. Many job stress researchers have included job dissatisfaction as one of many consequences, however, such studies have usually found that perceived job stressors are positively related to dissatisfaction with job [Beehr, (1976); Beehr, et al., (1976); Caplan, et al., (1975); *Margolis et al., (1974)*⁷⁸].

If one takes the person-environment fit approach, however, both underloaded and overloaded subjects have poor fit with their tasks (i.e., are experiencing stress) and therefore, both should be dissatisfied relative to a group of people with a good fit.

Researchers like Beehr, (1976); Caplan, et al., (1975); Margolis et al., (1974); Schar, (1976). etc. using psychological health measures, have used many different labels of psychological health variables, but it is unlikely that all the measures in the studies reviewed were of different types psychological health. A category comprising general measures of poor mental health would include neuroticism, tension, depression, irritation and anxiety. Several studies of the above mentioned researchers had shown that perceived job stressors are related to one or more of these poor mental health variables.

*Ivancevich, (1974)*⁷⁹, *Ivancevich, et al., (1985)*⁸⁰ included an objective or non-self-report measures of the stressors. It is encouraging therefore, that these studies also found significant results, without the potential confound of a method bias.

*Pestonjee, (1999)*⁸¹ reported that emotional stress is a well-known aspect of contemporary world. According to him 50% of the executives suffer from emotional strain and anxiety as they have to face various organizational problems and sometimes the job requirements also produce anxiety. He also reported that one remains unaware that headaches, indigestion, increased blood pressure and fatigue are the common symptoms due to perceived emotional stress.

2.5.3 Behavioral Consequences

Of the three types of consequences, the behavioral consequences are least often studied. This may well be because it takes a psychologist more time, effort and ingenuity to measure behavior than to psychological consequences.

The behavioral human consequence studied most by researchers is smoking. Smoking is considered an aversive behavior to the individual because of the presumed relationship it has with illnesses such as cardiovascular disease and cancer. Schar, (1976) found that occupational status is negatively related to smoking, and Sherom, et al., (1973) found occupational differences in smoking among kibbutz members suggesting that job characteristics may affect smoking. As with most of the studies cited in the physiological areas, however this study also took the subjective approach of self-study report.

Caplan, Cobb, and French (1975) reported that quitting smoking is related negatively to some job stressors, and they found no difference among smoker, ex-smoker and never-smoked groups in the amount of perceived stress present in their jobs.

Drinking habit however, is considered to be another major behavioral consequence among stress occupants. *Selzer and Vinokur (1974)*⁸² found a weak relationship between job pressure and traffic accidents among alcoholic drivers, although the same relationship for drivers in general was not significant.

Researchers in different studies however, mentioned other important variables of behavioral consequences e.g. absenteeism, feeling of early retirement, ill-adjustment with colleagues and customers, a general tendency of favoring strikes, and overall burnout symptoms.

Burnout as described by different scholars is a symptom or a combination of symptoms faced by an incumbent under stress for a prolonged period of time. *Maslach (1981)*⁸³ however, reviewed literature on Burnout and concluded that there is no single acceptable definition of Burnout. However, there are also similarities among various definitions of Burnout. First of all, there is a general agreement that Burnout occurs at individual level. Second, Burnout is an internal psychological experience involving feelings, attitudes, motives and expectations. Third, there is also general agreement that burnout is a negative

experience for the individual, in that it concerns problems, distress, discomfort, dysfunction, and/or negative consequences.

"It occurs as a result of unrelieved work stress persists and which is not managed effectively"- *Sharma, Radha. R, (2002)* ⁸⁴ commented in defining Burnout.

Paine (1982) ⁸⁵ has observed that **Burnout Stress Syndrome (BOSS)**, the consequences of high levels of job stress, personal frustration, and inadequate coping skills, have major personal, organizational and social costs; and these costs are probably increasing.

Veninga and Spradley (1981) ⁸⁶ pointed out five different stages of Burnout, while *Maslach (1981)* ⁸⁷ had developed a self-report scale for measuring Burnout and reported that these three measures work on three different phases. Where as *Pareek (1993)* ⁸⁸ pointed out nine factors which lead to Burnout for an incumbent. All these variables/phases are however, discussed later on in concurrence with the findings of the result of the present study with appropriate importance.

