CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter provides review of related literature and is organized according to the following subheadings:

2.1 - Job Stressors

2.2 - Group Stressors

2.3 - Career Stressors

2.4 - Organizational Stressors

2.5 - Stress Responses

2.6 - Stress And Administrators

2.7 - Conclusion

2.1 Job Stressors

This section reviews literature on stress caused by working conditions, work load, time pressure, role ambiguity, role conflict, and responsibility.

2.1.1 Working Conditions

Unpleasant working conditions cause poor mental health (Kornhauser, 1965 in Cooper, 1981) as well as physical health (Marcson, 1970; Kritsikis, Heinemann, and Eitner, 1968; and Shepard, 1971 in Cooper, 1981).

Certain chemicals in the environment cause stress. Sudden and dramatic occurrence of stress in mass psychogenic illness (Lindstrom and Mantysalo, 1987) is due to strange odor or contaminated air. The work environment therefore includes the type of chemicals in the air, the water that the workers drink and the food they eat during work (Powell and Enright, 1993).

The physical and cognitive performance of the workers are sharply impaired under heat stress (Lindstrom and Mantysalo, 1987). Studies reported by Lindstrom and Mantysalo show that task performance varies at different temperatures, and in tasks requiring good concentration and clear thinking, performance deteriorates even in conditions of moderate heat stress.

Workers may be able to adapt to bad workplaces but this results in lowered productivity (Corlett, 1981). Poor posture in the workplace contributes to diseases of the middle age such as low back pain, and varicose (Corlett, 1981). Posture requiring to stand all the time or sit all the time

creates misery, unnecessary diseases and lost productivity (Corlett, 1981; and Oja, Kuorinka and Karhu, 1981).

Gulian (1974) found that noise affects the central and autonomic nervous systems of workers to the point that they feel fatigued and experienced sleeping difficulties. Workers needing to perform visual tasks actually experienced slower vigilance and speed in motor reactions (Linstrom and Mantysalo, 1987).

Crump found that poor design of the work place while Otway and Misenta found that the noise factor in the work place exacerbates stress (Cooper, 1987). Noise or crowded office condition that is anticipated or occurs with predictable regularity is less harmful than unpredictable ones (Yates, 1979). Singer and Glass (Yates, 1979) identified some important principles on noise and crowding. Firstly most environmental stressors are not drastic to cause immediate physical damage as the impact is cumulative and long range. Secondly, the social and emotional context of an environment stressor is as important as the physical ones. Therefore, a busy Assistant Registrar rushing to complete a report with a pressing deadline can find the sound of a nearby typewriter annoying but the annoyance is greater if the typist is doing another officer's work. Thirdly, most workers are easily adaptable. Fourthly, particular psychological or social factors can ease or aggravate the effects of an environmental stressor, such as Assistant Registrars who work under noisy, crowded conditions are less efficient and are less tolerant of frustrations after work than those who work in better physical conditions.

It can be concluded that unpleasant work environments cause occupational stress, though there is an enormous capacity for humans to adjust and adapt to them. It is disappointing that most researches on work environment are conducted on the blue collar workers.

2.1.2 Work Load

Harrison proposed that both overload and underload cause stress (Hinton, 1991). Workload has to take into consideration various factors such as contact with people, physical challenge, and mental challenge (Albercht, 1979).

Research findings (Cox and Mackay, 1981) suggested that the relationship between stimulation and levels of stress is best described by a "U"-shaped function in that the highest levels of stress are found at the extremes of the continuum. Similarly, Welford (Yates, 1979) suggested that stress arises when there is a departure from the optimum conditions and the worker finds it hard to adjust. Welford identifies two principles in determining the optimum load. Firstly, workers seek to avoid extreme level of stimulation, preferring only moderate levels of stimulation. Secondly, the stimulation is to have moderate level of predictability in terms of space and time. Therefore, stress arises when it is too high or too low a demand (Cox and Mackay, 1981).

Sales (Cox and Mackay, 1981) found that interest and enjoyment of work play an important part in determining the stress level. Subjects with high levels of interest and enjoyment when receiving the overload condition reported low subjective workload while those receiving underload condition reported overload. Those given the overload conditions and who felt overloaded as well as those who were given underload conditions and who felt underloaded both had low levels of interest in the job. The subjects who showed greater interest and enjoyment in the task exhibited decreases in serum cholesterol while those with lesser job interest have increased serum cholesterol.

2.1.2.1 Work Overload

Work overload is associated with certain behavioral malfunctions (Cooper and Marshall, 1976; Margolis, Kroes, and Quinn, 1974; Cooper and Marshall, 1978; and Cooper and Davidson, 1987) such as lowered self-esteem, low work motivation, work absenteeism, and escapist drinking. Workload is associated with dysfunctional workers and organizational outcomes (Khan, Wolfe, Quinn & Snoek 1964)

Schultz and Schonpflug argued that stress is greatest when the person's capabilities just match the workload or when the workload is marginally greater (Hinton, 1991). On the other hand, Harrison proposed that the lowest degree of stress occur when capabilities just meet the workload (Hinton, 1991). However according to the Yerkes-Dodson Law, the response of a person to increased pressure

shows a steady improvement of performance and health up to a peak; after which both performance and health becomes worse, at first slowly and then drastically (Melhuish, 1981).

