CHAPTER III

THE STRESS – CONCEPTS & ITS DEVELOPMENT
- AN OVERVIEW OF WESTERN VIEWPOINT

3.1 INTRODUCTION

The previous chapter was an attempt to understand the origin, growth and development of conceptual framework built around Human Resources and its manifestation. It was also seen how Health and Safety has a role to play in the Human Resource Development and its Management. Recent studies have proved that managing stress tantamounts to Managing Health.

In this chapter, an attempt has been made to understand the concept of stress as viewed by western scholars.

3.2 THE MEANING OF STRESS

Stress has become a major concern of the modern times as it can cause harm to employee’s health and performance. Different psychologists and physiologists have defined stress differently. In simple words, stress refers to pressures or tensions people feel in life. As living human makes
constant demands, so it produces pressure, i.e., stress. Stress is, therefore, a
natural and unavoidable feature of human life. However, stress beyond a
particular level can cause psychological and physiological problems which
in turn would affect the individual’s performance in the organisation. Thus,
management of stress has become a challenging job for the modern
organisations.

Stress is usually thought of in negative terms. It is thought to be
caused by something bad (for example, a college student is placed on
scholastic probation, a loved one is seriously ill, or the boss gives a formal
reprimand for poor performance). This is a form of distress. But there is
also a positive, pleasant side of stress caused by good things (for example, a
college student makes the dean’s list; and attractive, respected acquaintance
asks for a date; an employee is offered a job promotion at another
location). This is a form of eustress. This latter term was coined by the
pioneers of stress research from the Greek eu, which means, “good”. In
other words, stress can be viewed in a number of different ways and has
been described as the most imprecise word in the scientific dictionary. The
word “stress” has also been compared with the word “sin”. Both are short,

Co., pp.638.
emotionally charged words used to refer to something that otherwise would take many words to say.”

3.3 DEFINITION OF STRESS

Stress is an experience that creates physiological and psychological imbalances within a person. It is a body reaction to any demands or changes in its internal and external environment. Whenever there is a change in external environment, such as temperature, pollution, humidity and working conditions, it leads to stress. In these days of competition, when one wishes to surpass what has been achieved by others, leading to an imbalance between demands and resources, it causes psycho-social stress. Thus, stress is a part and parcel of everyday life.

The origin of the concept of stress predates antiquity. Selye3 has defined stress as “the non-specific response of the body to any demand made upon it. The concept of stress has been borrowed from the natural sciences. During the 18th and 19th Century, Stress was equated with “force, pressure or strain” exerted upon a material object or person which resists these forces and attempts to maintain its original state. The use of the

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concept in this fashion encouraged physicists and engineers into adopting it to suit their purpose. Thus, stress in engineering is known as “the ratio of the internal force brought into play when a substance is distorted to the area over which the force acts”.

R.S. Schuler⁴ is of the view that stress is a dynamic condition in which an individual confronted with an opportunity, constraint or demand related to what he desires and for which the outcome is perceived to be both uncertain and important. Thus, when a student takes a test at an university, he feels stressed because he has to confront opportunities, constraints and demands. A good performance will lead to earning due credits, completion of degree / diploma and even earning a reward or medal. But a bad performance may lead to failure, compartment in some paper and wastage of time. In fact, sitting in an examination is a potential stress for most of the students. The potential stress becomes actual stress when the outcome is uncertain, but is very important for the individual.

Stress is not necessarily bad in and of itself. While stress is typically taken in a negative sense, it also has positive value. It is an opportunity when it offers potential gain. Consider, for example, the superior

⁴ Schuler, R.S., “Definition and Conceptualization of Stress in Organisations”, in Organizational Behaviour and Human Performance, April 1980, p.189.
performance that an athlete or stage performer gives in "difficult" situations. Such individuals often use stress positively to rise to the occasion and perform at or near their maximum.

"Stress is additive. It builds up. Each new and persistent stressor adds to an individual’s stress level. A single stressor, in and of itself, may seem relatively unimportant, but if it is added to an already high level of stress, it can be the straw that breaks the camel’s back".\textsuperscript{5} If we want to appraise the total amount of stress an individual is under, we have to sum up his opportunity stress, constraint stresses, and demand stresses.

