THE STATE OF HEALTH OF MALAYSIAN MANAGERS

By

ONG JOO LEE

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ABSTRAK

Satu elemen genting dalam pencapaian Wawasan 2020 Malaysia ialah tenaga pekerja yang sihat. Akan tetapi, terdapat kekurangan maklumat tentang taraf kesihatan pengurus di Malaysia. Oleh yang demikian, objektif kajian ini ialah untuk mengisikan jurang yang ada dengan maklumat asas tentang isu dan faktor-faktor cara hidup penting yang menyumbang kepada tahap kesihatan fizikal dan mental pengurus di Malaysia.

Model penyelidikan ini direkabentukkan untuk mengkaji bagaimana keempat pemboleh ubah utama, iaitu: sejarah keluarga, tabiat cara hidup kegiatan fizikal dan diet, jenis personaliti A/B dan persekitaran kerja mempengaruhi kesihatan fizikal dan mental pengurus di Malaysia. Peringkat kesihatan fizikal diukurkan melalui peringkat kekuatan fizikal yang meningkat daripada aktiviti fizikal terancang, indeks jirim badan (BMI), bilangan lawatan ke doktor dan cuti sakit akibat kurang sihat. Peringkat kesihatan mental diukurkan melalui peringkat kecemasan psikologi akibat ketekanan kerja. Data dikutip dengan kegunaan borang soalselidik yang diedarkan dan dikutip balik oleh penyelidik sendiri. Responden terdiri daripada mereka yang memegang jawatan penyelia ke atas dan bekerja di Pulau Pinang. Keputusan kajian ini menunjukkan bahawa melebihi 80% pengurus di Malaysia kekurangan bersenam dan hanya 45% mempunyai indeks jirim badan (BMI) yang sempurna, iaitu: antara 19 hingga 23. Pada keseluruhannya, lebih kurang 50% pengurus mempunyai peringkat kesihatan fizikal di bawah tahap yang diperakukan. Secara umumnya, pengurus wanita mempunyai indeks jirim badan (BMI) yang lebih rendah dan lebih sihat secara fizikal berbanding dengan pengurus lelaki.

Kajian ini tidak mendapati sebarang perbezaan dalam kesihatan mental antara pengurus lelaki dan pengurus perempuan. Tahap kesihatan mental agak memberangsangkan; untuk kebanyakan pengurus (68%) mempunyai skor 4 ke bawah dalam soalselidik Kesihatan Umum yang mengukurkan tahap kecemasan psikologi.

Secara kesimpulannya, peringkat aktiviti pengurus di Malaysia lebih rendah daripada purata populasi umum dimana lebih kurang 60% dianggapkan melakukan kerja yang berduduk (sedentary). Diperakukan bahawa pengurus-pengurus di Malaysia menukarkan cara hidup mereka kepada sesuatu yang lebih aktif, yang merangkumi senaman aerobik selama 30 minit 3 kali seminggu. Berdasarkan ancaman obesiti, satu pertukaran dalam tabiat diet yang merangkumi lebih buah-

buahan dan sayuran dan pada masa yang sama mengurangkan makanan lemak dan bahagian saiznya diperakukan.

ABSTRACT

A healthy workforce is an essential element for Malaysia to achieve Vision 2020. However, there is a dearth of information on the state of health of Malaysian managers. The objective of this study, therefore, is to fill this gap by providing some baseline information on the issue and the salient lifestyle factors contributing to the level of physical and mental health of Malaysian managers.

The research model is designed to attempt to find out how the four major independent variables of familial history, lifestyle habits of physical activity and diet, personality type A/B and the work environment impact the physical and mental health of Malaysian managers. Physical health level was measured by the physical fitness level arising from regular physical activities, body mass index, the number of visits to the doctors and days off work due to illness. Mental health level was measured by the level of psychological distress resulting from job stress. Data was collected using self-administered questionnaire distributed and collected from respondents working in organizations sited in Penang. Respondents were required to be in control of subordinates and holding managerial positions of supervisors upwards. Results of the study showed that over 80% of Malaysian managers under-exercise and only 45% are within the ideal BMI range of 19 to 23. Overall, approximately 50% of managers are below the recommended level of physical health. Generally, female managers have comparatively lower BMI and are physically healthier than their male counterpart.

This study found no difference in mental health level between male and female managers. Mental health level is heartening, for most managers (68%) had a score of 4 and below on the General Health Questionnaire that measured the level of psychological distress.

In conclusion, Malaysian managers' level of physical activity (80%) is below that of the general population where around 60% are deemed to too sedentary. It is recommended that Malaysian managers change to a more active lifestyle, incorporating at least the recommended 30 minutes 3 times a week aerobic exercise. In view of the threat of obesity, a change in dietary habits to incorporate more fruits and vegetables and at the same time cut down on fatty foods and portion size.

