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**DIET, LIFESTYLE PATTERN AND HEALTH PROFILE OF
PROFESSIONALS IN SOFTWARE INDUSTSRY**



Thesis submitted in partial fulfillment of the requirement
for the degree of

**Master of Science in Home Science
(Food Science and Nutrition)**

**Faculty of Agriculture
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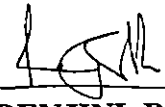
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DECLARATION

I hereby declare that this thesis entitled "Diet, Lifestyle pattern and Health profile of professionals in software industry" is a bonafide record of research work done by me during the course of research and that the thesis has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title, of any other university or society.

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LIST OF ABBREVIATIONS

ADL	-	Activities of Daily Living
BMI	-	Body Mass Index
BMR	-	Basal Metabolic Rate
B-Tech	-	Bachelor of Technology
CHD	-	Coronary Heart Disease
CVD	-	Cardio Vascular Disease
HR policies	-	Human Resource policies
ICMR	-	Indian Council of Medical Research
ITES	-	Information Technology Enabled Services
ITR	-	Information Technology Respondents
Kg	-	Kilogram
M	-	Meter
MBA	-	Master of Business Administration
MCA	-	Master in Computer Application
NASSCOM	-	National Association of Software and Service Companies
NCDS	-	Non Communicable Diseases
NCHS	-	National Center for Health Statistics
NHANES	-	National Health and Nutrition Examination Survey
NIOSH	-	National Institute of Occupational Health and Safety
NNMB	-	National Nutritional Monitoring Bureau
Non ITR	-	Non Information Technology Respondents
NSI	-	Nutritional Status Index
OSHA	-	Occupational Safety and Health Administration
R&D	-	Research and Development
RDA	-	Recommended Dietary Allowances
RSI	-	Repetitive strain Injuries
TMI	-	Text Messaging Injuries
TST	-	Triceps Skin fold Thickness
TV	-	Television
WHO	-	World Health Organization
WHR	-	Waist Hip Ratio
WRMDS	-	Work related musculoskeletal disorders

INTRODUCTION

INTRODUCTION

Good health is a major resource and is an important dimension of the quality of life. Changes, in the way people work, eat and relax in the modern day has rapidly led to sedentary living which is the major consequence of technological advancement (WHO, 2002). In the present day, changes in lifestyle and dietary patterns stemming from rapid modernization have favoured an increase in the occurrence of degenerative diet related diseases and non-communicable diseases (Sachan and Mogra 2004).

Until recently, the software industry had a reputation of being clean and green. Most of the developed nations transferred their manual and labour intensive component of the software industry to developing countries. India has been part and parcel of this phenomenon and therefore is quickly becoming a major player in the field of Information Technology (Press Trust of India, 2000).

The software industry in India, which started in the early 1970s, has grown at a phenomenal rate since 1980s, with high export growth rate. Software enabled services like call centers, customer interactions, back-office operations, medical transcriptions, data base management and also many service operations are on the rise. This industry is now emerging as one of the largest employment providers (NASSCOM, 2007).

Software professionals spend hours in front of computer monitors with little regard for the need for timely food and exercise, thus inviting trouble. (Pinto, 2004).

Moreover, jobs in the software industry are insecure, people are liable to be laid off or transferred at any time in response to downward trends in the economy, loss of customers or closure of a project.

Nature of work with respect to the commitment of time and energy in this industry is heavy, which invariably leads to stress among the professionals. Work in software industry is implemented largely through the organization of employees into 'teams'. Individual team members are assessed on the basis of team performance as well as their own performance which leads them to put pressure on one another to complete the work in time (Prasanna, 2008).

People working on computers for long hours have chances of falling prey to a new health hazard called computer vision syndrome. Increasing numbers of computer professionals are also affected by Repetitive Strain Injury (RSI). Already about 75 percent of computer professionals in Bangalore are affected by RSI (Sharan, 2005).

In 1992, OSHA (Occupational Safety and Health Administration) reported that ergonomic disorders accounted for 56 percent of the illness. Repetitive strain disorders were common among software engineers primarily because their wrists were either flexed or extended during working with keyboard. This problematic posture usually resulted from the chairs being too high or too low in relation to the keyboard (Center for Health Statistics, 2004).

A sedentary lifestyle, lack of exercise, excess carbohydrate and protein rich diet and improper eating habits have resulted in a wide range of problems such as diabetes and hypertension (Leslie,1990). According to Keith (2007) software professionals were prone to diet and nutrition problems and are seen to be overweight or obese.

Hence the present study was taken up with an objective to study the dietary pattern, lifestyle and health profile of professionals in software industry.

REVIEW OF LITERATURE

2. REVIEW OF LITERATURE

The present investigation is carried out with a view to study the diet, lifestyle pattern and health profile of professionals in Software industry. The study includes the assessment of the food habits and food preferences of the respondents. A brief review of the literature pertaining to the topic has been categorized under the following headings.

2.1. LIFESTYLE CHANGES AFFECTING MODERN FAMILIES

2.2. IMPACT OF LIFESTYLE CHANGES ON HEALTH

2.3 MODERN LIFESTYLE AND STRESS

2.4. HEALTH PROBLEMS OF PROFESSIONALS INVOLVED IN SOFTWARE INDUSTRY

2.1. LIFESTYLE CHANGES AFFECTING MODERN FAMILIES

Life style in twenty first century has given a new meaning to modernity. Socio-economic equations have changed, so also values and attitudes guiding people's lifestyle. Life style is now more individual- centric than social (Suparna et al., 2005).

Study by Bharat (1991) stated that the effects of lifestyle changes on Indian family system have been complex, varied and even contradictory at times. Industrialization together with technological development has brought several new challenges to the family. Shangle (1995) pointed out that lifestyle changes have brought significant changes in the structure of urban families and moved from large extended family systems to more nuclear structures. The breakup of the large extended family system and loosening or dissolving of kinship ties due to migration had resulted in the emergence of single parent families.

According to Mullatti (1995) in the world as a whole, the family is the most important institution that has survived through the ages. Indian family stands out in emphasizing family integrity, family loyalty and family unity; the modified extended family has replaced the traditional joint family.

This new family norm does not encourage socializing, it calls for financial assistance; aid and support in childcare and house hold chores; and less involvement and participation in life-cycle events such as births, marriages, death and celebrations. However, in India the familial and kinship bonds are maintained and sustained to a better extent. Even in the more modern and nuclear families in contemporary India, many functional extensions of the traditional joint family have been retained (Nandan and Eames, 1990).

Medora and Dave (2000) opined that in urban areas, there has been a substantial increase in the number of middle- and upper-class women working to supplement their husband's incomes. Thus, women are entrusted with the multiple responsibility of looking after the home, caring for the children, elderly parents and relatives.

With the concept of working parents and nuclear families catching on, daycare facilities have started mushrooming. It is thought as the second best place, after home, where parents can leave their children (www.indiaparenting.com). However, even with the daycare facilities, it is not easy to juggle professional and personal life, especially if the facility is located far away from the office or does not coincide with the office timings. In such a case, parents are always on the run, either picking up or dropping their child. This hampers the work routine and displeases the senior management (www.lifestylelong.com).

WHO (2002) reported that modern living has rapidly led to a sedentary life as a consequence of technological advancement- more people move around in cars and buses instead of walking or cycling, they take elevators instead of climbing stairs, machines

wash clothes or dishes instead of people. Microwaves and mixers have replaced manual cooking and grinding. People watch T.V or surf the net glued to their chair for hours. More and more people now 'meet' neighbors over the telephone or through the e- mail rather than walking across.

Srinivasan (1997) reported that rapid urbanization and sociological changes, have increased the desire on the part of the housewives to spend less time in the kitchen. Increased value has been placed on leisure and the habit of eating out, Family ties have weakened mainly due to women taking up full time jobs. The spread of television and its impact have put forth a sedentary population. The rush behind sophisticated jobs, have made it difficult for obtaining domestic help. Sami (1999) gives a glaring observation that the changing lifestyles and growth of travel have created a demand for pre- packaged, pre-cooked foods, which could be cooked quickly and also ensures top quality taste and flavor.

Progress in technological development, industrialization and economic conditions have improved the standard of living of people which has created changes in food habits and lifestyle leading to health problems (Park, 2000). Changing lifestyles has led to greater demand for basic processed foods, especially for the more sophisticated processed food products (Businessline, 2004).

Education, rapid urbanization, changing lifestyles and increasing working women population have contributed to the increased use of convenience foods (Singh et al., 1998); Junk food is high on the list of priorities for most people who live in cities. It has become a part of the busy lifestyle. But, nutrition experts viewed that it is often high in calories, sodium, fat and cholesterol (News and views, 2002).

Ambily (2008) observed that the 'nutritional status' and the lifestyle changes are becoming prevalent among children and adolescents. The popularity of 'fast foods', hotel foods, 'fizzy' drinks, sedentary lifestyles, increased 'pocket money', lack of physical

activity, increased sedentary habits like TV and computer watching and busy lifestyle of working parents have all led to a new lifestyle among children and youth.

(Zhao, 2001). stated that today health is a major concern for the common man. The stressed and hectic life is a major reason for poor health.

Relation between food, nutrition and health is one of the global challenges that we are facing today. Since centuries people have accepted that our health depends on what we eat and how we live (Amudha, 2007).

Popkin (2001) pointed out that persons consuming traditional diets were seen to enjoy excellent physical and emotional health. But those who had changed to a western diet suffered from a range of physical and emotional health problems. Fast foods, processed foods, eating unhealthy foods, adding empty calories and even skipping meals is becoming a major public health concern (Weston, 2002).

Data from India showed that higher income groups consumed a diet with thirty two percent energy from fat, when compared to the lower income group which was only seventeen percent. Recent dietary survey in Delhi also confirmed that the upper income groups in urban India consumed higher levels of energy and fat as compared to the urban poor or rural populations (Chadha et al., 1995).

Indians have a food culture which is mostly based on food items fried in ghee or excessively spiced items, for instance sweet meats, biriyanis, parathas etc. The present day's food habits along with junk foods and reduced physical activity has translated into many degenerative diseases (Hariram et al., 2005).

2.2 IMPACT OF LIFESTYLE CHANGES ON HEALTH

Lack of physical activity is the major underlying cause of many diseases. The state is now going through an epidemiological transition where non-communicable diseases are on the rise. A large number of women, particularly from the urban middle class are unwittingly becoming victims of obesity and non communicable diseases (NCDS) (John, 1999).

Murray and Lopez (1994) reported that an accelerated epidemic of diet, nutrition and lifestyle related non-communicable diseases (NCDs) are occurring globally. A recent analysis of mortality trends on NCDs by the WHO (2002) suggest that a large increase in NCDS have occurred in Eastern Europe and developing countries particularly those in rapid transition like India, China, and Brazil, over the last two decade.

Shetty (2002) revealed that though communicable and non-communicable diseases are responsible for health problems, non-communicable diseases continue to be the most important of public health problems.

Popkin (1994) stated that some of the reasons of the lifestyle changes are urbanization and adaptation of westernized lifestyle. Smoking and alcohol consumption associated with westernized diets are leading to degenerative diseases. Internal migration, urbanization and exposure to modern diet and lifestyle increases risk of chronic diseases (Popkin, 2001).

The present dietary intakes and lifestyles are different from their pre-migration times (Bhatnagar, 1991). Lakka and Bouchard (2005) viewed that worldwide epidemic of excess weight is due to imbalance between physical activity and dietary energy intake. Rising affluence has modified the dietary pattern characterized by increased consumption

of diets rich in fat, sugar and calorie which directly leads to coronary heart diseases (Das et al., 2005).

A stressful sedentary life without much exercise provides a situation fraught with coronary danger. Physically inactive people are almost twice as likely to develop coronary heart disease against people who engage in regular physical activity (Paffen et al., 2003). Physical inactivity is an important lifestyle determinant of insulin resistance in hypertensive patients (Grove et al., 2004). Hulley (1998) found that death rate from coronary heart disease is lower among those who do strenuous physical work. Men in physically active jobs have less tendency to develop coronary heart disease during middle age in comparison to those engaged in physically inactive jobs (Mukamal et al., 2006).

Alcohol consumption and smoking are particularly conducive to fat deposition in the omental area, thus producing a selective increase in the waist hip ratio with its associated hazards (Garrow, 1999). Drinking too much alcohol can raise blood pressure, cancer, heart failure and can lead to stroke, It also contributes to obesity (Leonard, 2000).

2.2.1. Obesity

According to Sunye (1991), Obesity is a lifestyle disease and a serious public health problem associated with increased morbidity and mortality. Mohamed (2007) suggested that in the twenty first century obesity is making the headlines everywhere. It is one of the biggest health crises; both men and women are equally represented. More than 1.2 billion people in the world fall into the category of being overweight.

Gupta et al. (2005) stated that there are 40-50 millions over weight belonging to the upper middle class in India. NHANES (2003) has reported that the percentage of obese adults nearly doubled between 1976-80 and 1999-2002. At present 32 percent of the adults are obese with a further 34 percent being overweight. The prevalence of overweight and obesity have increased dramatically over the past 20 years, and the problem has now reached epidemic proportions (Freedman et al., 2002).

Obesity and higher body weight are strongly associated with a sedentary lifestyle and lack of physical activity in the adult population of the European Union (Martinez et al., 1999). Study by Kurtz (1999) reported that in India 11 percent of the population is over nourished and it is most prevalent in cities. Over nutrition results from an excess of calorie consumed. Sinha (1997) stated that economic development and food import have led to increased intake of foods of animal origin and total fat, whereas intake of fruits, vegetables and roots and tubers are low.

Sunanda et al. (2006) observed that obesity is a genetic disorder; if both parents are obese 80 per cent of the children are obese. Vijayalakshmi and Radha (2006) reported that there is an issue of whether over eating or lack of exercise is the reason for obesity.

2.2.2. Diabetes

WHO (1991) reported that Diabetes Mellitus has reached epidemic proportions worldwide. Diabetes is strongly related to lifestyle and economic change. India is referred to as the “Diabetes Paradise” of the world. The total number of diabetic patients in India is estimated to be 3 crores. (WHO, 2003)

Diabetes is the fastest-growing disease in the world, 230 million people are affected. By 2025, every fifth diabetic in the world would be an Indian (Aarthi, 2008).

A study by Singh (2007) in South India reported that the prevalence of Diabetes among adults has ranged from 8 – 15% in industrial population. The incidence of diabetes is five times higher among Asians than it is in white populations.

Vasanthamony and Rekha (2006) stated that migration from rural areas to urban cities, adaptation of western life style with increasing physical inactivity are the contributing factors of obesity and glucose intolerance.

Kutty et al. (1999) reported that the prevalence of Type II Diabetes in Kerala is 16.3 percent, among the 30 – 65 years age group. Greater prevalence is associated with

advancing age, body mass index, sedentary habits, increased serum cholesterol level, increased serum triglyceride and hypertension.

According to Sunde (2001) sedentary lifestyle, high energy intake and low level of physical activity leads to higher fasting blood glucose levels.

2.2.3. Hypertension

WHO (2005) reported hypertension has been considered to be one of the most important causes of morbidity and mortality. Srilakshmi (1997) stated that hypertension may occur at any age, but is found most frequently in people over 40 years of age.

The higher prevalence of Diastolic hypertension is seen in middle aged women (Isles, 2000). Melby et al. (1994) pointed out that vegetarians have lower hypertension and lower serum cholesterol.

Technological advances reduces job opportunities among young generation leading to stress and hypertension (Syamal et al., 2005). Mohan et al. (2005) were of the opinion that hypertension is found to be a risk factor of coronary heart disease.

2.2.4. Cardio vascular disease (CVD)

The prevalence of coronary heart disease increased from 1 percent in 1960 to 9.6 percent in the year 1995. CVD is a leading cause of death worldwide; By 2010 India will have 100 million patients with CVD (WHO, 2002).

Varma (2005) reported that heart disease is the leading cause of death in India. According to Vijayalakshmi and Radha (2006), in India prevalence of coronary artery disease is 30/100. In rural and urban area CVD is increased by 100 per cent and appears

to be more among the sedentary and moderately working groups rather than among those working heavily.

Every year, CVD claims 5.6 million lives which accounts for 64 percent of all deaths reported in India. About one fourth of these deaths occur in people below the age of 45 years (Eswaran, 2000). The study done by Joseph et al. (2000) indicated the prevalence of coronary heart disease as 2.9 percent in Thiruvananthapuram city.

Incidence of coronary heart disease is increasing world wide and the rate of increase is expected to be higher in the urban areas of the developing countries including South Asia (Miller et al., 1999).

Gupta et al. (1990) reported that prevalence of coronary heart disease in urban subjects was twice that of their rural counterparts. Coronary heart condition is increasing among youngsters due to over whelming work demands along with skipping meals.

Acharya (1995) pointed out the death from coronary heart diseases in India were almost equal to that in all the developed countries put together. The factors which increase the chances of developing blocks in the arteries are smoking, hypertension, diabetes, high cholesterol, heredity, obesity, lack of exercise and stress, (Prasanna, 2000).

Coronary heart disease is the primary cause of premature mortality in most modern societies (Mann, 2002). The risk of death due to heart disease has doubled among the physically inactive (Peregil, 2002).

American Heart association (2001) reported that the number one cause of majority of heart diseases among the U.S adults have been altered lipid and lipoprotein profile.

2.2.5. Cancer

Another lifestyle disease of this century is cancer. Today in the world 200 million people are living with Cancer. Cancer has now become the third leading cause of death in South East Asia. Each year it is expected to increase, from 10 million in 2000 to 15 million in 2020. Sixty percent cases occur in the less developed world .In 20 years time the number of cancer deaths annually will increase from about 6 million to 10 million. (www.naturalhealthprospective.com).

Smoking has long been known to cause lung cancer. (Doll, 1998). Research has also found smoking to be linked to other cancers such as oesophagal cancer (Burch, 1998). Oesophageal cancer has also been linked to alcohol consumption (Anderson, 1997).

Excessive intake of dietary fat increases the development of breast cancer (White,2001). People in many western countries had diets rich in animal products, fat & sugar; there were high rates of cancers of the colorectum, breast, prostate, endometrium and lung amongst them. (www.naturalhealthprospective.com).

Singh and Fracer (1998) pointed out that carcinogenic chemicals known as heterocyclic amines are produced when meat and fish are cooked under normal condition. Both red meat and white meat consumption are important dietary risk factors for colon cancer.

Frequent consumption of both fresh and processed meat, dairy products and fish increases the risk of gastric cancer. Franco and Sikalidas (2005) indicated that obesity, physical inactivity, excessive consumption of alcohol, meat intake, dietary fats are the risk factors for colorectal cancer. (Ward, 1999).

2.2.6. Other health problems

According to Melton et al. (2001) Osteoporosis is an increasing public health problem world wide with age related fractures. Over and above the hormonal and health status, high intake of tea or coffee, low level of physical activity and family history are the causes of osteoporosis (Carol, 2003).

Mayer (1997) stated that high consumption of animal protein increases the risk of fracture in women, where 'calcium' intake was low. According to Mercer, (2006) women who drink four or more cola beverages per week have higher risk of developing bone disease.

According to Sejal (2007) Arthritis affecting the joints appears to be correlated with poor bone and muscle health, disproportionate body weight, lack of exercise, fatty diet, sedentary lifestyle, stress and hypersensitivity.

More than half of the world's population have some form of allergy. Modern living along with change in diet, air pollution, sedentary lifestyle, obesity and drugs are the contributing factors of allergy (Park, 2000).

Srilakshmi (1997) states that Allergy can be caused due to ingestion of food or drugs, contact with foods, pesticides, drugs, adhesives, feather or fungi, inhalation of pollen, cosmetics, perfumes, injection of vaccines, hormones etc.

Recent research indicated the surprising link between Alzheimer's disease and Type II diabetes. It is the fourth largest cause of death (Holscher, 2002).

Alzheimer's disease is estimated to affect 1 in 10 people over the age of 65 causing problems with memory. The root cause of Alzheimer's is the modern life style diet with increased acid, sugar, carbohydrates, excess fat and uric acid (Britt, 2005).

2.3. MODERN LIFESTYLE AND MENTAL STRESS

According to Gomez (2003) stress can be defined as our reaction to the environment as well as our internal thoughts and feelings. According to Arthur and John (2002), stress can be defined as a physical or psychological stimulus, which produces strain or disruption of the individual's normal psychological equilibrium.