3.4 STRESS AND THE RELATION TO BURNOUT

Ivancevich\textsuperscript{6} and Matteson define stress simply as "the interaction of the individual with the environment", but then they go on to give a more detailed working definition, as follows; "an adaptive response, mediated by individual differences and/or psychological processes, that is a consequence of any external (environmental) action, situation, or event that places excessive psychological and / or physical demands upon a person. Beehr

\textsuperscript{5} Ibid.
and Newman define job stress as “a condition arising from the interaction of people and their jobs and characterised by charges within people that force them to deviate from their normal functioning. Taking these two definitions and simplifying them for the purpose of this chapter, “stress” is defined as an adaptive response to an external situation that results in physical, psychological, and/or behaviour deviations for organizational participants.

It is also important to point out what stress is not:

1. Stress is not simply anxiety. Anxiety operates solely in the emotional and psychological sphere, whereas stress operates there and also in the physiological sphere. Thus, stress may be accompanied by anxiety, but the two should not be equated.

2. Stress is not simply nervous tension. Like anxiety, nervous tension may result from stress, but the two are not the same. Unconscious people have exhibited stress, and some people may keep it “bottled up” and not reveal it through nervous tension.

3. Stress is not necessarily something damaging, bad, or to be avoided. Eustress is not damaging or bad and is something people should seek out rather than avoid. The key, of course, is how the person handles the stress. Stress is inevitable; distress may be prevented or can be effectively controlled. (This summary is based on Hans Selye, Stress without Distress, Lippincott, Philadelphia, 1974 and James C. Quick and Jonathan D. Quick, Organizational Stress and Preventive Management, McGraw-Hill, New York, 1984, pp.8-9).

As far as the increasingly popular term “burnout” is concerned, some stress researchers contend that burnout is a type of stress and others treat it differently. For example, a recent comprehensive review of job burnout says that it is characterized by emotional exhaustion, depersonalization, and diminished personal accomplishment. Burnout is also most closely associated with the so-called helping professions such as nursing, education, and social work. So, even though technically burnout may be

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somewhat different from stress, the two terms will be treated the same here and used interchangeably.

3.5 EUSTRESS AND DISTRESS

Stress is anything that changes out physical, emotional or mental state while encountering various stimuli in our environment. Selye\textsuperscript{11} has used two separate terms to distinguish between the positive and negative effects of stress on the individual, even though bodily reactions to the two forms of stress are similar. Eustress is ‘positive’ stress that accompanies achievement and exhilaration. Eustress is the stress of meeting challenges such as those found in managerial job. Distress occurs when we feel insecure, inadequate, helpless or desperate as a result of too much, or too little, pressure or tension.

3.6 THE BACKGROUND OF STRESS

Concern about the impact of stress on people has its roots in medicine and specifically in the pioneering work of Hans Selye, the recognised father of stress studies. In his search for a new sex hormone, he serendipitously (by accident or chance) discovered that tissue damage is a

\textsuperscript{11} Selye, Hans (1956), \textit{The Stress of Life}, New York, McGraw-Hill.
nonspecific response to virtually all noxious stimuli. He called this phenomenon the general adaptation syndrome (GAS), and about a decade later he introduced the term “stress” in his writings.

The GAS has three stages: alarm, resistance, and exhaustion. In the alarm stage an outside stressor mobilize the internal stress system of the body. There are a number of physiological and chemical reactions, such as increased pituitary and adrenaline secretions; noticeable increases in respiration, heart rate, and blood pressure; and a heightening of the senses. If the stressor continues, then the GAS moves into the resistance stage, during which the body calls upon the needed organ or system to deal with the stressor. However, while there may be a great deal of resistance to one stressor during this second stage, there may be little, if any, resistance to other, unrelated stressors. This helps explain why a person going through an emotional strain may be particularly vulnerable to other illness or disease. Finally, if the stressor persists over a long period of time, the reserve of the adaptive mechanisms during the second stage may become drained, and exhaustion sets in. When this happens, there may be a return to the alarm stage, and the cycle starts again with another organ or system, or the “automatic shutoff valve” of death occurs. This Gas process, of course, can be very hard on the person and takes its toll on the human body.
Besides the physiologically oriented approach to stress represented by the classic GAS model, which remains a vital dimension of modern stress research and stress management, attention is also being given to the psychological (for example, mood changes, negative emotions, and feelings of helplessness) and the behavioural (for example, mood changes, negative emotions and feelings of helplessness) and the behavioural (for example, directly confronting the stressors or attempting to obtain information about the stressor) dimensions of stress. All three dimensions (physiological, psychological and behavioral) are important to the understanding of job stress and coping strategies in modern organization.