2.6 Organizational Consequences

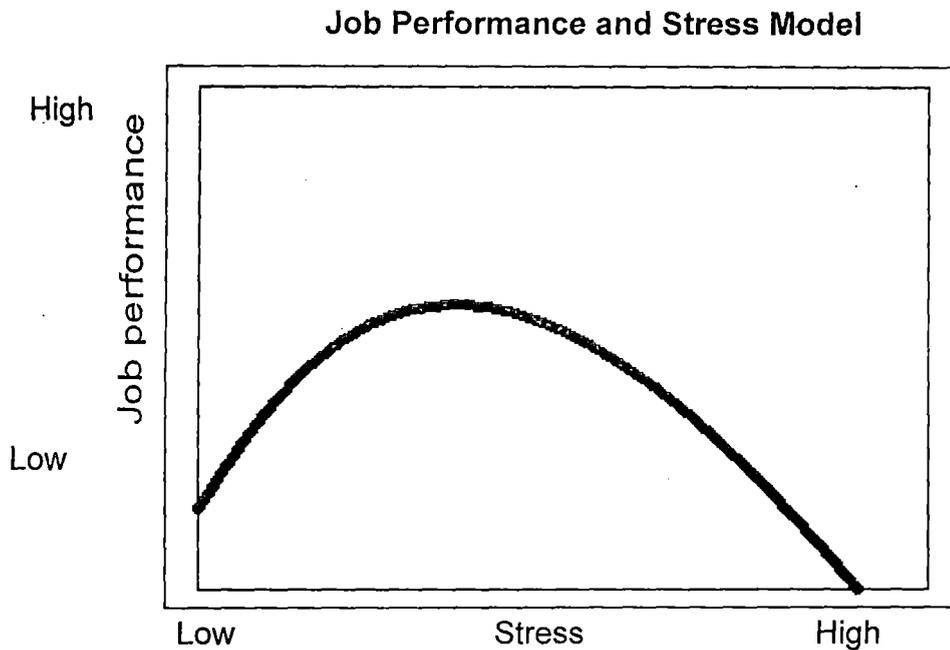
Separation of the consequences that are most directly relevant to the individual from those that are most directly relevant to the organization implies that these two parties may value events independently. Consequences of stress in which the organization presumably has more direct interest than the individual employee are primarily those (e.g., an employees job performance) presumed to be linked directly with the organization's effectiveness.

Many studies have been compiled in which variables labeled stress is shown related to job performance-type variables [e.g., *Andrews and Farris, (1972)* ⁸⁹ *Drabek and Haas, (1969)* ⁹⁰]. Since most of the studies did not simultaneously include human consequences (employee health) and job

performance variables, the job stress variables in such studies did not fit the definition of job stress, and hence were not taken as objective measures in this area of studies.

Sylvia A. Joure et al., (1989)⁹¹ reported that stress can be either helpful or harmful to job performance, depending upon the quantity of it. According to the model (Fig: 2.1) developed by him the relationship between job stress and job performance is depicted clearly.

Figure: 2.1



(Source: Sylvia. A. Joure, 1989)

When there is no stress, job challenges are absent and performance tends to be low. As stress increases, performance tends to increase, because stress helps a person to call up resources to meet job requirements. It is healthy stimulus that encourages employees to respond to challenges. Eventually stress reaches a plateau that corresponds approximately with a person's top day to day performance capability. At this point additional stress tends to produce no more improvement and finally performance begins to decline.

Job involvement is another area of concern for researchers in organizational consequences. Though it is relatively new concept, it has gained much importance because of its pivotal role of providing link between productivity and employees' needs and quality of work life- *Srivastav, (1999)*⁹².

Among the Indian researchers *Madhu (1976)*⁹³ examined the relationship of stress stemming from role conflict and role ambiguity with job involvement. They concluded with the result of significant negative relationship between role stress and job involvement.

*Srivastav, (1990)*⁹⁴ examined relationship between occupational stress and job involvement of the employees operating in both public and private sector organizations. The result reported by him shows that all the dimensions of occupational stress are negatively correlated with job involvement for the employees in public sector. On the other hand the responses of the employees of private sector did not show any significant relationship between perceived role stress and job involvement.