Shealy (1999) opined that stress is a condition that results from a person's response to physical, emotional or environmental factors. Stress at work plays an important role in contributing to the larger difference in health, sickness and premature death (Gupta et al., 2005).

Bijilakshmi and Satpathy (2002) stated that generally stress is the change which our bodies experience as one, adjusts to the continuously changing environment. It has both physical and emotional effects on us and can create positive and negative feelings. As a positive influence, stress can help compel us to action, result in a new awareness and an exciting new perspective. As a negative influence it can result in feelings of distrust, rejection, anger and depression which in turn can lead to work and also several health problems such as headaches, high blood pressure, heart disease etc.

Sharma (2000) stated that stress is associated with personal and family problems and manifests as back pain, coronary heart disease and immune disorder. He also found that a combination of high demands and lack of control and support contribute to absenteeism, mental strain, muscles and bone problems including repetitive strain injuries.

Mental health problems are fast becoming the number one health issue of twenty first century. The younger people in India are stressed out because of heavy competition in academic fields and also pressures for securing employment (Vasan, 2002).

Levi (1990) reported that about fifty percent of the entire working populations are unhappy in their jobs and as many as ninety percent may be spending much of their time and energy in their work that brings them no closer to their goals in life and about seventy five percent of those who consult psychiatrists are experiencing problems that can be traced to a lack of job satisfaction. Job stress is a chronic disease caused by conditions in the work place that negatively affects an individual's performance and /or overall well being of his/her body and mind (Ellis, 2002).

There is an association between job strain and psychological distresses (Bourbonnais et. al., 1996). Psychological and emotional stress is often an important factor in triggering attacks of angina or even a myocardial infarction (Taylor, 1998). Dallas (1998) reported that mental stress increases oxygen demand because blood pressure and heart rate are elevated. Vascular resistance and coronary artery constriction during mental stress also decreases blood supply.

. Stoney (1997) observed that stress increases blood cholesterol levels and also found that stress can reduce plasma triglyceride clearance in healthy men and women. A study by Nancy (2002) pointed out that those who are stressed and consume something fattening take about 20 times longer to clear the heart damaging fats from the blood stream than those who are not stressed.

Diet is one area of behavior that tends to be abused or neglected when under stress, and affects our ability to cope with stress. A healthy body is always able to respond better to the tensions of daily life, and good nutrition is a major contributing factor to health. (Gomez, 2003).

Stress often increases cravings for high fat snacks or comfort foods. Treats that have high fat and sugar will add excessive fat and calories in the persons diet (Stoney, 1997).

Eck and Wilson (2004) in their studies had showed that the body depletes its stores of nutrients when under stress, mainly protein and biotin as well as vitamin C and A. Deficiency of magnesium which helps muscle relax, has been linked to high stressed personalities under risk of hypertension. Software professionals, particularly those employed by multinationals are becoming vulnerable to psycho-physiological disorders owing to enormous stress in the globalized scenario (ICMR, 2002).

Physical or psychological circumstances, over work, lack of sleep, physical illness, and excessive alcohol consumption, stimulants like tea and coffee and smoking are common factors that put stress on the body. Stress along with high pace of life, diet, health, lack of exercise and sleep also cause infertility. (www.lifestyle-guide.info).

2.4. HEALTH PROBLEMS OF PROFESSIONALS INVOLVED IN SOFTWARE INDUSTRY

India today is a land of opportunity for IT companies. Of the estimated 375,000 software professionals working in India today, forty eight percent are involved in product development, thirty percent in implementation, support and operation, sixteen percent in marketing, relationship development and other activities and 6 percent in R and D and quality control (National Software Directorate, 2000).

The software and IT sectors has been the power house of economic growth. Major software hubs in India are Bangalore, Hyderabad, Chennai and Pune. Fresh graduates who join as software engineers are offered an average salary of approximately Rs.18,000 per month.(Ipe; 2005).

The overall median age of the software professional is about 27.5 years. 76 percent of software professionals in software companies are men whereas 24 percent are women. However NASSCOM states that this ratio is likely to be 65:33 (Men: Women) by the year 2007. Twenty seven percent of them have over 5 years experience in the field 21 percent have 3 to 5 years, 32 percent have between 1 and 3 years and 20 percent have less than one year (National Software Directorate, 2000).

Choudhary et al. (2002) states that computer, the hallmark of technological advancement has ushered in a new genre of occupational health problems. ie of computer related health problems. India being the forerunner in the cyber world, the occupational health personnel are slowly awakening to this group of modern occupational diseases, which are slowly taking its roots among the information technology professionals. These problems if ignored can prove debilitating and can cause crippling injuries forcing one to change one's profession (Prasanna, 2008).

Sathyamurthy (2004) remarked that software professionals work long hours with little rest and have no time for healthy eating or regular exercise, combined with genetic disposition of Indians, such a lifestyle can lead to obesity which in turn predisposes a person to diabetes, or heart disease or both.

A study conducted by Suparna et al. (2005) among 200 IT professionals in the National capital region, reveals that the computer related morbidity was present in 93 percent of the study subjects. The visual problems were seen in 76 percent and musculoskeletal in 77.5 percent while 35 percent felt stressful symptoms. The study also brought forth a very high prevalence of computer related morbidity among IT professionals.

Another study carried out by Pinto, (2003) in Goa observed visual fatigue, musculoskeletal disorders and psychological stress as the important possible causes affecting the health of IT professionals. Low backache, straight spine syndrome and

carpal tunnel syndrome were present in a significant percentage of the population indicating that WRMSDs (Work related musculoskeletal disorders) are the second most prevalent disorders in the IT professionals.

Sharan (2005) found that repetitive Strain Injury is becoming an increasing cause for concern, Repetitive strain injuries, intense sessions at a computer also puts programmers at risk of eye strain from staring for too long at a computer screen. Statistics from the National Institute of Occupational Safety and Health shows that 91 percent of the 75 million people who use computers for more than 2 hours a day suffered some kind of vision problem, usually resulting in eye strain or headaches.

The review by Soo-yeet al. (1998) for National Institute of occupational Health and safety (NIOSH) identified four basic lighting factors viz quality, contrast, illumination and glare, which increased visual problems; inadequate lighting and not using an antiglare also increased visual problems.

Hunting et al. (1981) observed increase in subjective and objective symptoms of eye troubles to be associated with high luminance and inadequate contrast between screen and surrounding space. However, Collins et al (1990) found that glare in users field was not significantly associated with ocular visual or systemic symptoms.

Software professionals between the age of 25 and 35 suffered mainly from ailments such as computer vision syndrome (causing dryness in the eyes, fatigue and headache), carpal tunnel syndrome (which made the wrist and hand numb), insomnia, lumbago and cervical spondylosis (Sharan, 2005).

National Center for Health Statistics, (2007) pointed out that Standard keyboards and high desks required employees to hold their hands in a fixed and unnatural position, which strained the forearms. Meanwhile, the constant pounding on keys create tiny tears to muscle and tendons. In some cases, the nerves in the wrist become hypersensitized, so even the slightest of movements, like turning a doorknob, caused extreme pain

Shah et al. (1999) reported from their studies on IT professionals that the common musculoskeletal symptoms were pain (55percent) and stiffness (14.8percent). The nerve involvement was suggested by numbness and tingling sensation in 12 percent and 9.5 percent of the subjects respectively. The common areas affected with musculoskeletal problems were neck (44 percent) low back pain (30.5 percent) wrist /hand (19 percent) and shoulders (16 percent) in the last 12 months. Ipe (2002) also reported that the shoulder pain caused reduction of activities of daily living (ADL) in 32 percent of subjects. Phalens test for carpel tunnel syndrome was positive in 11.5 percent while Tinet's test was positive only in 5 percent.

The youngsters from the software and software enabled industry, complained of stress including gastrointestinal problems, irritable bowel syndrome, acidity and acid reflux (Chaitanya, 2002). Suri (2005) observed that back pain is one of the most common complaint among adults under 45. Back pain brought their activities to a complete halt and intervened in the progress of their career Software professionals can fell victims to backache, headaches, sleep problems and poor attention spans a result of their career. (Best, 2006).

According to Bharath, (2006) the most common injuries seen in software professionals were repetitive strain injury or work related musculoskeletal injuries like back injuries.

Prolonged sitting altered posture of shoulder, neck, back, wrist and thumb movement, resulting in cervicogenic head ache. It automatically led to low back pain and the curvature changes spine position. Sedentary lifestyles further complicated the problem (Sujatha, 2007).

Chaitanya (2002) reported that young software executives suffered from diabetes, high cholesterol or blood pressure. Orthopaedicians and RSI experts, the world over,

reported an increasing incidence of overuse syndrome and primarily Text Messaging Injuries (TMI) among the hi tech generations.

Cervical spondilitis and wrist problems due to uncomfortable handling of the computer mouse, eye problems, and discomfort in bowel movements were common amongst the many health problems of soft ware professionals (Vinitha, 2005).

When Software professionals spent hours in front of computer monitors with little regard for the need for exercise they were inviting trouble. Such activities adversely affected the flow of blood and finally the effects were seen in the heart, kidney and finally the brain (Walve, 2005).

Sudo and Ohtsuka (2001) reported that the Software shift workers took less amount of energy and other nutrients during the working time which worsened their nutritional status.

Akshara et al. (2006) reported that depression was present in 8%, when tested by Zung's self rating scale and 6 percent by Hamilton depression scale. Homes and Rahe (2002) revealed that the psychological stress of IT workers ranked around 1.2 on a scale of 4. An increasing number of persons working in the software and software enabled service sector fell prey to depression. There was also lack of recreation and opportunities to relax, and all these led eventually to depression (Charan, 2007)

According to Shoji et.al. (1990) many software engineers were not satisfied with their work and their 'quantity of jobs' had the greatest influence on their mental health. Walve, (2005) stated that number of suicides, divorces, heart ailments, blood pressure, diabetes and cause of mental depression were highest in the software industry.

Letha et al. (2007) have observed that job attitudes, organizational culture, long work hours and lack of time management skills were the highly influencing factors of stress among software professionals. Factors causing stress includes

problems in self perception or personality, lower job satisfaction, family conflict, conflict at work place, improper motivation in work, and lack of decision making opportunities and nature of leadership at work place.

Unfavourable working conditions, insecure jobs, poor inter personal relationship at work place, poor organized climate, lack of group cohesiveness, lack of control at work, improper listening and communication by peers and superiors and lack of creative problem solving ability had some influence in inducing stress (Agarwal et al., 2003).

The results were on par with views of Reddy et al (2003) who found that work environment was one of the important factors that affected job satisfaction and commitment of software professionals. It included convenient job hours comfortable working conditions and work place locations that suited the professionals. The professionals also expected the organization to give opportunities for professional's skill development, job security, fringe benefits and leisureliness in the job. According to Gwen (2003) Software professionals expected listening and recognition from press, clients and senior management, which helped them in their work and career development. Proper listening and effective two way communications clarified and motivated the work to be done and reduced stress. Vinutha (2005) reported that the company's HR policies were intended to create a highly motivated work place, which was far from reality.

MATERIALS AND METHODS

3. MATERIALS AND METHODS

The methodology adapted for the study entitled 'Diet, lifestyle pattern and health profile of professionals in software industry' is presented in this chapter. The objective of the study was to assess the dietary pattern, lifestyle and health profile of professionals of software industry. The methodology followed and materials used for the study is given under the following heads.

CONDUCT OF THE STUDY

3.1. LOCALE OF THE STUDY

3.2. SELECTION OF RESPONDENTS

3.3. VARIABLES SELECTED FOR THE STUDY

3.3.1. PERSONAL PROFILE OF RESPONDENTS

3.3.1.1. Socio –economic background of the respondent

3.3.1.2. Personal habits of the respondents

3.3.2. LIFESTYLE PATTERN OF THE RESPONDENTS

3.3.2.1. Leisure time activities

3.3.2.2. Exercise pattern

3.3.2.3. Time spent for household and out of home activities

3.3.2.4. Social participation of the respondents

3.3.2.5. Travel pattern of the respondents

3.3.3. DIETARY PARTICULARS OF THE RESPONDENTS

3.3.3.1. Food consumption patterns

3.3.3.2. Food habits

3.3.3.3. Food use frequency and food preference

3.3.3.4. Eating style (Kushner's scale)

3.3.3.5. Nutrient intake by 24 hour recall Method

3.3.4. HEALTH INDICATORS OF THE RESPONDENTS

3.3.4.1. Morbidity pattern of the respondents

3.3.4.2. Chronic diseases

3.3.5. ANTHROPOMETRIC MEASUREMENTS OF THE RESPONDENTS

3.3.5.1. Height

3.3.5.2. Weight

3.3.5.3. Body Mass Index

3.3.5.4. Triceps Skin Fold Thickness (TST)

3.3.5.5. Waist Hip Circumference

3.3.5.6. Waist Hip Ratio (WHR)

3.3.6. STRESS PATTERN OF THE RESPONDENTS

3.4. STATISTICAL ANALYSIS

CONDUCT OF THE STUDY

3.1 Locale of the study

The locale of the study chosen was the various software companies of Techno park. This IT park is situated in Kazhakootom panchayat of Thiruvananthapuram district. This area is purposively selected because Techno park is hosting over 150 IT and ITES companies and employing over 20,000 IT professionals.

3.2. SELECTION OF RESPONDENTS

Two categories of respondents were selected for the study; namely, Experimental group and Control group, using the following inclusion criteria.

1. 25-35 years of age
2. 5 years experience

Experimental group

A homogenous group of 100 software professionals comprising Of 50 males and 50 females belonging to the age group of 25 to 35 years with minimum of 5 year experience were selected randomly from Techno park.

Control group

A group of 50 persons comprising of 25 males and 25 females belonging to similar age, educational qualifications, but not involved in software industry were selected at random and they were doctors, teachers and journalists.

3.3. VARIABLES SELECTED FOR THE STUDY

3.3.1. Personal Profile of Respondents

3.3.1.1. Socio- economic background and personal habits of the respondents

To elicit information on socio- economic profile of the respondents, details regarding – age, religion, marital status, educational status, experience in the occupation and type of family, were collected. A pre tested standardized schedule was framed for this survey and the information was collected by personal interview technique. This schedule was developed using standard procedures and was administered to the respondents which is appended in Appendix 1

3.3.1.2. Personal habits of the respondents

The information on personal habits such as personal grooming, sleeping pattern and substance abuse were assessed through the same schedule.

3.3.2. LIFE STYLE PATTERN OF THE RESPONDENTS

“Life style” means the way of living of an individual. It is primarily decided by home, friends, neighborhood, society, and culture. Besides, globalization of culture, advancement of science and technology and communication strategies also decides the lifestyle of an individual (Nair and George, 2000). Lifestyle related activity patterns of the respondents were measured using modified versions of Wen’s and Kushner’s scale (2003).

3.3.2.1. Leisure time activities

a) For assessing leisure time activities of the respondents, details regarding activities such as reading news papers, reading magazines, viewing T.V, writing articles, pursuing music/dance, gardening, cooking, shopping, online chatting/mobile chatting were collected by the pre tested schedule.(Appendix 11)

3.3.2.2. Exercise pattern

Exercise pattern of the respondents were assessed using modified version of Kushner's scale (Kushner, 2003). The scale consisted of expressions such as "Hate to move struggler", "Uneasy participant", "Fresh starter", "All or nothing doer", "Self routine repeater", "Aches and pains sufferer", and "Exercise protester". The respondents stated their response by putting tick mark in the appropriate category which suited them most. (Appendix 111).

3.3.2.3. Time spent for house hold and out of home activities

In order to assess the lifestyle and workload of the respondents and its relation to their nutritional status, the time utilization pattern of the respondents were studied.

The energy requirement of an individual is the level of energy intake from food, that will balance energy expenditure. The energy intake is sufficient when the individual has a body size and composition and level of physical activity, consistent with long term good health and that will allow for maintenance of economically necessary and socially desirable activity (ICMR, 1992). It is also recommended that energy requirement must be assessed in terms of energy expenditure rather than in terms of energy intake. As per the standard suggested by ICMR the energy requirement of a sedentary active man was taken as 2425Kcal/day and for sedentary active women was taken as 1875kcal/day. The time spent for daily activity was assessed using questionnaire by interview method. Time spent for different activities including both at household and at occupation, on a working day and a holiday was recorded. Details of the time spent by respondents for various activities were ascertained through the schedule (Appendix 1V), by enlisting even the minute wise activities throughout a day; It was assessed for a random working day and also for a holiday.

3.3.2.4. Social participation was assessed as part of out of home activities.

In this study, social participation was measured using the scale followed by Fayas (2003). The response was measured based on the membership in various social organizations. The scores were assigned as follows.

Not a member of any organization	0
Member in one organization	1
Member in more than one organization	2
Office bearer in one organization	3
Office bearer in more than one organization	4

The schedule is given in appendix V.

3.3.2.5. Travel pattern of the respondents

The distance and means of commutation for reporting to work and also details of time spent by the respondents for travel were determined through the schedule. Appendix V1

3.3.3. DIETARY PARTICULARS

3.3.3.1. Food consumption pattern

Rahman and Rao (2002) observed socio-economic and demographic factors play an important role on the pattern and consumption of food and nutrition. One day meal pattern along with ingredients used for preparations of the meals were collected to understand the food combinations used in their daily dietaries (Appendix V11). Thus the quality of meals were evaluated with regard to food groups used in the three major meals viz; breakfast, lunch, dinner. Based

on the combinations used by the respondents, scores were assigned as detailed below.

Food combinations used in the meals	Scores
Cereals alone	1
Cereal + pulse	2
Cereal + pulse + Fruits / Vegetables	3

Therefore those who used a better food combination for meals would get a maximum score of 9 per day. Based on the scores obtained the respondents were classified into 3 groups.

Total score	Quality of meals
< 3	Low
4 - 6	Medium
> 6	High

3.3.3.2. Food habits

Singh and Kaur (1997) analyzed food habits of people and found that food habits depended on taste and availability of raw materials. Food habits were assessed using modified version of Kushner's scale.(Kushner,2003) The scale consisted of phrases such as "Meal skipper", "Night nibbler", "Convenient dinner", "Fruit less feaster", "Steady snacker", "Hearty portioner", and "swing eater". (Appendix V11.)

3.3.3.3. Food use frequency and preference

Food preferences and frequency of use of different food items in the dietaries of the respondents indicates the trends in food consumption. In this

study, food use frequencies were measured using a check list. The locally popular foods and those frequently advertised through media were listed down and respondent's use of each item was rated (Appendix V111).

The total score for each food groups used by the respondent as well as preference score of the respondent's for different food items were calculated separately using the formula suggested by (Reaburn et al., 1979).

$$\begin{aligned} \text{The mean score for each food group} &= \frac{R_1 S_1 + R_2 S_2 + R_3 S_3 + \dots + R_n S_n}{100} \\ &= \frac{\sum R_i S_i}{100} \end{aligned}$$

Where

$$S_1 = n = 8, S_2 = n - 1 = 7, S_n = 1$$

S_i = Scale rating given for frequency of use of a food item ($i = 1, 2, 3, \dots, 8$)

R_i = Percentage of respondent's placed under each frequency group ($i = 1, 2, 3, \dots, n$)

$$\text{Percentage of total score for each food group} = \frac{\text{Mean score}}{n} \times 100$$

When $n = 8$ for 8 fold classification

3.3.3.3. Eating style

Eating style of the respondents was assessed through modified Kushner's scale. The scale consisted of eleven negative statements regarding different kinds of eating styles like skipping meals, over eating, frequent snacking etc, followed by the respondents. The respondents were asked to indicate their response in a three point scale such as 'Disagree', 'Agree some time', and 'Agree most of the time' with the scores of two, one and zero respectively by putting tick mark in the column which suited them most. (Appendix 1X) From the total scores

computed the respondents were classified, as 'very good' (score-80 and above) , 'good' (65-80), 'moderate' (50-65), 'poor' (36-50) and 'very poor' (< 35).

3.3.3.4. Measures of food and nutrient intake (24 hour recall method)

Gore et al. (1997) suggested that only weighment method can give reasonably accurate values of dietary intake. According to Rao (1996) Recall method for any single day or two days would be as efficient a tool as that of seven days.

The 24 hour recall method was used to assess the actual food intake by the respondents. For this, a set of cups and spoons were standardized by the investigator following the procedure given by Thimmayamma and Rao, (2003). The respondents were asked about the type of food preparations they had for breakfast, lunch, tea time and dinner and the raw ingredients used for each of the preparations and the quantity consumed by them were then measured using the standardized cups. The cups were used to aid the respondents to recall the quantities prepared and eaten. Later the actual quantity of foods consumed by the respondents and its nutrient content were computed. Schedule attached in Appendix X.

