2 Review of Literature

2.1 Introduction

Dr. Hans Selye (1973), the father of stress theory defines that “stress is the non-specific response of the body to any demand made upon it.” Stress is caused by a stimulus, the stimulus can be physical or psychological. The individual is forced to adapt to that sudden change. The individual has to respond to the physical or psychological demands on him or her. Selye proposed the General Adaptation Syndrome Model to describe the stress process which may vary from individual to individual. According to this model, each one of us has a normal level of resistance to stressful events. When a person encounters a stressor, he goes through the first phase which he called “Alarm”. In the next stage, the person may think how he can cope with it. This stage he called “Resistance”. The body prepares to flee or attack the impending threat. So it is referred to as the “Flight” or “Fight” syndrome. At the third phase, when he/she is exposed to a stressor for a prolonged period, then he/she will reach the state of “Exhaustion”. Selye identified two types of stress- Eustress and Distress. Eustress is that kind of stress which brings about positive outcomes. Distress is that kind of stress which brings about negative outcomes or results for the individual.
During a stress reaction, the body’s metabolism increases as more energy is required. The heart rate increases and the muscles become tense causing palpitation and dry mouth. Breathing rate and perspiration increase. There is an increase in blood flow to the brain, heart and muscles. All these cause an increase in the level of blood sugar and cholesterol. Blood flow to the skin, digestive tract and kidneys decreases.

When a person encounters a stressful situation, it results in emotional responses such as anxiety, apathy and depression, anger and aggression. When the person believes that he is incapable of handling the stressful situation, it brings about negative emotions in him/her. As a result of this, his/her cognitive functioning gets impaired. He/she dwells on the negative aspects and acknowledges his personal limitations rather than finding a method to resolve the problem.

Stress may affect health of the individual adversely causing headache, ulcers, irritable bowel syndrome, insomnia and even heart attack.

Initially a threat is perceived and this sends a message to the brain which activates the pituitary gland. Nerve impulses reaching the pituitary gland release a hormone into the blood stream. The hormone reaches the adrenal glands, one over each kidney. The adrenal glands release adrenalin and some allied substances.
Dr. Jere E. Yates (1979) has identified three stages which people undergo when they experience stress. The first stage called the “Yield Point” shows a slight change from “normal” behavior. The second stage called the “elastic limit” is an extremely critical point. This stage is described by Dr. Yates as an early-warning device that gives us the signal that we are near our stress threshold. Once this stage is crossed, we reach the third stage called “rupture point” which is the breaking stage that can cause severe and permanent mental and physical damage.

A person has a number of roles to play simultaneously in his/her life whether at workplace or at home. Each role has a number of expectations attached to it. These are the expectations or mindsets that others have about the particular role during interpersonal interaction. This places conflicting demands on the person and result in different types of role conflicts as described below (Newell, 1995):

**Intra-sender conflict:** When the same person sends conflicting messages, there is occurrence of intra-sender conflict.

**Intra-role conflict:** Different people have different expectations of a role incumbent. This causes intra-role conflict.

**Inter-role conflict:** When two roles held by a person are in conflict, inter-role conflict arises.
**Person-role conflict**: When the personal attitudes or values of the individual do not match with the activities in the role, person-role conflict arises.

**Role ambiguity**: Lack of clarity with respect to the role causes role ambiguity. Any one of the following situations gives rise to role ambiguity.

(i) The person is not clear about what is expected of him/her.
(ii) The person understands what is expected of him/her but is not clear about the manner in which he/she is to perform.
(iii) Perception of the job by the role incumbent differs from the perception by role set members.

**Role overload**: Role overload results when demands of the job exceed the ability of the person. Two types of role overload have been identified – Quantitative role overload and Qualitative role overload. Quantitative overload occurs when the role incumbent has to do more work within the prescribed time frame. Qualitative role overload occurs when the role incumbent is under-skilled to perform the job.

**Role under-load**: Under-utilization of the abilities of a person causes role under-load. Similar to role overload, role under-load can also be quantitative or qualitative. Quantitative role under-load is a situation in which a person has to do little in the job. Qualitative role under-load is situation in which a person has to perform only routine jobs that does not involve any innovation or creativity.
Work-place relationships: Work-place relationships with boss, peers and subordinates can be a source of occupational stress.

Career prospects: Causative factors of stress related to career prospects are lack of job security and status incongruity. Downsizing or rightsizing of manpower in organizations cause concern over security of the job. Status incongruity refers to a mismatch between the individual’s aspirations and reality in the matter of promotion and career growth.

Organizational structure and Climate: Non-acclimatization to the structure and climate of an organization affect the person’s performance and it can be a source of stress.

Balance between home and career: Stress in one circumstance may spill over and influence another situation. For example, a person stressed at work may home in an irritable state of mind and this may create domestic friction. In a similar manner, domestic friction may lead to preoccupation and inattention at work and resultant poor performance. Striking a balance between family and workplace is very much essential. The problems faced at one place should not be carried to the other place. Taking out the frustration on the other end will bring about stressful situation.

Individual differences: The level of stress a person can take depends on individual differences, i.e., depending on whether a person can be classified under Type A or Type
B behavior pattern. The following findings have been arrived at when behavior of Type A and Type B people were studied: (i) Type A tend to perceive as being more under stress than Type B (ii) Type A tend to behave in ways that increase their workload and ensuing stress.

**Hardiness:** The level of hardiness of an individual is a decisive factor in facing stressful events. Hardy people are characterized by a higher level of commitment, self-control and ability to cope with change.

**Optimism:** The level of optimism/pessimism helps individuals in appraising situations with a positive/negative approach as the case may be.

There may be many stressful events and also several sources of stress. But everybody who performs a stressful job does not develop mental or physical health problems. If we have ability to cope with stress, then we can tolerate or at least moderate the stress that we experience without suffering too many consequences.

Stress management initiatives do not remove the stressors, rather, they equip the individual physically and psychologically and thus more resilient to the stresses of work. Stress inducing people or situations can be avoided. Individuals can control the situations instead of allowing the situations control them. A situation should be analysed in the light of how people perceive themselves as being capable of coping or not coping.

Improving physical fitness helps to build up stress tolerance. Nutrition and exercise are two aspects of improving physical fitness. People who do not exercise regularly feel more
stress. They are more likely to be depressed and experience negative consequences of stress. Relaxation is a related method of managing stress. Time management helps a person execute his work better with more ease. Role management helps a person in avoiding overload, ambiguity and conflict. The role incumbent’s support system such as friends, family members etc. provide an emotional and moral support in times of distress. Behavioral self-control is a method by which stress can be reduced. People can achieve self-control by managing the antecedents and consequences of own behavior.

A review of literature in this study opens up a vast area since stress and leadership are two subjects in which so much research work has been done and consequently so much literature is available in both these domains. Hence there is no dearth of literature. The survey here is reviewed under three parts- stress, leadership and linkage to the present research problem.

2.2 Studies on Stress

Hans Seyle (1907-82) the originator of the biological concept of stress referred stress as “The Syndrome of Just Being Sick”.

In 1984, the joint ILO/WHO Committee on Occupational Health expressed that occupational stressors and stress related ill-health do constitute serious problems for all parties of the labour market. Its report titled Psychosocial factors at work: Recognition and Control which was subsequently endorsed by the Governing Body of ILO and the Executive Board of WHO, became the first policy document for activities in this field worldwide (ILO, 1986). In 1992, based on a series of WHO and /or ILO sponsored

Another publication which had world wide impact was issued by European Commission, the Orientation Document for its Ad Hoc Group (AHG) on ‘Work-Related Stress’. The document lists the following reasons:

- Stress at work may lead to mental or physical ill-health
- Stress that is not work-related can manifest itself in the workplace
- The human and economic costs of such stress are very high to all concerned
- Such costs should therefore be reduced by preventing work-related stress

The recommendations of European Commission (1997) include support for:

- Research on work, stress and health
- A Guidance Note for National Guidelines
- Exchange of information on Work-Related Stress
- Education and training

**Stress and job stress:** The term “stress” originated in the field of physics and was transferred into psychology. Basically, the idea is that human beings tend to resist external forces acting upon them, just as do physical materials and bodies (Hobfull, 1989). Today the concept of stress is widespread but controversial, and is defined in several different ways (Keinan, 1997):
Stress as stimulation- stress is an extremely powerful (and at times unusual) stimulation which combines characteristics of loss and threat.

Stress as reaction- stress is a reaction to a particular event.

Stress as relation- this definition combines both previous definitions. The term stress refers to the interaction between the person and the environment. In reviewing studies pertaining to job stresses Kahn and Byosiere (1992) see as recurring themes, role conflict, role ambiguity and work overload. Such factors have negative implications for workers, both psychologically and physically.

**Job stress** can be defined as an employee’s awareness or feeling of personal dysfunction as a result of perceived conditions or happenings in the workplace, and the employee’s psychological and physiological reactions caused by these uncomfortable, undesirable, or threats in the employee’s immediate workplace environment (Montgomery et al, 1996).

**Job performance**: According to Porter and Lawler (1968), there are three types of performance. One is the measure of output rates, amount of sales over a given period of time, the production of a group of employees reporting to manager and so on. The second type of measure of performance involves ratings of individuals by someone other than the person whose performance is being considered. The third type of performance measures is self-appraisal and self-ratings. As a result, the adoption of self-appraisal and self-rating techniques are useful in encouraging employees to take an active role in setting his or her own goals. Thus, job performance measures the level of achievement of business and social objectives and responsibilities from the perspective of the judging party (Hersey and Blanchard, 1993).
The Stress Process in Organizations: Walter B. Cannon was the first to identify the stress response, labeling it the ‘emergency reaction’. His view has its roots in ‘the fighting emotions’ and had set the stage for its identification as the fight-or-flight response (Cannon, 1929). Subsequently, Hans Selye’s environmental stress investigations found the release of adrenal-gland hormones to be a chief result of stress, normally leading to appropriate adaptation to stressful situations (Selye, 1976a). However, the adaptation mechanism may malfunction and cause one or more diseases of maladaptation, such as cardiovascular disease or arthritis. Selye’s (1973, 1976b) General Adaptation Syndrome (GAS) included three stages: alarm, resistance and exhaustion. While the alarm stage of the GAS is what Cannon labeled the emergency reaction, it is in the resistance stage of the GAS where an individual struggles, fights, and is exposed to health risk and distress. Finally, the exhaustion stage is where collapse occurs.

Kahn et al (1964) drew attention to the psychology of stress by focusing attention on the psychosocial demands of role conflict and role ambiguity as environmental stressors for people in organizations. They showed how conflict and confusion can lead to individual distress and strain, with their associated organizational costs. Lazarus drew attention to another aspect of the psychology of stress by introducing cognitive appraisal and coping (Lazarus et al, 1985). This line of research identified the role of individual differences in the perceptions of demands and stressors, leading one person to see an opportunity or challenge where another sees a threat.
The Chemistry of Stress (Goleman and Boyatzis, 2008): When people are under stress, surges in the stress hormones adrenaline and cortisol strongly affect their reasoning and cognition. At low levels, cortisol facilitates thinking and other mental functions so well-timed pressure to perform and targeted critiques of subordinates certainly have their place. When a leader’s demands become too great for a subordinate to handle, however, soaring cortisol levels and an added hard kick of adrenaline can paralyze the mind’s critical abilities. Attention fixates on the threat from the boss rather than the work at hand; memory, planning and creativity go out the window. People fall back on old habits, no matter how unsuitable those are for addressing new challenges.

Shupe and McGrath (1998) conceptualize an individual ‘Stress Event’ as a complex cycle consisting of:

- **A situation**: an event(s) or condition that occurs or is anticipated in the environment of some focal system (a focal system is an individual group, organization or other human system to which a stress researcher chooses to attend);
- **The perceived situation**: the focal system’s interpretation of those events;
- **The response selection**: the system’s choice of coping responses to those events;
- **The coping behavior**: those responses, the execution of which have consequences both for the focal system and for the external context within all of this is taking place.
That cycle begins with some (actual or perceived) event or condition in the environment of a focal system. Elsewhere, they have been called stress potential events and conditions, or SPECs (McGrath and Beehr, 1990). Note that a SPEC is a potential stressor depending on how it is interpreted or appraised by the focal system.

The four parts of the cycle are connected by four processes: the appraisal process, the choice process, the performance process, and the outcome process. The occurrence (or anticipated occurrence) of the SPEC is accomplished by an appraisal process by which the focal system interprets the ‘meaning’ of the event for the system—that is, the threat, demand, and/or opportunity, implied by its consequences—and the likelihood that the system can deal with the event effectively. Consequences of the SPEC may be either its potential harm if it threat is not guarded against, its potential for benefits if the opportunity is seized, or both harm and benefit. The probability of the system dealing effectively with the SPEC depends both on the difficulty of carrying out the necessary responses and on the system’s available capabilities and resources at the time when it will need to make those required responses. The result of the appraisal process is the system’s perceived situation, which includes the level of ‘experienced stress’ with regard to that event. Here, level of experienced stress is represented as a function of: (1) the (perceived) importance of the consequences of the SPEC, (2) the uncertainty surrounding the stressful situation, and (3) certain temporal features of the SPEC and its consequences.

Assuming that the appraisal process results in some denotable level of perceived stress, it is followed by a choice process in which the focal system selects one or more responses
from its repertoire of potential responses, to deal with the SPEC and its consequences. These potential responses could include, for example, efforts to alleviate the SPEC itself, efforts to prevent the occurrence of a similar SPEC in the future, or attempts to modify the appraisal of the SPEC. The response choice depends on the nature of the SPEC and the focal system’s interpretation of it, as well as on the array of potential responses that the focal system is aware of and has available for use. The latter, in turn, will depend not only on the past experiences of that focal system (hence the development of a repertoire of coping responses and strategies), but also upon the current status of the system (hence the degree to which it has available uncommitted resources to deal with the SPEC).

The choice of one or more coping responses is, presumably, followed by the execution of those responses, or the performance process. That execution may vary in quality and vigor, depending on the skills of the focal system, and its motivation with regard to those responses.

Note that observation of focal system’s coping responses poses some serious problems for the researcher. For one thing, some of the potential coping responses may be covert, hence only accessible to observation by the focal system itself. Moreover, one ever-potential coping response is ‘do nothing’-and sometimes that is not only a deliberate, but also an effective, response. Furthermore, it is difficult (for anyone but the focal system) to distinguish which behaviors are being done in reaction to the perceived stressor, and which are simply behaviors that the focal system is doing in the ‘normal’ course of its ongoing life. Indeed, even if there is no perceived stress, the focal system will likely be
carrying out some response (including the ubiquitous ‘do nothing’) at any given time (Beehr and McGrath, 1996). So the specification by an ‘outsider’ (e.g. a researcher) that certain behaviors are coping responses is always, to some degree, arbitrary and/or subjective.

Whatever responses the focal system carries out will have consequences—both for the focal system itself and for portions of the system’s embedding context. Beehr and McGrath (1996) refer to that as the outcome process. The focal system’s responses may or may not serve to reduce or eliminate the negative consequences of the actual SPEC or change the appraisal of the threat posed by the SPEC. Thus, the cycle of appraisal, choice, performance, and outcome may or may not be a closed loop, because the responses may or may not alter the consequences of the SPEC. In fact, coping does not always work as a negative feedback loop, to reduce the level of stress. If ineffective, it can work as a ‘positive feedback loop’, amplifying the stressor or worsening the appraisal of it, thereby increasing the level of experienced stress.

Fig. 2.1 Stages and processes in a single stress cycle
2.2.1 A Model of Occupational Stress of Lennart (1998)

According to Lennart, common occupational stressors arising from social arrangements at work are mediated through perception, appraisal and expertise (higher nervous processes) and include: structures and processes in the total work environment (e.g., over- or under-load, low decision latitude) that can elicit pathogenic effects. Individual determinants of the propensity of human beings to appraise and react to such stimuli include personality, customs and attitudes. Stressor-induced physiological, psychological and behavioral mechanisms (e.g., functional disturbance in hormone production; anxiety; risk-taking behavior) are activated leading to work-stress-related mental and physical disease; and decrease in well-being, satisfaction and quality of life. The afore-said interactions are displayed in an ecological model (see fig. 2.2) (Kagan and Levi, 1975; European Commission, 1997).

The occupational situation with all its social structures and processes as appraised by the individual worker, gives rise to stimuli, that interact with the psychobiological program. The process is modified by interacting variables, e.g., social support; coping repertoire. The resulting responses are in some cases provoked by a wide variety of situations, and/or in almost any individual, and/or are related to morbidity in general—the non-specific stress response as described above. Other responses are more specific. Some do not relate to various aspects of health, whereas others do. The latter have diverse expression as pathogenic mechanisms—such as feelings of anxiety, depression and distress, abuse of alcohol and drugs, or disturbances in lipid metabolism. These
mechanisms are known or suspected to cause precursors of disease, or disease itself. Predisposing interacting variables may promote this sequence of events, while protective interacting factors—adequate coping and/or social support—may counteract it.

All of these processes take place in a man-environment ecosystem. The process just described is not a one-way flow but constitutes a cybernetic system with continuous feedback. Accordingly, if disease (or social disintegration) has occurred in an individual (or a group), this has repercussions on occupational structures and processes and on the resulting psychosocial stimuli, individual and group characteristics and on the interacting variables.

Fig. 2.2: A theoretical model for psychosocially mediated disease. The interaction between the psychosocial stimuli (1) as appraised by the individual and the psychobiological programme (2) determines the emotional, behavioral and physiological
reaction mechanisms (3), e.g., stress of the individual. These may, under certain circumstances, lead to precursors of disease (4) and to disease itself (5). This sequence of events can be promoted or counteracted by interacting variables (6). The sequence is not a one-way process but constitutes part of a cybernetic system with multiple and continuous feedback (Kagan and Levi, 1975).