French, Caplan and Harrison (1982) suggested that both qualitative and quantitative overload can produce at least nine different symptoms of psychological and physical strain, such as job dissatisfaction, job tension, lower self-esteem, threat, embarrassment, high cholesterol levels, increased heart rate, skin resistance, and more smoking. Friedman, Rosenman, Carrol (Latack, 1981) in a longitudinal study found that overload is associated with coronary heart disease risk factors such as cholesterol level and blood coagulation. Feelings of being overload is associated with higher cholesterol levels and quantitative overload is related primarily to coronary heart disease while qualitative overload have primarily mental health consequences such as low esteem (Kasl, 1978).

Russek and Zohman (Cooper, 1981) found that 45 percent of a study of 100 young coronary patients had worked at jobs requiring 60 or more hours per week, thereby indicating overload. Breslow and Buell (Cooper, 1981) also found a relationship between hours of work and death from coronary disease as those who worked for more than 48 hours a week have twice the risk of death from coronary heart disease than those who work 40 hours or less.

Qualitative overload is associated with tension and low self-esteem of the workers (Kalimo and Mejman in Kalimo, El-Batawi and Cooper, 1987). French, Tupper and Muetler (Cooper, 1981) studied 122 university administrators and professors in a large university and found that low self-

esteem (a symptom of stress) was related to overload but the pattern was different for the two groups. Qualitative overload was not significantly linked with low self-esteem among university administrators but was more significant among university professors.

Role overload has been positively associated with increased blood cholesterol levels, job dissatisfaction, lower self-esteem, increased heart rate, and increased cigarette consumption (Vecchio, 1991) and positively associated with absenteeism and involuntary turnover, fatigue and tension and negatively related to satisfaction, positively related with coronary heart disease morbidity and mortality in general (Latack, 1981).

2.1.2.2 Work Underload

A study by Caplan and colleagues (Yates, 1979) found that boredom is an important factor in inducing illness and may produce stress as fast as or even faster than long hours, heavy workloads, and pressing responsibilities. Workers who reported boredom experience anxiety, depression, and irritation. This study found that job boredom is felt when the workers' skills and abilities are not being used well, their work is low in complexity and there is a poor fit between the amount of complexity the workers want and the amount their jobs can provide. Boredom brings about fatigue that is often emotional in origin (Yates, 1979).

Variance in workload is an important element in the consideration of job stress and is defined by French, Caplan and Harrison (1982) as the extent to which the pace of work remains steady or varies. Otway and Misenta (1980) found that an emergency on a monotonous, boring job can suddenly jolt workers to the physical and mental state detrimental to health. Cooper (1987) found that lack of job complexity, underutilization of skills and abilities, too little decentralization and decision making result in stress. On the other hand, too much job complexity can also cause stress.

Qualitative underload creates problems for the organization as it is associated with ill health for the workers (Cox, 1980; Matteson and Ivancevich, 1982). Studies by researchers at the Institute for Social Research of the University of Michigan (Matteson and Ivancevich, 1982) have shown that underload or boring jobs cause anxiety, depression, irritability, and psychosomatic illnesses such as migraine headache, backache, gastrointestinal disorders. Kalimo and Mejman, Kalimo, El-Batawi, and Cooper (1987) also reported that qualitative underload is associated with depression, irritation and psychosomatic complaints.

A General Household Survey in Britain in 1972 shows that the highest levels of absence from work came from jobs that require the lowest levels of skills (Powell and Enright, 1993). Kalimo and Mejman also reported that those engaged in repetitive tasks experienced more dissatisfaction than those with non-repetitive work.

The review on workload shows that the two opposite sides of workload, that is overload and underload cause stress. However interest and enjoyment of the work can do much to take off the stress from the workers. Thus an interested worker may not feel the stress of overload, eventhough he is actually overloaded or likewise may not feel the stress of underload in times of underload. Workload is thus a subjective condition.

2.1.3 Time Pressure

Time pressure can cause the heart to beat faster, blood to pump and even to perspire and flush (Matteson and Ivancevich, 1982). Time pressure elicits a stress response called "time stress" (Albercht, 1979) which is an anxiety reaction to the feeling that something must be done before the deadline and that time is running out and that something terrible will happen when it does.

Magnus, Matroos and Strackel (Byrne and Byrne, 1991) did not find any relationship between excessive working hours and time pressure and coronary heart disease. Likewise, Maschewsky only found dubious support for the association between work demands, measured by length of working hours, pressure on time and responsibility at work and acute coronary heart disease (Byrne and Byrne, 1991). Byrne and Byrne (1991) proposed that the cause of the failure to find more consistent result is the simplicity of the measures of work demands. Thus when Magnus, Matroos and Strackel (Byrne

and Byrne, 1991) used the composite measures of work stress, job stress was found to be positively associated with coronary heart disease.

Cholesterol level goes up and the blood coagulation accelerates when deadline approaches and workload go up (Kasl, 1978). Both the cholesterol level and the blood coagulation go back to normal only two months after the deadline.

The reviews on the literature indicate that too simple measures of work demands cannot accurately measure the effects of time pressure. From the reviews, time pressure appears to be causing stress response leading to adverse effects on the body.

2.1.4 Role In Organization

Cooper and Davidson (1987) found that a person's role at work has been determined as a main source of occupational stress, and can result in stress-related disease such as coronary heart disease. Cooper and Davidson (1987) found a strong correlation between role conflict and role ambiguity and components of job satisfaction; and a weak correlation between role conflict and ambiguity and mental disorder.

2.1.4.1 Role Ambiguity

Khan, Wolfe, Quinn & Snoek (1964) found in their study that 35 percent of their respondents were disturbed by lack of information on the scope and responsibilities of their jobs, 20 percent of the respondents bothered by ambiguity about what their co-workers expect of them, 18 percent distressed as they cannot get the information required to do their job, 31 percent disturbed by lack of information about opportunities for advancement in the organization and 32 per cent under tension on uncertainty about the evaluation of their superiors.