3.7 IMPLICATIONS OF STRESS ON PERFORMANCE AND SATISFACTION

There has been a significant amount of research investigating the relationship between stress and performance.\textsuperscript{12}

Selye suggested that optimum stress (or eustress) may be achieved at work and reflected in job performance when job provides adequate challenge, but not too little or too much pressure. Though optimum stress level is different for different individuals, each individual can sense and

\textsuperscript{12} Selye, Hans, "Stress Without Distress", op. cit., p.191.
determine how much stress is functional for him to operate in a productive manner. In case of optimum stress, there is high energy and high motivation. Under the situations of under-stress and over-stress, boredom and apathy creep in. The implications of different levels of stress have been shown in Table 3.7.1.

<table>
<thead>
<tr>
<th>Basis</th>
<th>Low Stress</th>
<th>Optimum Stress</th>
<th>High Stress</th>
</tr>
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<tbody>
<tr>
<td>1. Reaction</td>
<td>Boredom / Apathy</td>
<td>High Energy</td>
<td>Exhaustion</td>
</tr>
<tr>
<td>2. Behaviour</td>
<td>Low Motivation</td>
<td>High Motivation</td>
<td>Anxiety and</td>
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<td></td>
<td>Careless mistakes</td>
<td>Heightened</td>
<td>Nervousness</td>
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<td></td>
<td>Psychological</td>
<td>Perception High</td>
<td>Indecisiveness</td>
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<td></td>
<td>withdrawal</td>
<td>Involvement</td>
<td>Bad Judgement</td>
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<td></td>
<td>Physical</td>
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<tr>
<td></td>
<td>Withdrawal</td>
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<td></td>
<td>Inactivity</td>
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<tr>
<td>3. Performance</td>
<td>Low Performance</td>
<td>High Performance</td>
<td>Poor Performance</td>
</tr>
<tr>
<td>4. Health Effects</td>
<td>Dull Health</td>
<td>Good Health</td>
<td>Insomnia</td>
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<td></td>
<td></td>
<td></td>
<td>Psychosomatic</td>
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<td></td>
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<td>Illness</td>
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3.8 Potential Sources of Stress

The factors which have the potential to cause stress may be grouped under two headings, namely: (1) Organisational stressors, and (2) Individual stressors. These are discussed below:
3.8.1 Organisational Stressors

Organisational stressors are various factors in the work place that can cause stress. The general sets of organisational stressors are follows:

(i) Task Demands: Task demands are stressors associated with the specific job a person performs. Some occupations are by nature more stressful than others. The job of surgeons, air traffic controllers, and professional football coaches are more than stressful than those of general practitioners, airplane baggage loaders, and football team equipment managers.

Beyond specific task-related pressures, other aspects of job may pose physical threats to a person's health. Unhealthy conditions exist in occupations such as coal mining and toxic waste handling. Security is another task demand that can cause stress. Someone in a relatively secure job is not likely to worry unduly about losing that position. Threats to job security can increase stress dramatically. For example, stress generally increases throughout an organisation during a period of layoffs or immediately after a merger with another firm.

(ii) Role Demands: The sources of stress in organisational role include role ambiguity, role conflict, responsibility towards people and things and
other stressors. Role ambiguity involves lack of clarity about the work objectives, expectations of colleagues related to scope and responsibilities of the job. Role conflict arises where the individual is exposed to conflicting job demands or is required to do things which he does not want to do. Responsibility towards people is more stress generating than responsibility towards things (i.e. equipment, materials, etc.) Other role stressors include lack of participation in decision making lack of managerial support and need for maintaining high standards of performance.

(iii) Inter-personal Relationship at Work. The nature of relationship with one’s boss, subordinates and colleagues also form a major source of stress. Poor relations involve low trust, low supportiveness and low interest in listening to and dealing with organisational problems of the members. The members feel more stress if the boss is low on ‘consideration’. Task oriented managers cause more stress to subordinates than ‘people-oriented’ managers. Stress is generated not only by the pressure of relationship but also by a lack of adequate social support from colleagues during difficult situations.