3.3.4. HEALTH INDICATORS OF THE RESPONDENTS

3.3.4.1. Morbidity pattern

Morbidity means the occurrence of disease or illness and can be regarded as an indicator of overall health of an individual. The occurrence of disease or illness among the respondents were assessed by ascertaining the manifestation of disease or illness of the respondents in the past six months prior to the interview. This was ascertained using a checklist (Appendix X1).

3.3.4.2. Chronic diseases

The occurrences of chronic diseases were assessed using a checklist. (Appendix X1)

3.3.5. ANTHROPOMETRIC MEASUREMENTS OF THE RESPONDENTS

Nutritional anthropometry is the measurement of human body at various ages and levels of nutritional status. For assessing the nutritional status of the respondents, anthropometric measurement is considered an effective measure.(Elizabeth, 2005).

Anthropometry provides the single most universally applicable inexpensive technique for assessing the size, proportions and composition of the human body. Anthropometry has been accepted as an important tool for the assessment of nutritional status (Vijayaraghavan, 1987). Anthropometry is the conventional bench mark method used for epidemiological purpose (Sachdev, 2003).

Therefore height, weight, triceps skin fold thickness (TST) and waist hip circumference of the respondents were measured and recorded using the standardized techniques.

3.3.5.1.Height :

Height or the total length is influenced by the nutritional, environmental and hereditary factors (Gopaldas and Seshadri, 1987).

To determine height, the respondents were asked to remove their slippers and stand with centre of the back touching the wall with feet paralleled and heels, buttocks, shoulder and back of head touching the wall. The head was held comfortably erect, the scale was centre crushing the hair at right angles to the wall and the height read off from the lower edge of the ruler to the nearest 0.5 cm. Each reading was taken twice to ensure the correctness of measurement.

3.3.5.2. Weight :

Weight is the measurement of body mass. (Rao and Vijayaraghavan, 1986). For weighing, platform weighing balance was used, as it is portable and it is convenient to use in the field. The weighing scale was checked periodically for

accuracy .The scale was adjusted to zero before each measurement. The subjects in minimum modest clothing were asked to stand on the platform of the scale, without touching anything and looking straight ahead. The weight was recorded to the nearest of 0.5 Kg. Each reading was taken twice to ensure correctness of the measurement.

3.3.5.3. **Body Mass Index :**

BMI is regarded as a good indicator of nutritional status. Body Mass Index (BMI) is expressed as the ratio of weight to height square ie. Weight (Kg) / Height² (m). This was used as an indicator of nutritional status (James et al., 1988). From the recorded height and weight , Body Mass Index was computed .Based on the BMI subjects were classified as underweight, normal and over weight.

$$\text{BMI} = \frac{\text{Weight (Kg)}}{\text{Height}^2 \text{ (m)}}$$

Based on their BMI the respondents were graded following the procedure cited by Srilakshmi (1997).

3.3.5.4. **Triceps skin fold Thickness (TST)**

According to Malina et al. (1974) measurement of skin fold (fat fold) at triceps is one of the methods for assessing the amount of subcutaneous fat, which gives an indication of the calorie reserves in the body of an individual. TST was determined using Lange's calipers. A length wise skin fold on the dorsal side of the left hand was firmly grasped and slightly lifted up between finger and thumb of left hand. Care was taken not to include underlying muscle. The caliper was applied about 1 cm below the operator's finger at a depth about equal to the skin folds, the skin fold was gently held throughout the measurement. The measurement was read to 0.1 mm accuracy. An average of three measurement was taken as final measurement of TST of the respondents.

3.3.5.5. Waist Hip Circumference

According to Lean et al. (1995) Waist circumference is used as a measurement that indicates the need for weight management and in the present study the circumference of waist was measured by passing a fibre glass tape around the waist. The circumference of hip at the maximum point of protrusion was also correctly measured using fibre glass tape as per the technique suggested by Bray (1991).

3.3.5.6. Waist Hip circumference Ratio (WHR)

After documenting the waist and hip measurements of the respondents, their WHR was calculated by dividing the circumference of the waist by the circumference of the hip. (Chadha et al.,1995).

3.3.6. STRESS PATTERN OF THE RESPONDENTS

Stress can be defined as our reaction to our external environment as well as our internal thoughts and feelings (Gomez, 2003). In this study, the stress is operationally defined as the psychological pressure developed in human beings consequent to his/her inability to fulfill their basic livelihood needs of life. For the purpose of this study, stress inventory scale developed by Menon (2003) was used.

The scale consists of fifty negative statements regarding different kinds of problems often faced by the respondents in their professions. The respondents were asked to state their response in a three point continuum viz. 'usually', 'sometimes', and 'never' with the scores of two, one and zero respectively by putting tick mark in the column which suit them most.

The scale consists of four sections. First related to physical complaints of the respondents (1-13 statements) second on negative affective reactions (14-26

statements), third on negative cognitive behavior (27 -38) and fourth on negative overt behavior (39 -50 statements). (Appendix X11).

The total score obtained for all the four sections by an individual indicate their score level and the interpretation is done as given below. The total score that can be obtained ranges from 0-100.

Total score (range)	Stress level (category)
Above 80	Very High
65 - 80	High
50 - 65	Moderate
35 - 50	Low
< 35	Very Low

The 4 sections were followed by a miscellaneous section, comprising of seven statements to identify the factors which influences stress in the respondents. The respondents were asked to state their response in a three point continuum viz, 'Often', 'rarely', and 'never' by putting tick mark in the column which suit them most.

3.4. STATISTICAL ANALYSIS

The data collected were coded and consolidated and subjected to statistical analysis. The statistical procedures used were mean, percentage, and t- test, z- test and correlation. The results of the statistical analysis and findings are presented in the ensuing chapter.

RESULTS

4. RESULTS

The results of the present study entitled 'Diet, lifestyle pattern and health profile of professionals in software industry' is presented as a comparison between two groups ie. A homogenous group of 100 software / information technology (IT) professionals hereafter who will be referred as ITR (IT respondents) and another group of 50 persons who will be called as Non ITR (Non IT respondents) belonging, to similar age, educational qualification, and not involved in software industry. The results obtained from the above two groups are presented under the following subheadings.

4.1 Personal and socio – economic characteristics of the respondents.

4.2 Life style and activity patterns of the respondents.

4.3 Food consumption pattern of the respondents.

4.4 Health Status of the respondents.

4.5. Nutritional Status Index of the respondents.

4.6. Interrelationship between variables selected for the study.

4.1. PERSONAL AND SOCIO – ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

4.1.1. Personal characteristics

Personal and socio- economic characteristics of the respondents such as age, religion, caste, marital status, educational status, years of experience, type of family, income, and personal habits were collected using a structured schedule through personal interview.

Age: Table 1: Distribution of the respondents based on their age.

Age (yrs)	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
25-30	28 (56)	40(80)	68	7 (14)	9 (36)	16 (32)
31-35	22 (44)	10 (20)	32	18 (36)	16 (64)	34 (68)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

As per the details shown in the table 1 it was noticed that in the IT group 68 percent of the respondents selected were between the age of 25 -30 years. Fifty six percent of the male respondents and 80 percent of the female respondents formed this group. Among the 50 Non IT respondents surveyed, 32 percent of the respondents were between the age of 25 -30 years. Fourteen percent of them were found to be males and 36 percent were females.

The data also revealed that 32 percent respondents were between the age of 31-35 years. Forty four percent of the male respondents and 20 percent of the female respondents formed this group. Similarly majority of the Non IT respondents were between the age of 31 -35 years., thirty six percent of them were males and 64 percent were females.

Religion: Table 2: Distribution of the respondents based on their religion.

Religion	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
Hindu	31 (62)	35 (70)	66	19 (76)	22 (88)	41 (82)
Christian	14 (28)	9 (18)	23	2 (8)	1 (4)	3 (6)
Muslim	5 (10)	6 (12)	11	4 (16)	2 (8)	6 (12)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

As summarized in the above table 2, majority (66 percent) of the IT respondents were Hindus. Twenty three percent were Christians and 11 percent were Muslims respectively. The table also shows that majority (82 percent) of the Non IT respondents were Hindus, 6 percent of them were Christians and 12 percent of the respondents were Muslims.

Caste: Table 3: Distribution of respondents based on their caste.

Caste	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
Forward	30 (60)	29 (58)	59	10 (40)	3 (12)	13 (26)
OBC	20 (40)	21 (42)	41	15 (60)	22 (88)	37 (74)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

Table 3 reveals that among the IT respondents 59 percent belonged to forward castes and the remaining 41 percent belonged to other backward castes. Caste wise analysis of Non IT respondents also reveals that 26 percent belonged to forward castes and majority (74 percent) were from other backward castes.

Place of residence: Table 4: Distribution of respondents based on their place of residence.

Place of residence	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/%	Male	Female	Total (%)
Rural	8 (16)	10 (20)	18	2 (8)	2 (8)	4 (8)
Urban	35 (70)	32 (64)	67	22 (88)	20 (80)	42 (84)
Suburban	7 (14)	8 (16)	15	1 (4)	3 (12)	4 (8)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

Place of residence of the respondents was classified into rural, urban and sub urban. When place of residence of the IT respondents were analyzed, it was observed that 18 percent of respondents were living in rural areas, 67 percent

were living in urban areas, the remaining 15 percent were living in suburban areas.

The data also reveals that 8 percent of the Non IT respondents were residing in rural areas, 84 percent were residing in urban areas and the remaining 8 percent were residing in sub urban areas.

Marital status: Table 5: Distribution of respondents based on their marital status.

Marital status	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/ %	Male	Female	Total %)
Married	23 (46)	23 (46)	46	3 (12)	13 (52)	16(32)
Unmarried	27 (54)	27 (54)	54	22 (88)	12 (48)	34(68)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50(100)

(Figures in parenthesis indicate percentage)

Table 5 indicates that 46 percent of the IT respondents were married and 54 percent of them were unmarried. But among Non IT professionals, 32 percent were married and 68 percent were unmarried. Among Non IT respondents 12 percent males and 52 percent females were married. While 88 percent males and 48 percent females were unmarried.

The data also reveals coincidentally that among IT respondents when there were 23 (46 percent) married males there were 23 married females as well. This similarity is observed in the case of unmarried professionals also.

Educational status of the respondents:

When the educational level of the respondents were assessed, it was found to vary from degree, professional degree to above post graduation level.

Table 6 : Distribution of respondents based on their educational status.

Educational level	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total /%	Male	Female	Total (%)
Degree	2 (4)	1 (2)	3	-	-	-
Professional degree	36 (72)	33(66)	69	17 (68)	1 (4)	18(36)
P G	12 (24)	16 (32)	28	6 (24)	20 (80)	26(52)
Above PG	-	-	-	2 (8)	4 (16)	6(12)
Total	50(100)	50(100)	100	25 (100)	25 (100)	50(100)

(Figures in parenthesis indicate percentage)

Table 6 reveals that 3 percent of the IT respondents had education only up to degree level, when 28 percent had post graduation and 69 percent had completed their professional degree. (B-TECH /MBA /MCA). In the case of Non IT respondents, majority of them had education up to post graduation, twenty four percent of the male respondents and eighty percent of the female respondents belonged to this category.

When the data on IT professionals was analyzed for sex wise distribution, it is seen that 72 percent males and 66 percent females had completed professional degree, and the remaining 24 percent males and 32 percent females had post graduation level of education.

Years of experience: Table 7: Distribution of respondents based on their years of experience.

Years of experience	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
5 - 10 years	44 (88)	43 (86)	87	23 (92)	25(100)	48 (96)
Above 10 years	6 (12)	7 (14)	13	2 (8)	-	2 (4)
Total	50 (100)	50(100)	100	25(100)	25(100)	50(100)

(Figures in parenthesis indicate percentage)

As illustrated in table 7, eighty-seven percent of the respondents in software industry had job experience of 5-10 years. This group comprised of 88 percent of the total male respondents and 86 percent of the total female respondents.

Among Non IT respondents surveyed, 96 percent of the respondents had of 5-10 years experience. This group comprised of 92 percent males and centum females. The remaining 13 percent of the IT respondents had an experience above 10 years. This group comprised of 12 percent of male population and 14 percent of female population. Only 4 percent of the Non IT respondents had an experience above 10 years which comprised of only males.

Type of family:

Family type was classified in to nuclear, joint and extended based on composition. Joint families included husband and wife, children, grand parents and other relatives, whereas extended families included husband, wife, their children and one or two relatives residing in the family and nuclear families had only husband and wife and their children under the same roof.

Table 8: Distribution of respondents based on their type of family.

Type of family	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
Nuclear	33 (66)	29 (58)	62	10 (40)	15 (60)	25(50)
Joint	12 (24)	16 (32)	28	13 (52)	7 (28)	20(40)
Extended	5 (10)	5 (10)	10	2 (8)	3 (12)	5(10)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50(100)

(Figures in parenthesis indicate percentage)

Table 8 indicates that 62 percent of IT respondents belonged to nuclear families. while among Non IT respondents 50 percent were from nuclear families. Twenty eight percent of the IT and forty percent of Non IT respondents belonged to joint families. It was further noted that 10 percent of the respondents of IT sector and 10 percent Non IT sector were from extended families.

Personal income:

Table 9: Distribution of respondents based on their monthly personal income.

Personal Income (Rs)	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
10000-25000	10 (20)	-	10	2(8)	2 (8)	4(8)
25000-50000	18 (36)	17 (34)	32	18(72)	20(80)	38(76)
50000- 100000	21 (42)	31 (62)	55	5 (20)	3 (12)	8(16)
Above100000	1 (2)	2 (4)	3	-	-	-
Total	50(100)	50(100)	100	25 (100)	25 (100)	100

(Figures in parenthesis indicate percentage)

The personal income of the respondents ranged between Rs.10,000 to above 100000 and the details of the personal income are given in the above table.

The table reveals that about 10 percent of respondents from IT sector and 8 percent of the respondents of Non IT sector were having personal income ranging between Rs.10,000 to 25,000. Thirty two percent of the IT respondents and 76 percent of the Non IT were having personal income between Rs.25,000 to 50,000. It was also observed that the remaining 55 percent among IT and 16 percent in Non IT had their income ranging between Rs. 50,000 to Rs.100000.

Total monthly family income:

Table: 10 Distribution of respondents based on their monthly family income.

Family income (Rs)	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/ %	Male	Female	Total (%)
15000-25000	3 (6)	-	3	2 (8)	2(8)	4(8)
25000-50000	15 (30)	3 (6)	18	11 (44)	15 (60)	26(52)
50000-100000	17 (34)	15 (30)	32	6 (24)	8 (32)	14(28)
100000-200000	11 (22)	27 (54)	38	6(24)	-	6(12)
Above 200000	4 (8)	5 (10)	9	-	-	-
Total	50(100)	50(100)	100	25 (100)	25 (100)	50(100)

(Figures in parenthesis indicate percentage)

The total monthly family income of the respondents were assessed by adding the salary of the family members as well as income from other sources. The total family income of the respondents ranged between Rs 15,000 to Rs 2,00,000 and the details of the total family income are given in the above table.

As shown in table 10 it was observed that 3 percent of the IT respondent's families and 8 percent of the Non IT respondent families had their income ranging between Rs. 15,000- 25,000. It was also observed that majority

(38percent) of the IT respondents and 12 percent of the Non IT respondents had a higher income ranging from 1,00,000 to 2,00,000.

Personal habits of the respondents.

The health related personal habits and way of life are important factors which help to maintain good health of an individual. Accordingly details on the personal habits of the respondents such as personal grooming, sleeping pattern and substance abuse were collected.

Results indicated that 70 percent of the IT respondents took bath twice in a day and majority of them (79 percent) brushed their teeth twice a day. Majority (98 percent) of the respondents went to toilet once in a day, when 56 percent utilized the urinal facility more than three times a day.

Fifty six percent of the Non IT respondents took bath twice a day, when fifty two percent brushed their teeth twice a day. Thirty five percent used the urinal three times a day and all of them had regular toilet habits once a day.

Sleeping pattern: Table11: Distribution of respondents based on the duration of sleep.

Duration of sleep at night	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total %)
8 hours	15 (30)	21 (42)	36	19 (76)	10 (40)	29(58)
6-7 hours	27 (54)	23 (46)	50	6 (24)	10 (40)	16(32)
<6 hours	8 (16)	6 (12)	14	-	5 (20)	5(10)
Total	50(100)	50(100)	100	25(100)	25(100)	50(100)

(Figures in parenthesis indicate percentage)

From table 11 it was found that only 36 percent of the respondents of IT sector were sleeping 8 hours during night, but in Non IT sector 58 percent of them were sleeping 8 hours during night. However 50 percent of the respondents of IT sector and 32 percent of Non IT sector were able to sleep only for 6-7

hours. Fourteen percent of IT and 10 percent of Non IT respondents were having less than 6 hours sleep at night.

Afternoon nap of the respondents:

Table12: Distribution of respondents based on their afternoon nap.

Duration of afternoon nap	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/ %	Male	Female	Total %)
10mts	3(6)	5 (10)	8	1 (4)	5 (20)	6(12)
20mts	-	-	-	-	5 (20)	5(10)
Never	47 (94)	45 (90)	92	24(96)	15 (60)	39(78)
Total	50(100)	50(100)	100	25(100)	25(100)	100

(Figures in parenthesis indicate percentage)

The details regarding the duration of afternoon nap of the respondents revealed that, 8 percent of the respondents in IT and 12 percent respondents in Non IT spent 10 minutes for afternoon nap. Only 10 percent in Non IT spent 20 minutes. Ninety two percent (IT) and 78 percent (Non IT) never spent time for afternoon nap.

Habit of alcohol consumption

Table13: Distribution of respondents based on their habit of alcoholism.

Frequency of alcohol consumption	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/ %	Male	Female	Total(%)
Occasionally	28 (56)	2 (4)	30	6 (24)	-	6(12)
Never	22 (44)	48 (96)	70	19 (76)	25(100)	44(88)
Total	50 (100)	50(100)	100	25(100)	25(100)	100

(Figures in parenthesis indicate percentage)

It is observed in table 13, that majority of the respondents among both groups were non users of alcohol. i.e 70 percent and 88 percent respectively. Among respondents of Non IT sector 12 percent and 30 percent of IT sector consumed alcohol occasionally.

Habit of smoking

Table 14 : Distribution of respondents based on their habit of smoking.

Smoking habit	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/%	Male	Female	Total (%)
Occasionally	7 (14)	-	7	5 (20)	-	5 (10)
Regularly	1 (2)	-	1	-	-	-
Never	42 (84)	50(100)	92	20 (80)	25(100)	45 (90)
Total	50 (100)	50 (100)	100	25(100)	25(100)	50 (100)

(Figures in parenthesis indicate percentage)

As shown in table 14, it was observed that majority of the respondents among both groups were free from smoking habit.i.e.92 percent among respondents of IT sector and 90 percent among Non IT sector, whereas only 7 percent of IT and 10 percent of Non IT respondents smoked occasionally.

Habit of chewing pan

Table15: Habit of chewing pan

Habit of chewing pan	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/ %	Male	Female	Total(%)
Occasionally	3 (6)	-	3	5 (20)	-	5 (10)
Never	47 (94)	50(100)	97	20 (80)	25(100)	45 (90)
Total	50 (100)	50(100)	100	25(100)	25(100)	50 (100)

(Figures in parenthesis indicate percentage)

From table 15, it was found that in both groups (IT & Non IT) majority of the respondents did not have the habit of chewing pan (97 percent and 90 percent

respectively). Only 3 percent of IT respondents and 10 percent of the Non IT respondents had the habit of chewing pan occasionally.

Habit of using drugs.

It was observed that none of the respondents of either groups had the habit of taking drugs.

4.2. Life style and activity pattern of the respondents.

Table 16 and 17 depicts the results of analysis of leisure time activities of both the groups. It was seen that 81 percent of the IT respondents had the habit of reading news paper daily, 10 percent however read them only once in two days and only 9 percent of them read news paper on a weekly basis. However table 17 shows that centum of the Non IT respondents read news paper daily.

Seven percent of the IT respondents were reading magazines once in two days. Majority of the respondents were reading magazines on a weekly basis and 13 percent were reading them once in three days. Ten percent of the Non IT respondents read magazines daily, 14 percent were reading them once in two days and most of them (48 percent) read magazines on a weekly basis.