Chapter 1

INTRODUCTION

1.1 Introduction

The average life expectancy of Malaysians is 72 (Ministry of Health, Malaysia). However, it is not uncommon now to hear of or read about the premature deaths or forced early retirement of executives, chief executive officers (CEO) and prominent business leaders from heart attacks, cancer or stroke. Recent examples of some prominent Malaysian CEO's who have passed away prematurely are - Tan Sri Dr. Abdullah Sanusi Ahmad, age 67, Vice President of the Open University of Malaysia who died suddenly of a heart attack; Tan Sri Othman Yeop, age 64, Executive Chairman of the Malaysian Development Corporation who died of cancer (Ibrahim Ahmad Bajunid, 2003) and Professor Ahyaudin Ali, age 47, Deputy Vice Chancellor, University Sains Malaysia who died of brain tumor. The untimely deaths and early retirement of these executives, CEOs and businessmen are a great loss to the nation, their community and their family.

Dynamic leadership and a healthy workforce are essential for Malaysia to achieve Vision 2020 and industrialized nation status. But, how healthy are the Malaysian CEOs, senior managers, middle managers, junior managers and executives? Are they like their Western counterparts neglecting their health in creating wealth for their organizations, their families and themselves?

There is a dearth of knowledge on the physical and mental or psychological health of Malaysian managers. It would, therefore, be interesting to find out the current physical health and mental health status of Malaysian executives and managers, how their lifestyle – physical and dietary habits, personality and work

environment affect their state of health. This study hopes to add to the little knowledge on this subject.

1.2 Background of the Study

Quick, Cooper, Quick, and Gavin (2002) highlight the fact that executives and managerial health is a leading issue. With globalization and the new economy, executives and managers are thrown into increasingly competitive environments. They face increased performance pressures; job insecurities (mergers and downsizing), and are given less time to prove their capabilities before being shown the door. However, these executives and managers play key roles in the creation of economic benefits and wealth for themselves, family, society, organization (they work for or own) and the nation. Therefore, premature managers' disability resulting in forced retirement or death will have serious financial and economic consequences to all stakeholders concerned.

The World Health Organisation Report, 2002 (WHOR 2002) states that the three major diseases resulting in the untimely death or disability of the world population are cardiovascular diseases (CVD), diabetes and cancer. Classified as chronic diseases, CVD, cancer and diabetes are the most prevalent, costly and preventable of all health problems as their root causes lie in a sedentary lifestyle, diet, overweight and obesity. Lack of vigorous physical activities coupled with a change in dietary habits from carbohydrates to more protein-rich foods as in meat and dairy products that are rich in saturated fat and bigger portion sizes (termed the American diet) due to increased economic well-being is a major cause of overweight and obesity.

Increased income has also enabled most households to own televisions. Television has turned many away from some physical activities to life as a couch potato. In their book, Pace and Jones (1995) cited studies that indicated that life in front of the television also encourages snacking and drinking of canned or bottled drinks (alcoholic or nonalcoholic). All these are only marginally nutritious while adding extra unutilized calories that will be further converted to fat thus compounding the overweight/obesity problem.

Another major cause of health problems for managers is the stress of having to work long hours plus coping with unreasonable and more demanding workloads (Brett, & Stroh, 2003, Pisarski, Bohle, & Callan, 2002) with little time for family, hobbies, exercise, rest, relaxation and sleep. Managers are finding that they have to choose between their personal life and their jobs with 38 per cent opting to sacrifice their personal lives and only 3 per cent their professional lives (Trustee, 1998).

Many managers are reporting stress overload which is affecting their psychological well-being. Episodic stress can help maximize performance (Robbins, 1998) but chronic prolonged job stress will result in diminished psychological and physical health (Minirth, Meier, Hawkins, Thurman & Flournoy, 1997; and The American Institute of Stress, 2002). Stress has been positively related to absenteeism, turnover, coronary heart disease and viral infections. Of the 10 leading causes of death, stress is directly implicated in contributing to heart disease, strokes, injuries and suicide/homicide. Stress is indirectly implicated as triggering cancer, chronic liver disease and emphysema/chronic bronchitis (Quick, et al., 2002). The European Community (Dainels, 2002), United Kingdom and the United States of America (Overall, Financial Times, 2001) all agree that stress at work is now a health epidemic and that stress-related illness cost the United Kingdom £3.9 billion and the

United States of America (USA) 10 per cent of her gross national product each year respectively.

It is a proven fact that smoking causes many health problems like cancer of the lungs and narrowing and hardening of the arteries. Both high stress and low self-esteem are positively related to smoking (Byrne & Mazanov, 2001).

Alcohol abuse is another contributing factor towards managers' ill-health. Studies have shown that increased alcohol consumption is a form of coping with increased job pressure. Alcohol abuse is a leading cause for liver cancer worldwide and drunk driving road fatalities in the west.

There is increasing awareness that a combination of regular exercise, proper dietary behaviours and practices is the best medicine to prevent or diminish the effects of such chronic diseases as diabetes, depression, heart diseases, high blood pressure, arthritis and more (Goldberg, et al., 2000; Pollock, 2001; WHOR 200*;* Li, Culver, & Ren, 2003*).* Studies have also shown that proper dietary behaviours and practices can help prevent the onset of or help in the recovery from the diseases mentioned earlier. It is therefore one of the objectives of this study to find out more about the dietrary habits of Malaysian managers and how often they exercise.