Kornhauser (1965) realizes the significance of mental health and opines that mental health is not so much a freedom from specific frustrations as it is an overall balanced relationship to the world, which permits a person to maintain a realistic, positive belief in himself and his purposeful activities. In so far as his entire job and life situation facilitate and support such feelings of adequacy, inner security and meaningfulness of his existence, it can be presumed that his mental health will tend to be good. What is important in a negative way is not any single characteristic of his situation but everything that deprives the person of purpose and zest, that leaves him with negative feelings about himself, with anxieties, tensions, a sense of lostness, emptiness and futility.
2.2.2 Meta-Model of Occupational Stress (Beehr, 1998)

Beehr and Franz (1987) categorized approaches to understanding and treating occupational stress into four categories: medical; clinical/counseling psychology; engineering psychology; and organizational psychology. The first approach focuses on stressors in the physical environment, on physical (psychological or biochemical) strains, and on treating the individual directly. The second approach, the clinical/counseling psychology approach, focuses more on stressors in the psychological work environment and on the psychological strain responses of the individual (e.g. depression or anxiety), but it also tends to treat the individual directly. The third approach to occupational stress, which was labeled engineering psychology, looks for stressors in the physical environment at work, examines changes in performance as an outcome as much or more often than employee strains, and prefers to change the organizational environment as a form of treatment. The organizational psychology approach focuses on psychological strain responses in the employee, and often recommends treatments that change something in the employees’ organizational environment.

Newsman and Beehr (1978) conducted an early review of occupational stress research and developed a facet model outlining the relationships among stress- and non-stress-related variables found or assumed in the literature at that time (fig.2.3). In this stress model, occupational stressors are located in the environmental facet, and the individual’s strains are part of the human consequences facet. Stressors and strains are the two types
of variables whose presence is necessary and sufficient to define an occupational stress situation.

The personal facet consists of relatively stable characteristics of the person (e.g. personality, ability, physical traits and demographic traits). These can combine in some way with stressors (in the environmental facet) to produce the strains (in the human consequences facet). The process facet consists of intervening psychological or physical (physiological or biochemical) reactions of the person that are often assumed necessary for actual harm to occur to the person in the form of strains. The organizational consequences facet contains employee behaviors, in stressful situations, that have direct implications for the effectiveness of the organization (e.g. absenteeism, turnover, or changes in job performance). Adaptive responses are any responses, usually by the individual or the organization, but potentially also by third parties (e.g. government regulations or health insurance) that are an attempt to or successfully alleviate stressors, strains, or both. The time facet recognizes the importance of time in the occupational stress process, which is probably an under recognized factor in such situations (McGrath and Beehr, 1990).
2.2.3 Facet Model of Occupational Stress

Beer and Newman developed a more refined or adjusted facet model (Fig.2.4) that is more specific, for example, by specifying moderator effects. It breaks the environmental facet into two parts, the workplace ‘stressors’ and other ‘situational’ characteristics. These other characteristics of the situation or work environment can moderate the relationship between stressors and processes (and therefore also moderate the relationship between stressors and strains). In addition, the model changes the role of personal characteristics to show them explicitly as moderators of these same stressor-response relationships. Personal characteristics (e.g. personality) might directly lead to or predict strain-type responses. When they do have direct effects on strains, however, there is no work stressor involved, and therefore it is not a condition of occupational stress. Instead, the nature of the person is directly leading to responses regardless of the presence of any
sort of occupational situation. Therefore, there is no arrow from personal characteristics to strain responses. Time, now ‘duration’, is the other variable realigned as a moderator variable. This is consistent with the uncertainty theory of occupational stress by Beehr and Bhagat (1985a), in which the duration of the stressor is proposed as a factor causing stronger stress responses. The adaptive responses facet can be renamed ‘coping and adaptation’ to indicate its inclusiveness better. It consists of any actions taken to correct problems with the stressors, the strains or the organizational outcomes. And finally as noted in Beehr and Newman (1978), it is likely that strains to the individual person can lead to some of the behaviours that become organizational outcomes, e.g. too much strain might make the person quit his or her job.

Fig. 2.4 Refined facet model of occupational stress
2.2.4 The Uncertainty Theory of Occupational Stress

The psychological and physical processes have been one of the more mysterious parts of the stress model. It suggests that there are processes that are common to all stress experiences. Uncertainty is likely to be a common initial response to many of them (Beehr and Bhagat, 1985b). The uncertainty theory of occupational stress proposes that experienced stress is a multiplicative function of uncertainty, importance and duration: \( S = Uc \times I \times D \).

Three commonly studied stressors are role conflict, role ambiguity and under-utilization of skills and these can be analyzed in the light of uncertainty theory. An employee experiencing role conflict has two or more sets of expectations placed on him or her that are in conflict in the sense that meeting one set of expectations seems to make it more difficult to meet the other. In this case, the employee is uncertain how to direct his or her efforts in order to have adequate job performance - in other words, uncertainty about the level of \( E \rightarrow P \) expectancy. An employee experiencing under-utilization of skills, if the underutilization is not too severe, might experience \( P \rightarrow O \) uncertainty, especially regarding an intrinsic outcome. Because the employees in such situations have plenty of ability to do the job, they should have little \( E \rightarrow P \) uncertainty; they know it would be easy to perform the job well if they put forth the effort. There might be, however, some uncertainty regarding whether the employee would receive an intrinsic outcome such as a sense of achievement or pride as a result of accomplishing the work. If a job is too simple, the employee might be uncertain whether a feeling of accomplishment and
resulting pride will occur. Even though we are often admonished in our culture to take pride in doing good work, it is not so clear that we will be especially proud of performing simple tasks well. The third example of a job stressor commonly studied from the organizational psychology point of view is role ambiguity, which is proposed to create uncertainty for both E--->P and P--->O expectancies. Role ambiguity sounds a good deal like uncertainty itself, but if it is truly a stressor, it must be a characteristic of the work environment rather than a reaction of a person such as inability to determine a perceived probability. Role ambiguity would occur when the situation lacks sufficient information or contains ambiguous information regarding what is expected of the employee (Katz and Kahn, 1978). Uncertainty is the employee’s response or cognitive reaction to the environment (although she labels the terms differently, Pearce (1981) has discussed some of these distinctions). Ambiguous expectations can either be unclear regarding how to direct one’s efforts in order to perform well (E--->P) or how one’s performance is or will be evaluated and rewarded (P--->O), or both. Most of the types of social psychological occupational stressors commonly studied from the organizational psychology approach can result in these types of cognitive uncertainties for the person.

Cybernetic theory emphasizes time, information and feedback (Shibutani, 1968). The temporal dimension provides a dynamic view of stress frequently missing in OS research. The focus on information underscores the key notion that information mediates the person-environment relationship. The idea of feedback recognizes that coping behavior is purposeful, directed by knowledge of its previous effects. These factors are central to
an understanding of stress. Moreover, they are equally applicable to the stress phenomena studied both by psychologists and social scientists.

The concept of stress is related to this drive toward homeostatis. Each of the numerous variables in an organism has a specific range of stability. When a variable is within this range, it is in steady state and the person has no need for corrective action. Conversely, when forces disrupt a variable beyond its range of stability, the organism must act (or cope) to restore its steady state. A stress is any force displacing a variable beyond its range of stability. This produces a strain within the organism. Strains may or may not be capable of being reduced, depending upon their intensity and the resources of the individual.

Organisms may also anticipate a stress. Knowledge that a stress is likely to occur constitutes a threat to the individual. A threat can cause a strain because of its meaning to the person: a pattern of information is a threat when it is capable of eliciting responses that can counteract the stress it presages. Thus, either a stress or a threat can create a strain within the individual.

The totality of strains within the organism represents its values, and the relative urgency of reducing each of these strains denotes the individual’s hierarchy of values. Each person develops through genetic make up, experience, and reinforcements, a preferential hierarchy of values. This gives rise to decision-making rules which determine the individual’s preference for a particular steady state. It is this preferred steady state which
determines the range of stability for each of the variables the person attempts to maintain in balance.

Individual behavior directed at maintaining a steady state represents the person’s adjustment processes. These processes are aimed at reducing deviations from the individual’s preferred state. Since separate adjustment processes are interrelated, the organism may be considered ultra stable (Ashby, 1954); if initial behavior cannot cope with a stress or threat, related responses are implemented, and so on. Eventually, the entire adjustment processes of the individual may be directed at coping with stress.

Adjustment processes are guided by information feedback. Information about the state of a person’s variables is fed back to the individual, thus enabling her or him to detect strain and to direct subsequent coping behavior to reduce it. If the information increases deviation from the preferred steady state, positive feedback exists. Conversely, when information decreases (or negates) deviations from the steady state, it is negative feedback. Because the latter kind of feedback is needed to restore the individual’s steady state, it is the minimum requirement for coping with stress.

Feedback processes have three major properties that determine their effectiveness: (1) probability of error; (2) lag or time which they require to affect the individual; and (3) gain or extent of corrective effect. Negative feedback with a low probability of error, or a short lag time, or a large gain is generally more effective than feedback with dissimilar characteristics.
These conceptual distinctions among the terms stress, threat, strain and adjustment processes refine considerably the generic concept of stress. They suggest a classification of variables—stress or threat (independent variable), strain (intervening variable), and adjustment processes (dependent variable)—which can serve as a starting point for defining and operationalizing the empirical referents of these distinct aspects of the P-E fit.

2.2.5 Cybernetic Theory of Organizational Stress (Cummings and Cooper, 1998)

Cybernetic theory depicts stress as an information-feedback cycle. The underlying characteristics of this process are the person’s direction of strain and translation of this knowledge into adjustment processes to cope with the stress or threat situation. Information and feedback are central to this conception of stress. The individual must receive information as to whether his or her steady state variables are beyond their ranges of stability, and if so, use it to select appropriate adjustment behavior. The outcomes of this behavior are fed back to the person to inform subsequent coping, and so on.

Until now, the information and feedback aspects of the P-E fit have received only cursory attention in the OS field. The tendency is to uncover potential sources of stress in the work environment (e.g. work overload, role conflict) and to link these to individual characteristics (e.g. tolerance for ambiguity, Type A behavioral pattern) and to symptoms
of ineffective coping (e.g. mental ill-health, coronary heart disease). Although there is often recognition given to the feedback aspect of P- E interaction and to the information needed to appraise the environment and to choose a coping response (McGrath, 1976), there have been few attempts to apply these cybernetic concepts systematically to the stress cycle. This requires attention to four distinct phases of the stress cycle: (1) detection of strain; (2) choice of adjustment processes (3) implementation of adjustment processes; and (4) affects of adjustment processes on the stress or threat situation.

Individual difference factors such as personality traits (e.g. locus of control) and behavioral characteristics (e.g. Type A behavior pattern) contribute to people’s reactions to stresses and threats. For Type A people, these work conditions such as work overload, role conflict and role ambiguity are likely to result in a disparity between the amount of control that is preferred and that which the situation affords, thus resulting in experiencing strain. People with high growth needs tend to prefer enriched forms of work; individuals with high social needs prefer team-based work (Cummings and Worley, 1997). These employees are likely to experience strain when encountering work designs that are highly routinized or that require working alone.

Cybernetic theory provides an understanding of the relationship between detection of strain and choice of adjustment process. The underlying premise is that coping behavior is guided by information feedback. This feedback, inherent in the detection process, informs the individual of the need to cope with strain: it is the basis for the subjective assessment of strain. Given this essential linkage between detection and choice of
adjustment process, three key properties of feedback affect the decision-making process: error, lag and gain.

Because we are dealing primarily with psychological stress, a person’s ability to judge feedback gain accurately may determine whether he or she chooses an appropriate response and enacts it properly. Again, the possibilities for perceptual distortion seem considerable. If people are to fine tune their coping responses to achieve maximum positive effect, accurate information about feedback gain is critical.

Cybernetic theory draws attention to the cumulative effects of adjustment processes. Based on the premise that information about the outcome of behavior affects subsequent behavior, it raises the essential issue of whether such feedback is actually reducing strain (negative feedback) or increasing it (positive feedback). The concepts of negative and positive feedback may make possible more precise descriptions of the cumulative development of both adaptive and maladaptive stress cycles. A negative feedback (or adaptive) cycle implies that successive coping behaviors interact favorably with the situation to decrease strain; conversely, a positive feedback (or maladaptive) cycle suggests that a succession of response-situation interactions amplifies strain.

2.2.6 Ashby’s Law of Requisite Variety

Ashby (1966) has developed this idea into a formalized cybernetic law: Ashby’s Law of Requisite Variety. He proposed that a system regulator (e.g. an employee) is effective
only to the extent that it possesses the requisite number of responses (e.g. coping behaviors) to match the number of distinct disturbances (e.g. work stresses) it must face. Further, the regulator must have within its response set the appropriate responses for reducing the actual disturbance (Hare, 1967). Hence, an employee can cope with only that number of different work stresses for which he or she has a requisite number of relevant responses.

Ashby’s law provides a useful method for studying the linkage between work stresses and employees’ coping behaviors. Starting with the environmental side of the relationship, determination of the variety of stresses in a particular work context provides a preliminary measure of its ‘stress complexity’. Hare (1967) suggested that environmental complexity refers to the variety of distinctions the controller must make to obtain adequate control. In our case, this means the number of different sources of work stress employees must attend to if they are to cope effectively. Because the objective work environment and individuals’ perceptions of it may differ, it is necessary to examine stress complexity both objectively (i.e. in terms of the variety of stresses individuals must attend to) and subjectively (i.e. in terms of the variety of distinctions employees actually make) and to compare the two. This indicates the fit between the work environment’s actual stress demands and employees’ ability to recognize them. A poor fit between the two measures identifies those situations where the work environment has too much or too little stress variety for the detection capability of its occupants. Variety overload may adversely affect feedback error, lag and gain; hence the quantity, quality and timing of information needed to choose adjustment processes.
Employee response complexity must match workplace stress complexity if strain is to be reduced effectively. Failure to match variety with variety may lead to either stress overload or underload.

Ashby’s law also directs attention to two major strategies for personal stress management: increase the person’s response complexity or reduce the environment’s stress complexity. The former requires learning new coping behaviors; the latter simplifying the environment to more manageable levels of complexity.

2.2.7 Cybernetic Theory of Stress, Coping and Well-Being: Review and Extension to Work and Family (Edwards, 1998)

The basis for this theory is the cybernetic theory. Edwards (1992) developed an integrative theory of stress, coping and well-being in organizations (fig.2.5). This theory views stress, coping and well-being as critical elements of a negative feedback loop, in which discrepancies between environmental inputs and internal standards induce stress, which damages well-being and stimulates coping efforts intended to resolve discrepancies between the environment and standards. This theory integrates other theories that define stress in terms of person-environment congruence and incorporate feedback relationships linking coping to the sources of stress (e.g. Beehr and Newman,
Some investigators define stress as a situational condition or event (e.g. Cooper and Marshall, 1976; Kahn and Quinn, 1970; Matteson and Ivancevich, 1979) or as a psychological or physiological response of the person (Martin and Schermerhorn, 1983; Parker and DeCotiis, 1983; Seyle, 1956). Situational definitions overlook individual differences in how situations are cognitively appraised. Moreover, situational definitions usually denote a situation as stressful only if it damages well-being, thereby confounding stress with one of its primary outcomes. Response definitions ignore differences in the subjective meaning of situations that may generate the same psychophysiological outcome (Lazarus and Folkman, 1984), as when danger and exercise both produce physiological arousal. Response definitions also exclude episodes in which coping successfully avoids or ameliorates stress, thereby preventing damage to well-being. The definition of stress employed here avoids these problems by incorporating cognitive appraisal as the subjective comparison of perceptions to desires and by defining stress independent of its hypothesized outcomes (i.e. well-being, coping).

Several theories define stress as a discrepancy between environmental demands and the abilities of the person, indicating that stress arises when demands exceed abilities and failure to meet demands has important consequences (Beehr and Bhagat, 1985; Cox 1987; Lazarus and Folkman, 1984; Shirom, 1982). This definition of stress is consistent with the demands-control model, which posits that strain results when demands exceed
decision latitude, a situational determinant of ability (Karasek and Theorell, 1990). The view of stress as excess demands has been challenged by Harrison (1978), who contends that excess demands are stressful only when: (1) failure to meet demands prevents the receipt of desired outcomes (e.g. rewards, approval); or (2) demands are internalized by the person as desired goals, motives or rules of behavior. In either case, excess demands generate stress only if they create discrepancies between perceptions and desires. Hence excess demands do not constitute stress itself, but rather are a potential cause of stress. Discrepancies between demands and abilities may also influence coping efficacy, in that coping strategies are more likely to succeed when the demands of the strategy are within the person’s abilities (Edwards, 1988, 1992).

Three other key constructs in Edwards’ (1992) theory are duration, well-being and coping. Duration refers to the amount of time the person spends thinking about a discrepancy (Beehr and Bhagat, 1985; Gardner et al, 1989). Duration captures the person’s awareness of a discrepancy, which is a necessary condition for the experience of psychological stress (Lazarus and Folkman, 1984; McGrath, 1976). Well-being refers to psychological and physical health, including short-term affective and physiological outcomes and chronic, long-term mental and physical functioning. Unlike strain, which focuses on dysfunction (French et al, 1982), well-being ranges from mental and physical illness to positive mental health and physiological growth and regeneration (Edwards and Cooper, 1988; Karasek et al, 1982; Seeman, 1989). Coping represents efforts to prevent or reduce the negative effects of stress on well-being. To avoid confounding coping with its outcomes, coping is defined as efforts to influence stress and well-being, not as the
successful implementation of these efforts (Edwards, 1988; Lazarus and Folkman, 1984). Coping involves a decision-making process in which coping strategies are selected and implemented. This process may range from a careful generation, evaluation, and selection of coping strategies to an intuitive or pre-conscious coping response (Edwards, 1988). Each coping strategy signifies a casual pathway by which coping may affect stress and well-being.