Hundred percent of the male and female IT respondents were viewing T.V on daily basis. Ninety eight percent of the Non IT respondents were watching T.V daily and 2 percent were viewing on a weekly basis.

When 6 percent of IT respondents wrote articles on holidays; it was observed that 10 percent of Non IT respondents were in the habit of writing articles daily; when 4 percent wrote them once in three days the remaining 10 percent were writing articles weekly. This could be due to needs of their occupation.

Few of the IT respondents (7 percent and 2 percent) were doing gardening once in two days and once in three days respectively; Forty percent of the Non IT respondents were engaged in gardening once a week. Thirty eight percent of them

Table: 16 Leisure time activities of IT professionals

Leisure time activity	Daily			Once in two days			Once in three days			Weekly			Never		
	Male (No)	Female (No)	Total %	Male (No)	Female (No)	Total %	Male (No)	Female (No)	Total %	Male (No)	Female (No)	Total %	Male (No)	Female (No)	Total %
Reading news papers	50(100)	31(62)	81	-	10(20)	10	-	-	-	-	9 (18)	9	-	-	-
Reading magazines	-	-	-	7 (14)	-	-	5 (10)	8 (16)	13	38 (76)	42 (82)	80	-	-	-
Viewing T.V	50 (100)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Writing articles	-	-	-	-	-	-	-	-	-	-	3 (6)	-	-	-	-
Pursuing music/Dance	4 (8)	2 (4)	6	-	-	-	-	-	-	-	-	-	-	-	-
Gardening	-	-	-	-	7 (14)	7	2 (4)	-	2	-	11 (22)	11	48 (96)	32 (64)	80
Cooking	-	36 (72)	-	-	-	-	-	-	2 (4)	-	12 (24)	12	50 (100)	-	-
Online chatting / mobile	43 (86)	50 (100)	93	7 (14)	-	7	-	-	-	-	-	-	-	-	-
Shopping	-	-	-	-	6 (12)	6	4 (12)	4 (12)	8	46 (92)	40 (80)	86	-	-	-
Cinema	-	-	-	-	-	-	-	-	-	2 (4)	-	-	-	-	-
Outing	-	-	-	-	-	-	-	-	-	5 (10)	10	15	-	-	-

(Figures in parenthesis indicate percentage)

Table: 17 Leisure time activities of NONIT professionals

Leisure time activity	Daily			Once in two days			Once in three days			Weekly			Never		
	Male (No)	Female (No)	Total %	Male (No)	Female (No)	Total %	Male (No)	Female (No)	Total %	Male (No)	Female (No)	Total %	Male (No)	Female (No)	Total %
Reading news papers	25 (100)	25 (100)	50 (100)	-	-	-	-	-	-	-	-	-	-	-	-
Reading magazines	3 (12)	2 (8)	5 (10)	(20)	2 (8)	7 (14)	5 (20)	9 (36)	14 (28)	12 (48)	12 (48)	24 (48)	-	-	-
Viewing T.V	25 (100)	24 (96)	49 (98)	-	-	-	-	-	-	-	1 (4)	1 (2)	-	-	-
Writing articles	3 (12)	2 (8)	5 (10)	-	-	-	1 (4)	1 (4)	2 (4)	3 (12)	2 (8)	5 (10)	18 (72)	20 (80)	38 (76)
Pursuing music/Dance	-	2	2 (4)	-	-	-	-	-	-	-	-	-	25 (100)	23 (46)	48 (96)
Gardening	2 (8)	6 (24)	8 (16)	1 (4)	-	1 (2)	-	2 (8)	2 (4)	6 (24)	14 (56)	20 (40)	16 (64)	3 (12)	19 (38)
Cooking	-	25 (100)	25 (100)	-	-	-	-	-	-	-	-	-	25 (100)	-	25 (100)
Online chatting / mobile	25 (100)	25 (100)	50 (100)	-	-	-	-	-	-	-	-	-	-	-	-
Shopping	-	-	-	-	-	-	-	5 (20)	5 (10)	25 (100)	20 (80)	45 (90)	-	-	-
Cinema	-	-	-	-	-	-	-	-	-	6 (24)	-	6 (12)	19 (38)	25 (100)	44 (88)
Outing	-	-	-	-	-	-	-	-	-	12 (48)	10 (40)	22 (44)	13 (26)	15 (30)	18 (36)

(Figures in parenthesis indicate percentage)

never liked gardening. Sixteen percent were engaged in gardening daily, 2 percent once in two days while 4 percent were engaged in gardening once in three days.

The table also shows that centum of the male IT respondents never cooked at all. While among females, 72 percent were cooking on a daily basis and 24 percent were cooking on a weekly basis and the remaining 4 percent were cooking once in three days. Hundred percent of the male Non IT respondents were never involved in cooking, while among females, all of them had to cook daily.

Ninety three percent of the IT respondents were chatting on mobile or online on a daily basis and 7 percent of them were chatting once in two days. Eighty six percent of the respondents were shopping once a week, 8 percent shopped once in three days and 6 percent were shopping once in two days. Hundred percent of the Non IT respondents (25 males and 25 females) were chatting in mobile or online daily. Majority of them (90 percent) were shopping weekly and 10 percent of them were shopping once in three days.

Table 18 : Distribution of respondents based on their exercise pattern.

Exercise pattern	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
"Hate to move struggler"	24 (48)	14 (28)	38	17(68)	9 (36)	26 (52)
"Uneasy participant"	3 (6)	-	3	2 (8)	1 (4)	3 (6)
"Fresh starter"	8 (16)	18 (36)	26	2 (8)	6 (24)	8(16)
"All or nothing doer"	1 (2)	3 (6)	4	-	1 (4)	1 (2)
"Self routine repeater"	11 (22)	12 (24)	23	4 (16)	8 (32)	12 (24)
"Aches and pains sufferer"	3 (6)	3 (6)	6	-	-	-
"Exercise protester"	-	-	-	-	-	-
Total	50 (100)	50(100)	100	25(100)	25(100)	50(100)

(Figures in parenthesis indicate percentage)

Table 18 shows that in the IT group 38 percent of the respondents were extremely lazy to do exercise (hate to move struggler). Three percent of them were “uneasy participants” (embarrassed to exercise in front of others). Twenty six percents were “fresh starters” (recently started). Four percent respondents had extreme variation in their exercise behavior (all or nothing doer). Twenty three percent respondents were self routine repeaters (some how they managed to keep targets). Six percent respondents were Aches and pains sufferers (exercise till exhausted). None of them were in the category of exercise protesters.

The table also shows that in Non IT group 52 percent respondents were involved in the group of “hate to move strugglers”, 6 percent were “uneasy participants”, 16 percents were “fresh starters”, 24 percent were “self routine repeaters” and only 2 percent showed extreme variations in exercise behavior (all or nothing doer). None of them were in the group of “exercise protesters” and “Aches and pains sufferer” group.

Time utilization pattern of the respondents.

In order to assess the workload, the time utilization pattern of the respondents on a working day and a holiday was studied and time spent for sleeping, occupational activities, non-occupational activities (exercise, kitchen work, child care, cleaning house, cleaning clothes, freshening, relaxing, having food, prayer) and other activities (travelling, shopping, reading, T.V watching, gardening) were calculated and are given in table 19 to 22.

Table 19 : Distribution of IT and Non IT male respondents based on their time utilization on a working day.

Group	Mean time spent for each activity per day				
	Sleeping (in hours)	Personal Grooming (in minutes)	Occupational Activities (in hours)	Non occupational Activities (in hours)	Others (in hours)
ITR	6.74	37.8	9.32	3.24	4.07
Non ITR	7.76	38.4	7.48	5.1	3.02
t value	5.86**	0.18	8.30**	9.50**	2.57

**significant at 1 percent level

The average time spent for each group are presented in Table 19. It is clear that on a working day the time spent by IT group for the non occupational activities is less compared to the Non IT group. It is found that Non IT group spent significantly more time (7.76 hours) for sleeping when compared to the IT group. For personal grooming Non IT group spent 38.4 minutes, but in occupational activities IT group spent more time (9.32 hours) than Non IT group. In Non IT group they spent more time (5.1 hours) for non occupational activities. For other activities, IT group spent more time (4.07) than Non IT group. The time spent for sleep and non-occupational activities by IT respondents were found to be significantly low. (1 percent level). The time spent on occupational activities by the IT respondents were significantly higher than that of Non IT respondents (1 percent level).

Table 20 : Distribution of IT and Non IT male respondents based on their time utilization on a holiday.

Group	Mean time spent for each activity per day			
	Sleeping (in hours)	Personal grooming (in minutes)	Non occupational activities(in hours)	Others (in hours)
ITR	9.28	46.9	6.15	7.78
Non ITR	8.12	40.2	6.32	8.88
t value	6.05	2.58	1.08	4.64

Table 20 reveals that on a holiday IT group spent more time for sleeping and personal grooming i.e (9.28 hrs and 46.9 mts) than Non IT group. The time spent for non occupational and other activities among IT group is less compared to the Non IT group. However this difference was not statistically significant.

Table 21 : Distribution of IT and Non IT female respondents based on their time utilization on a working day.

Group	Mean time spent for each activity per day				
	Sleeping (in hours)	Personal Grooming (in hours)	Occupational Activities (in hours)	Non occupational Activities (in hours)	Others (in hours)
ITR	7.06	1.63	8.5	3.81	3.65
Non ITR	6.92	1.43	7.36	5.38	3.48
t value	0.54	1.69	7.48	7.90	0.46

From table 21 it was observed that the time spent for sleeping and personal grooming and occupational activities among IT group on a working day is more compared to Non IT group. (7.06,&1.63hours). IT group spent less time for non occupational and other activities compared to Non IT group. This difference however was not statistically significant

Table 22 : Distribution of IT and Non IT female respondents based on their time utilization on a holiday.

Group	Mean time spent for each activity per day			
	Sleeping (in hours)	Personal Grooming (in hours)	Non occupational Activities (in hours)	Others (in hours)
ITR	8.36	1.5	6.12	8.64
Non ITR	8.56	1.55	6.56	7.95
t value	1.20	0.51	2.71	3.02

The table 22 reveals that on a holiday, Non IT group spent more time for sleeping, personal grooming and non occupational activities than IT group and IT group spent more time for other activities than Non IT group. These differences were also not statistically significant

Social participation: Table 23: Distribution of respondents based on their social participation.

Membership in organization/clubs	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/%	Male	Female	Total(%)
Not a member of any organization	19(38)	23 (46)	42	7 (28)	15 (60)	22 (44)
Member in one organization	16(32)	15 (30)	31	14 (56)	4 (16)	18 (36)
Member in more than one organization	6 (12)	-	6	4 (16)	3 (12)	7(14)
Office bearer in one organization	9 (18)	12 (24)	21	-	1 (4)	1 (2)
Office bearer in more than one organization	-	-	-	-	2 (8)	2 (4)
Total	50 (100)	50 (100)	100	25(100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

Table 23 indicates that 42 percent of the IT respondents and 44 percent of Non IT respondents were not members in any organization. Among IT respondents, 31 percent and among Non IT respondents 36 percent respondents had membership in one organization. Six percent of the respondents in IT sector and 14 percent of Non IT sector were members in more than one organization. When 21 percent of the IT respondents were office bearers in one organization, only 2 percent of the Non IT respondents were office bearer in one organization. Only 4 percent respondents in Non IT sector were office bearers in more than one organization and in IT sector none of them belonged to that group.

Travel pattern: Table 24: Distribution of respondents based on their distance between residence and work place.

Distance (kms)	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total /%	Male	Female	Total (%)
>5	14 (28)	34 (68)	48	12 (48)	7 (28)	19 (38)
6 -15	28 (56)	10 (20)	38	9 (36)	8 (32)	17(34)
16 -30	6 (12)	6 (12)	12	-	4 (16)	4 (8)
<30	2 (4)	-	2	4 (16)	6 (24)	10 (20)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

Table 24 indicates that 48 percent of the IT respondents stayed at a distance of less than 5 kilometers, while 38 percent of Non IT respondents stayed at a distance of less than 5 kilometers. Among IT respondents 38 percent and among Non IT professionals 34 percent were residing at a distance between 6 -15 kilometers. Twelve percent of the respondents in IT and 8 percent of Non IT were residing between 16-30 kilometers. Only 2 percent in IT sector and 20 percent in Non IT sector were residing at a distance more than 30 kilometers away.

Table 25 : Distribution of respondents based on their mode of conveyance.

Mode of conveyance	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total /%	Male	Female	Total (%)
Public transport	8 (16)	9 (18)	17	4 (16)	10 (40)	14 (28)
Own vehicle	40 (80)	21 (42)	61	16 (64)	9 (36)	25 (50)
Public transport and own vehicle	-	-	-	2 (8)	-	2 (4)
Corporate transport	2 (4)	6 (12)	8	2 (8)	4 (16)	6 (12)
By walk	-	14 (28)	14	-	2 (8)	2 (4)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

Table 25 reveals that most of the respondents of IT and Non IT sector went to office in their own vehicle. i.e 61 percent and 50 percent respectively. Four percent of the respondents in Non IT used public transport and at times own

vehicle for reaching office. Among the IT respondents 17 percent of the respondents used public transport while in Non IT sector 28 percent used public transport. It was also found that 14 percent of the female IT respondents and 8 percent of the female Non IT respondents walked to office.

4.3. Food consumption pattern of the respondents

Food consumption pattern of the respondents was assessed with regard to their dietary practice, frequency of use of various food items and food preference scores. The results obtained are presented in the table 26 to 36.

Table 26: Food consumption pattern of the respondents

Quality of meals	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/%	Male	Female	Total(%)
Low	8 (16)	6 (12)	14	3 (6)	2 (4)	5 (10)
Medium	31 (62)	37 (74)	68	18 (72)	20 (80)	38 (76)
High	7 (14)	11 (22)	18	4 (8)	3 (6)	7 (14)
Total	50(100)	50(100)	100	25(100)	25(100)	50 (100)

(Figures in parenthesis indicate percentage)

It was observed that 68 percent of respondents among IT sector and 76 percent among Non IT sector consumed moderate quality of diet with respect to composition. However 14 percent among IT and 10 percent among Non IT sector consumed lower quality of diet. Eighteen percent and 14 percent among IT and Non IT sector consumed a higher quality of diet.

Table 27: Distribution of respondents based on their food habits.

Food Habits	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
Vegetarian	4 (8)	5 (10)	9	1 (4)	1 (4)	2 (4)
Non-vegetarian	46 (92)	45 (90)	91	24 (96)	24 (96)	48 (96)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

Food habits of the respondents showed that majority of the IT and Non IT respondents were non- vegetarians, while only 9 percent of the IT respondents and 4 percent of the Non IT respondents were vegetarians.

Food habits were also assessed using modified version of Kushner's scale (2003). The scale consisted of phrases such as "Meal skipper", "Night time nibbler", "Convenient dinner", "Fruit less feaster", "Steady snacker", "Hearty portioner", and "swing eater". The distribution of respondents based on this scale is as depicted below.

Table 28 : Distribution of respondents based on their Food Habits by Kushner's scale

Food Habits	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
Meal Skipper	5 (10)	4 (8)	9	4 (16)	3 (12)	7 (14)
Night time nibbler	15 (30)	18 (36)	33	7 (28)	6 (24)	13(26)
Convenient Diner	6 (12)	8 (16)	14	2 (8)	2 (8)	4 (8)
Fruitless Feaster	1 (2)	4 (8)	5	1 (4)	1 (4)	2 (4)
Steady Snacker	3 (6)	2 (4)	5	-	2 (8)	2 (4)
Hearty portioner	7 (14)	3 (6)	10	-	1 (4)	1 (2)
Swing eater	13(26)	11 (22)	24	11 (22)	10 (20)	21 (42)
Total	50 (100)	50 (100)	100	25 (100)	25 (100)	50 (100)

(Figures in parenthesis indicate percentage)

The above table reveals that 9 percent of the IT and 14 percent of Non IT respondents had the habit of skipping meals. Thirty three percent of the IT respondents and 26 percent Non IT respondents consumed most of the foods during night. About 14 percent of the IT and 8 percent Non IT respondents consumed packaged, microwavable, frozen and branded foods. Five percent of IT respondents and 4 percent of Non IT respondents consumed less fruits. Five percent respondents in IT sector ate healthy foods in public but at the same time

ate unhealthy foods in private. In Non IT group this group formed 4 percent. About 10 percent of IT respondents were hearty portioners (had large appetite and ate more) and 24 percent respondents had extreme eating habits (swing eaters). The corresponding figure for Non IT sector was 42 percent.

Food use frequency of the respondents.

In this study, food use frequencies were measured using a check list. The locally popular foods and those frequently advertised through media were listed down and respondent's use of each item was rated based on Reaburn et al's method (1979).

As may be seen from the table 29 and 30 both the group of respondents consumed food items like cereals, sugar / jaggery, milk and milk products, nuts and oil seeds daily. Hundred percent of the respondents of IT and Non IT sector consumed non- carbonated beverages like tea / coffee.

Consumption of pulses was found to be high. Twenty four percent consumed pulses on a daily basis and 31 percent consumed pulses more than twice a week. Among Non IT respondents it was seen that 44 percent consumed pulses twice in a week and 14 percent consumed once in a week.

The daily consumption of leafy vegetables was found to be very low. Only 2 percent among IT and 6 percent among Non IT respondents were consuming leafy vegetables daily. Majority of the respondents among IT sector (36percent) and 26 percent among Non IT sector consumed leafy vegetables only once in a week.

Daily consumption of roots and tubers was seen among 8 percent and 16 percent among IT and Non IT groups respectively. Fifteen percent among IT and 22 percent among Non IT sector consumed roots and tubers twice in a week. Most of them consumed roots and tubers on a fortnightly level (i.e.25 percent of IT respondents and 28 percent Non IT respondents).

Table 29 : Frequency of use of various food items by IT professionals.

Food Items	Daily		More than twice in a week		Twice in a week		Once in a week		Fortnightly		Once in a month		Occasionally		Never		Total	Percentage
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Cereals	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Pulses	24	24	31	31	10	10	27	27	2	2	2	2	4	4	-	-	100	100
Leafy vegetables	2	2	7	7	5	5	36	36	16	16	13	13	16	16	3	3	100	100
Roots & Tubers	8	8	9	9	15	15	10	10	25	25	9	9	19	19	5	5	100	100
Other vegetables	32		20	20	9	9	34	34	5	5	-	-	-	-	-	-	100	100
Fruits	22	32	21	21	18	18	8	8	17	17	6	6	8	8	-	-	100	100
Fish	46	46	19	19	9	9	7	7	4	4	5	5	1	1	9	9	100	100
Sugar & Jaggery	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Meat	20	20	12	12	4	4	35	35	11	11	9	9	-	-	9	9	100	100
Egg	25	25	9	9	12	12	16	16	3	3	15	15	7	7	13	13	100	100
Milk & Milk products	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Nuts & Oil Seeds	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Processed Foods	26	26	12	12	19	19	14	14	16	16	6	6	7	7	-	-	100	100
Non-carbonated Beverages	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Fresh Fruit Juices	32	32	15	15	25	25	15	15	9	9	-	-	4	4	-	-	100	100
Baked Products	16	16	6	6	17	17	26	26	21	21	4	4	7	7	3	3	100	100
Carbonated Soft drinks	30	30	8	8	6	6	19	19	16	16	5	5	6	6	10	10	100	100
Fried Items	51	51	10	10	9	9	5	5	13	13	6	6	6	6	-	-	100	100

Daily consumption of other vegetables was found among 32 percent and 54 percent of IT and Non IT respondents respectively. Majority of the respondents among IT sector were consuming other vegetables only once in a week i.e 34 percent. But among Non IT this corresponding figure was 24 percent.

Twenty two percent of the respondents of IT sector consumed fruits everyday while it was found that only 16 percent of Non IT respondents consumed fruits daily. When 8 percent of IT respondents consumed fruits only once a week and 20 percent of the Non IT respondents consumed fruits in the same manner.

Nine percent among IT and 4 percent among Non IT respondents did not consume fish. The daily consumption of fish was observed in 46 percent and 62 percent of IT and Non IT respondents respectively.

Nine percent of IT and 10 percent among Non IT respondents did not consume meat at all. Twenty percent of the respondents from IT sector consumed meat daily but in Non IT sector none of the respondents surveyed, consumed meat daily. Majority of the respondents consumed meat once in a week i.e 35 percent and 30 percent of IT and Non IT sectors respectively.