1.3 Research Problem

The background information above indicates the importance of exercise, diet and stress management to achieve a healthy life style. To date, there is little information on the physical health and mental health level among managers in Malaysia and how their lifestyles and work environment contribute to their level of physical health or ill-health. This research will attempt to examine the relationship between lifestyle choices and the level of manager's physical health and mental health.

1.4 Research Objectives

The purpose of this study is :-

(i) To assess the level of physical and mental health of Malaysian managers.

(ii) To determine the salient lifestyle factors contributing to the level of the Malaysian managers' health.

1.5 Research Questions

The research questions to be addressed are:

(i) What is the level of physical and mental health of Malaysian managers?

(ii) What lifestyle factors impact the health of Malaysian managers?

1.6 Significance of Study

This study upon successful completion will be able to indicate the health level of Malaysian managers. It will also add to the dearth of information on this subject as well as identify the factors that jeopardize or enhance the health of Malaysian managers.

1.7 Definition of Key Terms

1.7.1 Health

As defined by The World Health Organisation, Constitution, 1948, " ***Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity".*** For the purpose of this study, health would include total physical fitness, mental fitness, social well-being and free of diseases.

1.7.2 Physical Health and Mental or Psychological Health

Good physical health will be defined as having at least one component of physical fitness (cardiovascular endurance or muscular fitness), a bodyweight within the ideal body mass index range and good immunity).

Good mental or psychological health will be defined as having non or low, manageable level of psychological distress.

1.7.3 Physical Fitness

Physical fitness is defined as the ability of the human body to function with vigor and alertness, without undue fatigue and with ample energy to engage in leisure activities, and to meet physical stresses. It consists of three components, that is cardiovascular endurance, muscular fitness, and a good nutritional status.

Cardiovascular endurance is the ability of the heart, lungs and blood vessels to supply the body, especially the working muscles, with oxygen.

Muscular fitness consists of three categories, that is muscle strength, muscle endurance and muscle flexibility (Pace & Jones, 1995).

1.7.4 Psychological Fitness & Psychological Distress

Psychological fitness is defined as being able to have a realistic view of situations and making good informed decisions even under stress. Psychological distress is defined as outcomes of stress consisting of symptoms of anxiety, depression, and somatic complaints that will eventually have negative consequences for the individual, their family and their employing organizations (Kosaba & Puccetti, 1983; Sack & Girard, 1982 as cited by Kumaresan, 2003).

1.7.5 Lifestyle

Lifestyle portrays a person's pattern of living in the world as expressed in his or her activities (active or sedentary), dietary habits (example health food enthusiast or fast food fanatic), interests and hobbies, opinions and preferences. (Kotler, 2000 : 168)

1.7.6 Physical Activity (PA)

For the purpose of this study, physical activity (PA) would be any activity that results in contraction of skeletal muscle and promotes physical fitness and can consists of active recreational pursuits such as swimming, team sports, walking, "keep-fit" exercises, dancing, heavy work (e.g. digging), or routine daily tasks like walking the dog, manually washing the car and using the stairs instead of the elevator at work.

1.7.7 Dietary Habits

Dietary habits would include a person's eating habits like the number of meals per day, types of food preferred, food group composition of the daily total calorie intake, which is the main meal for the day, when meals are taken and the size of each meal. (Goldberg & Elliot, 2000).

1.7.8 Body Mass Index (BMI)

This assesses your weight in relation to your height and gives an indication of how healthy your current body shape. Ideal BMI is between 19 and 23; 23.1-25 is slightly overweight, 25.1 - 30 is overweight and above 30 is obese. Malaysia is now adopting BMI above 23 as overweight against the 25 used by the World Health Organization. (New Straits Times, 7 Jan. 2004).

1.7.9 The Metabolic Syndrome

The "metabolic syndrome" is a reference that relates all the following conditions: obesity, hypertension, low levels of high density lipoprotein or good cholesterol (HDL), high levels of triglyceride (LDL or bad cholesterol) and insulin problems faced by diabetics. This syndrome is a reference that relates one of the above conditions to the others, and shows that each increases the risk of others occurring. It shows the accumulated risk factors instead of whether diabetes causes CVD or the other way around. (WHOR 2002 and Prof. Datuk Dr. Khalid Abdul Kadir, Professor of Medicine, University Malaya Medical College).

1.7.10 Job Stress

The definition used will be that of Matterson and Ivancevich (1999) as cited by Kumaresan (2003, p. 5).

> "Job stress in this study will be defined as a result of interaction between the individual with the job and environment that causes deviation in their normal functioning like being in anxiety, worried and depressed".

1.7.11 Personality

The relatively permanent set of psychological and behavioral attributes that distinguish one person from another (Griffin, 1999, p. 455).

