REVIEW OF RELATED LITERATURE

In this chapter main emphasis is on critical review of research studies conducted by eminent researchers related to the present study. The researcher made an attempt to have access over all available relevant literature including internet searching.

Review of related literature is essential for any research work for formulating the hypothesis, if any and is a guide to research planning. In fact, present researcher was benefited research from critical review of most respect publications available from the internet connectively. The related research conducted by foreign authors in this area are plenty but such studies by Indian researchers are few and far between. The present study is a survey type with special emphasis on some correlates of life-style of the senior citizen. Therefore, in the present study an attempt has been made to fill this gap in the literature pertaining to information on Indian subjects.

Steinmann (1975) conducted a study on risk factors and age in humans. He has mentioned that the known risk factors for atherosclerosis do not possess the same significance in young people as in the elderly and point of view that hypercholesterolemia, diabetes and cigarette smoking appear to have a greater bearing below the age of 50 than later, particularly in myocardial infarction but also in apoplexy. On the other hand, hypertension is an important factor in the young and especially in the case of apoplexy, even more so in advanced age. From, the
observation, he concluded that the similarity of the risk factors in elderly patients either with or without apoplexy is due to the fact that arteriosclerosis is already established in both groups and the risk factors which give rise to ischemia, thrombosis or embolism assume prominence.

Connolly (1976) opined that life events before myocardial infarction. The sample of the study were 121 men between the ages of 35 and 65 who had been admitted to a coronary care unit were interviewed within a mean of 2.3 days of their admission, concerning their experience of certain specified pre-designated life events in the previous three months before myocardial infarction (MI). 91 of them who were proven to have sustained a MI were randomly matched individually with 91 men from an industrial pay roll for sex, age and occupational level. Further they shown the significantly more patients than comparison subjects reported these life events in the three weeks before infarction. From the observation, he concluded that most events were apparently independent of patients' or comparison subjects control; these were reported significantly more often by patients, both during the entire 12 weeks prior to illness and during the three weeks immediately before infarction.

Segal et al. (1977) opined that hypertension, high serum cholesterol and Triglyceride levels and cigarette smoking are the major risk factors for Coronary heart disease.

Garros et al. (1980) in a review article identified sudden causes for increase in cardiovascular mortality in some developing and in industrial countries. They pointed out that the third world
specially Africa, hypertension and related heart disease are widely spread. They pointed out that particularly in Africa, CVDs are increasing due to change to way of life, which is changing identical to the developing countries. They analyzed the cardiovascular mortality and indicated the relationship between the increasing heart disease mortality and the age structure of population and life-style.

Ruberman et al., (1984) conducted a study on psychological influences on mortality after myocardial infarction. With other important prognostic factors controlled for the patients classified as being socially isolated and having a high degree of life stress had more than four times the risk of death of the men with low levels of both stress and isolation. An inverse association of education with mortality in this population reflected the gradient in the prevalence of the defined psychological characteristics. They found that high levels of stress and social isolation were most prevalent among the least educated men and least prevalent among the best-educated.

Epstein (1986) conducted a study on sudden death—epidemiological aspects. He showed the studies on coronary heart disease presents in a disturbingly high percentage of instances as sudden death. A large percentage of cases occur outside the hospital, outside the reach of emergency care. He described from data on the frequency of sudden death, within the framework of coronary heart disease incidence, are presented and specific point of view that the risk factors for sudden death, as far as it is known, are similar in kind and predictive power to those for MI with survival. Further, he reported that prevention of premature CHD as
a whole, through appropriate changes in life-style, will correspondingly reduce the risk of sudden death in the population as well. From the observation, he concluded that this knowledge must be put into action and should have an appreciable effect on the frequency of sudden death while more research on the mechanisms of the condition is being conducted.

Paffenbarger et al. (1986) conducted a longitudinal study on physical activity, other life-style patterns, cardiovascular disease and longevity, on 16,936 Harvard alumni. They identified 572 first coronary heart disease (CHD) attacks, 1962-1972, and 1,413 all-cause deaths, 1962-1978. Men expending 8.4 + MJ 2,000+Kcal) per week in walking stair-climbing, and sports play were at 39% lower risk of developing CHD than less active classmates. Attributable risk estimates suggested: there might have been 16% fewer CVD deaths in the alumni population if every man had exercised 8.4+MJ per week; 25% fewer from total cigarette abstinence: 9% fewer from abolition of hypertension; 6% fewer with less obesity; and 11% fewer CVD deaths in the absence of parental CHD. Discounting the influence of blood pressure status, cigarette habits, net weight gain since college, and parental history of early death, the more active alumni (39% of the population) are estimated to have lived on average one and one quarter years longer than less active men.

Friedman et al. (1987) conducted a study on personality, type-A behaviour, and Coronary heart disease. They identified clearly the nature of the relation between personality factors and coronary heart disease is one of the most important controversial issues in the field of psychology and health. Although there is still a
great deal of conceptual confusion, progress is being made in refining the key components of a predisposition to heart disease. They opined that special consideration is given to mode of measurement of the Type-A behaviour pattern, Structural Interview (SI) versus Jenkins Activity Survey (JAS). The sample of the study was 50 middle-aged men who had a MI were compared with 50 healthy controls in terms of relevant aspects of their psychological functioning. The study results confirm that the SI is better than the JAS as a predictor of coronary heart disease (CHD) because of its attention to emotional expressive style and also indicated that depression, anxiety or both relate to CHD because of its attention to emotional expressive style and also indicated that depression, anxiety or both may relate to CHD independently of and in addition to Type A behaviour. Other aspects of personality and social support are also discussed in the context of improving the construct of coronary proneness.