Among IT respondent's 25 percent respondents consumed egg daily. But among Non IT respondents only 14 percent consumed egg every day. Sixteen percent of IT respondents and 20 percent of Non IT respondents consumed egg only once a week. Thirteen percent among IT and 4 percent of Non IT respondents did not consume egg at all.

Twenty six percent of IT respondents and 18 percent Non IT respondents consumed processed foods daily. Nineteen percent of IT respondents consumed processed foods twice in a week. Sixteen percent consumed fortnightly and 12 percent consumed them more than twice in a week. But among Non IT many of the respondents i.e 28 percent of them consumed processed foods once in a week,

Table 30 : Frequency of use of various food items by NON IT professionals.

Food Items	Daily		More than twice in a week		Twice in a week		Once in a week		Fortnightly		Once in a month		Occasionally		Never		Total	Percentage
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Cereals	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Pulses	5	10	7	14	22	44	7	14	6	12	3	6	-	-	-	-	100	100
Leafy vegetables	3	6	5	10	2	4	13	26	12	24	8	16	7	14	-	-	100	100
Roots & Tubers	8	16	3	6	11	22	10	20	14	28	2	4	-	-	2	4	100	100
Other vegetables	27	54	6	12	5	10	12	24	-	-	-	-	-	-	-	-	100	100
Fruits	8	16	6	12	8	16	10	20	12	24	4	8	2	4	-	-	100	100
Fish	31	62	6	12	4	8	7	14	-	-	-	-	-	-	2	4	100	100
Sugar & Jaggery	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Meat	-	-	8	16	7	14	15	30	3	6	4	8	8	16	5	10	100	100
Egg	7	14	3	6	7	14	10	20	9	18	6	12	6	12	2	4	100	100
Milk & Milk products	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Nuts & Oil Seeds	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Processed Foods	9	18	1	2	3	6	14	28	3	6	9	18	7	14	4	-	100	100
Non-carbonated Beverages	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
Fresh Fruit Juices	8	16	4	8	7	14	10	20	7	14	4	-	10	20	-	-	100	100
Baked Products	5	10	6	12	11	22	3	6	12	24	5	10	8	16	-	-	100	100
Carbonated Soft drinks	3	6	2	4	-	-	-	-	13	26	3	6	13	26	16	32	100	100
Fried Items	12	24	5	10	11	22	9	18	6	12	4	8	-	-	3	6	100	100

eighteen percent consumed them once in a month and 14 percent consumed them occasionally.

Thirty two percent of the respondents of IT group consumed fresh juice daily. Among the Non IT group, only 16 percent consumed fruit juice everyday. Twenty five percent among IT and 14 percent among Non IT consumed fresh juice twice in a week. Only 4 percent of the respondents amongst IT and 20 percent among Non IT were consumed occasionally.

The daily consumption of baked products was found to be 16 percent and 10 percent of IT and Non IT respondents respectively. Twenty six percent of the respondents among IT sector consumed baked foods once in a week, while among Non IT respondents 6 percent of the respondents consumed baked products weekly and 22 percent of them were consumed baked foods twice in a week. Twenty one percent and 24 percent of IT and Non IT respondents consumed baked products on a fortnightly basis.

Thirty percent of IT respondents consumed carbonated soft drinks everyday. But among Non IT respondents only 6 percent consumed carbonated soft drinks daily. Ten percent of IT and 32 percent of Non IT did not consume carbonated soft drinks at all.

Majority of the IT respondents i.e 51 percent consumed fried foods everyday. Thirteen percent consumed them on a fortnightly basis and 10 percent consumed them more than twice in a week.

Six percent of the Non IT respondents did not consume fried foods, 24 percent consumed them daily, 22 percent consumed them twice a week and 18 percent consumed them once in a week.

Based on the frequency of use of the various food items by the respondents percentage of total score for each food group were calculated separately using the formula suggested by (Reaburn et al.,1979). The results obtained are as presented below.

Table 31: Food use frequency score and percentage obtained from the respondents for various food items

Food Items	ITR		Non ITR	
	Mean Score	Percentage	Mean Score	Percentage
Cereals	8.0	100	8.0	100
Pulses	6.3	78.3	5.8	72.3
Leafy Vegetables	4.3	53.2	4.5	55.5
Roots & Tubers	4.4	54.7	5.3	65.8
Other Vegetables	6.4	80.0	7.0	87.0
Fruits	5.8	71.7	5.4	67.0
Fish	6.4	79.0	7.0	87.5
Sugar & Jaggery	8.00	100	8.00	100
Meat	5.3	65.4	4.4	54.5
Egg	5.0	62.4	4.8	59.3
Milk&Milk Products	8.0	100	8.0	100
Nuts & Oil Seeds	8.0	100	8.0	100
Processed Foods	5.8	71.5	4.5	56.0
Non- carbonated Beverages	8.0	100	8.0	100
Fresh Fruit Juices	6.3	78.8	4.6	57.5
Baked Products	5.2	64.4	4.9	60.5
Carbonated Soft Drinks	5.3	66.0	2.9	35.3
Fried Items	6.4	79.9	5.7	70.3

Table 31 reveals the average food use frequency scores and percentage of total scores obtained for each food group by the respondents. Food use frequency percentage of 100 was obtained for food items like cereals, sugar/ jaggery, milk and milk products, nuts and oil seeds and non- carbonated beverages for both groups of respondents. The frequency percentages for baked foods were 64.4 and 60.5 among IT and Non IT respondents respectively. For fried foods a percentage of 79.9 and 70.3 were obtained for the IT and Non IT respondents respectively.

The percentage of total score of pulse was 78.3 for IT respondents and 72.3 for Non IT respondents. A percentage of 80 and 87 were obtained for other vegetables by IT and Non IT respondents. Similarly 79 and 87.5 were obtained

for fish. Among IT respondents, the scores of 78.8 was obtained for fresh fruit juices but in Non IT it was 57.5. The percentage scores of 53.2, 54.7 and 71.7 respectively were obtained for leafy vegetables, roots and tubers and fruits for IT respondents. Whereas 65.4 and 62.4 was obtained for meat and egg respectively.

Among Non IT respondents 55.5, 65.8 and 67 was the percentage scores obtained for leafy vegetables, roots and tubers and fruits respectively. The percentage obtained for meat was 54.5 while that of egg was 59.3.

Based on the percentage frequency of food groups included in the daily dietaries by the respondents were classified as most frequently used (percentage scores above 90), moderately used (percentage scores between 70-90), less frequently used (percentage scores between 50 -70) and very less frequently used (percentage scores below 50).

Table 32: Classification of foods consumed by IT respondents.

Most Frequently Used	Moderately used foods	Least Frequently Used	Very Less frequently Used
Cereals	Pulses	Leafy Vegetables	
Sugar & Jaggery	Other vegetables	Roots & Tubers	
Milk & Milk Products	Fruits	Meat	
Nuts & Oil Seeds	Fish	Egg	
Non- carbonated Beverages	Processed foods	Baked Products	
	Fresh fruit juices	Carbonated Soft drinks	
	Fried items		

The above table indicates that cereals, sugar and jaggery, milk and milk products, nuts and oil seeds and non-carbonated beverages are the food items used most frequently by IT respondents. Vegetables, Pulses, fruits, fish, processed foods, fresh fruit juice and fried items were found to be the foods used

in moderation. Leafy vegetables, roots and tubers, meat, egg, baked products and carbonated soft drinks were the foods consumed least frequently.

Table 33: Classification of foods consumed by Non IT respondents.

Most Frequently Used	Moderately used foods	Least Frequently Used	Very Less frequently Used
Cereals Sugar & Jaggery Milk & Milk Products Nuts & Oil Seeds Non- carbonated Beverages	Pulses Other vegetables Fish Fried items	Leafy Vegetables Roots & Tubers Fruits Meat Egg Processed Foods Fresh fruit Juices Baked Products	Carbonated Soft drinks

Table 33 indicates the frequency of use of food groups by Non IT respondents and it reveals that it is almost same as that of IT respondents. The main difference being that fruits, processed foods and fresh fruit juices have come under least frequently used food groups. Carbonated soft drinks used very less frequently.

Food preference.

As in food use frequency, the preference for food items in different food groups was assessed using a check list (Table 34). In addition to food groups, different food preparations, main snacks and beverages were also included.

Table 34: Food preference scores of respondents.

Food groups	Food preference score		'z' value
	ITR	Non ITR	
Cereal preparations	90	95	1.05
Pulse preparations	60	66	.71
Leafy vegetables preparations	70	73	.38
Root and tubers preparations	50	51	.11
Other vegetable preparations	80	83	.44
Fruit preparations	98	90	2.18 *
Fish preparations	80	89	1.38
Sugar and jaggery preparations	100	100	0
Meat preparations	80	75	.70
Egg preparations	50	52	.23
Milk & milk products and their preparations	93	90	.60
Nuts and Oil seeds and their preparations	100	100	0
Processed foods	69	66	.37
Non- carbonated beverages	100	100	0
Baked products	70	66	.49
Carbonated soft drinks	66	51	1.77
Fried items	97	100	1.23

*Significant at 5 percent level.

The above table reveals that the food preference score for cereals among the IT respondents was 90 while among Non IT respondents was 95, preference score of green leafy vegetables was 70 and 73 percent for other vegetables the score was 80 and 83 percent. The preference for roots and tubers was 50 and 51 percent.

Preference score for nuts and oil seeds, non-carbonated beverages and sugar and jaggery was 100. The result regarding the preference score for milk was high when compared to other animal foods being 93 percent among IT sector and 90 percent for Non IT group .The preference score of meat was 80 and 75 percent respectively among IT and Non IT group. The preference score of fish was high among Non IT group (89 percent) than IT group (80 percent).

The preference score of fruits was high for IT group (98 percent), than Non IT group (90 percent). The preference score of egg was less among IT group as compared with Non IT group (50 percent and 52 percent).

The data also shows the preference score of carbonated soft drinks among IT was high (66 percent) as compared with Non IT group i.e 51 percent. Preference score of fried food items was 97 among IT respondents and among the Non IT sector it was 100.

The food preference scores of majority of the food groups amongst both IT and Non IT groups were more or less similar. The scores for fruit preparations only showed significant difference.

Mean Nutrient Intake

Table 35 depicts the mean nutrient intake of male IT and Non IT respondents. The values were compared with that of recommended allowance of adult sedentary workers.

Table 35: Mean Nutrient intake of the respondents.

Mean Nutrient intake of male respondents				
Group	Nutrients	Mean Intake	RDA	% of RDA met
ITR	Energy (kcal)	2865	2425	118.1
Non ITR	Energy (kcal)	2481.3	2425	102.3
ITR	Protein (g)	67.6	60	112.7
Non ITR	Protein (g)	64.7	60	107.8
ITR	Fat (g)	36.8	20	183.7
Non ITR	Fat (g)	41.3	20	206.6
Mean Nutrient intake of Female respondents				
Group	Nutrients	Mean Intake	RDA	% of RDA met
ITR	Energy (kcal)	1912.2	1875	101.9
Non ITR	Energy (kcal)	1918.8	1875	102.3
ITR	Protein (g)	62.6	50	125.2
Non ITR	Protein (g)	65.4	50	130.7
ITR	Fat (g)	35.2	20	175.9
Non ITR	Fat (g)	54.5	20	272.6

* Source : ICMR , 1989

Table 35 reveals the mean intake of male IT and Non IT respondents. The mean intake of energy was 2865kcal for male IT respondents, while among male Non IT respondents the mean intake of energy was 2481.3 Kcal, which was found to be above the recommended allowances (118.1 percent and 102.3 percent). The mean protein intakes were found to be 67.6 g and 64.7 g among male IT and Non IT respondents respectively, which was also found to meet the recommended allowances viz, 112.7 and 107.8 percent RDA. The mean intake of fat was 36.8 and 41.3 among IT and Non IT female respondents. The percentage of RDA met for fat was 183.7 for IT and 206.6 among Non IT female respondents.

The data regarding the mean nutrient intake of IT & Non IT female respondents showed that the energy intake was 1912.2Kcal among IT respondents and 1918.8Kcal among Non IT respondents which was found to be above RDA. Protein intake was 62.6 g and 65.4 g among IT and Non IT respondents respectively which was 125.2 percent and 130.7 percent. Fat intake was 35.2 g and 54.5 g which was also found to be above RDA.

Eating styles of the respondents.

The respondents were asked to indicate their response in a three point scale such as 'Disagree , Agree some time, and Agree most of the time' with the scores of two, one and zero respectively by putting tick mark in the column which suited them most. The statements were based on different food habits. From the total scores computed the respondents were classified, as 'very good' (score-80), 'good' (65-80), 'moderate' (50-65), 'poor' (36-50) and 'very poor' (< 35).

Table 36 : Eating styles of the respondents.

Category	ITR (N=100)				Non ITR (N=50)		
	Range	Male	Female	Total / %	Male	Female	Total(%)
Very good	Above 80	13 (26)	15 (30)	28	7 (28)	10 (40)	17 (34)
Good	65-80	4 (8)	5 (10)	9	3 (12)	4 (16)	7 (14)
Moderate	50-65	21 (42)	27 (54)	48	13 (26)	6 (24)	19 (38)
Poor	36-50	8 (16)	3 (6)	11	-	5 (20)	5 (10)
Very poor	Below35	4 (8)	-	4	2 (8)	-	2 (4)
Total		50(100)	50(100)	100	25(100)	25(100)	50(100)

(Figures in parenthesis indicate percentage)

Table 36 indicates that 28 percent of IT respondents had very good eating styles. Nine percent had good, majority (48 percent) were found to have moderate, 11 percent had poor and 4 percent had very poor eating styles.

Among Non IT respondents, 34 percent had very good eating styles, while 14 percent had good, 38 percent had moderate, 10 percent had poor and 4 percent had very poor eating styles.

4.4. Health status of the respondents

Table 37: Distribution of respondents based on their morbidity pattern.

Diseases	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total/%	Male	Female	Total %)
Cold	9	13	22	3	15	72
Headache	21	23	44	-	16	64
Fever	3	2	5	4	-	16
Joint pain	19	22	41	-	-	-
Vision problem	31	27	58	5	8	56
Back pain	34	30	64	-	12	48
Shoulder pain	21	26	47	7	10	68
Muscular pain	18	19	37	-	-	-
Kidney stone	-	-	-	2	-	8
Typhoid	-	-	-	-	2	8
Jaundice	4	-	4	1	-	4
Diarrhoea	6	-	6	-	-	-
Dysentery	-	-	-	-	-	-
Spondilitis	8	7	15	-	-	-
Hyperlipidemia	28	13	41	6	-	24
Hypertension	21	8	29	-	3	12
Hyperthyroidism	-	-	-	-	1	1
Chronic Calcificpancreatitis	-	1	-	-	-	1

The morbidity Pattern of the respondents for the past six months were assessed using a check list and the results are presented in table 37. It can be seen from Table 37 that 22 percent among IT and 72 percent of Non IT respondents had attacks of cold in the past six months similarly, 44 percent of IT and 64 percent Non IT respondents had headaches.

Joint pains were reported in 41 percent of IT respondents. Vision problems were present in 58 percent of IT respondents and 56 percent Non IT respondents. Back pains were reported in 64 percent of IT and 48 percent Non IT respondents. Shoulder pains were also observed in 47 percent of IT and 68 percent of Non IT respondents. Muscular pain was reported in 37 percent of IT respondents. Spondilitis was also reported among 15 percent IT respondents.

Forty one percent of the IT respondents and 24 percent of the Non IT respondents were hyperlipidemic. Hypertension was present in 29 percent of IT and 12 percent Non IT respondents. One female respondent in IT was found to have chronic calcific pancreatitis and also one female respondent in Non IT was found to be Hyperthyroidism. Seven percent of IT and 4 percent among Non IT respondents were found to be diabetic.

Anthropometric measurements.

Anthropometric measurements are often used as indicators for assessing the morphological variation due to inappropriate food intake or malnutrition. The anthropometric measurements recorded were, height, weight, triceps skin fold thickness (TST), and waist and hip circumference.

The height and weight of the respondents were assessed and these ranged from 158 -181cms and 52 - 80 kg for male IT respondents and 152 -171cms and 45 -70 kg for female IT respondents. Among Non IT respondents the height and weight ranged from 158 – 175cms and 58 – 74 kg for males and 149 – 165 and 51 -78 for females.

Body Mass Index (BMI)

Body Mass Index of the respondents was computed in order to classify them according to the different categories - normal, Grade 1, Grade 11, and Grade 111.

Table 38 : Distribution of respondents based on their BMI.

BMI classification	ITR (N=100)			Non ITP (N=50)		
	Male	Female	Total / %	Male	Female	Total (%)
Normal (not obese <25)	38 (76)	39 (78)	77	18 (72)	18 (72)	36 (72)
Grade 1(25 -29.9)	12 (24)	11 (24)	23	7 (28)	6 (24)	13 (26)
Grade 11 (30-40)	-	-	-	-	1 (4)	1 (4)
Total	50	50(100)	100	25(100)	25(100)	50 (100)

(Figures in parenthesis indicate percentage) * Source : Srilakshmi, (1997).

According to Srilakshmi, (2006) obesity was classified into normal, grade I, Grade II, and Grade III based on the degree of severity. As indicated in table 38, seventy seven percent of the IT respondents were found to be normal while 23 percent were observed to be obese. Regarding Non IT respondents 72 percent were normal, 26 percent were obese (grade I), and 4 percent were found to be obese (grade II).

Triceps Skin fold Thickness (TST)

Table 39 : Distribution of respondents based on their TST.

TST (mm)	ITR (N=100)		Non ITR (N=50)	
	Male	percentage	Male	percentage
<12 (Low)	2	4	3	12
Normal (12)	13	26	8	32
> 12 (High)	35	70	14	56
Total	50	100	25	100
TST (mm)	ITR (N=100)		Non ITR (N=50)	
	Female	percentage	Female	Percentage
< 21 (Low)	-	-	-	-
Normal (21)	9	18	4	16
> 21 (High)	41	82	21	84
Total	50	100	25	100

*Source: Frisancho, 1981.

Table 39 reveals that 70 percent of the IT respondents (males) had high TST while 26 percent had normal TST and 4 percent belonged to TST below 12. Among Non IT respondents 56 percent had high TST, 12 percent had low TST and 32 percent had normal TST.

Table also indicates that majority of the respondents (females) had high TST i.e.82 percent among IT and 84 percent among Non IT sector. Only 18 percent of the respondents among IT sector had normal TST while 16 percent had normal TST among Non IT group.

Table 40 : Distribution of respondents based on their WHR.

WHR	ITR (N=100)		Non ITR (N=50)	
	Male	percentage	Male	percentage
< 1.0 (Low)	1	2	1	4
Normal (1.0)	11	22	9	36
> 1.0 (High)	38	76	15	60
Total	50	100	25	100
WHR	ITR (N=100)		Non ITR (N=50)	
	Female	Percentage	Female	Percentage
< 0.8 (Low)	2	4	1	4
Normal (0.8)	8	16	4	16
> 0.8 (High)	40	80	20	80
Total	50	100	25	100

*Source: Srilakshmi, (1997).

Among male IT respondents 2 percent had low Waist Hip Ratio. Majority of the male respondent had high Waist Hip Ratio (i.e.76 percent) and 22 percent males had normal Waist Hip Ratio. While among Non IT respondents 60 percent males had high Waist Hip Ratio, only 1 respondent had low Waist Hip Ratio and 36 percent had normal Waist Hip Ratio.

The table also indicates that among IT female respondents 4 percent had low Waist Hip Ratio, Majority (i.e 80percent) respondents had high Waist Hip Ratio and 16 percent had normal Waist Hip Ratio. While among Non IT female respondents majority (i.e 80 percent) had high Waist Hip Ratio, only 4 percent had low Waist Hip Ratio and 16 percent had normal Waist Hip Ratio.

Stress level of the respondents

A scale consisting of fifty negative statements regarding different kinds of problems often faced by the respondents in their professions was administered to assess level of stress. The respondents were asked to state their response in a three point continuum viz. 'usually', 'sometimes', and 'never' with the scores of two,

one and zero respectively by putting tick mark in the column which suit them most.

Table 41: Distribution of respondents based on stress levels.