1.7.12 Type A Behavior Pattern

> *"Type A behavior pattern is an action-emotion complex that can be observed in any person who 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 persons. It is not psychosis or a complex of worries or fears or phobias or obsessions, but a socially acceptable – indeed often praised – form of conflict. Persons possessing this pattern also are quite prone to exhibit a free-floating but extraordinary well-rationalized hostility. As might be expected, there are degrees in the intensity of this behavior".

(Friedman, & Rosenman, (1974) as cited by Kreitner & Kinicki (2001, p605)

1.7.13 Managers

Managers are defined as employees who have subordinates directly under them and are responsible for supervising or managing a production line, project, product or service, or other functional duties.

1.8 Organization of Chapters

This study is organized into five chapters. Chapter 1 introduces the subject matter, states the research problem, the objectives of the study and also define the key terms. Chapter 2 examines the related literature reviewed. Chapter 3 outlines the conceptual model and formulation of the research hypotheses of this study. This chapter also delineates on the methodology, which covers the discussion on the unit of analysis, sample and procedures, measures and the statistical analyses employed. Results of the various statistical analyses employed are presented in Chapter 4. Chapter 5 concludes the study. Survey findings, limitations and implications are discussed and suggestions for future studies proposed.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

This chapter provides a summary of the literature review done for the study. Reports on the threats to the physical and mental health of the general population in general and managers in particular are highlighted. This will be followed by epidemological, clinical or observational studies done on the efficacy of increased physical activity (daily physical activities and planned exercises) and healthier diets in reducing threats to physical and psychological health. Also discussed will be the lifestyle components of alcohol consumption, and smoking. This is then followed by a review of the direct and indirect impact of personality type A and job stress caused by the work environment on the physical and mental health of managers and executives.

2.2 Physical Health and Mental Health

For the purpose of this study, good physical health will be defined as having at least one component of physical fitness (cardiovascular endurance or muscular fitness), a bodyweight within the ideal BMI range and good immunity). Good mental health will be defined as having non or low, manageable level of psychological distress.

2.2.1 Threats to physical and psychological health.

The many health risks faced by managerial level staff reflect those of the general population. In fact, life at the top increases these risks (Quick et al., 2001). The World Health Organisation Report 2002 (WHOR 2002) states that cardiovascular disease or coronary heart disease (CVD), cancer and diabetes mellitus as the top three chronic

diseases causing death and disability in the most industrialized countries of North America, Europe and the Asian Pacific. Table 2.1 is a summary of the five leading risk factors globally that contributes to CVD, cancer and diabetes.

Table 2.1

The 5 Leading Risk Factors Globally that Contributes to Coronary Heart Disease, Cancer and Diabetes.

Disease / Risk Factor	Coronary Heart Disease	Cancer	Diabetes	Causes number of premature deaths a year
Tobacco	✓	✓	✓	Causes almost 5 million premature deaths a year
Alcohol	✓		✓	
Blood pressure	✓	✓	✓	Causes 7 million premature deaths a year
Cholesterol	✓	✓	✓	Causes > 4 million premature deaths a year
Obesity	✓	✓	✓	Causes 0.5 million premature deaths a year in N. America, Western Europe Over one billion adults are overweight and at least 300 million are clinically obese
Disease burden caused by the risk factor above or their combination	> three quarters of CVD globally			

(a) Tobacco, alcohol, blood pressure, cholesterol and obesity accounts for at least one third of all disease burden in the industrialized countries of North America, Europe and the Asian Pacific.

(b) Overweight and obesity are important determinants of health and lead to adverse metabolic changes including increases in blood pressure, unfavorable cholesterol levels and increased resistance to insulin. They raise the risks of coronary heart disease, stroke, diabetes mellitus, and many forms of cancer.

(c) High blood pressure and high blood cholesterol are closely related to excessive consumption of fatty, sugary and salty foods. They become even more lethal when combined with the deadly forces of tobacco and excessive alcohol consumption, which also cause a range of cancers as well as heart disease, stroke and other serious illnesses.

No single cause is responsible for the development of these diseases. They are the end result of a number of factors, both genetic and environmental (home, social and workplace), the contribution of which vary among individuals. The only clear conclusion from the different types of studies including cross-cultural studies, large epidemiologic studies and naturalistic-observational studies are that risk factors for CVD, cancer, diabetes and obesity are associated with increased economic well-being and the resultant sedentary lifestyle and intake of energy-dense foods (Fang, Wylie-Rosett, Cohen, Kaplan and Alderman, 2003; WH0R 2002, Quick et al., 2001, Leonard, 2001, Goldberg & Elliot, 2000; and Pace & Jones, 1995), and pressures from the home and work environment (Quick et al., 2001, Goldberg & Elliot, 2000). These types of risk factors can be prevented or reversed with a change in lifestyle to include exercises, healthy diet, stress management and a more balanced personal-professional lifestyle.