Fig. 2.5 Cybernetic model of stress, coping and well-being (Adapted from Edwards, 1992)

Coping may influence well-being both directly and indirectly through the determinants and moderators of stress. Coping targeted directly at well-being has been labeled emotion-focused coping (Billings and Moos, 1981; Lazarus and Folkman, 1984) and
includes relaxation, catharsis, alcohol and drug use and other efforts to dampen symptoms without influencing their causes. Coping may affect perception by altering personal characteristics or the physical and social environment, representing problem-focused coping directed toward the self and situation respectively (Lazarus and Folkman, 1984). Coping may also influence perception through cognitive reconstruction or the selection, reinterpretation, or rejection of social information. Additionally, coping may align desires with perceptions or devalue the importance of stressful discrepancies, both of which represent forms of cognitive reappraisal (Billings and Moos, 1981; Latack, 1986; Lazarus and Folkman, 1984). Finally, coping may reduce duration by diverting attention from discrepancies, signifying avoidant coping (Lazarus, 1983).

The above figure shows that the effects of discrepancies on coping are moderated by environmental and personal factors. Environmental factors include opportunities or constraints regarding coping strategy choice (Mattlin et al, 1990; Terry, 1994) and access to coping resources, such as social support (Cohen, 1988; House et al, 1988). Personal factors refer to coping styles that arise from personality traits (e.g. locus of control, Type A behavior) and cognitive schema that elicit scripted coping strategies (Edwards, 1988; Lord and Hanges, 1987; Menaghan, 1983). Environmental and personal factors also moderate the effects of coping on the sources and moderators of stress.

According to Edwards (1992), the effects of discrepancies on coping should mirror those for well-being, such that discrepancies simultaneously reduce well-being and increase coping efforts. Available evidence suggests that coping efforts intensify as discrepancies...
increase (Caplan et al, 1984; Mayes and Ganster, 1988) and that the choice of coping strategies may depend on personal characteristics such as gender (Eagan and Walsh, 1995).

The mechanisms that link the work and family domains can be explained with the extended cybernetic model. Three linking mechanisms that have received extensive attention in work-family research are spillover, compensation and segmentation (Burke and Greenglass, 1987; Evans and Bartolome, 1986; Lambert, 1990; Staines, 1980; Voydanoff, 1989; Zedeck, 1992).

Spillover: Spillover refers to the transfer of attitudes, feelings and behaviors from one domain to the other (Burke and Greenglass, 1987; Lambert, 1990; Staines, 1980; Zedeck, 1992). Two versions of spillover prevalent in work-family research are mood spillover (Gutek et al, 1988; Piotrkowski, 1979; Repetti, 1987; Rice et al, 1980; Staines, 1980) and skill transfer (Crouter, 1984; Payton-Miyazaki and Brayfield, 1976).

Mood is represented in the cybernetic model as an affective dimension of well-being (Edwards, 1992; Watson and Tellegen, 1985). Therefore, mood spillover may be viewed as a positive relationship between work and family well-being (Tenbrunsel et al, 1995). The cybernetic model suggests two processes by which work and family well-being may be positively related. First, this relationship may arise from instrumental linkages connecting feedback loops in the work and family domains. For example, financial rewards from work may not only increase work satisfaction, but may also meet material
needs for the family, thereby enhancing family satisfaction (Burke and Greenglass, 1987; Evans and Bartolome, 1986; Kanter, 1977). Second, personal characteristics at the system level may generate a spurious positive relationship between work and family well-being. For example, generalized coping skills (Spivack et al, 1976) may facilitate the resolution of discrepancies for both work and family, thereby enhancing well-being in both domains. Analogously, affective dispositions such as negative affectivity (NA) may prompt people to experience low levels of well-being across life domains, including work and family (Frone et al, 1984; Watson and Pennebaker, 1989). The effects of NA on work and family well-being may reflect the maintenance of unreasonably high standards (i.e. desires) for work and family, such that experiences in both life domains are rarely appraised as satisfactory (Parkes, 1990). Alternately, NA may inhibit effective coping by reducing perceived coping efficacy or by alienating potential sources of social support (Burke et al, 1993), thereby exacerbating stress and damaging well-being for both work and family.

Mood spillover is characterized as the expression generated in one domain while physically present in the other domain, such as venting work frustrations while at home or worrying about family matters while at work (Eckenrode and Gore, 1990; Evans and Bartolome, 1986; Piotrkowski, 1979; Voydanoff, 1989).

Work and family coping skills may be similar due to the effects of personal characteristics at the system level, such as general coping skills (e.g. analytical ability;
Spivack et al, 1976) and coping styles that represent habitual ways of coping with stress (Menaghan, 1983).

**Compensation:** Compensation represents efforts to offset dissatisfaction in one domain by seeking satisfaction in another domain (Burke and Greenglass, 1987; Lambert, 1990; Zedeck, 1992). Compensation is achieved by decreasing involvement in the dissatisfying domain and increasing involvement in another potentially satisfying domain, yielding a negative relationship between involvement in the two domains (Lambert, 1990).

**Segmentation:** Segmentation refers to the separation of work and family, such that experiences in the two domains do not influence one another (Lambert, 1990; Zedeck, 1992). First, segmentation may operate through duration, such that attention is focused solely on the domain in which the person is physically present (Piotrkowski, 1979). Second, segmentation may be manifested as the conscious utilization of different coping strategies in the work and family domains (Kabanoff, 1980). The use of different coping strategies for work and family stress may arise from the recognition of different coping requirements in the two domains. For example, coping at work may require problem-focused strategies such as direct confrontation, but these strategies may be ineffective or counterproductive in the family domain (Folkman and Lazarus, 1980; Eckenrode and Gore, 1990; Greenhaus and Beutell, 1985; Pearlin and Schooler, 1978). Differentiation of work and family coping requirements is more likely when the person consciously evaluates the suitability of alternative coping strategies, which may occur when discrepancies are large, important, novel or persistent (Edwards, 1992).
Control is the ability of the individual to choose his or her own actions from two or more options (Ganster and Fusilier, 1989). In the Control Theory, the focus is on behavioral control as opposed to cognitive control (Averill, 1973) which might also reduce the impact of job stressors (Thompson, 1981). Behavioral control in the workplace ranges from autonomy, which is control over the individual’s own immediate scheduling and tasks, to participation in more global decision making that might not affect the person directly. For the job stress process, it is control over the immediate and specific job stressors that is important. This implies that merely having autonomy or being able to participate in decisions may or may not have any effect on job stressors. To be effective, control must be over the job stressor itself. Having autonomy over job tasks is not likely to have any impact on a poor relation with co-workers, but on the other hand, having the autonomy to work at home and avoid them is likely to be helpful.

Control is divided into environmental and perceived. Environmental control is the degree of choice an individual is given, either by the situation or by superiors, while perceived control is the amount of choice the individual believes he or she has. An individual who is given control does not necessarily perceive that control. He or she might not feel capable of using the control.
Spector (1998) propounded the Control Theory of the Job Stress Process. Behavioral strains are instances of behavior elicited in response to the job stressor. They can range from the quite immediate and impulsive act, such as hitting someone who does something annoying, to long-term, well thought out strategies, such as seeking alternative employment. Many of these behaviors can be considered coping responses, which are acts done to handle the job stressor. These can be classified as emotion-focused versus problem-focused (Lazarus and Folkman, 1984). Emotion-focused coping is a behavior designed to reduce the emotional response without dealing directly with the job stressor, such as drinking alcohol or staying home from work. Problem-focused directly addresses the job stressor and might involve discussing the situation with the supervisor to find a resolution, or engaging in activities to reduce the job stressor.

Problem-focused approaches are often productive, in that employees might successfully solve organizational problems by taking direct action to reduce job stressors. For example, an employee might choose to handle an increase in workload by staying home from work (counterproductive and emotion-focused) or by suggest a more efficient procedure to save time (productive and problem-focused). Of course, emotion-focused approaches of avoiding work might in some cases be productive by providing needed rest in the short run so the person could be more effective in the long run, and a problem-focused approach might be to find a new job, which would not typically be productive for the organization.
Perceptions of job stressors are due to many things, including both personal and situational factors. Given a particular perception, there are considerable individual differences in response at both the affective and behavioral levels. Perceived control is posited to moderate the relation between environmental and perceived job stressor. Specifically, when control is high, the strength of relation between environmental and perceived stressor should be low. The individual is not likely to interpret the condition/situation as a job stressor and will not exhibit an emotional reaction. Conversely, when perceived control is low, the relation between environmental and perceived job stressor will be strong. An individual is likely to interpret the condition/situation as being a job stressor and will exhibit an emotional reaction.

Frankenhaeuser and Lundberg (1982) describe jobs and situations that produce effort and distress, which can be distinguished physiologically. Effort leads to a rise in catecholamines such as adrenaline and noradrenaline, and a decrease in cortisol. Distress leads to a rise in all three. These so called stress hormones are associated with experienced emotions (Frankenhaeuser, 1979), and help explain how psychological strains result in physical strains. An individual who feels in control of a situation may experience effort, but lack of control is likely to result in distress.

Beyond reducing the impact of environmental job stressors on perceived stressors, control also helps determine an individual’s behavioral reactions particularly in choosing between emotion- and problem- focused coping approaches. High levels of perceived control over a situation leads the individual to attempt a problem- focused and productive approach, intended to overcome the situation. Often this can be successful in managing
job strains, but at the cost of increased effort and workload (Tatttersall and Farmer, 1995). The job stressor likely induces minor irritation which is easily channeled into something constructive. Low perceived control leaves the person believing that nothing constructive can be done to overcome the situation, so he or she must cope with it another way. This more emotion-focused approach can be counterproductive, which can mean avoiding the situation entirely through absence or engaging in covert or overt acts of aggression and other antisocial behaviors that have been associated with anger and frustration at work (Spector, 1997).

There are many individual difference variables that can potentially affect the connection between environmental and perceived control. Two in particular are relevant to control itself—locus of control and self-efficacy. Locus of control is a tendency for an individual to believe he or she can control rewards and punishments in life. The external is an individual who believes that fate or powerful others are controlling rewards and punishments, and that he or she has little control. The internal believes that he or she is in control. Self-efficacy is the belief, limited to a specific domain, that a person is able to be effective in accomplishing something. An employee might have a high level of self-efficacy in his or her ability to do the job, for example. Self-efficacy is undoubtedly more malleable than most personality variables in that it can change with experience, but it can be considered for our purposes as a disposition.

Under some conditions control itself can function as a stressor. There are two ways in which this can occur. First, control typically comes with responsibility, and enhanced
responsibility can be perceived as a job stressor by many individuals. Second, an
individual who feels in control will often respond to job stressors with actions designed to
overcome them. If those actions are unsuccessful, the situation can become a job stressor.

Self-efficacy is another dispositional control variable that is more specific than locus of
control. It also moderates the relation between certain types of environmental job
stressors and perceived job stressors. Individuals who believe that they are capable of
handling a situation will be unlikely to perceive it as a job stressor. Nelson and Sutton
(1990), for example, found that individuals who were high in mastery at work (self-
efficacy) reported lower levels of job stressors than their counterparts who were low in
mastery. For self-efficacy to be an effective buffer, the job stressor must be something
relevant to the domain in which the individual feels capable. An individual who has high
self-efficacy for doing job tasks, for example, is not likely to perceive a challenging new
assignment as a job stressor. Such a person is also likely to respond to situations
constructively, with efforts made to overcome potential job stressors rather than merely
survive them. Nelson and Sutton (1990) also found that mastery correlated positively
with the use of problem-focused coping.

Individual differences in affective dispositions, such as negative affectivity (Watson et al,
1988) or trait anxiety (Spielberger, 1972), are also important. People may differ in their
tendency to perceive the world as threatening, as well as in their tendency to respond
emotionally. This can be considered a threshold difference among people, whereby some
individuals have bigger reactions than others to the same situation. Such dispositions act
independently of control, i.e. it is not that high anxious people respond more strongly because they perceive themselves to have less control. Rather they respond more strongly because they have a lower threshold for anxiety. For example, Spielberger (1972) discussed how individuals high in trait anxiety showed greater state anxiety increases in response to certain stressors than low anxious counterparts. These stressors were characterized as representing threats to self-esteem rather than physical danger. Affective dispositions have also been associated with reports of somatic symptoms (Watson and Pennebaker, 1989).

A handful of studies used multiple methods to assess job stressors to investigate relations among environmental conditions and perceptions. Such studies have provided evidence that, at least for some variables, there is convergence. For example, Frese (1985) compared incumbents with observers and peers on composite measures of job stressors. He found significant correlations in all cases, ranging from .30 to .61. Kirmeyer (1988) found that an incumbent measure of workload correlated .59 with an objective measure of amount of work done.

Not all measures of job stressors find good convergence among methods, however. Spector et al (1988) reported correlations between incumbents and supervisors on six job stressors. There was considerable variability in magnitude of correlations, ranging from a non-significant .08 for role ambiguity to .83 for hours worked per week. However, taken as a whole these studies indicate that perceptions of job stressors are very much reflective of the work environment.
Role of perceived control: Perlow and Latham (1993) reported that externals were more likely to abuse residents of a state facility for the developmentally disabled than were internals. In a more general sense, Hurrell and Murphy (1991) summarized research showing that internals use more constructive problem-focused coping approaches than externals.

There are many organizational techniques that might potentially enhance perceived control. Job redesign has as one objective increasing control and responsibility over tasks. Autonomous work groups allow more control than traditional working arrangements. Survey feedback is intended to give input to employees over issues that concern them. Team building could be used for much the same objective by allowing discussions of work problems.

Another more specific intervention that is directly targeted to control over job stressors would be to train supervisors to conduct special problem-solving sessions with subordinates. Supervisors would help subordinates identify their job stressors, and implement strategies designed to enhance perceived control over those situations. This can be done by having meetings during which work problems are discussed and solutions to those problems developed. Clearly to be successful it is essential that there be trust between subordinates and supervisors. A focus on work problems affecting performance rather than job stress and personal problems is likely to produce more candor and less defensiveness. However, what is likely to result is a discussion of things that are by
definition job stressors, such as conflicts with other employees or organizational conditions that interfere with the employee in doing his or her job.

One solution to work problems is likely to be enhanced control over the situation by the employee. If discussions happen regularly and they provide an opportunity for the individual to have input, control is already enhanced. The focus on control over the specific problem discussed limits it to an area in which it will likely reduce perceived job stressors. It is also essential that the person has control over their control. In other words control should be something that an individual is free to accept or decline. Not everyone wishes to have control (Xie, 1996), and it can produce additional job strain as the individual perceives more job stressors from the responsibility of unwanted control.

It is also likely that through such discussions, effective strategies will be undertaken that will reduce environmental job stressors. For example, an individual who feels overworked might suggest ways to make their work more efficient. The person who is experiencing the situation might be in the best position to come up with an effective solution, which is suggested quite clearly in research on principles of sociotechnical systems theory (e.g. Wall et al, 1992). In addition to remediating the problem of job stress, this approach is likely to have beneficial effects on job performance and organizational efficiency.

Specific solutions to problems of job stressors must be directed to their particular nature. What might help for one environmental condition or situation might be counterproductive
in another. For example, an individual might perceive high workload for variety of reasons. If the person lacks skills to do a task efficiently, additional training would be appropriate. If the problem was defective equipment, a different solution would be required.

2.2.9 The Ethological Theory of Stress (Schabracq, 1998)

This theory focuses on the relationship between integrity and stress. Integrity leads to a sense of control, safety, self-efficacy and self-esteem and allows for a morally appropriate way of functioning in a manageable reality, as well as the development of an attractive identity. While integrity is conducive to well-being and health in general, as well as to good performance, inadequate forms of integrity are stressful. We distinguish three forms of inadequacy which each cause stress:

- Underdevelopment of integrity
- Infringements on or losses of integrity
- Stress reactions caused by other stressors

All three can be the result of some environmental change that one has not successfully incorporated into one’s integrity.
Underdevelopment of integrity occurs when the task may have too little to offer to the task performer in the sense of challenges and goal attainment, and/or the task places too high demands on the task performer. So, tasks can be described in terms of a great number of bipolar dimensions. For each dimension, situated ranges can be specified within which the task can be optimally executed. Based on the bipolar nature of the dimensions, two kinds of loss of control can be distinguished, which can occur in diverse combinations.

First, loss of control can be caused by, for example, insufficient resources and equipment, poor ergonomical job characteristics, too high a workplace, too complex and too difficult tasks, too much task variety and too much autonomy. All these characteristics can, alone or in various combinations, lead to a state of task overload, which in its turn negatively affects what one is able and willing to do in order to attain the targets that one must attain. The task no longer corresponds to a personal theme; it becomes too complicated or too heavy to handle. Consequently, the task disintegrates. Attention is diverted in a non-instrumental way: chaos and anomie take over and serious stress reactions may occur.

Secondly, the other pole of these dimensions can negatively influence what employees may do or, more specifically, are allowed to do. Examples are an imposed, too slow work pace, too easy and simple tasks, too little autonomy, too little task variety and too short work cycles. This restriction of the freedom of acting may lead to problems of underload, of a qualitative (no challenges, boring tasks) or quantitative nature (too little activity). The themes that one can realize by task performance are too insignificant: the task cannot
provide sufficient meaning to the employee’s presence at the work site and the employee realizes that the work is keeping him or her away from more meaningful and rewarding ways of functioning.

The employee may experience concentration problems and feelings of irritation and boredom. If this leads to disruption of control over task performance, a stress process may be activated. Problems may be aggravated when the employee has high self-esteem, high work standards or high perceived self-efficacy.