Stress level score	ITR (N=100)				Non ITR (N=50)		
	Category	Male	Female	Total / %	Male	Female	Total(%)
Above 80	Very High	-	2 (4)	2	-	-	-
65 -80	High	2 (4)	2 (4)	4	-	-	-
50 -65	Moderate	5 (10)	9 (18)	14	1 (4)	-	2
36 -50	Low stress	17 (34)	15 (30)	32	4 (16)	14 (56)	36
Below 35	Very low	26 (52)	22 (44)	48	20 (80)	11 (44)	62
Total		50	50 (100)	100	25 (100)	25 (100)	50 (100)

*Source : Menon,2003

Stress levels were classified into 'very high', 'high', 'moderate', 'low' and 'very low' levels based on the scores obtained. As indicated in table 41, 2 percent of the IT respondents were found to have 'very high' stress while 4 percent had 'high' stress, 14 percent had 'moderate', 32 percent had 'low' and 48 percent had 'very low' level of stress.

But among Non IT respondents none were found to have 'very high' and 'high' level of stress. Only one respondent had 'moderate' level of stress. Thirty six percent were found to have 'low' and 62 percent had 'very low' stress.

Table 42 : Distribution of based on their level of domestic stress.

Items	ITR (N =100)			Non ITR (N= 50)		
	Male	Female	Total / %	Male	Female	Total(%)
Children's ill health	6 (12)	9 (18)	15	4 (16)	5 (20)	9 (18)
Financial problems	7 (14)	6 (12)	13	5(20)	1 (4)	6 (12)
Lack of understanding on the part of family members	18 (36)	15 (30)	33	6 (12)	5(20)	11 (22)
Worries about Children's studies / Examination		6 (12)	6		3(6)	3 (12)
Lack of domestic help	-	-	-	-	2(8)	2 (8)
Behavioral problems of children	-	-	-	-	2 (8)	2 (8)

*Source : Menon,2003.

As summarized in the above table lack of understanding on the part of family members is a major reason of stress among IT and Non IT respondents.

Children's ill health was a source of stress for 15 percent of IT respondents while the same was felt as a stress for 18 percent of Non IT respondents. Financial problem was a reason for stress for 13 percent of IT and 12 percent of Non IT respondents. Lack of domestic help and behavioral problems of children was also found to be a reason for stress among 8 percent of Non IT respondents.

Table 43: Distribution of respondents based on their stress coping patterns.

Coping patterns	ITR (N=100)			Non ITR (N=50)		
	Male	Female	Total%	Male	Female	Total %
By keeping silence	4 (8)	9 (18)	13	5 (20)	1 (4)	7 (14)
By watching T.V programmes.	12 (24)	9 (18)	21	11 (44)	5 (20)	15 (30)
Talking with someone close	19 (38)	14 (28)	33	8 (32)	7 (28)	16 (32)
Reading books	3 (6)	5 (10)	8	-	-	-
Praying for God's blessings	9 (18)	11 (22)	20	1 (4)	9 (36)	10 (20)
By doing meditation /Yoga	3 (6)	2 (4)	5	-	2 (8)	2 (4)
Total	50(100)	50(100)	50(100)	25(100)	25(100)	50 (100)

*Source : Menon,2003.

As may be seen from the table 50 majority (33 & 32 percent) of both groups of professionals managed their stress by talking to someone close. Twenty one percent among IT and 30 percent Non IT respondents managed stress by watching T.V programmes. Twenty percent in both groups prayed for God's blessings and 5 percent of IT respondents undertook meditation / Yoga.

4.5. Nutritional Status Index of the respondents.

Nutritional Stats Index (NSI) of the respondents was assessed using the parameters such as height, weight, WHR, energy and protein intake of the respondents. The formula of NSI developed for i^{th} sample (respondents) was

$$NSI = \sum \frac{[X_{ij} - N_{ij}]}{S_{ij}}$$

Where, X_{ij} = Observations corresponding to j^{th} variable for the i^{th} sample.

N_{ij} = Normal value corresponding to j^{th} variable for the i^{th} sample.

S_{ij} = Standard deviation corresponding to the j^{th} variable.

Σ = Indicate sum of all the variables for the j^{th} sample (respondents).

It was found that NSI values obtained for the IT male respondents ranged from -1.89 to 10.98 where as for IT female respondents it ranged between 1.14 to 10.70. The NSI values observed for Non IT male respondents ranged from -1.22 to 9.78 and among female respondents it ranged between 0.36 to 11.00. The mean value of NSI of the IT male respondents was 3.64 and the S.D was 2.75. The mean value of NSI of IT female respondents was 5.68 and the S.D was 2.23.

The mean NSI values obtained for male Non IT respondents was 3.65 and the S.D was 2.70. The mean value of NSI of female Non IT respondents was 5.58 and the S.D was 2.28.

The classifications of male and female respondents based on NSI were made as follows. Low (Below mean - S.D), Medium (Between mean \pm S.D), High (Above mean + S.D). Accordingly the table 44 shows the distribution of male and female respondents based on their Nutritional Status Index.

Table 44: Distribution of respondents based on their NSI

NSI	IT	Non IT	'z'	IT	Non IT	'z'
	Male	Male		Female	Female	
High	8(16)	3(12)	0.50	10(20)	3(12)	1.55
Medium	34(68)	19(76)	0.72	32(64)	18(72)	0.69
Low	8(16)	3(12)	0.50	8(16)	4(16)	0
Total	50(100)	25(100)		50(100)	25(100)	

The table shows that 16 percent of the male IT respondents had a high NSI while 68 percent of the respondents had medium NSI and 16 percent of the respondents had low NSI. The table also depicts that 12 percent of the Non IT male respondents had High NSI while only 76 percent had medium and 12 percent had low NSI.

The above table reveals that 20 percent of the female IT respondents had high NSI where as 16 percent had low and the remaining 64percent had medium NSI. Table also reveals that 12 percent of the Non IT female respondents had high NSI while 16 percent had low and 72 percent had medium NSI. The difference in NSI among the two groups were not found to be statistically significant.

4.6. Interrelationship between variables selected for the study.

Correlation was done to find out the relationship of different variables with NSI. The results of the interrelationship of different variables selected for the present study are given in table no. 45.

Table: 45 Interrelationship between different variables of IT respondents.

Sl.no		NSI	Stress	Sleeping Hours	Time spent on occupational activities	Membership in social organization
1	NSI	1				
2	Stress	0.42**	1			
3	Sleeping Hours	0.27**	0.011	1		
4	Time spent on occupational activities	0.14*	0.12	0.25*	1	
5	Membership in social organization	0.018	0.08	0.07	0.08	1

* Significant at 5 percent level, ** Significant at 1 percent level.

It was observed from the table that NSI of the IT respondents had positive significant correlation with stress levels, time spent for sleep and also time spent for occupational activities.

Table: 46 Interrelationship between different variables of Non IT respondents.

Sl.no		NSI	Stress	Sleeping Hours	Time spent on occupational activities	Membership in social organization
1	NSI	1				
2	Stress	0.30*	1			
3	Sleeping Hours	0.14	0.16	1		
4	Time spent on occupational activities	0.03	0.06	0.16	1	
5	Membership in social organization	0.32*	0.11	0.03	0.16	1

* Significant at 5 percent level, ** Significant at 1 percent level.

It was observed from the table that NSI of the Non IT respondents had positive significant correlation with stress levels, and membership in social organizations.

DISCUSSION

5. DISCUSSION

The result presented in the previous chapter is discussed in this section with relevant empirical evidences under the following heads:

- 5.1. Personal and Socio-economic characteristics of the respondents.**
- 5.2. Lifestyle and activity patterns of the respondents.**
- 5.3. Food Consumption pattern of the respondents.**
- 5.4. Health Status of the respondents.**
- 5.5. Nutritional Status Index of the respondents.**

5.1. PERSONAL AND SOCIO- ECONOMIC CHARACTERISTICS OF THE RESPONDENTS.

It has been rightly pointed out by Rahman and Rao (2002) that socio-economic factors play an important role in the food consumption pattern. Age and information on few other common characteristics like religion, caste, family size, education, employment status of the family and income level may help to understand the socio- economic status of the respondents. Hence the personal and socio-economic characteristics of the respondents were ascertained .Data on age of the respondents revealed that the respondents (IT & Non IT) belonged to the age of 25-35 years. The selection criteria was such that both the type of respondents were to belong to the age group of 25-35 years. This is owing to the fact that IT is a comparatively younger industry. (Vinutha,2005)

On assessing the socio-economic background of the respondents, it was revealed that 33 percent of the IT and 82 percent among Non IT respondents belonged to Hindu community. This agrees with the findings of Kerala Statistical

Institute (2000) that vast majority of the population of the Thiruvananthapuram District is predominated by Hindus followed by Christians and Muslims.

The caste wise distribution of the respondents (Table 3) revealed that among IT respondents more than half of the respondents belonged to forward castes; (59 percent). Among Non IT respondents majority belonged to OBC being 74 percent respondents.

The place of residence of the respondents revealed that majority of the respondents in both groups were living in urban areas i.e 67 percent and 84 percent respectively. The Census of India (2001) reported an urban population of 82, 67,135 in the state which is 25.97 percent of the total population.

The family background of the respondents was also studied in detail to understand the socio-economic conditions. Arora (1991) opined that socio- economic levels such as social, economic, religious and family background in general, have a very distinct part to play in determining the attitudes and food behavioral pattern of an individual. On analysis of family type of the respondents, it could be observed that majority of the respondents among IT i.e about 62 percent and 50 percent among Non IT belonged to nuclear families. This reveals that, the concept of nuclear families is becoming more and more common in our society and joint family system is fast disappearing. Similar reports are reported by Shah and Rathore (1993), Vishma (2000) and Krishnaroopu (2003) in their studies done in Thiruvananthapuram district.

Marital status of the respondents indicated that most of the respondents (54 percent) in IT sector and Non IT sector (68 percent) were unmarried. The higher age of marriage of women in Kerala is evident from this. It is reported in the household survey,(which is also reported by the Union Ministry of Health and family welfare) of Keralites that, Kerala has one of the highest mean ages at marriage in the country

and it indicates the level of social development. Kerala men on an average marry at age 28.7 and women marry at age 22.7 (Basheer, 2002).

Educational status of the IT as well as Non IT respondents indicated that majority of the IT respondents had professional degrees (69 percent) while among Non IT sector, 52 percent had completed their post graduation. Suresh (2008) reported that in 2001 census, Kerala topped the Education Development Index (EDI) among 21 major states in India in the year 2006-2007 and Thiruvananthapuram is a prime academic hub of Kerala.

In this study, it was found that 87 percent of IT respondents and 96 percent of Non IT respondents had job experience of 5 -10 years. Only 13 percent and 4 percent respondents had an experience of above 10 years among the IT and Non IT respondents respectively.

In the case of personal income it could be observed that majority of the IT respondents (55 percent) had an income between Rs. 50000 -100000. On assessment of personal income of the Non IT respondents, it was found that 8 percent were having an income between Rs. 10000 -25000, seventy six percent were found to have an income between Rs. 25000 – 50000 and only 16 percent were found to be the income between Rs. 50001-100000. Hence the personal income of the IT respondents were found to be better off than Non IT groups. The rapid spread of computers and IT has generated a need for highly trained workers to design and develop new software and hardware system. Employment of computer specialists is expected to grow much faster than many other occupations. The phenomenal growth, which the IT industry is witnessing has lead to it being recognized as one of the highly paid industry and the skilled, qualified professionals are hardly able to meet the requirements (Suparna et al., 2005).

On analysis of family income of the respondents, it was found that 38 percent of the IT families had an income between Rs. 100001 – 200000 per month. The financial status of the families have in general improved a lot with the upsurge of software industry.

On analyzing personal habits of the respondents, it was observed that majority of the respondents in both groups had good practices with respect to the frequency of taking bath, brushing teeth and toilet habits. In fact the practices were better for the IT respondents. For example 79 percent of the IT respondents took bath twice a day as against Non IT respondents was 56 percent. In Non IT sector, majority (58 percent) slept 8 hours at night while only 36 percent of IT respondents were able to sleep for 8 hours. A study conducted by Kousalya (2004) among IT and IT enabled sector in Chennai revealed that about 40 percent could not sleep and they were in poor health. Lorimiller, (2008) also observed that about 61 percent of Indians slept for seven hours or less daily and 29 percent sleep only after midnight which tends to enhance their blood pressure.

It is surprising to note that majority of the respondents among both groups were free from smoking habits (92 percent among IT respondents of IT sector and 90 percent among Non IT sector respectively).

When the habit of chewing pan of the respondents were studied, It was revealed that none of the respondents had the habit of chewing pan regularly. In case of using drugs it could be observed that none of the respondents had resorted to the habit of taking drugs.

5.2. LIFESTYLE AND ACTIVITY PATTERNS OF THE RESPONDENTS.

On assessing the leisure time activities of the respondents it was revealed that 81 percent of IT respondents had the habit of reading news paper daily, 7 percent of the respondents were reading magazines once in two days, 13 percent were reading magazines once in three days.

The leisure activities of the Non IT respondents were also studied and the data revealed that, 100 percent of the respondents read news papers daily, while ten percent of the respondents read magazines daily and 14 percent read them once in two days. All of the IT male and female respondents were in the habit of viewing T.V on daily basis. Hundred percent of the male and 98 percent female respondents among Non IT watched T.V daily and remaining 4 percent female respondents viewed T.V once a week.

Only few of the IT respondents took up gardening once in two days and once in three days respectively (7percent and 2 percent). Eleven percent took up gardening on a weekly basis and majority of the respondents were never doing gardening. Among the Non IT respondents 38 percent never liked gardening at all, while 40 percent respondents were engaged gardening once in a week and only 16 percent were engaged in gardening daily.

The data also revealed that 100 percent of the male IT respondents have never cooked at all when 72 percent females had to cook daily. Similarly it could be observed that, 100 percent of the male Non IT respondents were never involved in cooking and among females 100 percent of them had to cook daily.

Six percent were pursuing to learn music daily among respondents of IT sector. Only four percent female respondents were pursuing music lessons daily. Ten percent of them were in the habit of writing articles daily, 4 percent once in three days and 10 percent on weekly intervals. This could be due to the job requirement.

Ninety three percent of the IT professionals spent time in chatting daily on mobile or online while 7 percent were chatted only once in two days. All the respondents in Non IT sector were chatting in mobile or online daily.

Eighty six percent IT respondents did their shopping once in a week, 8 percent shopped once in three days. Majority of the Non IT respondents were shopping on weekly intervals and 10 percent of them were shopping once in three days. Mechanized and urbanized life are making our young people forced to be involved in indoor activities. However their favorite hobbies are shopping and spending time in shopping malls, snack bars, in front of computer games, internet and T.V screens (Khadilkar, 2004).

On analysis of exercise pattern of the respondents, it was observed that very few of the IT respondents exercised seriously. Only 23 percent were "self routine repeaters", and 6 percent respondents were in the group of "aches and pains sufferers". While among Non IT respondents too, it was revealed that, 16 percent were "Fresh starters", and 24 percent were "self routine repeaters" None of them were in the category of "aches and pains sufferers" group. It can be concluded that though there is awareness regarding exercise and its advantages it is not being followed by the working class.

The assessment of time utilization of the male respondents found that on a working day Non IT group spent more time for sleeping and non- occupational activities when compared to the IT group. On a holiday IT group spent more time for sleeping and personal grooming. It was also observed that the time spent for sleeping and personal grooming and occupational activities among female IT group on a working day is more compared to Non IT group. On a holiday Non IT group spent more time for sleeping, personal grooming and non occupational activities than IT group.

Assessment of social participation of the respondents found that 42 percent of the IT respondents and 44 percent of Non IT respondents were not members in any organization. Only 6 percent of the respondents of IT sector and 14 percent of respondents of Non IT sector had membership in more than one organization. There is a trend among professionals to be home bound than going out for socializing. Attending to domestic duties after work hours does not favor their participation in social activities.

It was observed from the study that most of the respondents in both sector stayed within 15 kilometers of their work place. Only twelve percent respondents among IT and 8 percent respondents among Non IT sector were staying at a distance between 16 – 30 kilometers. Only 2 percent among IT and 20 percent among Non IT were residing at a distance more than 30 kilometers away. It can be presumed that while choosing residence commutation convenience to work place is taken as a factor.

In this study, it was observed that most of the respondents of IT and Non IT sector used their own vehicle for going to office (61 percent and 50 percent) respectively. It was also found that only 14 percent of the female IT professionals and 8 percent of the female Non IT professionals went to office by walking. This may be due to the reason that they stayed near to the office.

5.3. FOOD CONSUMPTION PATTERN OF THE RESPONDENTS.

Robinson (1970) had opined that dietary habit of an individual in general influences his or her nutritional status. Gift et al. (1972) observed that food habits of an individual are the characteristic repetitive acts that he performs under the impetus of need to provide himself with nourishment and simultaneously to meet an assortment of social and emotional goals with respect to composition of diet. It was

found in the study that 68 percent of respondents among IT sector and 76 percent among Non IT sector consumed a medium quality of diet, with respect to composition. There was not much difference among the groups with respect to quality of meals.

The study found that majority of the respondents (IT and Non IT) were non-vegetarians. The consumption pattern of Keralites as reported by Kerala Statistical Institute, (2000) also revealed that 98 percent of the Keralities are habituated to non-vegetarian foods.

The food habits also revealed that 9 percent of the IT and 14 percent of Non IT respondents had the habit of skipping meals. It was found that majority of the respondents in IT sector consumed most of the foods during night (night time nibbler). This could be because they were more at leisure towards the late evening.

On assessing the frequency of use of food items by the respondents it was found that cereals were consumed daily. It can be inferred that cereals are the staple food of India and amongst these, rice is consumed daily by Keralites in spite of many changes. In addition to this, nuts and oil seeds, sugar and jaggery, milk and milk products etc are the most perpetually used foods in the dietaries of all respondents among both groups. Similar results were obtained in studies done by Juna (1999) and Gayathri (2003) as these items are needed in small quantities daily for various culinary preparations popular in this region. Coconut was used daily since it is an integral part of the gravy of dishes with vegetables or fish. Milk is used by the respondents to prepare coffee and tea. These findings were found to be same for both IT and Non IT respondents.

Next to other vegetables, fruits, fish, processed foods, fresh fruit juice and fried items were consumed moderately by IT respondents. But in Non IT sector pulses were consumed more frequently. In both groups consumption of fish was

high. Similar results were obtained in the studies of Nirmala (2002) and Suma (1999). Not many of the respondents in both groups consumed leafy vegetables, roots and tubers frequently. It was also found that egg was the mostly used non-vegetarian food. As for fruits and fresh fruit juices majority of the IT respondents consumed them daily. The consumption of fried items was higher in both groups while consumption of baked products and carbonated soft drinks were also higher in the IT groups i.e 64.37 and 66 percent while among Non IT group it was only 60.5 and 35.25 percent. Sumithra et al. (2007) pointed out that consumption of packet foods, breakfast cereals, and ready to serve beverages have increased due to rapid urbanization. The survey of NNMB (2000) also revealed that as per capita income increased, the consumption of cereals and millets, pulses, legumes and leafy vegetables decreased, where as the consumption of milk and milk products, fats and oils, sugar and jaggery increased.

The results of food preference revealed high scores for cereals, fruits, milk and milk products, sugar and jaggery, nuts and oil seeds, non-carbonated beverages and fried items amongst IT and Non IT groups. Excepting cereals the preference score of other items were higher for IT group.

The preference for meat, processed foods, fresh fruit juices, baked products and carbonated soft drinks were also higher in IT group. Similar food consumption patterns were reported by Rahman et al. (1999) among working urban populations. It was further observed that the preference scores of pulses, leafy vegetables, roots and tubers, other vegetables, fish and egg were higher in Non IT group. Taskar et al. (2007) observed that young adults consumed more servings of fruits than other older individuals. Here this was observed to be true for IT respondents while Non IT groups preferred fried foods more.

5.4. HEALTH STATUS OF THE RESPONDENTS.

Nutritional status reflects the health status of a person as influenced by the quality of foods eaten and the ability of the body to utilize these needs (Goutham and Prathanavishwakarma, 2004). Poor food habits, hectic lifestyle and neglected diet are known to be the main cause of health risks. An adequate or balanced diet provides all the essential nutrients in sufficient quantities and proper proportion to meet the needs of the body (ICMR, 1989). The present study indicated that, the nutrient intake of IT respondents are more than their RDA. The mean energy intake was 118.14 percent of Recommended Dietary Allowances (RDA), while protein intake was 67.64 percent of RDA and fat intake was 36.74 percent RDA. The high protein intake may be due to liberal intake of animal foods in the diet. A study by Krishna Priya (2007) also observed that among IT professionals the intake of nutrients was higher than the RDA. The high intake could be the reason for the inclination towards obesity seen in majority of the youngsters studied.