2.3 Lifestyle

Lifestyle portrays a person's pattern of living in the world as expressed in his or her activities (active or sedentary), dietary habits (example health food enthusiast or fast food fanatic and drinking habits), smoking habits and interests and hobbies, opinions and preferences (Kotler, 2000, p. 168). As reported by Kreitner and Kincki (2001, p.607), almost 85 percent of all illness and injury is the result of lifestyle choices. The American Cancer Society estimates that at least thirty-five percent of all cancer deaths may be related to (being) overweight and (an inherent) lack of activity. Sedentary lifestyle and overeating has been blamed for obesity and overweight. However, Woldek and Gonzales (2003) took a more unconventional approach. To them, obesity is not always the result of overeating and a sedentary lifestyle but environmental

factors causing cytokine activation that not only inhibits the metabolizing of nutrients from food into energy but at the same time converts the nutrients into fat leaving the person energy deficient and needing to eat more to create energy.

In this study, for convenience, physical activities and dietary habits will be discussed separately, but it must be always borne in mind that increased physical activity and healthy dietary habits are both essential for good health and weight reduction or maintenance.

2.3.1 Physical Activity (PA)

As cited by Goldberg and Elliot (2000), through observation, the Roman statesman, Cicero (106-43 B.C.) had noticed the benefits of PA on physical health when he wrote that "exercise … can preserve something of our early strength, even in old age," The physician Moses Maimonides (1135-1204), on the other hand described the benefits exercise on psychological health when he wrote, "The most beneficial of all types of exercise is physical gymnastics to the point that the soul becomes influenced and rejoices." (Goldberg & Elliot (2000). Today, there is a wealth of scientific evidence showing the preventive and healing powers of PA. Based on these evidence the WHOR 2002 concluded that PA provides everybody with a wide range of physical, social and mental health benefits. PA, especially exercise contributes to overall health by reducing the heart rate; increasing cardiovascular fitness, muscle size and strength, flexibility, endurance, balance and coordination; and decreasing the risk of CVD, type 2 diabetes and osteoporosis. Kenneth Cooper (2003), the father of aerobic exercise, states that exercise can be used in three general ways – as rest and relaxation, as muscle building and figure contouring, and as cardiovascular pulmonary conditioning. However, of the three, only cardiovascular pulmonary conditioning

(provided by aerobic exercises) has the potential to directly prolong life (Cooper, 2003). The following are some clinical and observational studies that have confirmed the beneficial effects of physical activities.

Goldberg and Elliot (2000) cites the longitudinal study by Dr. Ralph Paffenbarger that showed that men who exercised regularly lived longer and that the health benefits of exercise can only be reaped by remaining active. The benefits of exercise diminished with inactivity. They also cited Dr. Steven Blair and colleagues' time-series study that found a 52 percent increase in the number of men who developed hypertension among those who were less fit. Similarly, in clinical trials, low intensity exercise helped reduce the risk of CVD (Keller & Trevilno, 2001). Exercise also benefited systemic lupus erythematosu patients (Ramsey-Goldman, Schilling, Dunlop, Langman, Greenland, Thomas, & Chang, 2000); help improve the immune system function in cancer survivors (Fairey, Courneya, Field & Mackey, 2002) and contributed to reduction in binge eating and BMI for women with binge eating disorders (Pendleton, Goodrick, Walker, Poston, Reeves and Forey, (2002)

The inverse relationship between PA and fat mass (overweight and obesity) has been recorded by Ramadan and Barac-Nieto (2003), Ross, Dagnone, Jones, et al. (2000) and Hagan, Upton, Wong, and Whittam (1986) and the effects of exercise on subcutaneous fat distribution by An, Rice, Borecki, Perusse, Gagnon, Leon, Skinner, Wilmore, Bouchard and Rao (2000). Steinbeck (2001) proposes that the development of a lifestyle activity (habit) or the activity of day-to-day living is very important for overall energy expenditure in children to counter-balance energy intake (food) to prevent overweight and obesity in children. The same is true for teenagers and adults.

The intensity of PA has a direct inverse relationship with risk of diabetes (Manson, Nathan, Krolewski, Stampfer, Willett, & Hennekens, 1992; Manson, Rimm,

Stampfer, Colditz, Krolewski, Rosner, Hennekens & Speizer, 1991; and Hu, Sigal, Rich-Edwards, Colditz, Solomon, Willett, Speizer, & Manson, 1999). A number of clinical studies also indicate that weight loss and exercise helps in the treatment of diabetes. For example, weight loss and exercise have both been shown to decrease insulin resistance, a major physiological defect related to the development of diabetes, and to improve glycemic control. Both physical activities and weight loss have been shown to reduce blood pressure, improve serum lipid levels, and positively affect other CVD risk factors contribute to reduction in risk of CVD in individuals with type 2 diabetes (NHLBI Obesity Education Initiative Expert Panel, 1998 and Maggio, Pi-Sunyer, 1997). Wadden, Sternberg, Letizia, Stunkard, and Foster's (1989) longitudinal study showed that PA and adherence to self-monitoring is very important to long-term maintenance of weight loss for diabetics.