Kahn et al. (1964) discussed some of the sources of role ambiguity. One is the complexity of modern organization. Organization has grown in size and complexity to the extent that no single person is able to comprehend at any one time more than a bit of what he is to know. The second is the rate of organizational change. Change in technology requires yet associated changes in the social structure of the organization. Frequent personnel changes are often not only fraught with anxiety for the staff concerned, but also create problems of ambiguity for others for there is a great degree of interdependence in modern organization.

Khan et al. (1964) found role ambiguity to be associated to feelings of job related tension. According to Powell and Enright (1993), confusion, frustration, helplessness and stress occur when there is lack of feedback. Van Sell (Latack, 1981) has identified stress symptoms associated with role ambiguity and overloads as anxiety, tension, depression, increased heart rate, and increased coronary

risks such as increased cholesterol as well as dissatisfaction, absenteeism, turnover, and low performance. However, Miles (Latack, 1981) did not find a causal relationship between role ambiguity and job-related tension.

Latack (1981) in reviewing the literature on role ambiguity found it to be positively associated to job dissatisfaction, anxiety, boredom, job tension, physical stress symptoms (such as sleeping trouble) and the propensity to leave job; and negatively associated with job performance. Laboratory studies by Van Sell (Latack, 1981) found role ambiguity in groups to be related to lower group productivity, dissatisfaction with the group experience and psychological withdrawal. Margolis and Kroes (Cooper, 1981) found that there was significant relationship between symptoms of physical and mental ill health with role ambiguity. The stress symptoms related to role ambiguity were depressed mood, lowered self-esteem, life dissatisfaction, job dissatisfaction, low motivation to work, and intention to leave job.

Longitudinal studies showed that workers who are tense, dissatisfied and who leave the organization tend to have higher role ambiguity (Latack, 1981). Johnson and Graen (Latack, 1981) found that those who reject their roles, that is they found their roles unimportant for their future career were characterized by higher levels of ambiguity of what their supervisors prefer. They also have a higher turnover rate and the ambiguity tended to increase over time.

From the reviews, it can be concluded that role ambiguity is to some extent inherent in large and modern organizations. As role ambiguity is unhealthy directly for the individuals and indirectly for the organization, it definitely deserves serious attention if modern organizations are to progress and to succeed without sacrificing its human component.

2.1.4.2 Role Conflict

According to Kahn, Wolfe, Quinn and Snoek (1964), there are four types of role conflict, namely (1) intrasender conflict, (2) intersender conflict, (3) interrole conflict, and (4) person-role conflict.

Intrasender conflict is experienced when the orders given are in conflict with each other (Yates, 1979). An example is when an Assistant Registrar is asked by a higher official to rush a particular project by a certain dateline and also making the impossible demand that the proper channels of obtaining the signatures for the project be followed.

Intersender role conflict occurs when the worker reports to one manager functionally but at the same time is assigned to one or more other persons (Yates, 1979) or when there are pressures from one role sender opposing pressures from one or more other senders (Kahn, Wolfe, Quinn & Snoek, 1964). Intersender role conflict occurs to an Assistant Registrar when he reports to the Registrar

functionally but at the same time is assigned to the Dean of a faculty or when there are pressures from the Registrar opposing pressures from the Dean. The Assistant Registrar is in a bind as to who to please as both have legitimate authority over him.

Interrole conflict occurs when the different roles of the worker are in conflict (Yates, 1979) or when "the role pressures associated with membership in one organization are in conflict with pressures stemming from membership in other groups" (Kahn, Wolfe, Quinn and Snoek, 1964, p. 20). A busy administrator experiences interrole conflict when he is required to stay back late to complete certain assignments but at the same time he is required to be at home to fulfill his role as a family man.

Person-role conflict occurs when the role or roles the organization expects the worker to play are conflicting with the basic personal value of the worker. An administrator may be asked to administer a policy based on certain criteria that are not in line with his basic values.

Cooper and Marshall (Cooper and Davidson, 1987) in reviewing the literature relating to coronary heart disease and mental illness found that those in the managerial, clerical and professional jobs are more prone to occupational stress due to role conflict. The study by Shirom and co-researchers also showed the same findings (Cooper, 1981).

Kahn et al. (1964) found that workers who have more role conflict have lower job satisfaction and higher job-related tension. They also found the greater the authority of the person sending the role

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Shirom, Eden, Silberwasser, and Kellerman (Cooper, 1981) also found a significant
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A worker holding an organizational role at the boundary, such as that between departments or
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The above reviews on role conflict confirm that role conflict is definitely harmful to one's health. It also appears that those work that involve less physical activity do encounter more role conflict such as that experienced by the Assistant Registrars of the universities. Generally, certain amount of conflict is unavoidable in one's work situation as one is bound to experience some form of conflict, be it intersender, intrasender, person-role and interrole conflict.

2.1.5 Responsibility For People

According to Alan McLean, any responsibility in general can lead to greater stress (Vecchio, 1991). The stress created by responsibility is well illustrated in the Executive Monkey studies by Brady in 1958 (Beehr and Bhagat, 1985) where a monkey who was forced to be responsible for the decisions he made was found to develop ulcers while another monkey who was not responsible did not develop ulcers.

There are generally two types of responsibility: for things and for people. French and Caplan found that it is more stressful to be responsible for people than for things (Yates, 1979) and that responsibility for people was significantly related to heavy smoking, diastolic blood pressure, and serum cholesterol levels and that the more responsibility he has for people, the more was the risk for coronary heart disease (Cooper, 1981).