2.7 Adoptive Response

*Newman and Beehr (1979)*⁹⁵ in their article of review of Industrial and Organizational researchers suggested a frame to understand Adoptive Response in following way;

- i). "An adoptive response to job stress can be made by person, the organization and/or by any person or organization outside of the focal organization,
- ii) The primary target of the adoptive response is usually some aspects of the person and/or some aspects of the organization (e.g., structure, job design, coworker relations, and supervisory style)
- iii) The adoptive response can be primarily preventive or curative in nature"

*Calvasina, Eugene. J. et al., (1975)*⁹⁶ in their study confirmed the inverse relationship between consideration and burnout. Individuals who rated their supervisor high on consideration also reported low burnout. It is possible that the loss of autonomy that came from having a highly structuring supervisor, especially when coupled with low consideration, may have been an important contributor to job stress and develop burnout.

*Numerof, R.E. et al., (1988)*⁹⁷ on the supervisory style reported even more stress for the subordinate under lower consideration in supervisory style.

*Lazarus, (1984)*⁹⁸ however, used the term of 'coping' in relation to adoptive responses of people and organizations under stress. He also emphasized the key role of cognitive process in coping activities and the coping in determining the quality and intensity of employees' reactions to stress.

*Ivancevich et al., (1987)*⁹⁹, have suggested "tolerance of stressors" at cognitive level as a primary preventive technique. It is true that excessive stress is a real adverse for the people and organization both. Adoptive response thus from both the individual and the organization is a must for their mutual survival.

*Sharma, S. (1985)*¹⁰⁰, *Mehra and Misra, (1991)*¹⁰¹, *Srivastav, (1991)*¹⁰² and *Jagdish and Singh (1997)*¹⁰³ all are somehow in an agreement that the first adoptive reaction comes from the individual differences like personalities, motivation, involvement, job level, sex, age etc. on the other hand *Mehera, (1993)*¹⁰⁴, *Banerjee and Gupta (1996)*¹⁰⁵ mentioned that socio-economic conditions such as the nature, type and extent of one's social relationships with other, that influence one's adoption of stress play a significant role at second stage.

2.8 Time Phenomenon

The purpose of including this particular phenomenon is to make the issue of longitudinal, field research an explicit focus. As in most research domain in

Industrial and Organizational (I/O) psychology, researchers have usually employed cross sectional design, in part, no doubt, because of convenience. Field studies employing measurement at several points in time would greatly benefit the understanding of the job stress-employee health in two ways. First the managers are extremely interested in determining casual relationship. Cross sectional studies cannot shed much light on it.

The second reason is that time or duration of stress may be crucial factor in determining the consequences of stressful events. A certain amount of stress occurring occasionally in one's job may be quite harmless to the employee. Acute stress at the wrong time or chronic stress over a number of years, however, could be detrimental to the individual and/or the organization.

The study by *Cobb and Kasl (1972)*¹⁰⁶ is a notable exception. In this study of married male employees between 45-59 years old in a plant that was closing, they obtained physiological measures as unemployment (the stressful event), and they kept obtaining these measures after unemployment actually took place, in some cases even until subsequent reemployment. In general they found that uric acid and blood pressure levels increased before the actual plant closing, while cholesterol level did not increase until unemployment occurred.

Another noteworthy study in this context deserves its mention too. *Debra L. Nelson et al., (1990)*¹⁰⁷ examined the relationship between work stressors, coping techniques, distress symptoms and work performance for 91 organizational newcomers. However, distress symptoms reported prior to the beginning of a new job accounted for 32 percent of the variance in distress symptoms reported nine months after resuming the job, suggesting a possible dispositional influence on symptom reporting.

Several general conclusions emerge from this review. First, the conceptual ambiguity and terminological confusion in defining the term 'stress' is

a major problem. There are no conceptual definitions of the terms such as stress and strain that are common to all researchers in the area.

A related observation may be that strong methodology in this domain is rare relative to the amount of rigorous research in other, more traditional areas of Industrial and Organizational psychology. Much of the research on job stress and employee health was found in journals not normally read by I/O psychologists, and unfortunately not a single journal is devoted to job stress in particular. However, this vacuum may otherwise attract many new researchers in this field of study to make study of job stress more and more comprehensive, after all stress is a issue of concern of twenty-first century and we cannot but simply ignore it any more.

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