PA not only helps the body to use calories, but also to use 10% more calories by increasing the basal metabolic rate. This is very essential for weight loss and maintenance. The key to weight loss is regular PA. Aerobic activity of low to moderate intensity (e.g. brisk 30-minutes walk) will not only reduce appetite but also burn more body fat than a 100-yard sprint which will burn glycogen. The effect of exercise does not stop when you stop moving. People who exercise have higher metabolic rate and their bodies burn more calories per minute even when they are asleep (Miller, Foster-Powell & Colagiuri., 1997).

Sallo, Rimm, Harro, Karelson and Viru (1999) found that respondents who exercised regularly with good phsical fitness had lower scores of indices of depression.

PA may also act as a catalyst for other behaviour changes. Wankel and Sefton (1994), found that individuals who are more active often consume healthier diets and

smoke less.

So, how much exercise is required to keep you fit and healthy? Clinical test carried out by The Aerobics Institute, located in Dallas showed that a person can improve his/her health and prevent disease by simply going for a 30-minute walk three to four times a week or the accumulation of 150 minutes/week of moderate-intensity PA through multiple short bouts of exercise (Jakicic, Wing, Butler, & Robertson, 1995). Medical studies show that you do not have to train hard to lower blood pressure. For example, walking for 30 minutes every other day can reduce the systolic blood pressure by about 11 points (mm Hg) and decrease diastolic blood pressure by 8 mmHg. This is enough to reduce the risk of stroke by more than 25 percent and death from heart attack or stroke by 58 percent. The same benefits can be gained by walking two miles in 40 minutes, five times per week (Cooper, 2003; Keller & Trevino, 2001). According to Morris, Chave, Adam, Sirey, Epstein and Sheehan (1973), active recreational pursuits such as swimming, "keep-fit" exercises, heavy work (e.g. digging) can also reduce the risk of CVD and promotes cardiovascular health. However, despite strong evidence linking higher levels of physical fitness with improved health and functional outcomes, (Pate, Pratt, & Blair, 1995; Blair, Kohl, Barlow, Paffembarger, Gibbons, & Macera, 1995; Patrella, Koval, Cunningham, & Paterson, 2003; Norris, Carroll, & Cochrane, 1990); Pollock, 2001; and Li, et al., 2003), many still maintain their sedentary lifestyles. WHOR 2002, estimates that 60 percent of the global population fails to achieve the minimum recommendation of 30 minutes moderate intensity physical activity daily.

2.3.2 Dietary Habits

Dietary habits would include a person's eating habits like the number of meals per

day, types of food preferred, which is the main meal for the day, when meals are taken and the size or portion of each meal. Dietary habits are important as they determine your nutrition status. Good nutrition not only lowers the risk for many chronic diseases such as heart disease, stroke, diabetes, osteoporosis and some types of cancer, but it also helps fuel your body and provides the energy you need to keep moving. Proper nutrition and exercise may be the perfect recipe to maintain or improve your weight. Good nutrition is also essential in maintaining a healthy immune system. Nutrients like beta-glucan, vitamins A, C, E and the mineral zinc have the ability to neutralize free radicals and boost the immune system, thus slowing the damaging processes associated with aging (Barnard, 2001).

The main nutrients in food are carbohydrates, proteins, fats, vitamins and minerals. It is important to eat foods from each group every day to have a balanced healthy diet. The dietary recommendations from the Dietary Guidelines for Americans, the United States Department of Agriculture (USDA) Food Guide Pyramid, the American Cancer Society, American Heart Association, American Diabetes Association, and the Governor's Advisory Council on Physical Fitness are : (i) drink plenty of water every day; (ii) eat at least five fruits and vegetables a day (dark green, deep yellow fruits and vegetables are most nutritious); (iii) eat fibre-rich foods and whole grains; (iv) eat protein-rich foods like fish and dried beans; (v) total fat intake should not be more than 30 percent of total calories with not more than 10 percent from saturated fatty acid; (vi) get plenty of calcium, vitamin D, and vitamin B-12 and (vii) total calories should be adjusted to achieve and maintain a healthy body weight.

Cassey (2003) reports that two major long-term studies that have clearly indicated that a plant-based low saturated fats diets promote longevity and protects

against cardiovascular diseases, type II diabetes and obesity are the research on 34,192 non-Hispanic, white Seventh Day Adventists (cited by Neal Barnard. MD., president of the Physicians' Committee for Responsible Medicine) and the China Project study (Banoo Parpia, Cornell University, lead coordinator for the China Project). The beneficial effects of a change from a high saturated fat diet to more low-fat-vegetable/fruit diet on CVD risks factors was also observed by Volozh, Solodkaya, Abina, Kaup, Goldsteine, Olferiev and Deev (2002) in their study of the population of Tallinn, Estonia. The importance of lifestyle behaviour of PA and dietary habits are also clear in the studies comparing Pima Indians conducted by Ravussin, Valencia, Esparza, Bennett and Schulz (1994). Mexican Pima living a traditional lifestyle had lower reported rates of obesity and diabetes compared to their Arizona counterparts who consume a Westernized diet and are more sedentary. Many other examples of the negative effects of Westernization on eating and exercise, and the subsequent risk on obesity and type II diabetes are also highlighted by Zimmet, McCarty and deCourten (1997).