(iv) Organisational Structure and Climate. This source of stress involves perception of being in the organisation and a threat to one’s
freedom, autonomy and identity. Specifically such stressors include: little or no participation in decision-making, lack of belongingness, lack of effective consultation, poor communication, restrictions on behaviour and politics by some organisational members.

(v) Organisational Leadership. Leadership style also may cause stress. Suppose an employee needs a great deal of social support from his leader but the leader shows no concern or compassion for him, his employee will probably feel stressed. Similarly, assume an employee who has a strong need to participate in decision-making and to be active in all aspects of management, but his boss is very autocratic and refuses to consult subordinates about anything. Naturally, stress is likely to result.

(vi) Group Pressures. Group pressures may include pressure to restrict output, pressure to conform to the group's norms, and so forth. For instance, it is quite common for a work group to arrive at an informal agreement about how much each member will produce. Individuals who produce much more or much less than this level may be pressurised by the group to get back in line. An individual who feels a strong need to vary from the group's expectations (perhaps to get a pay raise or promotion) will
experience a great deal of stress, especially if acceptance by the group is also important to him or her.

3.8.2 Individual Stressors

Some stresses at the level of an individual may arise in the context of organisation life or personal life. These include: Career development, personality type, life change and life trauma\(^\text{13}\) which are discussed below.

(i) Career Development. There are two major clusters of stressors relating to career development (i) lack of job security (fear of redundancy, obsolescence or early retirement) (ii) status incongruity (under or over promotion and frustration stemming from attainment of one’s career ceiling).

(ii) Type A and B Personality Profiles. Type A and Type B profiles were first observed by two cardiologists, Meyer Friedman and Ray Rosenman\(^\text{14}\). They first got the idea when a worker repairing the upholstery on their waiting-room chairs noted that many of the chairs were worn only on the front. This suggested to the two cardiologists that many heart


patients were anxious and had a hard time sitting still—they were literally sitting on the edges of their seats.

Using this observation as a starting point, Friedman and Rosenman began to study the phenomenon more closely. They eventually concluded that their patients were exhibiting one of the two very different types of behaviour patterns. Their research also led them to conclude that the differences were personality-based. They labelled these two behaviour patterns as Type A and Type B.

The extreme Type A personality is characterized by feeling a chronic sense of time urgency and by an excessive competitive drive. The Type A individual is “aggressively-involved in a chronic, incessant struggle to achieve more and more in less and less time, and if required to do so, against the opposing efforts of other things or other persons\(^\text{15}\). The characteristics of Type A personality include the following.

(i) Always moving, walking, talking and eating rapidly.

(ii) Feeling of impatience with the rate at which most events take place.

(iii) Striving to think or do, two or more things simultaneously.

\(^{15}\) *Ibid*, p.84.
(iv) Persistent inability to cope with leisure time.

(v) Obsession with numbers; success is measured in terms of how much everything they acquire.

(vi) Aggressive and competitive attitude.

(vii) Constantly, feels under time pressure.

In contrast to the Type A personality, there is the Type B, who is exactly opposite. Type B's are "rarely carried by the desire to obtain a wildly increasing number of things or participate in an endless growing series of events in an ever decreasing amount of time." Type B personalities can be identified by the following characteristics.

(i) Never suffer from a sense of time urgency with its accompanying impatience.

(ii) Feel no need to display or discuss either their achievements or accomplishments unless such exposure is demanded by the situation.

(iii) Play for fun and relaxation, rather than to exhibit their superiority at any cost.

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16 Ibid, p.83.
(iv) Can relax without guilt.
(v) Have no pressing deadlines.
(vi) Are mild mannered.
(vii) Are never in a hurry.

One should not draw the conclusion that Type A people are more successful than Type B people. In reality, however, this is not necessarily true. The Type B person is not necessarily any more or less successful than the Type A. There are several possible explanations for this. For example, Type A people may alienate others because of their drive and may miss out on important learning opportunities in their quest to get ahead. Type B, on the other hand, may have better inter-personal reputation and may learn a wider array of skills.