Combinations of stressors from both categories, such as the combination of quantitative task overload and qualitative overload (the so-called high strain condition of Karasek and Theorell, 1990), may lead to an especially harmful condition.

The second form of inadequacy is a consequence of an infringement on or a loss of integrity, not counteracted by inadequate coping activities.

Notwithstanding the threats to the health and employability of employees over 40, the following studies show that the potential of these employees is a real one and provides a solid base for a different policy for the problems mentioned. So, nothing indicates a clear general decay of work performance of employees between 35 and 65 years (Waldman and Avolio, 1986; Sterns and Alexander, 1988; Cascio and McEnvoy, 1989; Warr, 1993). The health of older employees, as expressed in sick-leave numbers, does not give rise to big problems either. Though some abilities decline with ageing, others show further
development (Thomae, 1993). In general, the decline of abilities (speed, bodily strength, stamina, sensory keenness, alternating attention) does not have serious limiting consequences for job performance. When employees get enough room to arrange their own work, they usually show sufficient reserves and other qualities to compensate for this decay (Baltes and Baltes, 1993). In particular, abilities based on knowledge and experience tend to improve with age (Schroots and Birren, 1993), while some elderly employees develop ways of coping with these specific stressors, which can be summarized under the denominator of wisdom and can be of great value to organizations (Schabracq and Winnubst, 1996).

Sources of Stress in the Second Half of Working Life: Stress has many undesirable manifestations affecting our functioning, development and health. Though these effects can occur at all ages, they tend to be more serious in the second half of life, as people over 40, on average, are not in such good shape because of a lack of physical exercise. Their physiological reactivity tends to decrease, their physiological cycles tend to flatten and they need more time for recovery. In this respect, it is comforting to realize that most people over 40, compared to younger ones, have developed relatively effective coping procedures. Though ‘normal’ work stressors may affect the people who go through the second half of their working life as well, we here pay special attention to the specific sources of stress in the second half of the working life. Each of these can be described as a partial loss of integrity.
Loss of Youth: Loss of youth also affects career perspective. Middle-aged employees are no longer juniors and are supposed to have acquired an established position, if not the summit of their career. However, as organizations have become flatter, the number of management jobs has decreased, while the number of middle-aged employees competing for these jobs has increased considerably in most Western countries and Japan (e.g. Offerman and Gowing, 1990). As a result, many middle-aged employees see their expectations thwarted: their efforts and adaptations, and the resulting inconveniences and unpleasantness, appear to have been in vain. Moreover, they do not get the respect or acknowledgement for past achievements they feel they have earned.

Generally speaking, the outlook on life changes for employees growing older. Having only a finite time to go, the importance of their work becomes more relative to them. The dreams and goals that used to make work into a seemingly logical route toward a better future, become less compelling. They do not expect substantial increases in income and prestige. Moreover, older employees tend to be more or less satisfied with their present life style. Older employees tend to grow weary of radical organizational changes and the adaptations these demand.

Loss of Parts of one’s identity: Taking on a (new) job sometimes may mean allowing oneself to be forced into a kind of behavioral and emotional mould. If one stays in that job, one is at risk of either becoming a misfit, who pursues goals not adapted to the environment and who is exposed to the consequences of failure, or a person who is being left with an impoverished identity, no longer connected to certain basic needs. For
example, in many organizations, persons who connect themselves strongly with themes such as perfection, originality or diversion are at risk here. The same holds for persons who are at the wrong place in a certain organization: somebody who wants to dominate but cannot be boss, helpers who find nobody of relevance to help and experts not listened to.

Going through a series of such transitions, one may be left with a highly conventionalized and emotionally bleak form of functioning, which can be described as a state of stress, resulting from underdeveloped integrity (Schabracq and Cooper, 2000). The individual may feel ‘empty’, ‘hollow’ and alienated. The person does what he or she has to do, but without much zeal, feeling bored and finding it hard to concentrate. Rewards become less meaningful. This state, called ‘anhedonia’, is probably hormonally determined (by high levels of corticosteroids) and suppresses appetite-driven learning processes (Willner, 1993).

Concentration of Experience: Loss of Transferability: Employees identify with their jobs: the jobs become a part of themselves which they tend to hold on to for as long as possible. As a result, their abilities may develop only within the narrow limits of their jobs, a process called ‘concentration of experience’ (Thijssen, 1996) that can have important drawbacks. Career opportunities of persons subjected to concentration of experience tend to diminish. They cannot rise higher than their jobs or, in the best of cases, the top of their department. Also, they can be transferred less easily to other departments. This becomes especially consequential when their jobs disappear. Many
elderly employees end up being stuck in their job, suffering from several ceiling effects (‘golden cage syndrome’, Peter’s principle, being ‘kicked upstairs, glass ceiling). As their jobs lose much of their meaning and no longer provide a useful structure for their integrity, they suffer from qualitative task underload, which may undermine their well-being and health.

Lack of additional training: Loss of competence: While the world of work is changing faster than ever before, most employees over 40 get little or no additional training (Kerkhoff, 1993; Dresens, 1993; Boerlijst et al, 1993). As a result, their skills become obsolete at a fast rate.

Lack of additional training may initially result in some form of qualitative overload, as the work becomes too difficult. However, in most cases someone else is appointed for the new parts of the task, leaving the older employee with an impoverished function, stripped of much of its meaning and structure. The older employee’s integrity is affected and he or she may face qualitative, if not quantitative, underload, which can activate a pernicious stress process, while the organization is burdened with an unproductive, overpaid and, probably, poorly motivated older employee.

Cohort effects: Loss of communality: The emphasis on self-actualization and meaningful activities may interfere with performing routine tasks which do not offer much opportunity for further development. As such, they may be more prone to qualitative task underload. Apart from being time and energy consuming, a strongly felt responsibility to
live up to high standards in social relations may evoke negative feelings when one performs less well in this area, and lead to burnout symptoms.

**Ageing of networks:** *Loss of relationships:* Older employees are confronted with the loss of the ones who are of importance for them. This is also an emotional matter, involving feelings like grief, anxiety, depression and bereavement. Because many elderly people do not make new friends as easily as they used to do, such losses leave them with an impoverished network.

**Loss of feedback:** Some older employees get little or no feedback about their performance and so are exposed to a greater role ambiguity and isolation. Apart from these being stressors in their own right, they can be seen as other instances of loss of integrity and role structure.

**Harmful tasks:** Loss of work and health: Problems may also ensue from being exposed to work conditions characterized by few challenges, no possibilities for further development and little decision latitude for a very long period of time. Such conditions tend to lead to passivity in other life domains as well and pose serious threats to the well-being of health of the employees involved (Karasek and Theorell, 1990).

The increase in Change, *Loss of communality:* Changes in an organizational culture implies changes in the prominence of certain values and objectives. Objectives such as skill perfection and professional freedom may become less prominent, though these may
have been the reason for older employees joining the organization. These changes may leave them behind with work, which in their eyes, has been stripped of most of its challenges and meaning. Besides this loss, and the qualitative underload and stress resulting from it, they are confronted with demands to learn new skills which may not appeal to them.

**Stereotyping: Loss of face and self-esteem:** One of the most consistent research findings is that older people differ greatly on almost every point (Belsky, 1990; Baltes and Baltes, 1993), because people live divergent lives, are congenitally different, and make different choices. So, people enter the last stage of their working life from different points of departure and they differ also in the developmental tasks that they have accomplished. This implies that everybody is not equally well prepared, willing, and able to engage in the challenges posed by the last stages of working life. Still, there exists a vigorous stereotype of older employees as a uniform group, characterized by low flexibility, strength, speed and productivity as well as by conservatism, bitterness, dependency and passivity (Foner and Schwab, 1981; Belsky, 1990; Krijnen, 1996).

**Loss of quality thinking under stress:** Stress reactions can act as stressors in their own right, which may also be more incapacitating for people over forty. An important point in this respect is that stress interferes with quality of thinking. This may be a matter of all kinds of intruding blanks, thoughts, feelings and events, which make it hard, if not impossible, to maintain a productive line of thinking. It may also be a matter of too rigid and constrained ways of thinking, focused on standard procedures, characterized by
stereotypical conceptualization, black-and-white thinking and the absence of open questions, scrutinizing and reality testing, resulting in impoverished creativity. Often this second form is a kind of adaptation to an overly restricted work situation. Older employees who are for a long time exposed to such a situation are at a greater risk here.

With increasing global competition the pressure to innovate is becoming stronger. Research on stressors has consistently proved their negative effects on health, performance and satisfaction (Kahn and Byosiere, 1991).

2.2.10 The Multidimensional Theory of Burnout (Maslach, 1998) considers job burnout as a prolonged response to chronic interpersonal stressors on the job. The three key dimensions of this response are an overwhelming exhaustion; feeling of cynicism and detachment from the job; and sense of ineffectiveness and failure (Maslach, 1982a; Maslach and Jackson, 1981b; Maslach and Leiter, 1997).

The multidimensional theory conceptualizes burnout in terms of its three core components: emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, 1993; Maslach and Jackson, 1981a, 1986). According to this theory, burnout is an individual stress experience embedded in a context of complex social relationships, and it involves the person’s conception of both self and others.
*Emotional exhaustion* refers to feelings of being emotionally overextended and depleted of one’s emotional resources. The major sources of this exhaustion are work overload and personal conflict at work.

*Depersonalization* refers to a negative, cynical, or excessively detached response to other people, which often includes a loss of idealism. It usually develops in response to other overload of emotional exhaustion, and is self-protective at first—an emotional buffer of ‘detached concern’. But the risk is that the detachment can turn into dehumanization. The depersonalization component represents the interpersonal dimension of burnout.

*Reduced personal accomplishment* refers to a decline in feelings of competence and productivity at work. This lowered sense of self-efficacy has been linked to depression and an inability to cope with the demands of the job, and it can be exacerbated by a lack of social support and of opportunities to develop professionally.

Exhaustion has also been described as wearing out, loss of energy, depletion, debilitation, and fatigue; depersonalization has been described as negative or inappropriate attitudes towards clients, loss of idealism, and irritability; and reduced personal accomplishment has been described as reduced productivity or capability, low morale, withdrawal, and an inability to cope (for a more extensive analysis of these definitional issues, see Maslach, 1982b).
Other studies combined useful psychometric data with investigations of how burnout is related to critical job factors, demographic variables, and coping strategies (Maslach and Jackson, 1982, 1984 b, 1985).

The feeling of reduced personal accomplishment is related conceptually to such phenomena as self-inefficacy (Bandura, 1977, 1982) and learned helplessness (Abramson et al., 1978).

This psychometric research led to the development of a measure called the Maslach Burnout Inventory (MBI), which assesses all three of the burnout dimensions (Maslach and Jackson, 1981a). The MBI is now considered to be the standard tool for research in this field.

Burnout is one end of a continuum in the relationship people establish with their jobs. As a syndrome of exhaustion, cynicism, and ineffectiveness, it stands in contrast to the energetic, involved, and effective state of engagement with work. Recently, the multidimensional theory of burnout has been expanded to this other end of the continuum (Leiter and Maslach, 1998). Engagement is defined in terms of the same three dimensions as burnout, but the positive end of those dimensions rather than the negative. Thus, engagement consists of state of high energy (rather than exhaustion), strong involvement (rather than cynicism), and a sense of efficacy (rather than a reduced sense of accomplishment). This state is distinct from established constructs in organizational psychology such as organizational commitment, job satisfaction, or job involvement.
Organizational commitment focuses on an employee’s allegiance to the organization that provides employment, while engagement focuses on the work itself. Job satisfaction is the extent to which the job is a source of need fulfillment and contentment, or a means of freeing employees from hassles or dissatisfiers; it does not encompass the person’s relationship with the work itself. Job involvement is similar to the involvement aspect of engagement with work, but does not include the energy and effectiveness dimensions. Engagement with work provides a more complex and thorough perspective on an individual’s relationship with work.

While the burnout concept describes a syndrome of distress that may arise from enduring problems with work, engagement describes a positive state of fulfillment.

One important implication of the burnout-engagement continuum is that strategies to promote engagement may be just as important for burnout prevention as strategies to reduce the risk of burnout. A work setting that is designed to support the positive development of three core qualities of energy, involvement, and effectiveness should be successful in promoting the well-being and productivity of its employees.

**Job-person Mismatches:**

Inherent to the fundamental concept of stress is the problematic relationship between the individual and situation. In the case of job stress, the basic idea is that it is the result of a misfit between the person and the job. Some of the earliest models of organizational
stress focused on this notion of job-person fit (French and Kahn, 1962; French et al., 1982), and subsequent theorizing continues to highlight the importance of both individual and contextual factors (see Kahn and Byosiere, 1992).

The six areas in which mismatches can occur are: workload, control, reward, community, fairness, and values. A brief summary of these six mismatches follows (see Maslach and Leiter, 1997, for a more complete presentation):

**Work overload** occurs when job demands exceed human limits. People have to do too much in too little time with too few resources. When overload is a chronic job condition, not an occasional emergency, there is little opportunity to rest, recover, and restore balance.

**Lack of control** occurs when people have little control over the work they do, either because of rigid policies and tight monitoring, or because of chaotic job conditions. Such lack of control prevents people from being able to solve problems, make choices, and having some input into the achievement of the outcomes for which they will be held accountable.

**Insufficient reward** involves a lack of appropriate rewards for the work people do. This lack of recognition devalues both the work and the workers. Prominent among these rewards are external ones such as salary and benefits, but the loss of internal rewards (such as pride in doing something of importance and doing it well) can also be a critical part of this mismatch.
Breakdown of community occurs when people lose a sense of positive connection with others in workplace. Some jobs isolate people from each other, or make social contact impersonal. However, what is most destructive of community is chronic and unresolved conflict with others on the job. Such conflict produces constant negative feelings of frustration and hostility, and reduces the likelihood of social support.

Absence of fairness occurs when there is a lack of system of justice and fair procedures which maintain mutual respect in the workplace. Unfairness can occur when there is inequity of workload or pay, or when there is cheating, or when evaluations and promotions are handled inappropriately. If procedures for grievance or dispute resolution do not allow for both parties to have voice, then those will be judged as unfair.

Value conflict occurs when there is a mismatch between the requirements of the job and people’s personal principles. In some cases, people might feel constrained by the job to do things that are unethical and not in accord with their own values. For example, they might have to tell a lie or be otherwise deceptive or not forthcoming with the truth. In other instances, people may be caught between conflicting values of the organization, as when there is a discrepancy between the lofty mission statement and actual practice, or when the organization undergoes major changes.

2.2.11 Action Theory

Stressors are defined in relation to the regulation of actions: anything which disturbs the regulation of the action process is a stressor (Frese and Zapf, 1994; Semmer, 1984). A taxonomy of regulation problems distinguishes between three different factors resulting
in disturbed regulation: (1) regulation obstacles; (2) regulation uncertainty; (3) overtaxing regulations (Frese and Zapf, 1994; Leitner et al, 1987; Semmer, 1984).

**Regulation Obstacles:** Regulation obstacle (Leitner et al, 1987) is any event or condition ‘that makes it harder or even impossible to pursue a goal or to regulate an action’ (Frese and Zapf, 1994: 311).

**Regulation Uncertainty:** The working individual experiences regulation uncertainty when goals are badly specified, or when it is unknown which plans lead to the goal, what feedback is relevant, or when there is no or inadequate feedback. Instances of regulation uncertainty are qualitative overload (Frankenhaeuser and Gardell, 1976), role conflict and role ambiguity (Kahn, 1973). Receiving contradictory assignments (such as: do your job extremely fast, but do not fall below the quality standards) causes a situation in which it is not clear which operations are able to accomplish both requirements; likewise unclear task assignments make adequate goal development difficult.

**Overtaxing Regulations:** Regulations are taxed (and may be overtaxed) when actions have to be regulated with high speed or intensity.

Farr and Ford (1990) pointed out that stressful work situations can impede role innovation. They argued that an organization must provide some ‘slack’ that allows an individual to think about the future. In situations of extreme workload in which one is
only re-acting on immediate requests no time and possibilities are left to innovative, long-term thinking.

One mechanism suggests that stressors reduce the likelihood of identifying opportunities for innovation and initiative, thereby impeding these actions.

There is increasing evidence that demand-control-support concept could be used successfully in job redesign. One of the first published controlled evaluations was the one made by Jackson (1983). Theorell (1998) studied the effects of increased participation in decision making in a hospital outpatient facility using randomly assigned experimental and control working groups with a pretest and a six-month follow-up period. The job change intervention involved the training of all employees in participatory group problem-solving techniques and a doubling or tripling of the number of scheduled staff meetings to two per month. Both of these components of the intervention may result in increased decision latitude and increased social support. The evaluation after the follow-up period showed that there was a significant drop in two job stressors related to decision making: role conflict and role ambiguity. There was also significantly reduced emotional strain, job dissatisfaction, absenteeism and intention to leave the job.

Effort is the individual’s response to the demands made upon him or her. These responses could be divided into extrinsic effort which refers to the individual’s effort to cope with external demands and intrinsic effort which refers to the individual’s own drive to fulfill his or her expectations.
Reward is a composite measure of monetary rewards, esteem and social control. Composite measures of effort-reward imbalance are based upon calculations of the ratio or the difference between scores for effort and reward, respectively.

*Intervention strategy based upon effort-reward:* The general principle is that rewards should be increased for a high degree of effort. This has been applied in many contexts. The most instrumental application is of course increased monetary reward. However, a more psychosocial application builds upon possibilities to increase esteem associated with the job as well as increased status control. All of these interventions are dealing with the framework around the job situation, not with the work content itself. The three reward dimensions are inter-correlated since increased monetary reward may increase both esteem and status control. The monetary possibility should be used with moderation since employers who are uninterested in a good working environment may ‘buy themselves out’.