According to Pace and Jones (1995) modern diets alias American diet, especially fast food diets are high in fat and low in fiber, vitamins and minerals. Even popular foods (example an egg and sausage biscuit) not considered junk food contain so much fat that even when eaten in moderation can launch the percentage of fat in our diet. A high fat diet makes you fat. However, even if you are very active and manage to remain slim, you still run the risk of clogged arteries, high blood cholesterol, stroke and cancer. Gill (2002) recommends a regime of regular exercise and a diet rich in fruit and vegetables and low in fat to avoid or minimize weight gain and to protect against a rapid decline in health.

Food made from processed flour are generally low in fibre, essential minerals and nutrients and a major source of bad simple carbohydrates can be easily converted into fat. Such simple carbohydrates are of high glycaemic index that can over time contribute to the development of and aggravation of type II diabetes. Furthermore, a person needs to eat more of this simple carbohydrates to feel satiated, thus adding a lot of empty excess calories. Foods with a low glycaemic index factor help people control their hunger, their appetite and their blood sugar levels (Miller, et al.,1997).

However, as reported by Cowley (2003), the USDA (United States Department of Agriculture) food pyramid has made Americans fatter and sicker since it came out a decade ago. In trying to simplify its message, it had instead unwittingly given the wrong message that all carbohydrates are good and all fats bad and failed to warn against over eating. Thus consumers falsely assuming that anything low in fat must be harmless, started consuming additional unrequired calories in the form of low-fat cakes, cookies and snacks made from refined grains. For example, a bag of chips can easily pack 500 calories, and an accompanying 20-ounce soda another 250 – all of it sugar. Together, the calories already amount to slightly over a-third of the total calorie requirements of an adult. Instead of drinking sodas and other sugar loaded cordials, drinking at least eight glasses of water daily will not only help to keep the weight down but also can help to maintain a moist respiratory tract that repels viral infection, thus keeping sore throats, coughs and colds away.

Citing from the American Journal of Clinical Nutrition, July 2003, Jennifer Warnner reports that researchers have now found biological evidence of the link between a fatty (saturated fats) diet and an increased risk of type II diabetes. A high fat, high sugar and salty diet becomes even more lethal when combined with the deadly forces of tobacco and excessive alcohol consumption

2.3.3 Sleep

Not getting the proper amount of the best quality sleep (normally 8 hours a day) may have serious consequences. Many studies have shown that sleep deprivation affects performance and alertness. Reducing sleep by as little as one and a half hours for just one night reduces daytime alertness by about one-third. Excessive daytime sleepiness impairs memory and the ability to think and process information, and contributes to a substantially increased risk of sustaining an occupational injury (Breus, 2003). Carter, Ulfberg, Nystrom and Edling, (2003), found that male professional drivers that reported a significant sleep debt had higher rates of work-related accidents than their counterparts who were better rested.

2.3.4 Smoking

Research has irrevocably linked smoking with lung cancer (WHOR 2002, American Cancer Society, 2003) and increased risk of CVD. In fact tobacco companies are reeling from having to pay huge sums to settle class-action suits for health related problems and deaths due to smoking and other forms of tobacco usage. A longitudinal study over 19 years found that the difference in mean life expectancy for a current smoker and a never-smoker is three years and the difference in total health service costs to be Euro $69,300 (Kiiskinen, Vartiainen, Puska, & Pekurinen, 2002).

2.3.5 Alcohol consumption

It is well known that the prolonged use of excess alcohol causes a multiplicity of abnormal clinical, biochemical and electrophysiological changes that are associated with diseases of the liver, neuromuscular system, heart and brain.

Davis (2003) reports that researchers who compared data on age, smoking, BMI, cholesterol, alcohol consumption, and blood pressure of nearly 12,000 men and women in China between 25 and 54 years old found that those who drank 2 glasses of wine or more daily had a greater risk of high blood pressure than those who abstained. On the other hand, researchers lead by Professor Zimlichman (as reported by Warner, 2003) and Agarwal (2002) found that drinkers of no more than one glass of wine or beer or less than a short of liquor per day had increased artery elasticity in both small and large arteries making the arteries better able to respond to stress and thus reducing risk of heart attack or stroke. At the same time, compared to non-drinkers, moderate drinkers also recorded lower heart or pulse rates an important indicator of improved heart health. As reported in the The Sun, June 11, 2003, a 10-year longitudinal study of 109,690 women by researchers at the Royal Free and University College Medical Schools in London and Harvard University showed that compared to women non-drinkers, light to moderate women drinkers – one to two beers a day – have a lower risk of developing adult onset diabetes than those who do not drink.