Among Non IT respondents also, energy intake, protein intake and fat intake was found to be more than the RDA. The energy intake was 102.32 percent of RDA, protein intake was 107.77 percent and fat intake was 206.56 percent of RDA. According to NNMB, (2000) intake of nutrients like protein, energy, total fat and riboflavin increase with increase in per capita income. Singh et al. (2001) also found that in the urban population there is a gradual increase in protein and calorie consumption from lower consumption level to higher level. The consumption of protective foods increased with increase in socio-economic status.

Analyzing "eating styles" with respect to skipping of meals, over eating, snacking etc, it was seen that amongst the IT respondents only 28 percent scored very good in eating styles while 4 percent had very poor eating styles. Among Non

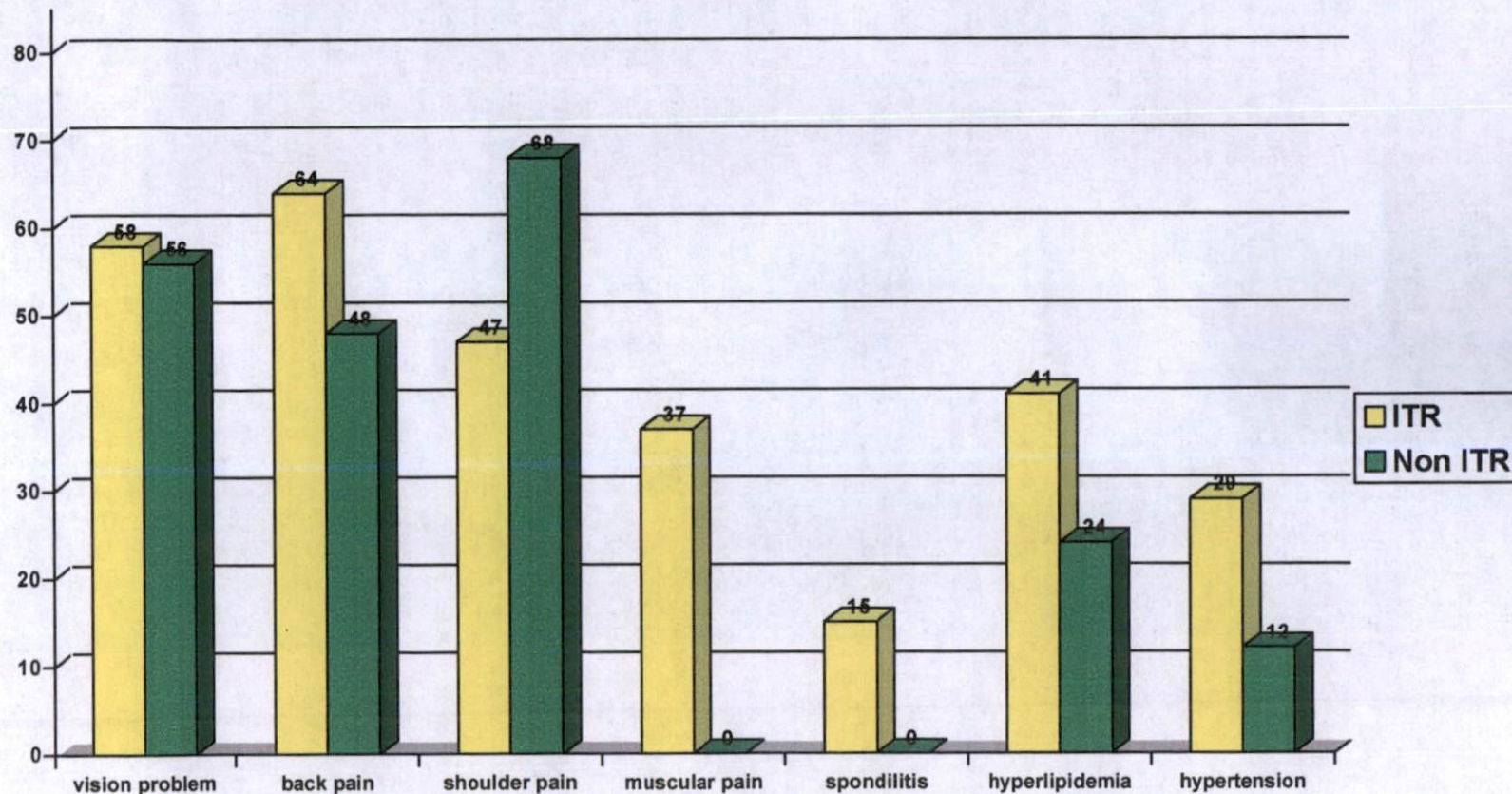
IT respondents 34 percent had very good eating styles while 4 percent had very poor eating styles. In both groups majority had moderate styles of eating. In a study conducted by Chadha (1990) in various parts of India it was noted that higher income groups consumed a diet which supplied 32 percent energy from fat. In the lower income group it was only 17 percent. More recent surveys in Delhi also shows that the upper income groups in urban India consumed higher levels of energy and fat as compared to urban poor or rural populations

Morbidity pattern of the respondents is an important determinant of health status. Among IT respondents majority had back pain and vision problems, 64 percent and 58 percent respectively. Shoulder pain, joint pain, head ache, muscular pain and hyperlipidemia were also observed among IT respondents. Among Non IT respondents none of them complained of having joint pains and muscular pains. Working long hours in front of computers causes back pain and vision problem (KrishnaPriya, 2007). This may be because majority of the respondents worked for 7-10 hours in front of computers each day. Occupational posture and pattern of their work could be the reason for these complaints. In the case of Non IT respondents they do not engage for long duration in the same posture.

Occurrence of chronic diseases such as cardiac problems and diabetes was found to less among the studied group. Not much difference was seen between the two groups. This is due to the fact that age of 25- 35 years is too early to show such manifestations.

Nutritional anthropometry is the measurement of human body at various ages and it is based on the concept that an appropriate indices should reflect any morphological variation due to significant functional and physiological change (Rao, 1996).

Fig. 1. Distribution of respondents based on their morbidity pattern in percentage



Anthropometric measurements viz. height, weight, Triceps Skin fold Thickness (TST) and Waist Hip Ratio (WHR) were taken into account for assessing the nutritional status of the respondents.

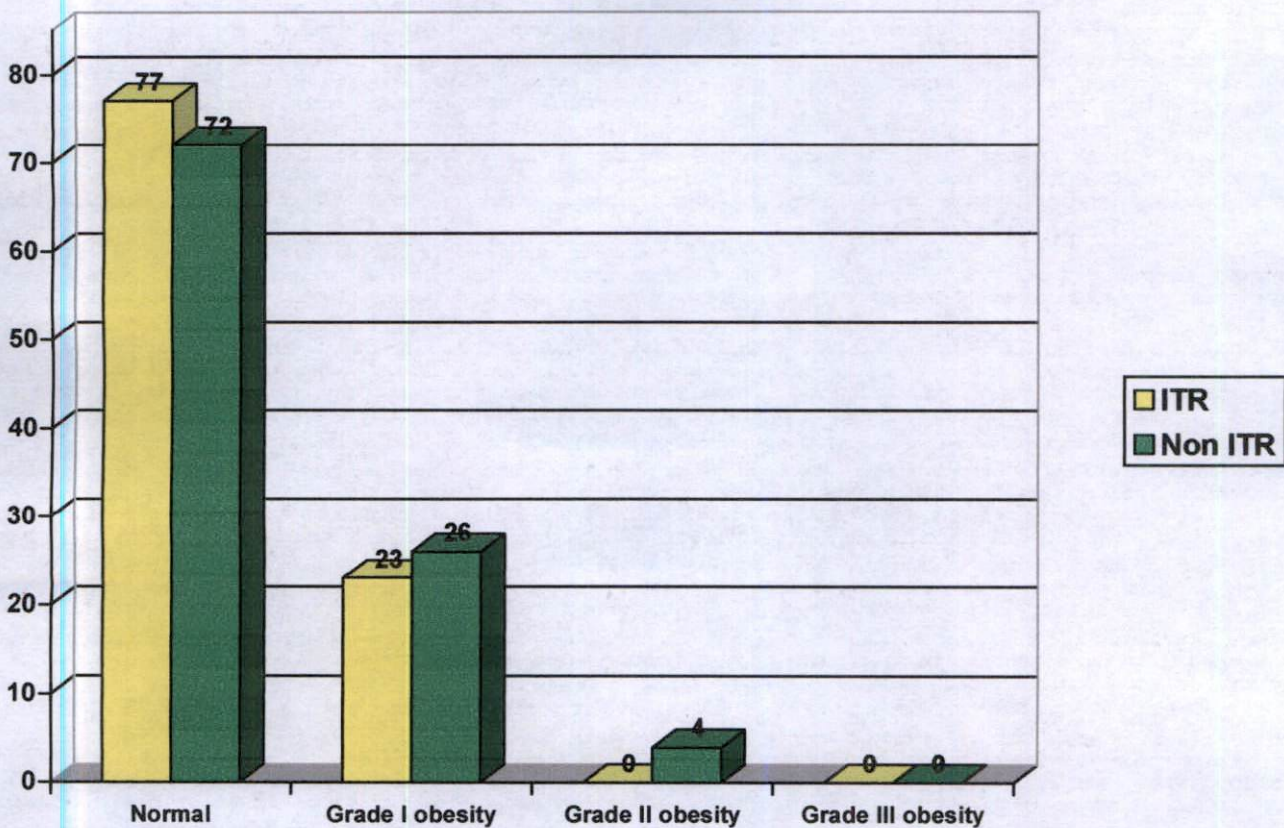
Body Mass Index (BMI) is an indicator of body's energy stores as reported by Choudhary and Solanki (1999). Body Mass Index of the IT respondents revealed that 78 percent of IT and 72 percent Non IT belonged to the normal group and among Non IT respondents 72 percent belonged to this category. Twenty three percent among IT sector fall in grade I obesity while among Non IT respondents 26 percent fell in to this group. Such a result was also obtained by Venkataramana and Reddy (1999); to physical inactivity and poor food habits predisposed the respondents to obesity. Majority have BMI greater than 25 and thus poor nutritional status. The sedentary habits of modern occupation and also eating habits could be the reason for high BMI.

TST measurement helped to assess the subcutaneous fat reserve which in turn gives an indication of calorie reserves in the body of an individual (Malina et al., 1974) Among IT respondents majority of them were having high TST (70 percent) where as among Non IT it was 56 percent. It was also observed that among female IT respondents majority (82 percent) had high TST. This is a further indicator of obesity of our sedentary populations.

Waist Hip Ratio gives distribution of fat in the human body. Waist Hip Ratio greater than 1.0 in men, and 0.8 in women is an indicator of android obesity and increases the risk of atherosclerosis (Srilakshmi, 2003).

In the IT sector, negligible percent of the both males and females were found to have low WHR. While among Non IT sector 60 percent males and 80 percent females had high WHR. This is another indicator of obesity related health problem.

Fig. 2. Distribution of respondents based on their BMI in percentage



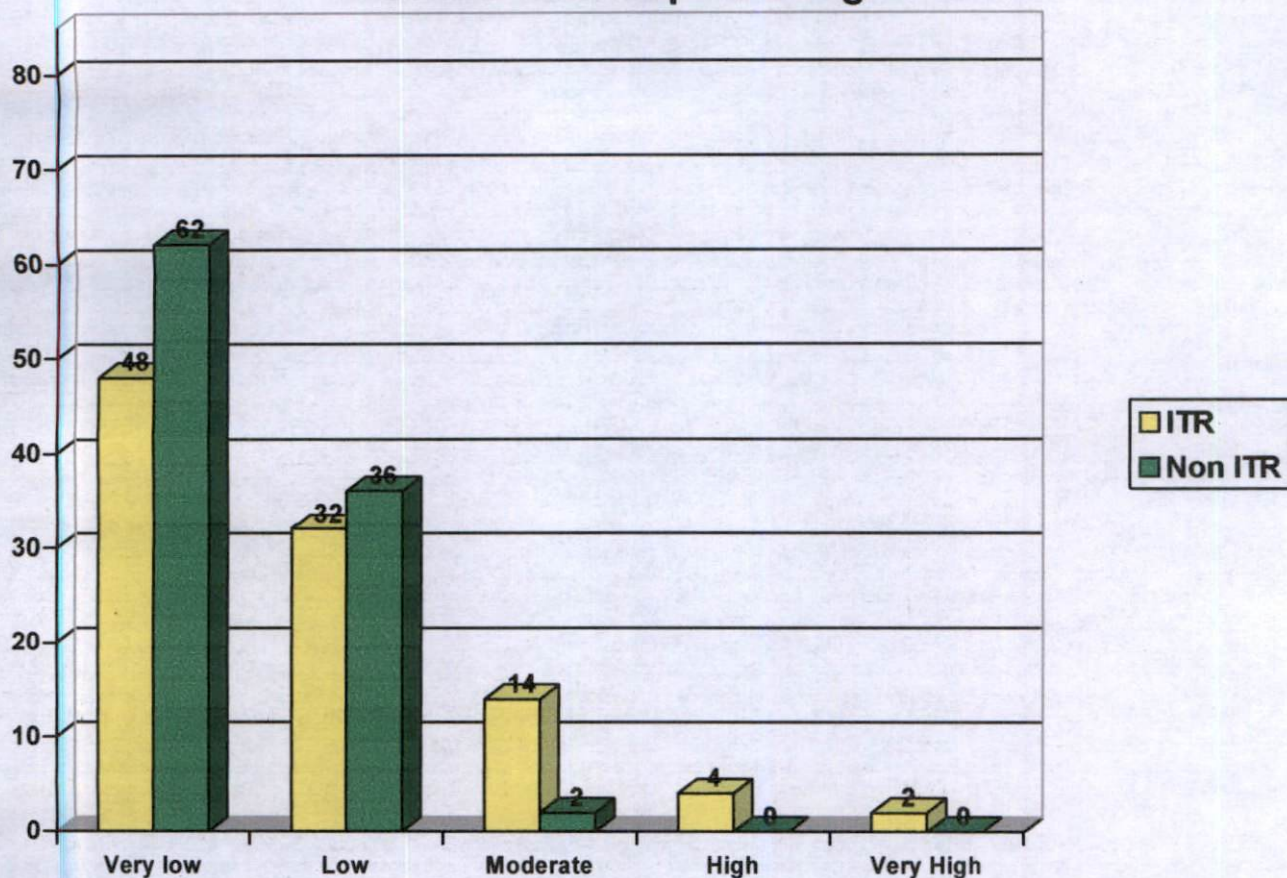
Mental health problems are fast becoming the major health issue of 21st century. International Stress Management Association (1999) found that nearly 60 percent of working adults have experienced great amount of stress at work.

The results of the present study revealed that 4 percent of the female IT respondents had very high stress. Two percent of females and two percent of males have high level of stress while among Non IT none of them were belonged to this category. Vasan (2002) reported that young people in India are stressed out because of heavy competition in academic fields for securing employment and also the competitions in their jobs. It was also noted that female respondents are more stressed than male respondents, which could be because of their dual burden at home and at work.

Lack of understanding on the part of family members is a major reason of stress among both groups. Children's ill health was reason for stress among 15 percent of IT respondents and 18 percent among Non IT respondents. Thirteen percent IT respondents and 12 percent of Non IT respondents reported financial problems, lack of domestic help and behavioral problems of children also accounted for stress among female respondents. Johnson et al. (1992) revealed that one in 8 or 13 percent of working women with depression have problems due to job stress.

The assessment of coping patterns of stress of the respondents showed that in both groups majority of the professionals managed their stress by talking with someone close. (i.e 14 percent males and 19 percent females among IT and 7 percent and 8 percent females in Non IT sector respectively). Twenty percent in both groups took help of spiritual support for removing stress conditions. Vivian and Lin (1996) reported that male IT professionals used to suppress their emotions and dealt with stress in an objective and unemotional manner. But women IT professional depend more on social support to deal with stress. Stress has been seen to be the major

Fig. 3. Distribution of respondents based on their stress level in percentage



outcome of concern of IT professionals. This is comparatively seen to be higher than other professional groups, which is to be addressed urgently.

5.5. NUTRITIONAL STATUS INDEX OF THE RESPONDENTS (NSI)

Nutritional Status Index (NSI) of the respondents was computed based on the various parameters assessed for determining the nutritional status like height, weight, WHR, energy and protein intake. It indicated that 16 percent of the male IT respondents had low nutritional status index and 12 percent Non IT respondents had low nutritional status index. The corresponding figures for female IT respondents were 16 percent and that for Non IT respondents was 16 percent. The difference in NSI among the two groups were not found to be statistically significant.

To conclude, the socio- economic profile and lifestyle pattern of IT and Non IT groups did not show much variations. Food consumption pattern also did not show much differences amongst the groups. In general both groups were consuming high calorie, high protein and high fat diets. This condition in association with meagre exercise and sedentary work is found to be the major characteristic of both groups.

However, the present study points out that majority of the IT respondents suffer from back pains, shoulder pains, headaches and more than half of the respondents were affected with vision problems. Twenty four percent among IT and twenty six percent among Non IT were having BMI greater than 25 which is an indicator of obesity. The present study also indicated that due to lack of physical activity and incorrect food habits majority of the respondents among both groups have high TST and Waist Hip Ratio, reflects their poor nutritional status.

The results of the study reveals that the health condition of the young IT professionals is quite gloomy. Their occupational environment and lifestyle needs much modification. The results obviously prompt the need for the nutrition

education. Suggestions for incorporating regular exercise in their daily routine in the form of walking or work outs or aerobics or yoga has to be adhered to. The authorities may be made aware of the necessity to avoid monotony of work through providing variety in the work pattern and also giving breathing space between tight schedules. Breaks to relax has to be necessarily planned to make them more healthy and productive. Breaks can be planned with outings, entertainments, social gatherings etc.

SUMMARY

Summary

The present study entitled 'Diet, lifestyle pattern and health profile of professionals in software industry' was undertaken with the major purpose of assessing the dietary pattern, lifestyle and health profile of IT professionals working in the software industry.

Locale of the study selected was Technopark, Kazhakootam, of Thiruvananthapuram district. The subjects in the experimental sample were randomly selected from the various companies functioning in Technopark. The subjects of control groups were selected from amongst college teachers, doctors and journalists.

In the present study 100 software professionals (50 males & 50 females) were surveyed. Their age ranged from 25- 35 years with minimum of five years experience. A group of 50 other professionals (25 males & 25 females) with similar age and educational qualifications but not involved in software industry, were included control group for the study.

Assessment of Social status of the respondents revealed that majority of the respondents in both groups belonged to Hindu religion. When 59 percent of IT respondent belonged to forward castes, 76 percent of Non IT respondents belonged to other backward castes.

Place of residence of the respondents indicated that majority of the respondents in both groups were living in urban areas.

The family background of the respondents indicated that 58 percent of IT respondent and 60 percent of Non IT respondents belonged to nuclear families.

Marital status of the respondents showed that majority of the respondents in both groups were unmarried.

The educational status of the respondents indicated that majority of the IT respondents had a professional degree and among the Non IT group, majority had even completed their post graduation.

Work experience of the respondents revealed that 86 percent of the IT respondents and 96 percent of Non IT respondents had job experience of 5-10 years.

The personal income of the respondents showed that majority had an income between Rs. 50000 – 100000 and among Non IT respondents 90 percent were having an income between Rs. 10000 -25000.

The assessment of family income of the respondents showed that 38 percent of the IT respondents had an income between Rs. 100001 – 200000, whereas among Non IT respondents 52 percent were having an income level between 25001– 50000.

Personal habits of the respondents revealed that among IT respondents majority had good personal habits with respect to toilet habits, personal grooming and substance abuse.

Assessment of duration of sleep of the respondents indicated that 50 percent of the IT respondents slept only 6-7 hours but among Non IT respondents 58 percent were slept for 8 hours at night. Majority of the respondents in both the groups never spent time for afternoon nap.

Analysis of lifestyle pattern of the respondents indicated that majority of the respondents in both groups had leisure time activities. When the exercise pattern was analyzed it was observed that majority of the respondents in both groups were extremely lazy to do exercise.

On assessment of social participation of the respondents, it was found that 42 percent of the IT and 44 percent of the Non IT respondents were not members in any organizations, which may be due to their preoccupation in the jobs.