In the modern working world it is often difficult for a company to decrease demands (and extrinsic rewards resulting from them) although the personnel management and the occupational health care team should monitor quantitative demands carefully. It is becoming increasingly difficult to monitor quantity especially in large technically advanced companies in which many employees work part of their time at home at the computer. The tendency is that working hours are increasing in the whole industrialized world for this group of employees. It will be an important research goal for the near
future to establish what amount of working hours may be harmful to health in different kinds of occupations.

Fay, Sonnentag and Frese (1998) made a study on the relationship between stressors, innovation and personal initiative. Role innovation refers to the implementation of new ideas, behaviors or procedures in one’s work role. Therefore, there is some overlap between personal initiative and role innovation, but again, both concepts should not be equated as they differ in two aspects. First, role innovation refers to innovating some aspects of one’s role by fulfilling role requirements differently; for example by choosing other methods for achieving work targets or by rearranging the order in which different parts of the job are done (West, 1987a). In contrast, personal initiative pursues extra-role goals. Second, role innovation is a rather descriptive concept focusing on doing one’s job differently from others (West, 1987a), irrespective of the time-frame or goals associated with these innovative behaviors. Role innovation does not necessarily include features crucial for personal initiative such as a long-term focus and persistence when confronted with barriers and setbacks.

*Predictors of Innovation:* Research addressed both individual and situational characteristics. With respect to individual characteristics the most prominent predictors of innovation are intrinsic motivation, domain-relevant skills, and creativity-relevant skills (Amabile, 1988). A consistent finding with respect to situational factors is that control at work, availability of resources and supportive leadership are positively related to innovation (Amabile et al, 1996; Scott and Bruce, 1994; West, 1987b).
The adverse health effects of Effort-Reward Imbalance at Work were investigated by Siegrist (1998). The core assumption of this model maintains that the work role in adult life defines a crucial link between self-regulatory functions such as self-esteem and self-efficacy and the social opportunity structure. In particular, the availability of an occupational status is associated with recurrent options of contributing and performing, of being rewarded or esteemed, and of belonging to some significant group (e.g. work colleagues). Yet these potentially beneficial effects of the work role on emotional and motivational self-regulation are contingent on a basic prerequisite of exchange in social life, that is, reciprocity. Effort at work is spent as part of a socially organized exchange process to which society at large contributes in terms of rewards. Societal rewards are distributed by three transmitter systems to the working population: money, esteem and status control. The model of effort-reward imbalance claims that lack of reciprocity between costs and gains (i.e. high-cost/lo-gain conditions), define a state of emotional distress with special propensity to autonomic arousal and associated strain reactions (Siegrist, 1996).

2.2.12 Theory of Preventive Stress Management in Organizations

(Quick et al, 1998)

Quick and Quick (1984) define preventive stress management as an organizational philosophy and set of principles which employs specific methods for promoting
individual and organizational health while preventing individual and organizational distress.

As a basic philosophy, preventive stress management consists of basic ideas, beliefs and principles to achieve good health and high performance in organizations. The basic ideas and beliefs are embodied in five guiding principles:

- Individual and organizational health are interdependent
- Leaders have a responsibility for individual and organizational health
- Individual and organizational distress are not inevitable
- Each individual and organization reacts uniquely to stress
- Organizations are ever-changing dynamic entities

### 2.3 Leadership

Leadership has been described as “the ability to influence the activities of others, through the process of communication, toward the attainment of a goal” (Mosley, Pietri and Megginson, 1996). Many studies have been conducted over the years on leadership, a major determinant of organizational behavior.
2.3.1 Studies on Leadership

2.3.1.1 Hawthorne Studies

Hawthorne studies refer to a series of studies conducted during the period 1924-1932 by Mayo and Roethlisberger in an electricity company at Illinois, U.S.A. One of the objectives of the research was to study whether the productivity of the workers was affected by changes in illumination, rest period and lunch breaks. The finding was that less light, shorter and fewer rest periods and shorter lunch breaks resulted in increased productivity. When all these changes were eliminated and the normal working conditions were resumed, it was found that the productivity and togetherness of workers went up. The increase in productivity was a reflection of the attitude of workers. Mayo and Roethlisberger concluded that a leader has not only to plan, decide, organize, lead and control but also consider the human element.

2.3.1.2 Theory X and Theory Y

In 1960, Mc Gregor classified leadership styles into two and called them Theory X and Theory Y. Theory X style of leaders is based on the premise that most people dislike work and will avoid it wherever possible. Leaders with such a belief, small in number, want to lead and take responsibility over a large majority of people who want to be directed and who want to avoid responsibility. In this style of leadership, the leaders
exercise strong controls and direction and wherever necessary punish people if they do not do the work. On the contrary, Theory Y leaders believe that people will work hard and assume responsibility if they can satisfy their personal needs and objectives of their organization.

2.3.1.3 Iowa Leadership Studies

Ronald Lippitt and Ralph K. White (1939) made a study under the direction of Kurt Lewin at the University of Iowa. The study was focused on the task performance of ten-year old boys in three groups. Each group was submitted to three different styles of leadership - authoritarian, democratic and laissez-faire. The authoritarian leader was very directive and did not allow participation of the team. The democratic leader encouraged discussion with the group and allowed participation in making decisions. The laissez-faire leader gave complete freedom and did not provide any leadership. Iowa study was significant as it was the first to analyze leadership from the standpoint of scientific methodology and it showed that different styles of leadership can produce different reactions from the same or similar groups.

2.3.1.4 Ohio State Leadership Studies (Stogdill, 1957)

In 1945, the Bureau of Business Research at Ohio State University initiated a series of studies on leadership. A Leader Behaviour Description Questionnaire (LBDQ) was
administered to analyze leadership in numerous types of groups and situations. The studies were conducted on Air Force Commanders and members of bomber crew, officers, non-commissioned personnel, civilian administrators in the Navy Department, manufacturing supervisors, executives, teachers, principals and school superintendents and leaders of various civilian groups. They did not have any satisfactory definition of leadership. The contributions of these studies were the emergence of two dimensions of leadership- 'consideration’ and ‘initiating structure’. ‘Consideration’ refers to the extent to which individuals are likely to have job relationship characterized by mutual respect for ideas of subordinates and consideration of their feelings. ‘Initiating structure’ is a reflection of the extent to which individuals are likely to define and structure their roles and those of their subordinates towards attainment of their goal. The value of Ohio State Studies lies in the fact that they had a two-dimensional approach, the first of its kind that emphasized the importance of both task and human dimensions in assessing leadership.

2.3.1.5 Michigan Studies on Leadership Styles

In 1961, Rensis Likert, the one-time director of the Institute for Social Research of the University of Michigan identified two major styles of leadership orientation- employee orientation and production- orientation. The employee oriented style of the leader gave emphasis to the relationship aspect of subordinates by having confidence and trust in them and resorting to two-way communication. The production oriented style of the leader gave emphasis to the production and technical aspects of the job. The subordinates were considered as tools employed to accomplish the goals of the organization. A major
finding of this study was that employee-oriented style brought high-producing performance when compared to production-oriented style.

2.3.2 Theories of Leadership

2.3.2.1 Trait Theory (Kelly, 1974)

Trait theory is based on the belief that a leader possesses certain traits, if not inborn, acquired through learning and experience. These traits were classified into six categories-physical characteristics (age, height, weight etc.); background characteristics education, social status, mobility, experience etc.); intelligence (ability, judgment, knowledge etc.); personality; task-oriented characteristics and social characteristics. The research findings could not arrive at a standard set of traits that can be said to be universal traits possessed by leaders. The findings did not agree on which traits are generally found in leaders or on which ones are more important than others. Traits of the person as well as demand of the situation together determine the effectiveness of the leader.

2.3.2.2 Group and Exchange Theories

Having their roots in social psychology, Group and Exchange theories mean simply that the leader provides more benefits/rewards than burdens/costs for followers. Propounded by Hollandder and Julian (1969), the theory states that there must be a positive exchange between the leader and the followers in order that group goals can be accomplished. The positive exchange can be in the form of praise, pay increase or promotion. Such positive exchange has positive impact on attitudes, satisfaction and performance of followers.
Consequently the followers respect the leader and give due regard for his status and esteem.

### 2.3.2.3 The Vertical Dyad Linkage Model

Also known as Leader-Member-Exchange (LMX) Theory, the Vertical Dyad Linkage theory says that leaders treat individual subordinates differently. Leader and subordinates develop dyadic (two-person) relationships that affect the behavior of both the leader and subordinates. Over a period, the leader will develop an “in-group” of subordinates and an “out-group” of subordinates. “In-group” subordinates were characterized by having more authority and more influence with the leader and also exhibiting higher-levels of self-efficacy, when compared with the “out-group”. Dansereau, Cashman, and Graen (1973), Graen and Cashman (1975), and Dansereau, Graen, and Haga (1975) and Grain (1976) proposed that leader-member relationships are heterogeneous and thereby established Leader-Member Exchange Theory. Leader-member exchange theory maintains that the leader and each individual member of a work group have a unique "dyadic" relationship. Therefore, the dyad, rather than the work group or the individual, is treated as the unit of analysis in leadership. Graen and Cashman (1975) coined the term vertical dyad linkage (VDL). In leader-group interactions, judgments are made and opinions are formed by the leader and the member of each dyad. Leaders give more positive tasks to members who they feel support them. Each dyad is seen as a social exchange or negotiated transaction of leader-member.
2.3.2.4 Social Learning Theory

Bandura (1977) stated that there is continuous reciprocal interaction between person, environment and behavior. A person produces the environmental conditions through his actions. The environmental conditions affect his behavior. The behavior generates experience which determines what a person becomes and what he can do. This in turn affects his ensuing behavior. Individuals interact with each other and learn in an environment. This is a social process. Hence this theory is called Social Learning Theory. This theory assumes that the leader knows how his behavior is controlled by various needs, situations and experiences that he undergoes.

2.3.2.5 Managerial Grid Theory

Blake and Mouton postulated the Managerial Grid theory based on the assumption that leaders can be oriented towards both tasks and persons. According to this theory leaders are most effective when they achieve a high and balanced concern for people and for tasks.

A popular framework for thinking about a leader’s ‘task versus person’ orientation, the Managerial Grid, or Leadership Grid (figure 2.6), plots the degree of task-centeredness versus person-centeredness and identifies five combinations as distinct leadership styles.
Understanding the Model the Managerial Grid is based on two behavioral dimensions:

* Concern for People – This is the degree to which a leader considers the needs of team members, their interests, and areas of personal development when deciding how best to accomplish a task.

* Concern for Production – This is the degree to which a leader emphasizes concrete objectives, organizational efficiency and high productivity when deciding how best to accomplish a task.
Using the axis to plot leadership ‘concerns for production’ versus ‘concerns for people’, Blake and Mouton defined the following five leadership styles:

Country Club Leadership – High People/Low Production This style of leader is most concerned about the needs and feelings of members of his/her team. These people operate under the assumption that as long as team members are happy and secure then they will work hard. What tends to result is a work environment that is very relaxed and fun but where production suffers due to lack of direction and control.

Produce or Perish Leadership – High Production/Low People Also known as Authoritarian or Compliance Leaders, people in this category believe that employees are simply a means to an end. Employee needs are always secondary to the need for efficient and productive workplaces. This type of leader is very autocratic, has strict work rules, policies, and procedures, and views punishment as the most effective means to motivate employees.

Impoverished Leadership – Low Production/Low People This leader is mostly ineffective. He/she has neither a high regard for creating systems for getting the job done, nor for creating a work environment that is satisfying and motivating. The result is a place of disorganization, dissatisfaction and disharmony.

Middle-of-the-Road Leadership – Medium Production/Medium People This style seems to be a balance of the two competing concerns. It may at first appear to be an ideal compromise. Therein lies the problem, though: When you compromise, you necessarily give away a bit of each concern so that neither production nor people needs are fully met.
Leaders who use this style settle for average results and often believe that this is the most anyone can expect.

Team Leadership – High Production/High People According to the Blake Mouton model, this is the pinnacle of managerial style. These leaders stress production needs and the needs of the people equally highly. The premise here is that employees are involved in understanding organizational purpose and determining production needs. When employees are committed to, and have a stake in the organization’s success, their needs and production needs coincide.

This creates a team environment based on trust and respect, which leads to high satisfaction and motivation and, as a result, high production.

2.3.2.6 Contingency Theory

The search for situational variables that affect leadership roles, skills, behavior and followers’ performance and satisfaction brought about a new direction to leadership studies. The first milestone was the Contingency Theory proposed by Fred Fielder (1967). The Contingency model of leadership effectiveness developed by him contained the relationship between leadership style and the favorableness of the situation. He described situational favorableness in terms of three empirically derived dimensions—leader-member relationship, degree of task structure and leader’s position power. This theory suggests that there are eight main group situations based on combinations of the above three dimensions. The eight combinations could be arranged in a continuum with a leader who had good relations with members, facing a highly structured task and who
possessed strong power at one end; and a leader who has poor relations with members, facing a loosely structured task and who had low power at the other end of the continuum.

In this model (figure 2.7) leadership is effective when the leader’s style is appropriate to the situation, as determined by three principal factors:

1. **Leader-member relations:** The nature of the interpersonal relationship between leader and follower, expressed in terms of good through poor, with qualifying modifiers attached as necessary. It is obvious that the leader’s personality and the personalities of subordinates play important roles in this variable.

2. **Task structure:** The nature of the subordinate’s task, described as structured or unstructured, associated with the amount of creative freedom allowed the subordinate to accomplish the task, and how the task is defined.

3. **Position power:** The degree to which the position itself enables the leader to get the group members to comply with and accept his or her direction and leadership
The continuum of Leadership Behaviour

The model put forward by Robert Tannenbaum and Warren H. Schmidt (figure 2.8) framed leadership in terms of choices managers may make regarding subordinates’ participation in decision making.
Figure 2.8 Continuum of leadership behavior

1. **Forces in the manager**: The manager’s value system, confidence in subordinates, leadership inclinations, and feelings of security in an uncertain situation.

2. **Forces in the subordinate**: Expectations, need for independence, readiness to assume decision-making responsibility, tolerance for ambiguity in task definition, interest in the problem, ability to understand and identify with the goals of the organization, and knowledge and experience to deal with the problem.

3. **Forces in the situation**: Type of organization, effectiveness of the group, the problem itself (the task), and time pressure.

**2.3.2.7 Path-Goal Theory**

This theory proposed by House and Mitchell (1974) applied a Contingency approach derived from the expectancy framework of motivation theory. The Path-Goal theory
(figure 2.9) attempts to explain the impact that leader behavior has on subordinate motivation, satisfaction and performance. Four styles of leadership were identified: Directive leadership- leader gives specific directions and there is no participation by subordinates; Supportive leadership- the friendly approachable leader shows a genuine concern for subordinates; Participative leadership- the leader asks and suggestions from subordinates; Achievement- Oriented leadership- the leader sets challenging goals for subordinates and has confidence in their performance.

**2.3.2.8 Leadership Motivation Theory: Likert’s M4**

Dr Renesis Likert has studied human behaviour within many organizations. After extensive research, Dr. Rensis Likert concluded that there are four systems of management. According to Likert, the efficiency of an organization or its departments is influenced by their system of management. Likert’s categories are:
(i) **Exploitive authoritative system (M1)**

In this type of management system the job of employees/subordinates is to abide by the decisions made by managers and those with a higher status than them in the organisation. The subordinates do not participate in the decision making. The organisation is concerned simply about completing the work. The organisation will use fear and threats to make sure employees complete the work set. There is no teamwork involved.

(ii) **Benevolent authoritative system (M2)**

Just as in an exploitive authoritative system, decisions are made by those at the top of the organisation and management. However employees are motivated through rewards (for their contribution) rather than fear and threats. Information may flow from subordinates to managers but it is restricted to “what management wants to hear”.

(iii) **Consultative system (M3)**

In this type of management system, subordinates are motivated by rewards and a degree of involvement in the decision making process. Management will constructively use their subordinates ideas and opinions. However involvement is incomplete and major decisions are still made by senior management. There is a greater flow of information (than in a benevolent authoritative system) from subordinates to management, although the information from subordinate to manager is incomplete and euphemistic.
(iv) Participative (group) system (M4)

Management has complete confidence in their subordinates/employees. There is lots of communication and subordinates are fully involved in the decision making process. Subordinates comfortably express opinions and there is lots of teamwork. Teams are linked together by people, who are members of more than one team. Likert calls people in more than one group “linking pins”. Employees throughout the organisation feel responsible for achieving the organisation’s objectives. This responsibility is motivational especially as subordinates are offered economic rewards for achieving organisational goals which they have participated in setting.

2.3.3 Modern Theories of Leadership

2.3.3.1 Charismatic Leadership Theory

The characteristics of charismatic leadership are self-confidence and confidence in subordinates, high expectations for subordinates, ideological vision etc. Followers of charismatic leaders have a tendency to emulate the leader’s values and behavior. They exhibit extreme loyalty to the leader. In this leadership style, the effect of the charisma style on the followers makes them perform beyond expectations. The followers have a strong commitment to the leader and his/her mission. Some traits that get reflected in charismatic leaders are self-confidence, impression-management skills, social sensitivity and empathy.
2.3.3.2 Transactional Leadership Theory (Burns, 1978)

Transactional leadership as identified by Burns involves an exchange relationship between leaders and followers. Transactional leaders resort to exchange of rewards for effort, promises rewards for good performance and recognizes accomplishments. Transactional leaders have an active, passive or laissez-faire approach to management. In active type of transactional leadership, the leader watches and searches for deviations from rules and standards before taking corrective action. In passive type of transactional leadership, the leader intervenes only if standards are not met. In laissez-faire type of transactional leadership, the leader abdicates responsibilities, avoids making decisions.