Use of alcohol as a coping strategy for stress can result in hazardous drinking and alcoholism. Sloan et al. (2003) found a direct relationship between anxiety and drinking. Subjects who experienced decreases in anxiety during treatment reported fewer drinks per day compared with those who reported increases in anxiety. Vasse, Nijhuis and Kok (1998) examined the associations between work stress, alcohol consumption and sickness absence.

2.4 Familial History

Physical and mental health is also influenced by biological inheritance. While an executive's biological inheritance cannot be altered, it can be managed by knowing

the endowments and vulnerabilities that lie within it. Katzmarzyk, Rankinen, Perusse, Rao and Bouchard's (2001) study found a significant familial risk for high blood pressure in the Canadian population and that genetics factors may be responsible for a portion of the risk. Type I diabetes is an inherited condition (American Diabetic Association). Similarly, women who inherit the BRCA1 or BRCA2 genes are more prone to breast cancer. Nasopharyngeal or nose cancer is also hereditary occurring mostly among the Chinese. In fact it is sometimes called the Cantonese cancer (The Cancer Research Initiatives Foundation, Malaysia). Children of obese parents are ten times more likely to be obese. Dr. George Zubenko and his colleagues involved in the Human Genome Survey found that genetic mutations were not only responsible for some major depressive disorders but also for why women were twice as likely as men to develop depression (Reuters, July 2, 2003).

Researchers have found that genetics accounts for about fifty percent of the personality differences and more than thirty percent of the variation in occupational and leisure interests (Robbins, p. 52). The other two components of personality are environment and situation. Heredity sets the parameters of outer limits, but an individual's full potential will be determined by how well he/she adjusts to the demands and requirements of the environment. Kreitner and Kinicki (2001) cites the study done by Diener and Diener that genetic factors can significantly predict life satisfaction, well-being and general job satisfaction.

2.5 Personality Type (Type A versus Type B)

Personality is the relatively permenant set of psychological and behavioural attributes that distinguish one person from another. As found in Kreitner and Kinicki (2001, p.606), a meta-analysis of 83 studies revealed that Type A individuals demonstrated

that the hard-driving and competitive aspects of Type A are related to coronary heart disease, but the speed and impatience and job involvement aspects are not. This meta-analysis also showed that feelings of anger, hostility, and aggression were more strongly related to heart disease than Type A behaviour. However, recent findings by lead author Yang Lijing of North-Western University presented at the 2002 American Heart Association Conference in Chicago showed that respondents having "time, urgency/impatience" traits were twice as likely as the others to have developed moderate or severe hypertension [140/90 mmgh or higher] (Gupta, S., 2003).

2.6 Work Environment

Work environment is defined as the organizational environment and the surrounding work atmosphere that creates job stress. The complexity, uncertainty and the dynamic nature of current international and national business environment are a major source of potential stressors. The increased stress of having to manage, maintain and enhance individual as well as team performance, faster time-to-market, increased competition, downsizing, acquisitions, consolidations, longer working hours, increased traveling, job insecurity, without increased coping have overwhelmed many executives and managers – resulting in diminished physical and mental health. (Daniels, 2002). The United Nation's International Labor Organization labels job stress as "the disease of the modern workplace" (The Business Journal of Kansas City, March 31, 1997) and the European Community officially dubbed stress the second-biggest occupational health problem facing the continent (Daniels, 2002). Long working hours not only contribute to job stress but also cuts into time available for healthy regular physical activity and hobbies, important contributors to physical fitness and mental fitness.

2.6.1 Job Stress

The ability to thrive on pressure and handle the stress of ambiguity is the hallmark of good managers. Stress as defined by Savery and Luke (2001) is a mental and physical condition which affects an individual's productivity, effectiveness, personal well-being, and quality of work produced. A highly stressed individual will experience diminished quality of work and satisfaction.

Chronic job stress has been associated with diminished psychological health and physical health, mental and physical symptoms of sickness that cannot be adequately explained by organic findings (somatization) (Choudhury-Mahajan, 2003; Daniels, 2002; Quick et al., 2001; Minirth, et al., 1997). In his guest editorial article, Professor Dinan (2001) cites the studies of Vaillant, Ford et.al., The Kuoppio Ischaemic Heart Disease Study, Epidemiological Catchment Area Study, and Schroll that established the positive relationship between stress-induced depression and a five-fold increase in coronary artery disease. Prolonged stress is implicated in the development of a wide range of medical conditions such as immune system dysfunctioning (Ilardo, Toniolo, Aimone-Gastin, Abdelmouttaleb, Gueant and Desor, 2001; and Wadee, Kuschke, Kometz. and Berk, 2001); increased risk of hypertension, cholesterol levels, CVD, and ulcers (Booth, 1998; and Schnall, Pieper, Schwartz, Sorensen, Karasek, Schlussel, Devereux, et al., 1990). It is also associated with the development of personal and social behavioural problems including drug and alcohol abuse, smoking, increased risk taking behaviour and gambling (Pomerleau & Promerleau, 1991; Burrows et al., 1999). Chronic stress will cause decreased productivity, increased absenteeism, increased injuries and accidents at work.