Wardwell, Hyman, and Bahnson found that responsibility for people was significantly related to coronary heart disease than responsibility for things (Cooper, 1981). A worker who is given higher responsibility for people at work faces greater level of stress related reaction as shown in studies by Crump, Kroes, and Otway and Misenta (Cooper & Davidson, 1987). Several studies reported by Kasl (1978) found that the amount of responsibility for other people and their work is positively associated with blood pressure and the amount of responsibility for things may be negatively associated with blood pressure. A study by Theorell (Latack, 1981) confirmed that responsibility is predictive of the coronary heart disease risk factors.

Hinkle and his colleagues did a study on rapid advancement in career and high level of responsibility with increased risk of heart attack and found no relationship between them. They actually found that the rates of heart attack actually declined with each step higher up the ladder of organization. Studies by Lee and Schneider; and Pell and D'Alonzo (Kasl, 1978) also found that people in higher levels of management have lower rates of coronary heart disease and it is possible that the work load and responsibility go down with higher levels of management. Theorell and Rahe (Kasl, 1978) also found cases with myocardial infraction reported fewer responsibilities at work and less supervising of others.

It is noted that responsibility for people is a heavier responsibility than responsibility for things as it carries more stress and stress inflicted diseases. Stress studies on jobs that deal specifically with personnel matters, such as those in the personnel department are not known to the writer. Though

most workers in higher positions are in some ways responsible for their staff, it is believed that those in the personnel department are in a different position as far as stress arising from responsibility for people is concerned.

2.2 Group Stressors

Group cohesiveness, group support and norm pressures can cause eustress or distress in a work environment. High group cohesiveness can be "a source of relief from stressful policies, changes, and leader behavior" (Matteson and Ivancevich, 1982, p.74) while a worker in a non-cohesive group cannot rely on the group to relieve stress or to cope with stress.

Poor relationships have been described by French and Caplan (Powell and Enright, 1993) as low trust, low supportiveness and low interest in listening and trying to deal with problems that confront the worker. In the area of interpersonal relationships, Latack (1981) has identified inconsiderate or inequitable supervisors; lack of recognition or acceptance; lack of trust; competition; difficulty in delegating responsibility; conflict within and between groups as stressors. Difficult relationships can bring on symptoms associated with extensive stress such as diarrhoea, pain in the neck or lower back, anxiety, and insomia (Yates, 1979).

According to French and Caplan (Cooper and Davidson, 1987), role ambiguity causes poor relationships in the work place. Yates (1979) reported role ambiguity, inadequate communication, and role conflict cause poor relations. Poor relationships can bring about psychological stress such as low job satisfaction and poor relationships with peers and immediate supervisor (Yates, 1979).

Studies by Kahn, Wolfe, Quinn and Snoek (1964) and French and Caplan (1982) showed that mistrust of persons was positively related to high role ambiguity, inadequate communication between people, and low job satisfaction and feelings of job-related threat to one's well-being. French (Kasl, 1978) found that the association between job stressors and physiological outcomes (such as blood pressure, serum glucose and cortisol) is positive for those with poor interpersonal relationship with co-workers, subordinates and supervisors and absent for those with good interpersonal relationships.

Buck (Cooper, 1981) found that the attitude and the relationship of the superior with their workers are important. When the superior was perceived as considerate by the workers, friendship, mutual trust, respect, and a certain warmth between the superior and the subordinates were reported. However when workers reported their superiors as being less considerate, they felt more job pressure.

Research has shown that when a person has a high level of social support, stressors bear no or little relationship to ill health and when support is low, symptoms of ill health are high (Matteson and Ivancevich, 1982). Social support has been defined by House (Beehr, 1985, p. 376) as "emotional

concern, instrumental aid, information, and/or appraisal given to people by each other". There are basically two types of social support: the emotional social support and the instrumental social support.

A study by Caplan (Cooper and Davidson, 1987) shows that a high degree of peer social support can relieve job stress. McMichael (Cooper, 1987a) found that social support from supervisors is more important than social support from co-workers in protecting workers from developing ulcers in response to perceived stress. Dembroski and co-researchers (Cooper, 1987b) found that Type-A workers increased their own stress by not receiving support from co-workers and subordinates which in turn caused them to be more frustrated at their colleagues.

From the above reviews, it cannot be denied that social factors at work occupied an important place in a worker's life. Workers are social beings and it can only be misery when one is unsuccessful in social relationships, as goes the saying "No man is an island". However there are very few individuals who prefer to be loners, possibly due to their upbringing and social conditioning; and social interaction for such individuals may bring forth intrusion into their psychological space that can only spell uneasiness and discomfort.

.3 Career Stressors

Environmental stressors related to career development include the effects of overpromotion, nderpromotion, status incongruence, lack of job security, and thwarted ambition (Cooper and)avidson, 1987).

Underutilization of capabilities in workers by not putting them in the right post that use their apabilities to the optimum cause stress in the individual worker. Underpromotion is associated with)b resignation, job dissatisfaction, and psychosomatic complaints such as depression, anxiety, ustration and headaches (Matteson and Ivancevich, 1982).

A worker who is several managerial levels below his expectation is likely to experience a great eal of stress as a result of disappointment. A study done on American Navy personnel (Yates, 1979))und that Navy personnel whose rate of advancement is greater than their expectations experienced reater job satisfaction; dissatisfaction increased as advancement slowed down; and those who were ast successful on advancement perceived the greatest amount of stress.