2.3.3.3 Transformational Leadership Theory (Burns, 1978)

Transformational leadership leads to superior performance in organizations, and excels in change management. Transformational leaders are characterized by their courage, belief in people, ability to deal with complexity, ambiguity and uncertainty. They are change agents in organizations. They are visionaries and life long learners. Charisma, inspiration, intellectual stimulation and individual consideration are some attributes of transformational leadership.
Figure 2.10 X & Y Leader Model (Boje, David M (2000) Transform into Super Leaders: Transformational Leadership).
Figure 2.11 Combining Leader Traits of Weber’s (Bureaucrat, Hero & Prince) with Burn’s (Opinion, Revolutionary, Reform, Government Party) leaders using 3 D (Boje, David M (2000) Transform into Super Leaders: Transformational Leadership).

2.3.3.4 Level 5 Leadership

Jim Collins propounded a Level 5 Hierarchy for leadership style. According to him, the good-to-great leaders never want to become larger-than-life heroes. They never aspire to be put on a pedestal or become unreachable icons. They are seemingly ordinary people
quietly producing extra-ordinary results. Collins has identified the following traits as characteristic of Level 5 leaders:

(a) Ambition first and foremost for the company and concern for its success rather than for one’s own riches and personal renown. Level 5 leaders want to see the company even more successful in the next generation, comfortable with the idea that most people won’t even know that the roots of that success trace back to their efforts.

(b) They have a ferocious resolve, an almost stoic determination to do whatever needs to be done to make the company great.

(c) They look out the window to apportion credit to factors outside themselves when things go well (and if they cannot find a specific person or event to give credit to, they credit good luck). At the same time, they look in the mirror to apportion responsibility, never blaming bad luck when things go poorly.

(d) They channel their ego needs away from themselves and into the larger goal of building up a great company. Their ambition is first and foremost for the institution, not themselves.

Collins has depicted five levels of leadership which he has termed “Level 5 Hierarchy”. Level 5 refers to the highest level in a hierarchy of executive capabilities.

**Level 1 Highly Capable Individual:** Makes productive contributions through talent, knowledge, skills and good work habits.
**Level 2 Contributing Team member:** Contributes individual capabilities to the achievement of group objectives and works effectively with others in a group setting.

**Level 3 Competent Manager:** Organizes people and resources toward the effective and efficient pursuit of pre-determined objectives.

**Level 4 Effective Leader:** Catalyzes commitment to and vigorous pursuit of a clear and compelling vision, stimulating higher performance standards.

**Level 5 Level 5 Executive:** Builds enduring greatness through a paradoxical blend of personal humility and professional will.

Collins further summarizes the two sides of Level 5 leadership in terms of professional will and personal humility as follows:

<table>
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<tr>
<th><strong>Professional Will</strong></th>
<th><strong>Personal Humility</strong></th>
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<tr>
<td>Creates superb results, a clear catalyst in the transition</td>
<td>Demonstrates a compelling modesty, shunning public adulation; never boastful</td>
</tr>
<tr>
<td>from good to great.</td>
<td>Acts with quiet, calm determination; relies principally on inspired standards, not</td>
</tr>
<tr>
<td></td>
<td>inspiring charisma, to motivate.</td>
</tr>
<tr>
<td>Demonstrates an unwavering resolve to do whatever must be</td>
<td>Sets the standard of building an enduring great company; will settle for nothing less.</td>
</tr>
<tr>
<td>done to produce the best long term results, no matter how</td>
<td>Channels ambition into the company, not the self; sets up successors for even greater</td>
</tr>
<tr>
<td>difficult.</td>
<td>success in the next generation.</td>
</tr>
<tr>
<td>Sets the standard of building an enduring great company;</td>
<td>Looks in the mirror, not out the window, to apportion responsibility for poor results,</td>
</tr>
<tr>
<td>will settle for nothing less.</td>
<td>never blaming other people, external factors, or bad luck.</td>
</tr>
<tr>
<td></td>
<td>Looks out the window, not in the mirror, to apportion credit for the success of the</td>
</tr>
<tr>
<td></td>
<td>company-to other people, external factors, and good luck.</td>
</tr>
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</table>
The hypothesis postulated by Collins is that there are two categories of people: those who do not have the seed of Level 5 and those who do. As regards people who do not have the seed of Level 5 in them, they cannot subjugate their egoistic needs to the greater ambition of building something larger and more lasting than themselves. For such people, work will always be first and foremost about what they get such as fame, fortune, adulation, power, not what they build, create and contribute. By the seed of Level 5 he means the potential to evolve to Level 5. The capability residing buried or ignored within them, develops under the right circumstances. The conducive circumstances can be self-reflection, conscious personal development, a mentor, a great teacher, loving parents, a significant life-experience, a level 5 boss and so on.
2.4 Linkage with the present research problem

Workplace stress is becoming costly and a mounting problem as organizations throughout the Western world and beyond dramatically downsize, outsource and develop less secure employment contracts. Many organizations are now smaller, with fewer people doing more and feeling much less secure. Books and stress- specific journals (e.g. *Stress Medicine, Work and Stress, International Journal of Stress Management*) are illustrative examples of the importance of the subject in the context of accelerated the pace of work with demands for a greater immediacy of response.

Research done (e.g. Cooper and Payne, 1988; Sauter and Murphy, 1995; Cooper 1996) in occupational stress has concentrated on identifying occupational or organizational sources of stress as they relate to adverse strain indicators (e.g. job dissatisfaction, mental ill health, sickness absence etc.) and in highlighting the potential individual difference variables or moderators in the stress- strain process.

2.41 Stress

2.41.1 The Meta-Model of Organizational Stress (Beehr, 1998) Figure 2.8 clarifies the roles of time (duration), environmental characteristics other than the stressors themselves (situational characteristics), and personal characteristics by specifying that they have moderator effects rather than main effects. In addition, it shows that coping or adaptation can directly affect strains and organizational outcomes as well as stressors, and that
individual strains may lead to organizational outcomes. The large rectangle in the middle of the figure is the ‘core relationship’ in all models and theories of occupational stress in the sense that it comprises the very definition of an occupational stress situation: stressors in the work environment can cause strain in the individual. If this relationship is not present in a situation, then there is no occupational stress in the situation.

Fig. 2.12 Parts of the occupational stress model tested in previous research (Beehr, 1995)

Regarding the strains themselves, they are proposed to come in three types (Beehr, 1995; Kahn and Byosiere, 1992), e.g. psychological, physical or physiological, and behavioral. As noted in Kahn and Byosiere’s review, there seems to be ample evidence that organizational stressors are linked to psychological strains (e.g. anxiety, depression) and probably to physiological strains (e.g. hypertension, catecholamine and cortisone
secretions), but behavioral strains have been studied less often in relation to organizational stressors.

The second study (O’Driscoll and Beehr, 1994) examining the uncertainty model of occupational stress in two major accounting firms (one in the USA and one in New Zealand), was a path analytical study looking at leadership behaviors leading to stressors, which led to uncertainty, which in turn led to strains.

2.41.2 Personal Characteristics as Moderators of Stressor-Strain Relationship

If there are individual differences or personal characteristics that moderate the relationship between occupational stressors and employee’s strains, they would either strengthen or weaken the potential effects of stressors on strains. Many such differences have been proposed, but the research results have not often strongly confirmed them. One of the most popular is Type A Behavioral Pattern, which is composed of several elements, such as employee’s hostility, aggressiveness, competitiveness, and sense of time urgency (e.g. Friedman and Rosenman,1974; Matthews, 1982).

2.41.3 Environmental or Situational Characteristics as Moderators of Stressor-Strain relationships

In addition to personal characteristics, environmental characteristics can moderate the relationship between stressors and strains, the most frequently studied situational moderator is social support. Some sources of support and some supportive behaviors are
more helpful than others, i.e. may result in more moderating effects than others (Beehr, 1995). Regarding specific behaviors, the nature of contents of their face-to-face communications (e.g. Beehr et al., 1990; Fenlason and Beehr, 1994; Fenlason et al., 1997).

Early research in stress and social support suggested that information exchange during supportive situations or episodes might constitute the crux of social support (e.g. Cobb, 1976), and this led us to examine what people say to each other as examples of social support.

Aside from social support, the other environmental or situational characteristic that might moderate the stressor-strain relationship is the control or autonomy the person has in his or her work situation. In organizational psychology, the job characteristic of autonomy has often been found related to good outcomes such as intrinsic job motivation and job satisfaction, and it is one of the characteristic of the most prominent model of job design (Hackman and Oldham, 1976; 1980).

2.41.4 Evidence regarding Organizational Consequences of Job Stress

The organization is also often affected by stress on the employees. This usually occurs through employee behaviors that have costs or benefits to the organization. Gupta and Beehr (1979) found, in a sample of five companies, employees who experienced more of the job stressors of role ambiguity, role overload, under-utilization of skills, and resources inadequacy were somewhat more likely to be absent during the subsequent month than other employees.
A much less frequently studied organizational outcome, tardiness, may also be related to occupational stress. At least one study (Jamal, 1984) found evidence that tardiness might be related to job stressors or individual strains.

2.41.5 Person-Environment Fit Theory (Edwards, Caplan and Harrison, 1998)

Person constructs relevant to stress research include Type-A behavior (Friedman and Roseman, 1959), locus of control (Rotter, 1966), hardiness (Kobasa, 1979), and coping styles (Meneghan, 1983). The environment has been construed as stressful life events (Rabkin and Struening, 1976), daily hassles (DeLongis et al., 1982), and chronic stressors such as role conflict and ambiguity (Kahn et al., 1964; Jackson and Schuler, 1985), role overload and underload (French and Caplan, 1972), and job demands and decision latitude (Karasek and Theorell, 1990). This dual emphasis on the person and environment in stress research is characteristic of the interactive perspective in psychology (Lewin, 1951; Magnusson and Endler, 1977; Murray, 1951; Pervin, 1989), which indicates that behavior, attitudes, and well-being are determined jointly by the person and environment.

The contributions of the person and environment to stress have been formalized in the person-environment (P-E) fit theory of stress (Caplan, 1983, 1987a, 1987b; Caplan and Harrison, 1993; French et al., 1982; French et al., 1974; Harrison, 1978, 1985). The core premise of P-E fit theory is that stress arises not from the person or environment separately, but rather by their fit or congruence with one another. This simple yet powerful notion is reflected in numerous theories of stress and well-being (Cummings
and Cooper, 1979; Edwards, 1992; McGrath, 1976; Rice et al., 1985; Schuler, 1980) and is largely responsible for the widespread impact of P-E fit theory in stress research (Edwards and Cooper, 1990; Eulberg et al., 1988).

The fundamental premise of P-E fit theory is that stress arises from misfit between the person and the environment. The core elements of the theory are shown in Figure 2.1, which depicts three basic distinctions central to P-E theory. The first and most basic distinction is between the person and the environment. This distinction is a prerequisite or the conceptualization of P-E fit and provides the basis for examining reciprocal causation between the person and environment. The second distinction is between objective and subjective representations of the person and environment. The objective person refers to attributes of the person as they actually exist, whereas the subjective person signifies the person’s perception of his or her own attributes (i.e., the person’s self-identity or self-concept). Analogously, the objective environment includes physical and social situations and events as they exist independent of the person’s perceptions, whereas the subjective environment refers to situations and events as encountered and perceived by the person. As shown on the Figure 2.13, the objective person and environment are casually related to their subjective counterparts (Harrison, 1978). These relationships are imperfect due to perceptual distortions (e.g. repression, denial), cognitive construction processes (Weick, 1979), limited human information processing capacities (March and Simon, 1958), and organizational structures that limit access to objective information (Caplan, 1987b; Harrison, 1978).
The two distinctions described above combine to yield four types of correspondence between person and environment constructs: (1) **objective P-E fit**, which refers to the fit between the objective person and objective environment; (2) **subjective P-E fit**, or the fit between the subjective person and the subjective environment; (3) **contact with reality**, meaning the degree to which the subjective environment corresponds to the objective environment; and (4) **accuracy of self-assessment**.

Fig.2.13 A model of stress as person-environment fit. Concepts within circles are discrepancies between the two adjoining concepts. Solid lines indicate casual effects. Broken lines indicate contributions to person-environment comparisons (Adapted from Harrison, 1978)

A third distinction shown in Figure 2.13 differentiates two types of P-E fit. The first involves the fit between the demands of the environment and the abilities of the person.
Demands include quantitative and qualitative job requirements, role expectations, and group and organizational norms, whereas abilities include the aptitudes, skills, training, time, and energy the person may muster to meet demands. A second type of P-E fit entails the march between the needs of the person and the supplies in the environment that pertain to the person’s needs. P-E fit theory characterizes needs in general terms, encompassing innate biological and psychological requirements, values acquired through learning and socialization, and motives to achieve desired ends (French and Kahn, 1962; Harrison, 1985). Supplies refer to extrinsic and intrinsic resources and rewards that may fulfill the person’s needs, such as food, shelter, money, social involvements, and the opportunity to achieve (Harrison, 1978).

Outcomes of P-E misfit: Coping entails efforts to improve objective P-E fit, either by changing the objective person (i.e., adaptation) or the objective environment (i.e., environmental mastery) (French et al., 1974). For example, a person experiencing excessive demands at work may seek training to enhance his or her abilities or attempt to negotiate a decreased workload with his or her supervisor (Harrison, 1978). Defense involves efforts to enhance subjective P-E fit through a cognitive distortion of the subjective person or environment (e.g. repression, progression, denial) without changing their objective counterparts (French et al., 1974). For instance, a person may respond to role overload by overestimating his or her abilities or by downplaying or ignoring excess demands. Harrison (1978) notes that defense may also include the denial of experienced strain, such that the person acknowledges subjective P-E misfit but discounts its resulting negative impacts on health. Another form of defense is described by French et al., (1974),
who indicate that person may respond to subjective misfit by reducing the perceived importance of the dimension on which misfit occurs, as when a person disengages from unattainable goals (Klinger, 1975; Schuler, 1985). The terms coping and defense do not imply that defense is more primitive or undesirable than coping (Caplan, 1987a). Indeed, defense mechanisms such as denial can be adaptive, particularly when the objective person and environment cannot be changed (Lazarus, 1983). The choice from among these alternative methods of adjustment is influenced by various person and environment factors, such as stable preferences, coping styles, and environmental resources and constraints.

*Relationship of demands-abilities fit to strain:* Strain should increase as demands exceed abilities, assuming that excess demands inhibit the receipt of supplies required to fulfill needs (Harrison, 1978). In contrast, excess abilities may increase, decrease, or have no effect on strain. Excess abilities will not influence strain when they cannot be used to acquire supplies, for example, excess technical skills specific to a particular job demand may be of little use for meeting other demands or fulfilling other work needs or goals. Excess abilities may decrease strain by providing supplies for needs, in the way that being able to complete one’s work more quickly than required creates time for reading, socializing, or other pleasurable activities (Harrison, 1978). Alternatively, excess abilities may decrease strain by allowing the person to conserve personal resources (e.g. time, energy) to apply toward future demands. These two mechanisms by which excess abilities may reduce strain represent carryover and conservation, as discussed with regard to the reduction of strain associated with excess supplies (Edwards, 1996). Finally, excess
abilities may increase strain by creating insufficient supplies for motives, as when the inability to utilize valued skills results in boredom and lowered self-esteem (Harrison, 1978). Excess abilities may also increase strain when they threaten the fulfillment of future demands. For example, unused knowledge or skills may be forgotten, making the person susceptible to task overload if demands increase in the future. These two processes correspond to interference and depletion respectively (Edwards, 1996).

2.41.6 Cognitive Theory of Emotion (Lazarus, 1991)

In the cognitive theory of emotion developed by Lazarus (1991), cognitive appraisal or evaluation of an experience stressor precedes any form of emotional response. In this view, negative emotions are the result of a multi-stage appraisal process, which includes the taxing of stressor properties and of a person’s coping repertoire under exposure. Negative affect is considered a common reaction to conditions that exceed a person’s coping abilities and thus threaten her or his self. Again, this theory would predict cognitive and behavioral adjustment to a high-cost/low-gain condition as a consequence of cognitive appraisal processes.

Figure 2.14 The model of effort-reward imbalance at work

<table>
<thead>
<tr>
<th>Intrinsic (person)</th>
<th>Critical coping (need for control and approval)</th>
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<tr>
<td>Extrinsic (situation)</td>
<td>High effort</td>
</tr>
<tr>
<td></td>
<td>Demands obligations</td>
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122
The core elements of the stress process are: (1) organizational demands and stressors, which lead to (2) the stress response, resulting in (3) eustressful or distressful consequences (Quick et al, 1997: 4-5; Selye, 1976a:15). Organizational demands and stressors are the physical or psychological triggers for the stress response. The stress response is the generalized, patterned, unconscious mobilization of the body’s natural energy resources and results from the combined action of the sympathetic nervous and endocrine systems. The stress response enables individuals to manage organizational demands and stressors. Eustressful consequences of stressful experiences or events are healthy, positive and constructive while distressful consequences are unhealthy, negative and destructive. The relationships among these constructs are expressed in two hypotheses.

Hypothesis 1: Intense, frequent, prolonged organizational demands increase the stress response in people at work.

Hypothesis 2: Intense, frequent, prolonged elicitation of the stress response increases the risk and incidence rates of distressful health consequences.