It was also observed from the study that most of the respondents in both groups stayed at a distance of less than 15 kilometers and many of them used their own vehicles for going to office. The travel pattern of out-of-office commutation revealed that most of them used their own vehicles.

Food consumption pattern of the respondents indicated that most of them were non-vegetarians in both the groups. It was also revealed that majority of the respondents in IT sector consumed bulk of the foods during night. Among the IT and Non IT groups, cereals, nuts and oil seeds, sugar and jaggery, milk and milk products were the food items most frequently used.

The food preference score of the respondents revealed that cereals, fruits, milk and milk products, sugar and jaggery, nuts and oil seeds, non-carbonated beverages and fried items were the highly preferred foods amongst both IT and Non IT groups. The preference score of all these items except cereals were seen to be higher in IT group.

Assessment of mean nutrient intake of the respondents showed that among both groups, energy, protein and fat intake was found to be much higher than

Recommended Dietary Allowances. Eating styles of the respondents revealed that in both groups majority of them had a moderate style of eating.

Morbidity pattern of the respondents found that among IT professionals majority had back pain, vision problems, Shoulder pain, joint pain, headache, muscular pain and hyperlipidemia. None of the Non IT group had complaints of joint pains and muscular pains.

The results of the analysis of chronic diseases revealed that among IT sector 4 percent had cardiac problem, while 7 percent were found to be diabetic though being in the younger age group.

Classification of the respondents based on the Body Mass index (BMI) revealed that majority were normal among both the groups. However 22 percent among IT and 26 percent among Non IT sector fell in the group of grade I obesity. Assessment of Triceps Skin Fold thickness (TST) revealed that majority of the male and female respondents among IT and Non IT group had high TST, and high Waist Hip Ratio (WHR).

Assessment of stress levels revealed that 2 percent of the IT respondents were having 'very high' stress and 4 percent had 'high stress'. But among Non IT none were in the 'very high' and 'high' stress groups. The results of coping pattern of stress of the respondents showed that, in both groups, majority of the respondents managed their stress by talking with someone close and it was also found that lack of understanding of the family members was reported as the major reason for stress among both groups.

Nutritional Status Index (NSI) of the respondents was computed incorporating relevant parameters like height, weight, TST, WHR, calorie intake and

protein intake. It was found that 16 percent of the IT male respondents had low NSI while 12 percent of Non IT respondent had low NSI. Among IT female respondents 16 percent had low NSI. Among Non IT female respondents too it was seen that 16 percent belonged to this group. Not much of a difference was noted in the nutritional status of the two groups.

This indicates the need for reframing their occupational environment along with changes in lifestyle pattern including food consumption patterns.

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**DIET, LIFESTYLE PATTERN AND HEALTH PROFILE OF
PROFESSIONALS IN SOFTWARE INDUSTRY**

RENJINI. R

**Abstract of the
thesis submitted in partial fulfillment of the requirement
for the degree of**

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ABSTRACT

The present study on the 'Diet, lifestyle pattern and health profile of professionals in software industry' was conducted to assess the socio-economic characteristics, dietary pattern, lifestyle and health profile of professionals.

Hundred software professionals were selected from Technopark, Thiruvananthapuram, towards the study. A group of 50 professionals were taken as control group, with similar age, educational qualification and 5 years of experience status.

The family back ground of the respondents revealed that, in both groups most of them belonged to nuclear families. Marital status of the respondents also showed that majority of them in both groups were unmarried.

Educational status of the respondents indicated that in both groups majority of the respondents had completed their degree level of education and majority had an experience of 5 – 10 years in their occupation.

The personal income of the IT respondents showed that majority had a monthly income between Rs. 50000 – 100000 and their monthly family income fell in the income group of Rs. 100001 – 200000.

The assessment of social participation showed that majority of the respondents in both groups were not members in any organizations.

Food consumption pattern of the respondents indicated that most of them were non-vegetarians in both groups and in IT group majority of the respondents were 'night time nibblers', some of them were 'meal skippers'. Assessment of mean

nutrient intake showed that among both groups energy, protein and fat intake was found to be well above the RDA.

Morbidity pattern of the respondents portrayed that among IT group, majority had back pains, vision problems, shoulder pain and hyperlipidemia. But among the Non IT group, none of them were reported to have such complaints.

Body Mass Index of the respondents revealed that majority of both groups were normal. Assessment of TST and WHR also revealed that majority among both groups had high TST and WHR.

Assessment of stress level revealed that 2 percent of the IT respondents were found to have very high stress, and 4 percent had high stress. None of the Non IT respondents belonged this category.

Nutritional status index of the respondents revealed that, among the IT group 44 percent of the IT male respondents had low NSI, while among IT female respondents 46 percent had low NSI.

APPENDICES

APPENDIX-1

KERALA AGRICULTURAL UNIVERSITY

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Department of Home Science

Interview schedule to elicit information on personal and socio-economic data from the respondents.

A. Socio – economic and Personal characteristics

1. Name of the respondent :
2. Age :
3. Sex :
4. Religion – Hindu, Christian, Muslim
5. Caste – Forward, SC, ST, OBC
6. Place of residence - Rural, Urban, Sub urban
7. Marital status _ Unmarried, Married, Divorced, Widowed, Separated
8. Educational status of the respondent _ Diploma, Degree , Professional degree, Post graduation, Post graduation and above.
9. Years of experience _ 5 - 10 years, Above 10 years

B. Family Details

10. Type of family - Nuclear, Joint, Extended
11. Personal income in Rs. per month _ 10000-25000, 25000-50000, 50000-100000, Above100000
12. Total family income (Rs. per month) - 15000-25000, 25000-50000, 50000-100000, 100000 – 200000, Above 200000.

APPENDIX-1 continues

13. Personal Habit

Personal grooming	Daily schedule			
	Once	Twice	Thrice	More than 3 times
Activities				
Bath				
Brushing teeth				
Toilet habits				
Frequency of use of urinals				

14. Duration of sleep at night - eight hours , 6-7 hrs, < 6 hrs

15 Afternoon nap – 10 mts, 20 mts, Above 20 mts, Never.

16. Do you consume alcohol _ Y / N

If Yes – Occasionally/ Regularly / Never.

17. Do you have the habit of smoking _ Y / N

If Yes - Occasionally/ Regularly / Never.

18. Do you have the habit of Chewing pan- Y / N

If yes , Occasionally / regularly/ Never

19. Do you have the habit of using drugs

If yes , Occasionally / regularly/ Never

APPENDIX-II

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Interview schedule to elicit information on leisure time activities of the respondents.

1. Name of the respondent :

2. Leisure time activities

Leisure time activity	Daily	Once in two days	Once in three days	Weekly	Never
Reading newspapers					
Reading Magazines					
Viewing T. V					
writing articles					
Pursuing Music/Dance					
Gardening					
Cooking					
Online chatting/Mobile					
Shopping					
Any other					

APPENDIX-III

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Interview schedule to elicit information on exercise pattern of the respondents.

1. Name of the respondent :

Please tick the appropriate category

1. Hate to move struggler (extremely lazy to do exercise)
2. Uneasy participant (embarrassed to exercise in front of others)
3. Fresh starter (recently started)
4. All or nothing doer (extreme variation in exercise behavior)
5. Self routine repeater (somehow manages to keep targets)
6. Aches and pains sufferer (exercise till exhausted)
7. Exercise protester (totally against exercise)

APPENDIX-V
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Interview schedule to elicit information on social participation of the respondents.

1. Name of the respondent :

Please tick appropriate category

- 1. Not a member of any organization
- 2. Member in an organization
- 3. Member in more than one organization
- 4. Office bearer in one organization
- 5. Office bearer in more than one organization

APPENDIX-V1
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Interview schedule to elicit information on travel pattern of the respondents

1. Name of the respondent
2. Distance between residence to work place..... km
3. Mode of transport utilized for reaching office
 - a. Public transport
 - b. Own vehicle
 - c. Corporate transport

APPENDIX-V11
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Department of Home Science

Interview schedule to elicit information on food consumption pattern and food habits of the respondents.

- 1.Name of the respondent
- 2.Food habit - Vegetarian/ Non-vegetarian.

Please tick appropriate category.

1. Meal skipper
- 2.Night time nibbler (Consume most of the foods during night)
- 3.Convenient diner (consume packaged, microwavable, frozen and branded foods)
- 4.Fruitless feaster (consume less fruits)
- 5.Steady snacker (eat healthy food in public but at the same time eat unhealthy food in private)
- 6.Hearty portioner (large appetite and eats more)
- 7.Swing eater (extreme eating habits)

Food consumption pattern of the respondents.

Meal Pattern	Food combinations commonly used (cereal/ pulse/ vegetables/ fruits)
Breakfast	
Lunch	
Dinner	

APPENDIX-IX
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Schedule used for collecting data pertaining the eating styles of the respondents.

1.Name of the respondent

2.Eating styles

Eating inventory	Disagree	Agree much of the time	Agree most of the time
I do not have consistent meal patterns from one day to the next			
I rarely take the time to plan my meals			
I'm rarely hungry in the morning			
I often skip breakfast			
I eat little during the day and am most hungry at night			
Most meals are taken out or eaten in restaurants			
I eat a fast-food meal on most days of the week			
Fruits and vegetables are my least favourite foods			
Hungry or not, I snack on foods throughout the day			
I have difficulty controlling my portion sizes			
I have two eating styles: the 'good' one I show in public and the "bad" one I do in private			

APPENDIX- X
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Schedule to assess individual dietary consumption of the respondents.

1. Name of the respondent

2. Actual food intake of the respondent. (24 hour recall method)

Meal	Composition of meal	Raw quantity of each ingredient (gm)	Total cooked amount	Individual intake cooked volume(gm)
Early morning				
Breakfast				
Mid morning				
Lunch				
Teatime				
Dinner				

APPENDIX- X1
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Schedule used for collecting data pertaining to the morbidity pattern of the respondents.

1. Name of the respondent

2. Have you had any attack of the following diseases during the last six months?(Please tick)

Cold	Kidney stone
Headache	Typhoid
Fever	Jaundice
Joint pain	
Vision problem	
Back pain	
Shoulder pain	
Muscular pain	
Kidney stone	
Typhoid	
Jaundice	
Diarrhoea	
Dysentery	
Spondilitis	
Hyperlipidemia	
Hypertention	
Any other	

3. Chronic diseases identified (please tick)

Diabetes , Heart disease, Kidney disease, Liver disease

Cancer

Any other

4. Anthropometric indices

1. Body weight (kg) :

2. Height (cm) :

3. Triceps skin fold thickness (TST) (mm) :

4. Waist measurements (cm) :

5. Hip measurements (cm)

APPENDIX-XII

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Department of Home Science

1. Name of the respondent

STRESS INVENTORY

PART - 1

SI. NO	ITEMS	SOMETIMES	USUALLY	NEVER
1	I sweat a lot			
2	I get headache			
3	I get tired easily			
4	I cannot stand loud noise			
5	I have very poor appetite			
6	I get giddiness			
7	I have disturbed sleep			
8	I have nausea			
9	I suffer from one health problem or the other everyday			
10	I have difficulty in falling asleep			
11	I get back ache			
12	I get pain in my joints			
13	I get pain in my neck and shoulders			

Appendix- XII Countinues

PART -11

SI.NO.	ITEMS	SOMETIMES	USUALLY	NEVER
1.	I am in a low mood			
2.	I am highly irritable			
3.	I feel helpless			
4.	I lose my temper easily			
5.	I do not enjoy activities which I used to enjoy			
6.	I am worried about my future			
7.	I am worried about my poor health			
8.	I find others too demanding			
9.	I get provoked very easily			
10.	I feel upset when I have to take up some responsibilities			
11.	I worry about my past			
12.	I become aggressive			
13.	I am afraid that I would break down			

Appendix- XII Countinues

PART -111

SI.NO.	ITEMS	SOMETIMES	USUALLY	NEVER
1.	I take a long time to decide			
2.	I am distracted very easily			
3.	I cannot think clearly			
4.	I think my future is dark			
5.	I get disturbing thoughts			
6.	I find it difficult to be attentive			
7.	I think I am overtaxing myself			
8.	I keep forgetting things			
9.	I cannot cope with sudden changes around me			
10.	I think life is a mess			
11.	I am preoccupied			
12.	I become blank			

Appendix- XII Countinues

PART -IV

SI.NO.	ITEMS	SOMETIMES	USUALLY	NEVER
1.	I throw things around			
2.	I am not bothered about my appearance			
3.	I leave things incomplete			
4.	I have a strained posture			
5.	I do not pay attention to what I eat			
6.	I do not speak much to anyone in the family			
7.	I strive hard to achieve more and more			
8.	I argue a lot			
9.	I have no time for exercise / walk /jog			
10.	I have very little time to be with my family members			
11.	I shout at others even for small matters			
12.	I have no time for relaxation			

Appendix- XII Countinues

MISCELLANEOUS ITEMS

1. What are the factors that lead to stress in you ?

(Put a tick mark in the appropriate box according to the frequency with which you experience the problem.)

SI.NO.	ITEMS	OFTEN	RARELY	NEVER
1.	Children's ill health			
2.	Financial problems			
3.	Lack of understanding on the part of family members			
4.	Worries about children's studies / examination.			
5.	Lack of domestic help.			
6.	Behavioural problems of children			
7.	Worry about children's bright future			

2. How do you cope with stress?

- a. By keeping silence
- b. By watching T.V programmes
- c. Talking with someone close
- d. Reading books
- e. Praying for God's blessings
- f. By doing meditation / yoga

Any other (specify).....

Would you like to get more information on ways to manage stress?

APPENDIX- X111

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Anthropometric values of male ITR

	Wt (kg)	Ht (cm)	WHR		Wt(kg)	Ht (cm)	WHR
1	52	162	1.03	31	69	170	1.1
2	52	162	1.02	32	69	173	1.1
3	54	168	1	33	69	173	1.2
4	55	165	1.03	34	69	175	1
5	55	168	1.2	35	70	173	1.1
6	56	163	1.05	36	70	174	1.1
7	57	158	1.02	37	71	178	1.1
8	57	158	1	38	72	174	1.2
9	57	176	1	39	72	179	1
10	58	162	1.3	40	73	169	1.2
11	58	162	1	41	73	173	1.2
12	60	163	1	42	75	169	1.2
13	60	170	1.2	43	76	173	1
14	62	162	1.02	44	77	172	1.2
15	62	165	1.02	45	77	175	1.3
16	62	166	1.02	46	78	175	1.3
17	62	170	1.03	47	79	171	1.4
18	62	172	0.82	48	80	173	1.4
19	63	172	1.03	49	82	172	1.6
20	64	167	1	50	90	181	1.3
21	64	168	1.04				
22	65	169	1				
23	65	171	1.2				
24	65	174	1.05				
25	68	163	1.05				
26	68	164	1				
27	68	165	1.06				
28	68	174	1.07				
29	69	158	1.08				
30	69	167	1.08				

Appendix- X111 Continues

Anthropometric values of female ITR

	Wt (kg)	Ht (cm)	WHR		Wt (kg)	Ht (cm)	WHR
1	56	152	0.86	31	64	160	0.8
2	59	152	0.77	32	58	161	0.84
3	51	153	0.86	33	60	161	0.86
4	55	153	0.87	34	50	162	0.83
5	56	153	0.9	35	50	162	0.8
6	57	153	0.83	36	56	162	0.86
7	58	153	0.84	37	56	162	0.87
8	48	154	0.83	38	66	162	0.89
9	48	154	0.89	39	66	163	0.85
10	56	154	0.81	40	49	164	0.9
11	58	154	0.86	41	54	164	0.74
12	68	154	0.83	42	54	164	0.82
13	51	155	0.8	43	54	164	0.87
14	51	155	0.84	44	55	164	0.8
15	51	155	0.85	45	55	164	0.86
16	59	155	0.84	46	68	165	0.82
17	59	155	0.81	47	69	166	0.89
18	59	155	0.83	48	70	167	0.8
19	62	155	0.88	49	53	169	0.81
20	45	156	0.91	50	58	171	0.8
21	45	156	0.93				
22	56	156	0.8				
23	57	156	0.81				
24	59	156	0.86				
25	55	157	0.85				
26	57	157	0.89				
27	62	157	0.82				
28	70	159	0.85				
29	70	159	0.8				
30	57	160	0.85				

Appendix- X111 Continues

Anthropometric values of Non ITR

Male respondents

	Wt(kg)	Ht (cm)	WHR
1	63	158	1
2	65	158	1.2
3	58	159	1
4	58	160	1
5	62	160	1.01
6	68	161	1.03
7	59	162	1.1
8	65	163	1.05
9	70	163	1.2
10	63	166	1
11	61	167	1.05
12	62	167	1.02
13	62	167	1.1
14	74	167	1
15	62	168	1.3
16	63	168	1.01
17	65	168	1
18	72	168	1.04
19	65	169	1
20	73	169	1.05
21	65	170	1.01
22	58	172	1
23	68	174	1.02
24	69	175	1.2
25	73	175	1

Female respondents

	Wt (kg)	Ht (cm)	WHR
1	56	149	0.8
2	54	153	0.85
3	55	152	0.85
4	65	152	0.9
5	51	153	0.83
6	56	153	0.91
7	58	153	0.8
8	60	153	0.87
9	54	154	0.88
10	57	155	0.89
11	63	155	0.8
12	69	155	0.86
13	60	156	0.93
14	61	157	0.91
15	60	158	0.85
16	63	158	0.86
17	70	158	0.71
18	78	158	0.88
19	62	160	0.89
20	53	161	0.86
21	53	161	0.88
22	56	161	0.87
23	57	163	0.89
24	60	165	0.8
25	67	165	0.87

APPENDIX- X1V

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Nutritional Status Index of the respondents

IT male respondents

1	-0.57116	26	2.424855
2	-0.47	27	4.766226
3	1.137304	28	6.646885
4	-1.35303	29	1.60261
5	-0.69911	30	3.438334
6	-0.2315	31	3.540437
7	1.916801	32	3.888316
8	-1.89023	33	5.366715
9	2.813254	34	3.358598
10	1.026066	35	5.847346
11	-0.69304	36	5.473777
12	4.381431	37	6.807086
13	5.724637	38	5.738393
14	-0.43558	39	4.539079
15	1.586398	40	4.785202
16	1.991987	41	6.344768
17	2.200304	42	4.691689
18	2.059606	43	5.207056
19	3.207849	44	5.334825
20	3.87056	45	7.74786
21	3.144699	46	6.852885
22	4.149905	47	7.277252
23	2.787117	48	7.051878
24	4.991715	49	8.496229
25	3.055731	50	10.9777

IT female respondents

1	5.277785	26	8.026249
2	2.192108	27	6.362419
3	3.572963	28	7.120011
4	4.229998	29	5.517469
5	5.560134	30	6.346761
6	1.143797	31	8.844377
7	7.762905	32	5.295679
8	2.770793	33	6.600099
9	8.929452	34	4.716015
10	5.89439	35	3.234956
11	1.605621	36	7.908979
12	9.623945	37	9.483574
13	3.421451	38	8.512803
14	3.913591	39	6.341447
15	5.749758	40	5.723604
16	7.437132	41	2.685923
17	3.453905	42	5.161921
18	3.17036	43	5.387914
19	8.156459	44	5.385904
20	4.736208	45	5.83063
21	6.215268	46	9.267851
22	4.725334	47	10.70109
23	3.448755	48	7.925878
24	3.786622	49	4.576886
25	5.494037	50	7.033078

APPENDIX- X1V

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Nutritional Status Index of the respondents

Non IT male respondents

Non IT female respondents

1 1.953487
 2 6.354882
 3 -1.21737
 4 -0.13434
 5 0.190276
 6 1.643369
 7 3.712134
 8 2.914844
 9 6.781119
 10 2.339652
 11 4.072442
 12 2.757422
 13 1.862804
 14 3.90825
 15 5.037357
 16 2.372199
 17 1.354024
 18 4.849714
 19 3.437258
 20 9.776454
 21 5.824429
 22 1.40086
 23 5.238722
 24 9.136311
 25 5.577712

1 1.808009
 2 2.812823
 3 4.459019
 4 0.360825
 5 3.005256
 6 3.753489
 7 4.538143
 8 4.939627
 9 5.396614
 10 6.238055
 11 5.003317
 12 6.194567
 13 6.734368
 14 7.356145
 15 8.583705
 16 7.528429
 17 4.474725
 18 11.00541
 19 6.091548
 20 5.039185
 21 6.382732
 22 6.016161
 23 6.302725
 24 6.573054
 25 8.890266