Status incongruence is believed to be an important factor in relation to job stress as confirmed a study by Erickson and co-researchers on the Navy of the United States (Cooper and Davidson,)87). Status congruency is the degree to which there is job advancement, including promotion to the

next higher post or in the words of Marshall (1979), the matching of one individual's advancement with his experience and ability. In the study by Erickson and co-researchers, status congruency was found to be positively related to military effectiveness and negatively related to the incidence of psychiatric disorder. In a study conducted by Arthur and Gunderson (Marshall, 1979), promotional lag was found to be significantly related to psychiatric illness.

Erikson, Pugh and Gunderson (Marshall, 1970) found that greater job satisfaction is experienced when the rates of advancement exceeded expectation and dissatisfaction increased as advancement rates retarded. However, Othway and Misenta (Cooper and Davidson, 1987) found that large increases in pay may not necessarily increase job satisfaction; but insufficient pay increases may bring on job stress. Jackson (Marshall, 1979) found all forms of status inconsistency psychologically disturbing but the response to stress varied with relative positions of inconsistent person's achieved and ascribed status ranks.

A sense of job insecurity puts worker under stress (Yates, 1979). This can occur when there is fear of redundancy, obsolescence, or early retirement. Though workers are expected to work harder in a redundancy exercise so as to be among the last to lay off, studies have found that they spend more time on coffee breaks and at the water cooler in discussing the next victim to be laid off (Yates, 1979).

From the above reviews, it is not just the "bread and butter" that are important to a worker's life but also the ascribed and achieved status rank in one's career. Failure to give the workers the right amount of pay, status, job and position will bring forth occupational stress.

2.4 Organizational Stressors

Studies by Cooper and Marshall (1978) and Veno and Davidson (1978) showed that organizational structure and climate can bring on stress in the workers from factors like office politics, lack of effective consultation, non-participation in decision-making process, especially those that are of relevance to the workers' job and career, and restrictions on behavior. The following are some of the organizational stressors.

2.4.1 Administrative Policies

Each organization has it own myriad of rules, policies, and procedures. Matteson and Ivancevich (1982) believed that administrative policies as stressor can be subdivided into the following two categories:

(1) policy on work assignments, procedures, and personal conduct of which red tape is a major stressor.

(2) lack of backing on matters of importance from the immediate officer or supervisor.

According to Yates (1979), the lack of responsiveness is a particularly damaging organizational stressor to the workers. Negative response from the management is better than lack of response, as the workers are not distressed but also discouraged from taking any initiative in the future (Yates, 1979).

French and Caplan (Yates, 1979) found that high participation brings about low psychological strain such as low alienation, low role ambiguity, low job-related threat, high self-esteem and high job satisfaction. French and Caplan found workers with high participation show high utilization of skills and abilities, have good working relationship in the workplace, possess positive attitudes towards work and show low absenteeism, low turnover and high performance. Research by Margolis, Kroes, and Quinn also confirmed the positive effects of participation by workers (Cooper, 1981). These two studies showed that greater participation led to lower physical and mental disorder, including stress-related behavior such as escapist drinking, depressed mood, low self-esteem, low life satisfaction, low job satisfaction, low motivation to work, intention to leave job, absenteeism and heavy smoking.

Low job satisfaction is related to non participation in decision making, inability to provide feedback to supervisors, and the lack of recognition for good performance (Cooper, 1981). The findings of Quinn, Seashore, and Mangione (Cooper, 1981) showed that poor mental health was linked to close supervision and no autonomy at work.

Findings by Buck (Cooper, 1981) showed that workers who felt under pressure most reported that their boss ruled with an iron hand and rarely tried out ideas or allowed participation in decision-

naking; and managers were also reported to be under stress when their bosses did not encourage vorkers working under the managers to participate.

Latack (1981) has identified the following administrative policies as stressors: inequitable or nadequate performance evaluation, pay inequities, ambiguous or arbitrary policies, frequent relocation, dealistic job description in recruiting, undefined and conflicting goals.

.4.2 Structure

Organizational structure is the way the organization is fitted together. It is simply an rrangement of people and work units that may be called the skeleton of the organization (Matteson nd Ivancevich, 1982). The organizational structure may be tall with many levels of workers with iffering amounts of authority, or it may be flat with only a few levels of workers. Burns and Stalker n Brief, Schuler and Van Sell, 1981) have coined the terms "organismic" system to describe structure dapted to uncertain, unstable environment and "mechanistic" organization to describe relatively and table structure where tasks are broken down into isolated specialties and are precisely defined. The b position in the organizational structure can determine the kind of stressors that a person may xperience.

The organizational structure determines the number of workers reporting to a supervisor and the reporting link to the boss or head. It can become a structure-initiated stressor if there are too many people reporting to a single person or lack of opportunities to make contact with the boss or head.

Latack (1981) has identified the following as stressors caused by structure: lack of growth of the organization resulting in lack of promotional opportunities, the size of the organization, excessive formalization, division of labor and excessive specialization, and interdependence of organizational units.

2.4.3 Changes At Work

Matteson and Ivancevich (1982) treat stress and change as almost synonymous terms. According to Albercht (1979), changes cause anticipatory stress that is actually a feeling of anxiety about an impending event, ranging from a generalized anxiety with little or no specific basis to anxiety attack where there is a diffuse feeling of dread or fear. Thus promotion, though a positive factor can be a stress factor in the job as it leads to change in job functions. Jenkins, Rosenman, and Friedman (Latack, 1981) found that those with silent myocardial infraction were most likely those who have received a promotion in the previous three years. Jennings (Latack, 1981) observed that the upward mobility process of executives involved stress and can lead to what he called mobility fatigue.