Modifiers of the stress response help account for variance in consequences across individuals, influencing whether the consequences are eustressful or distressful. These dispositional factors and individual difference modifiers influence vulnerability and help account for significant portions of the explained variance in consequences. Of the numerous modifiers of the stress response, Type A/B Behavior Pattern (TABP/TBBP)
(Jenkins, 1997), hardiness (Oullette, 1997), positive/negative affect (Burke et al, 1993) and self-reliance (Quick et al, 1996) may be among the most influential moderators. Wofford and Daly (1997) suggest that cognitive-affective stress propensity (CASP), which is a latent reactivity variable, may underlie these more manifest modifiers. For example, individuals high in CASP might possess more Type A Behavior Pattern, less hardiness, more negative affect, and less self-reliance, thus pre-disposing them to greater risk of distress. Or, individuals low in CASP might possess more Type B Behavior Pattern, more hardiness, more positive affect, and more self-reliance, thus immunizing them against the risk of distress. Because the stress response is a general response involving psychological as well as somatic (bodily) responses, there are parallel physiological susceptibility (Schwartz et al, 1996) and natural, protective, immunizing mechanisms and defenses (Ursin, 1997).

Hypothesis 3: Individuals high in vulnerability modifiers are at greater risk of distress than individuals low in vulnerability modifiers.

Corollary: Individuals high in protective mechanisms and defenses are immunized against the risk of distress more than individuals low in these factors.

Frankenhaeuser’s (1991) discussion of several studies provides the most direct evidence confirming the effects of workload and work-related demands on neuroendocrine arousal and the stress response.
Orly, Court and Petal (2009) are of the view that role conflict concerns incompatible role expectations. Such conflict is related to conceptual differences between workers and different supervisors regarding the content or importance of required job tasks. This creates conflict: the commitment to a number of superiors versus the individual’s values pertaining to the organization’s requirements (Kahn and Byosiere, 1992). Some researchers have suggested that in order to prevent role conflict, organizations should function according to the classic organizational theory principle of unity of command, that is, that the employee should be supervised by a single superior and work according to a single plan. According to Weisner (2003) and Rizzo et al (1970), an organization which cares for its employees must spare them the “cross-fire” of two or more superiors who have incompatible work instructions and expectations.

Role ambiguity expresses the ambivalence that is to be expected when role expectations are not clear due to lack of information about the role and the work it entails. The employee does not know where to direct his or her efforts, and moreover, whether his or her superiors will deem the results of the role performance a “success” or a “failure” (Beehr and Bhagat, 1985; Rizzo et al, 1970). Thus another aspect of role ambiguity is the employee’s inability to predict the results of his or her actions. This gives the worker a sense of lack of control, which has been identified as a strong contributor to stress (Karasek, 1979). An organization’s size and complexity may also give the employee a sense of not comprehending the essence of the job. Advanced technology and rapid organizational growth further add to organizational complexity, so that employees find it hard to be familiar with and have expertise in all the technical topics relevant to their
roles. Classical organizational theory maintains that each role should have a particular array of tasks and areas of responsibility (Weisner, 2003). Clear definition of role requirements gives superiors license to expect employees to be responsible for performing their roles. But if employees are not aware of the role requirements and what is expected of them, they will hesitate to make decisions and will work by trial and error aiming to meet their superiors’ expectations (Rizzo et al, 1970).

Role overload is defined as incompatibility between the role requirements and the amount of time and resources available to comply with these requirements (Rizzo et al, 1970). Other researchers emphasize only the time dimension as the main basis for role overload (Newton and Keenan, 1987). In the past role overload was considered part of role conflict. Problems of time, resources and capability were all contained under the various definitions of role conflict, compromising between the time put into the job, its quantity and quality (Conley and Woosley, 2000; Kahn and Byosiere, 1992). Today, role overload is understood to be distinct from role conflict.

Role overload is related to number of sick days, feelings of anxiety, frustration, depression, decrease in self-confidence, job burnout, attention and concentration problems and work accidents (Glisson et al, 2006; Kahn and Byosiere, 1992). Role overload poses a threat to the employee in performing his or her role and also increases withdrawal behavior patterns from the employing organization- early retirement, striking, leaving, absenteeism and more (Pelletier, 1992; Rahim, 1992; Jamal, 1990).
Karasek’s (1979) classic Job-Demands-Control model posits that workers whose jobs have high demands (related to role overload) but give them little control suffer most from stress-related problems. However, testing of this model has yielded inconsistent results (Rodriguez et al, 2001), and it has become clear that additional, contextual factors must be examined for a clearer picture of these relationships to emerge.

Organizational commitment: Organizational commitment refers to the employee’s attachment to the employing organization—namely, the commitment to the entire organization as the employee perceives it (Morrow, 1993) and the organization’s support for the employee (Zaitmen-Speiser, 2005; Whitener, 2001). According to Buchanan (1974) organizational commitment is the emotional connection to a particular organization, which is characterized by three major parameters in the individual’s attitudes towards the organization:

(1) Identification- internalization of the organization’s goals and values

(2) Involvement- activity that the employee performs as part of his or her role

(3) Loyalty- a sense of belonging to the employing organization

Popper (1984) stresses that organizational commitment reflects the individual’s unique relationship with the organization, and that this relationship is significant in explaining the individual’s behavior in the organization. The term rises out of a variety of behaviors characteristic of work, as different researchers present them (Allen and Meyer, 1996; Gellatly, 1995; Bycio et al, 1995; Bashaw and Grant, 1994; Meyer et al, 1993; Mathieu
and Zajac, 1990). For instance, leaving (or propensity to leave) expresses a negative emotional reaction towards various aspects of the job and the role (Kondratuk et al, 2005; Meyer and Allen, 1997; Mathieu and Zajac, 1990). Negative correlations were also found for absenteeism (Gellatly, 1995; Allen et al, 1993) and positive correlations for attendance (Mathieu and Zajac, 1990).

Organizational commitment is characterized by willingness to maintain membership in the organization, identification with the organization’s values and goals and willingness to invest effort in order to support the organization’s goals. The behavioral approach to organizational commitment (Angle and Lawson, 1993; Meyer and Allen, 1984) holds that the employee is committed to a certain mode of action in the organization as a whole, but is not necessarily committed to any particular entity in the organization. According to this approach, the employee might reach a psychological state of commitment solely as a result of engaging in binding behaviors. That is, behavior which in fact turns the termination of the organizational commitment into a loan with a substantial price (such as accumulation of a retirement fund, seniority etc). If commitment does develop, it is considered to be a result of the commitment to action. Such a development might take place in order to spare the employee cognitive dissonance and to preserve a positive self-perception of controllability (Weisner, 2003).
2.41.7 Workplace dimensions, stress and job satisfaction (Fairbrother and Warn, 2003)

Stress and occupational outcomes: Stress is associated with impaired individual functioning in the workplace. Negative effects include reduced efficiency, decreased capacity to perform, dampened initiative and reduced interest in working, increased rigidity of thought, a lack of concern for the organization and colleagues, and a loss of responsibility (Greenberg and Baron, 1995; Matteson and Ivancevich, 1982). Stress has been associated with important occupational outcomes of job satisfaction, organizational commitment and employee withdrawal behavior (Naumann, 1993; Sullivan and Bhagat, 1992; Tett and Meyer, 1993; Williams and Hazer, 1986). Satisfaction and commitment have invariably reported a negative relationship to intent to leave and turnover (Arnold and Feldman, 1982; Hollenback and Williams, 1986). High levels of work stress are associated with low levels of job satisfaction (Landsbergis, 1988; Terry et al, 1993) and job stressors are predictive of job dissatisfaction and a greater propensity to leave the organization (Cummins, 1990)

2.42 Stress Management/Coping

Lazarus and Folkman (1984) define coping as the person’s ‘constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resource of the person’.
2.42.1 Process of stress coping

Several researches have been conducted as regards the process of stress coping of individuals. Based on the studies made by Lazarus and Folkman (1984); Cox (1987), five major stages of the coping process have been identified: occurrence of an event, appraisal of that event, coping choices, immediate impact upon well-being and reappraisal and long term consequences. To begin with, at Stage 1, an event, that can potentially be stressful, happens. Subsequently, the person appraises the event at Stage 2. The coping decision has to be taken at Stage 3. Coping can belong to any of the following forms: Problem focused coping or emotion focused coping. While problem focused coping is directed at changing the event, emotion focused coping is directed at regulating individual responses to the event. Stage 4 and 5 refer to the after effects of the coping decision taken.

The aftermath can be either short term well-being effects, as in Stage 4 or long-term effects having their impact on the individual and the organization.

2.42.2 Ways of Coping

Drafke and Kossen (1998) have identified nine adjustive reactions to stress. They are rationalization, compensation, negativism, resignation, repression, pseudostupidity, obsessive thinking, displacement and conversion.

Researchers have classified ways in which an organization can take action to reduce the negative effects of stress on its employees: Primary, secondary and tertiary. Primary
initiative tries to reduce the causes of stress. Organizational change programs which involve increasing the level of participation in decision-making can be called a primary initiative. Secondary initiatives are those initiatives that help the individual cope with potential stress. Tertiary initiatives are those initiatives that help the individual cope with already developed stress. Through secondary initiatives individuals develop greater resilience to sources of stress.

Corporate fitness programs help the employees to increase resistance to stress and enhance ability to cope with the negative effects of stress. The employee develops increased commitment to the company. Such programs reduce absenteeism, enhances productivity and reduces health care costs borne by the company.

**Treatment for Occupational Stress**

Coping or adaptation in the stress models refer to ways in which people reduce, avoid, or alleviate the negative consequences of occupational stress. When consciously planned and implemented, such actions are often called ‘treatments’. To understand the nature of such treatments, it is helpful to consider the types of primary targets that are the focus of a treatment. In all cases, the treatment is expected ultimately to affect the individual’s strains, but the original or primary target might be something other than the strain itself. Two main categories of primary targets are the organization and the person (Ivancevich and Matteson, 1987; Murphy, 1987; Newman and Beehr, 1979).
The Individual as the Primary Target of Stress Treatments

The person or individual as the primary target is by far the most commonly used treatment category. In such treatments, there is an attempt to directly change something about the person him or herself. Some of these treatments seem to aim directly at the strain. If an employee has hypertension, for example, medication may be prescribed. If he or she is tense and anxious, progressive muscle relaxation training may be undertaken so that the person can relax at will or remain relaxed in the face of otherwise stressful stimuli. These approaches, the most obvious examples of which are from the medical or clinical and counseling psychology approaches noted earlier, try to change the person directly, and to aim pretty close to the strain itself. It should be noted that this amounts to addressing the negative effects of stress (individual strains), while leaving the causes (organizational stressors) intact.

Other person-targeted approaches might focus more on changing the long-term nature of the person. If, for example, the individual’s personality seems to play a part in the strain (e.g. a Type A person), one approach would be to try to alter the very nature of the person. Changing personality traits might be somewhat difficult and at best a slow process, because personality traits are considered relatively stable or semi-permanent. Long-term psychotherapy sometimes has this as a goal. Its use for the specific purpose of alleviating occupational stress, however, might seem misplaced. If there is indeed a situation with occupational stress, then by definition, a main cause is the nature of the work environment (it has stressors). Logically, treating the person as the initial target is
leaving a primary cause of occupational stress untouched (the stressors in the workplace). If the stressors continue to exist, then the treatment must either have a permanent effect (e.g. if treating the strains through medication or relaxation). This is because the environmental stressors, if chronic, will continue to exert pressure that tends to result in individual strains.

The Organization as the Primary Target of Stress Treatments

Although few organizationally targeted treatments of occupational stress have been reported, they have their own set of problems. First, because they involve changing some ways in which the organization functions (e.g. rules, procedures, communication, supervisory styles), the actions or at least permission to undertake them must come from those in power in the organization—usually some level of management. Stress reduction is often not one of the major tasks managers believe they face in their jobs, and so it is likely to get less attention than other important matters in their work. This alone could account for the relative lack of organizational interventions for job stress. Second, diagnosis must be undertaken to determine the source (organizational stressor) that is likely to be causing the employee strains, because the stressors are to be the target of the treatment. One should know, for example, that role ambiguity is likely to be the stressor causing strains before developing a treatment program aimed at reducing ambiguity. It should be noted that the individually targeted treatments of job stress often do not make such a diagnosis. Instead, at most, the diagnosis of employee mental and/or physical health is usually the only one undertaken. When this happens, labeling the individual
treatments as treatments of occupational stress has no evidence behind it. That is, if one finds people having jobs are ill, that does show that jobs caused illness, but labeling the treatments as occupational stress treatments asserts this. Therefore, it is unknown whether many of the occupational stress treatments have anything to do with job stress at all! When the organization is the primary target, however, this is not a problem, because stressors must be diagnosed before a treatment can logically be designed.

Researchers have proposed cultural differences in coping responses, including the expression versus the control of emotion (Aldwin, 1994), active versus passive coping styles (e.g. Diaz-Guerrero, 1977; Holtzman et al., 1975), and problem-solving versus emotion focused coping (Bhagat et al.,1994).

2.42.3 A Cybernetic Theory of Organizational Stress (Cummings and Cooper, 1998)

Cybernetics is concerned with the use of information and feedback to control purposeful behavior. The basic premise of this theory is that behavior is directed at reducing deviations from a specific goal-state.

Researchers traditionally focus on the relationship between current conditions at work (e.g. work overload, role conflict, overpromotion) and individual coping behavior (e.g. escapist drinking, smoking, reduced aspiration). Although this accounts for existing stresses at work, it ignores the possibility that certain factors not currently in the work
situation (i.e. threats) may also affect the individual. Thus, for example, a person’s present employment status may not affect his or her behavior adversely; yet the rumor that company downsizing is likely to occur and may result in job loss can be quite stressful.

Whereas stresses and threats are environmental conditions that disturb the person, the immediate effect or disruption constitutes a ‘strain’ within the individual. Subsequent behavior directed at reducing these strains represents the individual’s ‘adjustment processes’.

The cybernetic theory of occupational stress (OS) has significant implications for how organizations can ameliorate work stresses and help employees better cope with them. It draws attention to three key aspects of OS that can inform how organizations design and implement stress interventions: (1) the P-E interaction; (2) the information feedback that is needed to detect strain in the workplace and to devise and implement effective coping strategies; and (3) the temporal process underlying the stress cycle.

Cybernetic theory suggests that both the person and the environment (and the interaction between them) are essential referents for understanding and resolving OS. Following a medical model, organizations have traditionally addressed OS from the person side of the relationship (Murphy, 1995). They have implemented a number of practices aimed at helping employees understand stress-health relationships and gain the skills to manage workplace stresses. These individual-oriented interventions include relaxation techniques
such as meditation and biofeedback; health facilities for physical exercise; time-management practices; wellness programs; and stress- inoculation training which helps employees identify stress indicators and devise personal coping behaviors. Evidence suggests that these personal approaches can provide employees with better coping skills and reduce indicators of strain such as anxiety, depression and blood pressure (Ivancevich et al, 1990). These positive effects are typically short-term, however, pointing to the need to address the environmental conditions giving rise to experienced strain. Unless organizations also improve the workplace side of the relationship, the underlying causes of OS are likely to persist.

Researchers have identified a diversity of organizational conditions as potential stresses and threats to employees (Cooper and Marshall, 1976; Hurrell and Murphy, 1992). These include factors having to do with job design such as workload and autonomy; role in the organization such as role conflict and ambiguity; relationships with supervisors and peers; career development such as over- or underpromotion; rewards such as pay inequity; and structure such as bureaucratic practices and communication patterns. Examination of these conditions suggests that a large number of management and organization innovations not typically associated with OS can have applicability in this area. In the field of organization development, for example, interventions have been developed for improving many of the workplace factors that can be stresses and threats (Cummings and Worley, 1997). Job enrichment, employee involvement and self-managing work teams can provide employees with the autonomy and social support needed to reduce strain. Role clarification interventions can help supervisors and
employees reduce role ambiguity and conflict. Skill-based pay and gainsharing can help organizations create equitable reward systems. Career development interventions can help employees choose appropriate career paths and develop themselves accordingly. Decentralized structures and reengineering can facilitate effective communication and workflows.

In sum, a cybernetic perspective greatly expands the kinds of interventions that organizations typically consider for addressing OS. It directs attention to both sides of the P-E relationship and to designing comprehensive OS interventions. Person-oriented programs can help employees gain the knowledge and skills to detect and cope with stresses and threats more effectively. Environment-oriented interventions can help to improve the workplace conditions giving rise to experienced strain in the first place. Both types of changes are needed to reduce workplace strains and to assure that those results persist long-term.

Lack of information about stresses and individual differences can lead to poor choices of stress interventions. Insufficient knowledge of effects can make it difficult or impossible to adjust or modify the interventions if necessary.

Organizations can collect information on workplace stresses through a variety of methods, from informal discussions with workers to standardized questionnaires administered to large groups of employees (Murphy, 1995). These data-collection techniques can be designed to elicit employee responses about what working conditions
are important to their well-being, what the preferred state of those conditions should be, and what the actual state is.

OS is an ongoing process, not a periodic episode occurring between employees and their work environment. Thus, stress management needs to be a continuous process for addressing and resolving workplace stresses, not a discrete program with temporal boundaries.

This dynamic perspective has important implications for how organizations design and implement stress-management interventions. It points to the need to build stress management into the organization like other approaches to continuous improvement, such as total quality management (Deming, 1982; Juran, 1989), self-design (Mohrman and Cummings, 1989), and organizational learning (Senge, 1990). These approaches rely heavily on continual measurement, problem solving, and employee involvement. Based on organizational values and strategic objectives (Cooper and Jackson, 1997), improvement goals are set, progress is measured against them, and necessary changes are made. This feedback-change process seeks to improve the organization continually. It involves employees directly in the process to gain their valuable input and commitment to change.
Lazarus and Folkman (1984) differentiate between two coping strategies: emotion-focused coping seeks to regulate emotions that emerge with a stressor. Problem-focused coping is directed at changing the stressful person-environment relation.

According to the definition of coping, and supported by some empirical results, initiative and innovation in stressful situations can be regarded as instances of problem-focused coping. Problem-focused coping is often used when people experience work-related stress (Folkman et al., 1986).