(iii) Life Change. A life change is any meaningful change in a person’s personal or work situation. Holmes and Rahe\(^\text{17}\) reasoned that major changes in a person’s life can lead to stress and eventually to disease\(^\text{18}\). Several of these events relate directly (fired from work, retirement) or indirectly (change in residence) to work.

\(^\text{17}\) Ibid, p.83.
(iv) Life Trauma. A life trauma is any upheaval in an individual’s life that alters his on her attitudes, emotions, or behaviours. To illustrate, according to the life change view, a divorce adds to a person’s potential for health problems in the following year. At the same time, the person will obviously also experience emotional turmoil during the actual divorce process. This turmoil is a form of life trauma and will clearly cause stress, much of which may spill over into the work place.

Life trauma is similar to life change, but it has a narrower, more direct, and shorter-term focus. Major life traumas that may cause stress include marital problems, family difficulties, and health problems initially unrelated to stress. For example, a person learns that he has developed arthritis that will limit his favourite hobby. His dismay over the news may translate into stress at work. Similarly, a worker going through a family breakup will almost certainly go through difficult periods, some of which will affect his job performance.

3.9 CONSEQUENCES OF STRESS

3.9.1 Consequences for the Individual

Selye calls, “Stress as the spice of life”.

Complete freedom from stress comes only in death. Stress becomes distress when we begin to sense

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19 Selye, Hans, Stress without Distress, op.cit., p.47.
a loss of our feelings of security and adequacy. It may produce physical, behavioural and psychological consequences as discussed below:

(i) **Physical Consequences.** The physical or medical consequences of stress affect a person’s physical well-being. Heart disease and stroke, among other illnesses, have been linked to stress. Other common medical problems resulting from too much stress include headaches, backaches, ulcers and related stomach and intestinal disorders, and skin conditions such as acne and hives.20

(ii) **Behavioural Consequences.** The behavioural consequences of stress may harm the person under stress or others. One such behaviour is smoking. Research has clearly documented that people who smoke tend to smoke more when they experience stress. There is also evidence that alcohol and drug abuse are linked to stress, although this relationship is less well documented. Other possible behavioural consequences are accident proneness, violence and appetite disorders.

(iii) **Psychological Consequences.** The psychological consequences of stress relate to a person’s mental health and well-being. When people

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experience too much stress at work, they may become depressed or find themselves sleeping too much or not enough. Stress may also lead to family problems and sexual difficulties\textsuperscript{21}.

(iv) **Burnout Syndrome.** Burnout is a general feeling of exhaustion that develops when an individual simultaneously experiences too much pressure and has too few sources of satisfaction.

Burnout is the most severe stage of distress.\textsuperscript{22} Career burnout generally occurs when we begin questioning our personal values. Quite simply, we no longer feel that what we are doing is important. Depression, frustration and a loss of productivity are often symptoms of burnout. It can be due to a lack of personal fulfilment in the job, or a lack of positive feedback about performance. Thus, both supervisors and managers have a crucial role to play in identifying jobs likely to result in employee distress or burnout and employees likely to suffer.

3.9.2 **Consequences for the Organisation**

The consequences of stress on individuals may have both direct and indirect impact on the organisation. Specifically, the organisation is affected in terms of the following parameters.

\textsuperscript{21} *Ibid*, p. 76.

\textsuperscript{22} *Ibid*, p. 78.
(i) **Too much stress might lead to decline in performance of the individuals.**

Thus, overall productivity and quality will suffer leading to reduced margin of profit.

(ii) **The individuals under stress may withdraw from the scene.** There may be increased rates absenteeism and labour turnover. An employee may withdraw psychologically ceasing to care about the organisation.

(iii) **Another direct organisational consequence of employee stress relates to attitudes.** Job satisfaction, morale and organisational commitment can all suffer, along with motivation to perform at high levels. As a result, people may become more prone to complain about unimportant things, do only enough work to get by, and so forth.

(iv) **Decision-making might be delayed or even poor decisions might be taken if the decision-makers are under excessive stress.**

(v) **If stress is common among the employees, it will hamper communication and human relations in the organisation.**
3.10 STRESS AND PERFORMANCE

The best-known and most thoroughly documented pattern in the stress-performance literature is the inverted-U relationship. This is shown in the Figure.