The type of job changes appears to have some impact as shown in a study done by Kasl and French (Latack, 1981). For those who were demoted, there was an increase in diagnosed illness on voluntary dispensary visits and for those who were promoted, the number of voluntary dispensary visits decreased even though they were an older group.

Research by Adams (1981) found the following as the most stressful change events on the job (in order of intensity):

1. major or frequent changes in instructions, policies, or procedures,

2. major reorganization,

3. sudden significant change in the nature of work,

4. sudden significant increase in the activity level or pace of work,

5. new boss or supervisor,

6. required to work more hours than normal due to some crisis or deadlines,

7. give major briefing or formal presentation, and

8. decrease in status.

Studies by various researchers such as Adams; Cochrane and Robertson; Holmes and Rahe (Adams, 1981) have shown that the more readjusting there is, the less resistance to illness and the more likely to get sick. Syme, Borhani and Beuchley (Marshall, 1979) also confirmed that high mobility is related to disease incidence. Syme, Human, and Enterline (Bhagat and Beehr, 1985) reported that individuals with heart disease had experienced more occupational changes and had been in their

principal occupation for fewer years than their matched controls. Their findings indicated that occupational mobility is at least partially responsible for the health-related aspects. However another study of 30 years by Lehman, Schulman & Hinkle (Latack, 1981) showed no differences on indices of mobility on those who died from coronary heart disease, on those who died from other causes and on the survivors.

Research by Tinning and Spry (1981) showed that those in departments with doubtful future reached a potentially unhealthy stress level. Cobb (Latack, 1981) in a longitudinal study found that temporary unemployment and job changes caused elevated norepinephrine levels as a physiological stress symptom in those affected which persisted as long as one year after the job change.

2.4.4 Territorial Boundaries

Yates (1979) reports that a worker who has to interface extensively with other departments or to work in a department alien to their home base had lower self-actualization values and lower utilization of their best abilities and leadership skills. According to Brief, Schuler, & Van Sell (1981), those with boundary-spanning roles are subjected to constant role conflict. Likewise, Beehr (1995) reports that organizational boundary positions are stressful because of the likelihood of experiencing role conflicts. Miles (1980) in his study found that the high level of work stress created by work conflict can be offset by the enhanced job satisfaction and career opportunity created by boundary-

spanning work. Yates (1979) reports that those who spent most of the time working with people in their own work units had higher level of self-actualization.

According to Brief, Schuler, & Van Sell (1981), those with supervisory responsibility for other persons are subjected to stress arising from role conflict. Therefore while an administrator working in an engineering unit shows more stress, an engineer working in an administrative unit also displays greater pressures (Yates, 1979).

2.4.5 Leadership

The leader has significant impact on the frequency, intensity, and duration of stressor. The leader is an influential person as his influence can come from his personal attributes as well as from his position of authority and power. Leaders are all not equal as some are stress carriers while others are stress relievers. According to Brief, Schuler, & Van Sell (1981), two communication behaviors of the leaders, such as ego-deflation and contingent-disapproval create stress.

There is no one leader that is best for all people and every situation. While some believe that the warm, considerate and sincere leader is best with people; others may want a task-oriented, hard-nosed, no-nonsense leader. However it does seem that in stressful jobs where there are a lot of policies, little or lack of decision making, little privacy, and frequent changes, stress can be lower if the leader is more directive (Matteson and Ivancevich, 1982).

It can be concluded that organizational stressors, organizational structure, changes at work, administrative policies and leadership are usually in most ways beyond the direct control of the individual. The organization structure and climate dictate the conduct and behaviour of the workers. Thus to remove or reduce the effects of the organizational stressors, it needs the intervention of the top management of the organization.

2.5 Stress Responses

Somatic change often suggests that there is psychological stress (Hans Selye, 1956). Although most responses to stress are psychosomatic, there have been some instances when a person subjected to stress will move in one direction as opposed to another. Halliday (Rosoff, 1984) offered a theoretical perspective that psychoneurotic illnesses may also be found in those having psychosomatic disease or appear as preceding, alternating, or sequent disorders to psychosomatic disease.

Research had not come up with information on why a person usually falls physically ill as opposed to mental illness in the face of stress (Rosoff, 1984). Halliday, Grant and Rosoff (Rosoff, 1984) in their various research tried to explain that one follows the path taken by family members. Therefore if there is a family history of a certain kind of disease, the person is prone to somatize rather than move in the direction of psychiatric symptoms.

Selye (1953) believed that a person under stress responds with certain particular signs and symptoms that are caused by the vulnerable parts of the body. He has identified thirty-one signs of stress. Nico van Dijkhuizen (1981) however outlined the symptoms of stress as lower productivity by decreased work performance, high absenteeism, high staff turnover, irritability and much interpersonal conflict, less support giving, family problems, increased smoking, sleeplessness, change in clothing habits, change in eating and drinking habits, high blood pressure, high cholesterol level, and fight-flight reactions.

Schuler (Latack, 1981) has divided the individual symptoms of stress into the following three categories:

1. Physiological Responses

    - Short-term: heart rate, respiration, headache

    - Long-term: ulcer, blood pressure, heart attack

    - Non-specific: adrenaline, noradrenaline, thymus deduction, gastric acid production, ACTH

        production

2. Psychological Responses which consisted of both the affective and the cognitive responses such as fight or withdrawal; indifference, resignation, boredom; regression; forgetfulness; tendency to misjudge others; uncertainty about who to trust; inability to organize self; dissatisfaction; tendency to vacillate in decisions; tendency to be agitated with trifles; inattentiveness; irritability; procrastination; and feelings of persecution.