Folkman and colleagues (Folkman and Lazarus, 1980; Folkman et al., 1986) suggested that problem-focused coping is used more strongly when an encounter is appraised as changeable; emotion-focused coping is more strongly employed when the troublesome situation is perceived as unchangeable. However, both forms of coping appear simultaneously in both changeable and unchangeable situations. This is similar to our notion that innovation or initiative taking can appear as a result of work stressors if the individual believes he or she has adequate means to manage them.

The individual coping patterns are determined partly by generic factors and partly by experiences throughout life. Since generic factors determine approximately one third of the variance in relevant components in coping patterns (Lichtenstein, 1993), the environment is of considerable importance. The coping patterns are constantly changing somewhat due to our experiences.
There is a dynamic interplay between individual coping pattern and psychosocial work environment.

2.42.4 Theory of Preventive Stress Management Model (Quick, Quick and Nelson, 1998)

The translation of prevention into an organizational stress context: The preventive stress management model results from the translation of the preventive medicine model and its overlay onto the stress process in an organizational framework. The impact of organizational demands proceeds through three stages, providing an opportunity for preventive intervention. While early or preclinical disease begins in the second stage of the preventive medicine model, disorder, distress, and strain do not begin until the third stage of the preventive stress management model. This is an important distinction between the two models. While stage two stress responses are basically healthy, they do possess some health risk.

Primary prevention aims to reduce, modify, or otherwise manage organizational demands and stressors to enhance health and reduce distress. Secondary prevention aims to modify individual stress responses to necessary and inevitable organizational demands. Tertiary prevention attempts to minimize the amount of residual individual and organizational distress not averted by primary or secondary prevention, or a combination of the two. Understanding organizational stress is important in order to reduce the distress and strain too often associated with stress in organizations. Primary, secondary, and/or tertiary
preventive stress management programs are strategies for preventing job strain and channeling job stress into healthy, productive outcomes (Quick and Quick, 1997). Hypotheses 4, 5 and 6 of the above study pertain to stress prevention interventions as stated below:

Hypothesis 4: Primary prevention interventions to reduce, modify, or manage the intensity, frequency, and/or duration of organizational demands reduce the stress response in people at work.

Hypothesis 5: Secondary prevention interventions to moderate individuals’ stress responses reduce the intensity, frequency, and/or duration of the individuals’ experience of the stress response.

Hypothesis 6: Tertiary prevention interventions to minimize distress and provide therapy shorten and improve the healing process from stressful or traumatic events in organizations.
Research related to hypotheses 4, 5 and 6: Study (Karasek and Theorell, 1990) related to hypothesis 4 show the beneficial effects of increasing control through job redesign (Karasek, 1990) and designing a team-oriented work environment (Terra, 1995). Additional research tends to focus on the efficacy of specific primary prevention
strategies for individuals, such as learned optimism (Seligman, 1990), transformational coping (Maddi, 1995), changing TABP (Roskies, 1987), and social support (House et al, 1988; J.D.Quick et al, 1996). There is more empirical research on secondary prevention strategies for individuals, which bears on hypothesis 5. While learned optimism may be a primary prevention strategy for individuals, spiritual faith and hope are secondary prevention strategies because they alter how the individual responds (Sethi and Seligman, 1993). Relaxation and exercise are well established secondary strategies for individual preventive stress management (Pauley et al, 1982; Toivanen et al, 1993). There is the least evidence for support of hypothesis 6. While there is an argument for the use of expressive writing and confiding in others as secondary prevention strategies (Pennebaker, 1990), these clearly become tertiary prevention or treatment strategies when related to a work trauma such as job loss (Spera et al, 1994). Hypothesis 6 deals with clinical psychology and medicine as much as organizational behavior and management. Thus one may need to turn to clinical literature on the treatment of executives (Moss, 1981), post-traumatic crisis intervention (Braverman, 1992) or grief workshops for co-worker suicides (Adkins, 1995).

Organizational Stress Diagnosis: Diagnosis is an essential prerequisite to preventive or treatment interventions within the preventive stress management model. The following figure sets forth a process for organizational stress diagnosis. The diagnostic process shown in the figure rests on two assumptions. First, organizational stress diagnosis is an interdisciplinary process requiring representation and contributions from medicine, organizational science, and psychology. Second, organizational diagnosis is an
interpretative process that does not achieve closure. Rather, a diagnostic statement becomes a working hypothesis as a basis for data development and analysis, subject to modification in light of new data and information.

Organization stress diagnosis draws on a variety of diagnostic methods, including interviews, questionnaires and observational techniques. Many modifiers of the stress response can also be systematically assessed. These include social support, personality factors (e.g. hardiness, locus of control, optimism-pessimism), individual psychological susceptibility, gender and a number of other factors (Quick et al, 1997).

Fig.2.16 The process of organizational stress diagnosis
Strategies for preventive stress management: Organizational stress diagnosis should lead to preventive interventions aimed at improving individual and organizational functioning. The theory of preventive stress management in organizations is built on a preventive framework which offers a scheme for organizing and applying a wide range of individual and organizational stress management strategies at three discrete places in the organizational stress process.

Surveillance indicators for monitoring organizational stress: The theory of preventive stress management also lends itself to a systematic approach to surveillance and monitoring, which are important functions in occupational health and preventive medicine (Ordin, 1992). Surveillance indicators provide information about organizational stressors, stress responses and signs of individual and organizational distress.

Surveillance indicators are the foundation of an evidence-based approach to the preventive management of workplace stress. Indicators can be used to assess the causes, patterns, trends and means for preventing adverse individual and organizational consequences of stress. They can be used to assess the impact of preventive interventions; to compare stressors, stress responses, or symptoms of distress among different divisions or locations within an individual organization; or to make comparisons across companies or across industries.
Preventive strategies and surveillance indicators for organizational stress

Primary prevention

**Organizational strategies**
- Job and task redesign
- Participative management
- Career development
- Design of physical settings
- Role analysis
- Goal setting
- Social support

**Individual strategies**
- Managing perception of stress
- Managing the work environment
- Lifestyle management

Secondary prevention

**Organizational strategies**
- Team building
- Diversity programs

**Secondary prevention**
- Team building
- Diversity programs

**Individual strategies**
- Relaxation training
- Spirituality and faith
- Emotional outlets
- Physical fitness/nutrition

Tertiary prevention

**Individual strategies**

**Organizational demands and stressors**

**Organizational demands and stressors**

**Individual assessment of organizational Stressors**
- Occupational Stress Inventory
- NIOSH General Job Stress Questionnaire
- Stress Diagnostic Survey
- Content Questionnaire

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**The stress response and its modifiers**

**Individual and organizational distress**

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**Individual responses**
- Absenteeism, tardiness
- Employee assistant program use
- Health unit visits
- Counseling referrals

**Organizational responses**
- Absenteeism rate
- Employee turnover rate
- Internal transfer rate
- Grievances

**Individual distress**
- Acts of aggression and violence
- Psychological disability
- Early retirement
- Medical care

**Organizational distress**
- Violent incidents, vandalism
- Health care costs
- Compensations awards
- Quantity of production
- Quality of production
2.43 Leadership

2.43.1 Definitions of leadership

Hemphill and Coons (1957): Leadership is the individual behaviour to guide a group to achieve the common target.

Stogdill (1957): Leadership is an influential activity to others or organization to achieve the target set by the leader.

Bower (1969): Leadership is an activity process of interpersonal relationship; others behavior is influenced through this process to achieve the set target.

Davis (1977): Leadership means persuasion on others to enthusiastically chase for certain target.

Jacobs and Jaques (1990): Leadership helps others to strive and to enhance aspiration to achieve the target.
Yukl (1994): Leadership is the process of influence on the subordinate, in which the subordinate is inspired to achieve the target, the group is maintained in cooperation, and the established mission is accomplished, and the support from external group is obtained.

Fry (2003): Leadership means use of leading strategy to offer inspiring motive and to enhance the staff’s potential for growth and development.

2.43.2 Dimensions of leadership

Goleman and Boyatzis (2008) administered their behavioral assessment tool, the Emotional and Social Competency Inventory to measure an executive’s social intelligence and help him or her develop a plan for improving it. It is a 360-degree evaluation instrument by which bosses, peers, direct reports, clients and sometimes even family members assess a leader according to seven social intelligence qualities. We came up with seven by integrating our existing emotional intelligence framework with data assembled by our colleagues at the Hay Group, who used hard metrics to capture the behavior of top-performing leaders at hundreds of corporations over two decades. Listed here are each of the qualities, followed by some of the questions we use to assess them.

**Empathy**

Do you understand what motivates other people, even those from different backgrounds?

Are you sensitive to others’ needs?
**Attunement**

Do you listen attentively and think about how others feel?

Are you attuned to others’ moods?

**Organizational Awareness**

Do you appreciate the culture and values of the group or organization?

Do you understand social networks and know their unspoken norms?

**Influence**

Do you persuade others by engaging them in discussion and appealing to their self-interests?

Do you get support from key people?

**Developing Others**

Do you coach and mentor others with compassion and personally invest time and energy in mentoring?

Do you provide feedback that people find helpful for their professional development?

**Inspiration**

Do you articulate a compelling vision, build group pride and foster a positive emotional tone?
Do you lead by bringing out the best in people?

**Teamwork**

Do you solicit input from everyone on the team?

Do you support all team members and encourage cooperation?

Poorly delivered criticism and displays of anger by leaders are common triggers of hormonal surges. In fact, when laboratory scientists want to study the highest levels of stress hormones, they stimulate a job interview in which an applicant receives intense face-to-face criticism- an analogue of a boss’s tearing apart a subordinate’s performance. Researchers likewise find that when someone who is very important to a person expresses contempt or disgust toward him, his stress circuitry triggers an explosion of stress hormones and a spike in heart rate by 30 to 40 beats per minute. Then, because of the interpersonal dynamic of mirror neurons and oscillators, the tension spreads to other people. Before you know it, the destructive emotions have infected an entire group and inhibited its performance.

Leaders are themselves not immune to the contagion of stress. All the more reason they should take the time to understand the biology of their emotions.

Transformational leadership practices were helpful in fostering organizational learning; in particular, vision building, individual support, intellectual stimulation, modeling, culture building and holding high performance expectations (Leithwood et al, 1999).
Yukl’s (1994) framework was used to develop the initial set of categories for personality characteristics and leadership skills. These included need for achievement, need for power, self-confidence, emotional maturity, technical skills, conceptual skills and interpersonal skills.

A study on transformational leadership qualities was made by Lievens, Van Geit and Coetsier (1997) and found that based on the ideas originally proposed by Burns (1978), Bass (1985) distinguished between transactional leadership (TA) and transformational leadership (TF). In transactional leadership, leader-follower relationships are based on a series of exchanges or bargains between leaders and followers. These leaders can be effective to the extent that they clarify expectations and goals, but they generally neglect to focus on developing the long-term potential of followers. Bass (1985) identified two factors as composing transactional leadership. Leaders can transact with followers by rewarding effort contractually, telling them what to do to gain rewards, punishing undesired action, and giving extra feedback and promotions for good work. Such transactions are referred to as contingent reward (CR) leadership. Leaders can also transact with followers by intervening only when followers deviate from expectations, giving negative feedback for failure to meet standards. These transactions are referred to as management-by-exception. Based on the timing of the leader’s interventions a distinction is often made between active and passive management-by-exception (Bass & Avolio, 1993); Hater & Bass (1988). In passive management-by-exception, (PM) leaders
intervene only after standards are not met. In the more active form of management-by exception (AM) leaders try to anticipate mistakes or problems.

Transformational leaders move beyond these simple exchange processes. They set challenging expectations and enable others to achieve higher levels of performance. Bass (1985) depicted transformational leadership as comprising four distinct factors: charisma, inspiration, individual consideration and intellectual stimulation. The first dimension, charismatic leadership is shown by leaders who act as role models, create a sense of identification with a shared vision, and instill pride and faith in followers by overcoming obstacles. This dimension is also known as idealized influence. Inspiration (I) is defined as inspiring and empowering followers to enthusiastically accept and pursue challenging goals and a mission. Individual consideration (IC) consists of behaviors such as communicating personal respect to followers by giving them specialized attention, by treating each one individually, and by recognizing each one’s unique needs. Finally, leaders who consider old problems in new ways, articulate these new ideas, and encourage followers to rethink their conventional practice and ideas are said to be intellectually stimulating (IS).

Lievens, Van Geit and Coetsier (1997) made a study on transformational leadership development by identifying leadership qualities via distribution of the multifactor leadership questionnaire (MLQ) to followers of the target leaders. The identification of leadership qualities is a basic ingredient of these transformational leadership development programmes. In order to identify the strengths and weaknesses of the target leaders, the
MLQ was distributed to their followers or co-workers. These subordinates or colleagues had to judge the frequency with which leadership skills and actions were displayed by the target leaders.

For transactional leaders, the negotiation of resources and transactions was monitored by modal values, “that is values of means- honesty, responsibility, fairness, the honoring of commitments- without which transactional leadership could not work” (Burns, 1978: 426).

Transformational categories of leadership: “recognizes and exploits an existing need or demand of a potential follower…(and) looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower” (Burns, 1978:4).

Burns saw four categories in his typology: Intellectual, Reform, Revolutionary and Heroic (charismatic)

The Intellectual leader is a person with a vision that can transform society by raising social consciousness.

Reform leadership by definition implies moral leadership, which means an attention to matching the means to the ends.
Heroic (Charismatic)- The heroic, charismatic is what is today most referenced as transformational leadership.

2.43.3 Flexible leadership (Yuki, 2008)

Vroom and Yetton (1973) proposed a normative model specifying which decision procedures are appropriate for different types of decisions, and the research found that managers whose decision procedures were consistent with the normative model were more likely to be effective. Situational theories of leadership such as path-goal theory (e.g. House & Mitchell, 1974) and the Multiple- linkage Model (Yukl, 1989) identify appropriate behaviors for managers who are responsible for different types of tasks. For example, more clarifying of role expectations is needed for tasks that are novel and complex than for tasks that are routine and simple. Likewise, more supportive leadership is needed when the task is very stressful and difficult. Other theories of leadership specify different behaviors for subordinates who differ in their skills and motivation (Hersey and Blanchard, 1984) or their exchange relationship. For example, more delegation is appropriate and less close monitoring is needed for a subordinate who is confident and competent than for one who is not. Finally, research on influence tactics finds that a different mix of tactics is appropriate depending in whether the target person is a subordinate, peer, or boss (Kipnis et al, 1980; Yukl, 2006; Yukl and Fable, 1990).

The research on situational differences for the same manager has several implications for improving flexible, adaptive leadership. First, managers need to learn how to diagnose the situation quickly and understand what pattern of behavior will produce a successful
outcome. Second, managers should become proficient at using a wide range of behaviors. Third, managers can be proactive about influencing the situational variables that determine what behavior choices are available or necessary.

Traits and skills relevant for flexible leadership (Yukl, 2008): Cognitive complexity and systems thinking include the ability to understand how the various parts of the organization relate to each other and how changes in one part of the system will eventually affect the other parts. Managers must also be able to comprehend how changes in the external environment will affect the organization. A manager with high cognitive complexity and systems thinking is able to develop a better mental model to help understand casual relationships (Senge, 1990). Situational awareness and social intelligence both involve a person’s ability to identify and understand the leadership situation, including social and political processes and relationships. Social intelligence also includes the ability to select an appropriate response and to be flexible on one’s behavior (Zaccaro et al, 1991).

Emotional intelligence includes the ability to recognize and regulate one’s emotions and empathy for the feelings of others, which is essential for determining how to influence and motivate them (Goleman, 1995; Mayer & Salovey, 1995). Self awareness includes the ability to understand one’s values, motives and effectiveness in influencing others (Zaccaro et al, 1991).
Openness to learning and new ideas is one of the big five personality traits, and it is essential for leaders who must adapt to changing conditions. This trait includes the ability to accept feedback about the impact of one’s actions and learn how to improve them. The trait also includes the ability to learn new ways to dealing with problems. A person who relies on habitual forms of behavior and denies negative feedback or new ideas is unlikely to be flexible and adaptive (Argyris, 1991; Dechant, 1990).

2.43.4 Versatile leadership

The theory of versatile leadership (Kaplan & Kaiser, 2003) involves competing values, but effective flexibility is defined as an appropriate amount of skills or behavior related to competing objectives. Two competing values emphasized in this “duality approach” are forceful vs. enabling styles, and emphasis on strategic vs. operational objectives.

Flexible leadership theory uses ideas from several different literatures, including leadership, human resource management, strategic management, organizational theory, and organizational change (Yukl, 2008; Yukl & Lepsinger, 2004, 2005). It is a theory of strategic leadership that emphasizes the need to influence key determinants of financial performance for a company: efficiency, innovative adaptation, and human capital. One form of influence is the use of task, relations, and change-oriented leadership behaviors. Another form of influence is with management decisions about strategy, programs and systems, and organizational structure. Effective leaders look for behaviors and programs that are mutually compatible and likely to create synergies rather than adverse side
effects. In addition, the actions and decisions of managers at different levels in the organization and in inter-dependent subunits must be mutually compatible and consistent with the organization’s competitive strategy and external environment.

2.43.5 Leadership style and Job stress

Hsien-Chee Lee and Isai-Hua Chuang made a study on the impact of leadership styles on job stress and turnover intention in Taiwan Insurance Industry. One of the conclusions arrived at is leadership style has significant influence on job stress. Another is that personality characteristic has no moderating effect on the relationship between leadership style and job stress. The leader’s leadership type plays an important role in achieving performance of the organization. The leader’s ability to adapt to internal and external environment changes and lead a group of cordial subordinates to work together is the key to success.