Diagram 3.10.1 Showing relationship between stress and performance

The logic underlying the inverted-U is that low to moderate levels of stress, stimulate the body and increase its ability to react. Individuals then often perform their task better, more intensely, or more rapidly. But too

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much stress places unattainable demands or constraints on a person, which results in lower performance. This inverted-U pattern may also describe the reaction to stress over time, as well as to changes in stress intensity. That is, even moderate levels of stress can have a negative influence on performance over the long term as the continued intensity of the stress wears down the individual and saps his or her energy resources. An athlete may be able to use the positive effects of stress to obtain a higher performance during every Saturday’s game in the fall season. Or a sales executive may be able to psych herself up for her presentation at the annual national meeting. But moderate levels of stress experienced continually over long periods of time as typified by the emergency room staff in a large urban hospital can result in lower performance. This may explain why emergency room staffs at such hospitals are frequently rotated and why it is unusual to find individual who have spent the bulk of their career in such an environment. In effect, to do so would expose the individual to the risk of “career burnout”.

The inverted-U hypothesis is moderated by at least two important contingency factors: the type of job and the personality of the individual.
Type of Job. You don't have to be an insightful behavioural scientist to hypothesise that jobs differ in such a way that a given level of stress might effect performance positively in one job and negatively in another. Casual observation would lead most of us to assume that the stress level of a scriptwriter who has to turn out a fresh half-hour comedy show every week is probably quite high. A high state of arousal is probably necessary to get a quality script. Stress stimulates a nervousness and intensity that is functional. But would that same stress level be functional for a brain surgeon? Probably not. While the brain surgeon certainly works under stress, it is of a lower level. It is more controlled. Since the surgeon is typically performing precise yet routine procedures, extremely high levels of arousal are likely to lead to a lower level of surgical performance. But this extreme arousal level may be just what is necessary for the scriptwriter to do her best work.

The evidence suggests that high stress jobs are those where incumbents have little control over their work, are under relentless time pressures, face threatening physical conditions, or have major responsibilities for financial or human resources\(^{24}\). Managers fall in this category as do secretaries, foreman, waiters, inspectors, and clinical lab

technicians. In contrast, jobs rating low on stress include farm labourer, maid stock handler, and college professor.\textsuperscript{25}

Probably the most widely recognized stress-including occupation is that of the air traffic controller.\textsuperscript{26} At Chicago’s O’Hare airport, for instance, 1,900 flights are handled each day. That equates to a takeoff or landing every twenty seconds. Each air traffic controller at O’Hare is responsible for landing a plane every two minutes while simultaneously monitoring a half dozen others on the radar screen. In such a job, there is obviously little room for error. As a result, controllers at O’Hare are allowed to work only ninety continuous minutes during peak hours. Even with these shortened time schedules, stress-induced symptoms are overwhelming. Tenure is short compared to more typical jobs. Of the 94 controllers at O’Hare in 1977, only two had been there more than ten years. Most don’t last five years. Of those that made it for five years, two-thirds had either ulcers or ulcer symptoms. One study which compared over 4,000 air traffic controllers with 8,000 second-class airmen found the rate of hypertension among the controllers to be four times that of the airmen, while ulcers were more than twice as prevalent.\textsuperscript{27}


3.11 CONCLUSION

This chapter examined the various contributions in the field of stress. Although not always bad for the person or the organization, stress is still one of the most important and serious problems facing the field of organizational behaviour. Defined as an adaptive response to an external situation that results in physical, psychological and/or behavioural deviations for organizational participants, stress was first studied in terms of Selye’s general adaptation syndrome. The three stages of GAS are alarm, resistance and exhaustion. Since this beginning, which concentrated mainly on the physiological dimensions of stress, attention has also been focused on the psychological and behavioural dimensions.

The causes of stress can be categorized into extraorganizational, organizational and group stressors, as well as individual stressors and dispositions. In combination or singly, they represent a tremendous amount of personal stress impinging upon today’s job holder at every level and in every type of organization. The effects of such stress can create physical problems (heart disease, ulcers, arthritis and may be even concern), psychological problems (mood changes, lowered self-esteem, resentment of supervision, inability to make decisions and job dissatisfaction) and/or behavioural problems (tardiness, absenteeism, turnover and accidents).