3. Behavioral Responses bring about individual and organizational consequences such as follows:

    a. Individual consequences such as loss of appetite; sudden, noticeable loss or gain in weight; sudden change of appearance such as in dressing (improved or becomes worse), complexion (sallow, reddened, acne), and hair style; difficulty in breathing; sudden change of smoking habits or use of alcohol

    b. Organizational consequences such as low performance in terms of quality and quantity; low job involvement; loss of responsibility; lack of concern for organization; lack of concern for colleagues; loss of creativity; absenteeism; voluntary turnover and accident proneness

An individual style of reaction is then peculiar to the individual rather than related to the type of stressor involved (Beech, 1987). Margolis and Kroes (Tinning and Spry, 1981) have identified at least five dimensions of job related stress reactions that can be used in order to assess the total picture of the effects of job stress upon the worker. These five dimensions are:

    (1) Reactions which are transient, short-term and subjective in close temporal proximity to specific job stresses such as feelings of anger, fear, tension, and anxiety.

    (2) Responses that are more chronic and psychological that are a part of the person's health status. This is not so much a reaction to specific work stressors. Examples of such responses are general malaise, constant fatigue, chronic depression or alienation.

(3)   Transient clinical-physiological changes like alterations in levels of catacholamines, blood lipids, blood pressure, or gut motility. Such changes are objective indicators that the person is under stress.

(4)   Symptoms of physical and /or psychosomatic illness such as coronary heart disease, gastro-intestinal disorder and others.

(5)   Decreasing work performance such as increased error rates and increased incidence of accidents.

According to Selye (1953), the physiological response to stress is a response mediated by the adrenal glands releasing adrenalin and noradrenalin, as well as steroid hormones stimulating the body to peak performance. This physiological response was evolved over hundreds of thousands of years while work has only existed 30 to 40 years ago. Mankind still responds to the mental challenge of his work with a physical response totally inappropriate to his needs (Melhuish, 1981). Even when the stressor is symbolic rather than physical such as the threat of demotion, the autonomous nervous system is activated in a fight-flight behavior where the considerable tension can lead a paranoid to try to attack it while a depressive try to flee from it.

The response to stress comes from a readjustment of the blood supply to the various parts of the body as well as a heightened nervous tone mediated by the brain. The heart pumps harder, the lungs also work harder, and fuel, in the form of glucose and fats must be liberated into the blood in order to ensure the muscles receive more blood, fuel, and oxygen. The extra blood needed by those

muscles have diverted the blood from going to the other organs such as the stomach, bowels, skin and sexual organs, thereby making those under stress to experience the symptoms of the physiological response as increased pulse, feeling of sweatiness and apprehension, the hollow feeling in the pit of the stomach (due to shortage of blood), the looseness of the bowels and the frequency of passing urine (Melhuish, 1981). Burns (1981) identified the responses to include rapid heart beat, increased blood pressure, pallor or flushing, raised muscular tension, headaches, and sleep disturbances.

The heart is the prime target of fats released into the bloodstream which form sludge if not used up by physical activity and so block the arteries. Thus the sedentary nature of Assistant Registrars can make even the natural, healthy physiological response to stress potentially dangerous if the response is not used by physical activity.

According to Melhuish (1981), mental impairment can also occur with the constant arousal of the nervous system producing exhaustion or the continued alteration of the natural balance of the circulation. Thus the overuse of the physiological response can cause mental symptoms of anxiety, sleeplessness and depression (Melhuish, 1981). Burns (1981) has identified the cognitive responses as usually involving trains of thought that are self-defeating, anxiety generating, unproductive, or irrational.

Stress also precipitates changes of habits. Cigarette smoking is increased at times of stress for smokers. Some resort to drinking alcohol or coffee to try to soothe themselves or forget their worries. In doing so, they find their pulse rate accelerated and therefore adding more stress to themselves.

Another major category of stress response is a syndrome called long term performance decrement (Hogan and Hogan, 1982). The causes of performance decrement are that of illness, distractibility, inattention, and the lingering effects of stress-related substance abuse and fatigue.

Scheck, Kinicki and Davy (1995) in their research has identified stress response as of two types. Immediate stress response is that of the body's initial reaction to a stressor which is more of a reflex action, and the immediate psychological and physiological changes associated with this reaction. The second type of stress response is that of the intermediate stress response whereby there is a coping stage which has two dominant coping functions: emotion-focussed coping and problem-focused coping.

According to Lazarus (1966), the two distinct categories of coping activities are direct action tendencies aimed at reducing external demands directly and defensive reappraisals aimed at reducing the experience of stress by altering perceptual and cognitive functioning which is the palliative mode of coping. According to Lazarus (1966), how a person responds depends on how the person appraises the significance of an event and the resultant state of stress will manifest itself in different areas of physical, cognitive and behavioural symptoms.

Pestonjee (1992) viewed stress responses as differentiated into the adaptive responses where actions help to alleviate the stress and return the system back to the state of equilibrium, and the maladaptive response where actions serve to exacerbate existing demands and keep the system in a destabilized state. Svebak (1991) in his research found that there is a relationship between maladaptive coping and musculoskeletal complaints, especially back pain.

Appley (Lazarus, 1967) conceptualized the appraisal process of the worker when coping with stress as three kinds of simultaneous evaluations. These are the appraisal of task requirements and the worker's competence in relation to the task; the appraisal of the worker's own role in relation to the task; and the appraisal of environmental constraints.

2.6 Stress And Administrators

Guralnick (Kasl, 1978) found certain occupation groups experiencing higher levels of stress and believed that different job stressors are the causes of the differences in stress levels. Rice, 1992 has placed administrators as an occupational group that suffered from high stress.

Studies by Singer and Rutenfranz, and Smith (Kasl, 1978) have indicated that one of the most frequently disliked aspects of job that are stressful involve administration. Burns & Gmelch (1992)

found that two of the five stress factors experienced by department chairs as administrators of higher education are related to administrative work and they are administrative task stress and administrative relationship stress.

Chemers, Hays, Rhodewalt & Wysocki (1981) did a study on 51 university administrators and found that administrators whose leadership style "matched" level of situational control reported significantly less job stress, fewer health problems, and fewer days missed from work than administrators "out of match". Thus these findings show that it is important to match the administrators and their staff. Staff who are always waiting for directions and orders work well under more directive Assistant Registrars while those who are independent workers match better with Assistant Registrars who delegate.

A study by Bassett & Hamilton (1984) on educational administrators found a positive relationship between stress coping capability and the number of subordinates supervised.

Rhodewalt, Hays, Chemers & Wysocki (1984) did a study on 49 university administrators and found that work stress and life change interacted with the Type A behaviour pattern in symptomatology. Type A university administrators under high stress reported more psychological impairment and cardiovascular-related health problems than that type B who faced high stress or the types A and B who faced low stress.

Hayes and O'Connor (1982) evaluated a university employee assistance programme that uses problem-solving model to resolve emotional problems about role function and found such a programme to be able to promote peer interaction and role clarification.

Tung (1980) compared the occupational stress profiles of male and females educational administrators and found that female administrators are good candidates for administrative jobs as the females experienced substantially lower levels of self-perceived occupation stress than males. In another study by Rockwell (1981) on 173 university women in professional, managerial, and clerical occupations, the female reproductive system was found not vulnerable to the level of stress. These findings may lend support to the above findings by Tung on female administrators. However it may also mean that stress has not affected or does not affect the female reproductive system.

On the other hand, a study done on 177 university employees consisting of faculty, administrators and support staff by Sullivan (1991) shows that gender and years of experience did not affect the stress levels. Saxon (1993) in a study on 238 administrators of special education found significant differences in role overload, role boundary, responsibility and physical environment when compared by gender. The highest level of stress is found in responsibility and role overload. Significant differences were found in role overload and role ambiguity when compared by length of service.

Butler (1995) did a study on 168 university administrators and found that the younger the administrators in age, the higher the level of occupational stress. The study also found that allergies and debility and headache were common stress-related illnesses among university administrators.

Job significance, workload, work politics, interpersonal dealings at work, work conditions, and university reorganization were major stressors in a study conducted by Dua (1994) on all staff at the University of New England in Australia. In this study, it was found that both job and nonwork stress were associated with poor health and high job dissatisfaction. The stress levels of the administrative staff of the University of New England indicate that 24.3% are in low stress, 62.6% are facing moderate stress, and 13.1% are experiencing high stress. Dua also found that the younger staff reported more stress due to job significance, work politics and working conditions than older staff. On the other hand older staff reported more stress than younger staff due to workload. In general, younger staff reported more job stress than older staff. The study found no significant difference in the job stress of those who supervised the work of others and those who did not.

There has been a mixture of results as far as research on educational administrators is concerned. While Tung (1980) found that females face less stress as administrators, Sullivan (1991) found that there is no difference in the stress levels according to gender.

Likewise while Sullivan (1991) found that years of experience do not make a difference in the stress level, Saxon (1993) found that there are significant differences in stress on role overload and

responsibility by years of service. If age can be taken to indicate roughly the years of experience, then the study by Butler (1995) on the university administrators found that the younger the administrators the higher the stress. Dua (1994) also share the same findings with Butler on younger staff facing more stress.

The above discussion shows that results have been inconclusive and cannot be used to generalize educational administrators. The differences can be due to the different variables and measuring instruments used. It may also be due to the differences in the environment that bring about differences in results.

2.7 Conclusion

The reviews on the sources of occupational stress have provided a whole range of common stressors. Even though there has been a multitude of studies conducted on occupational stress, there is still no agreement on what constitute occupational stress and stressors. Results on the effects on occupational stressors are sometimes conflicting.

It can be agreed that almost everything in the work situation is at some time, or by somebody, identified as a job stressor. Therefore it is just not possible to cover all the environmental stressors at work.

The reviews show that both a situation and its direct opposite can cause stress. Examples are that of overwork and underwork; too many decisions to make or too few decisions to make; and overpromotion and underpromotion.

What may be a stressor for one may be a satisfier for another. While a poorly defined job may cause anxiety to one worker, it provides scope for another worker to use his initiative and gain greater satisfaction from a job well done. Therefore no stimulus is a stressor to all workers. The review on stressors confirms the wisdom of the saying "one man's meat is another man's poison".

Stress is dependent not only on stressors in the work environment but also on the extraorganizational stressors as well as the makeup of the individual himself. Stress is indeed very much an individual phenomenon as it is subjective in nature. It depends on the specific demands on the particular individual and how the individual relates to his particular capability to meet the perceived demands and the perceived consequences if the perceived demands are not met.

The reviews on the various related topics point out clearly that literature on the Malaysian aspect is scarce to come by. Since literature on the Malaysian aspect is lacking, most of the figures and data quoted in this study are mainly British or American.

The reviews have shown that there is a need to conduct more studies to know and to understand the stress situation in Malaysia in terms of the workers as individuals, the organizations as the employers, and the society in which the workers and organizations exist. The study on occupational stress needs serious attention from all quarters as occupational stress may be a contributory factor in many of the disturbances in modern Malaysia such as that of road bullies, child abuse and so on.