Briazgounov (1988) opined that the close association of hypertension, overweight and diabetes mellitus with lack of exercise at work and/or off the job has made physical inactivity a significant risk factor for coronary heart disease and stroke. Further a number of studies have demonstrated that, holding all other risk factors constant, there was a lower mortality rate among persons engaging regularly in high-intensity exercises than among those with a sedentary life-style.

Laderum et al. (1988) conducted a well designed study and opined that myocardial infarction (MI) may induce positive changes in life-style and in the quality of life. The sample of the study were 84 male patients with a mean age of 56.4 years were subjected to
a semi-structured interview 12-21 weeks after acute MI. 28 individuals (group A) perceived a considerably or somewhat improved total life situation, 39 patients an unchanged (group B) and 17 patients (group C) a somewhat or considerably worsened total life situation. In all groups there were appreciable alterations with respect to stress on the job, physical activity and intake of fat/calories. 60% had reduced or quit smoking, and 19% had reduced their alcohol consumption. 50% of the patients perceived an increased gratitude at being alive. Further they shown the concern associated with a reduced health status was experienced as the most distressing consequence of MI. The study concludes that it is considered important also to discover and reinforce possible positive changes after MI.

Mac Donald et al. (1991) conducted a study on life-style profiles of hypertensive. They suggested that healthily life-styles and quality of life are key elements in the health of individuals and the community as a whole. This study critically analyzed the relationship of specific life-style behaviours to blood pressure in subjects being treated for hypertension. Discriminate analysis identified that, of the life-styles selected, predictors of uncontrolled hypertension were a high calcium intake, a high perceived level of stress and a 'normal' body mass index. Profiles of life-style behaviours identified by discriminate analyzing found to be important to various age & sex groupings of the subjects.

Burke et al. (1992) conducted a cross-sectional study of 843 independent living 60-87 years old volunteers. Association between certain life-style and personality characteristics and blood pressure and hypertension was assessed. Life-style factors and personality
characteristics associated with blood pressure were similar to those described in younger adult populations, although there were some differences related to gender and whether subjects were being treated for hypertension. Stepwise multiple regression showed that higher blood pressure was associated with greater body mass index (BMI), alcohol intake and coffee drinking and measures of irritability. Increased physical activity and high values for measures of suspicion and extraversion were negatively related to blood pressure. Age was positively related to systolic, but not to diastolic blood pressure. The presence of hypertension was significantly associated with self-reports of raised cholesterol, diabetes or angina, as well as past history of heart failure, heart attack or stroke.

Harris (1992) reported that those with low Cholesterol levels comprised two distinct groups of people, healthy and unhealthy. In this study, most of the adverse health effects of low serum cholesterol were seen in the elderly, those aged 65 and above. However, older individuals with low cholesterol levels who were physically active, i.e., healthy, had no significant increased mortality rates compared to individuals with higher serum cholesterol levels. Harris concluded that low serum cholesterol is not associated with increased mortality in individuals who are classified as healthy. If you are young and healthy, the current advice is not to worry about low serum cholesterol.

Tselika - Garfe (1992) observed effects of acute myocardial infarction on the patient’s and the family’s way of life. During the last decade, the relation between psychosocial factors and patient’s personality in front of the risk of an acute myocardial infarction
and his health progress after the infarction has fully been investigated. The patient’s personality and a number of factors related to his job-carrier and family environment have been proved to be very important. The effect of patient’s behavior, educational level, social and psychological status in the progress of coronary heart disease has especially pointed out. The MI is a serious disease which can alter the patients and his close family’s way of life due to its financial involvement among the other consequences.

al-Roomi et al. (1994) conducted a study on life-style and the risk of acute myocardial infarction in a Gulf Arab population. A population based case-control study was carried out to explore the importance of life-style in the occurrence of AMI in Bahrain among those aged 30-79 years. The study result confirm that the patients with first time AMI, 64% did not walk regularly for exercise compared with 34% of community controls, 12% of community controls has a history of hypertension and 9% had diabetes. The comparative figures for AMI patients were 44% for hypertension and 22% for diabetes. Cigarette smoking and infrequent consumption of fruits and vegetables also appeared to be associated with an increased risk of AMI. They concluded that there is scope for life-style change in reducing AMI risk, by changes in physical activity, smoking and dietary habits.

Beilin (1994) indicated that a variety of life-style changes may be important in the non-pharmacological treatment of hypertension. One of the most important is to avoid the use of tobacco, but several dietary practices and exercise may also help reduce both systolic and diastolic pressure.
Busby et al. (1994) conducted a study on the low blood pressure in elderly people and consequence of heart disease and frailty. They suggested that low blood pressure has been associated with increased mortality in older people, but it is unclear whether the hypertension is a risk in its own right or just a marker of disease. Further they shown there was a significant relationship between low systolic blood pressure and male sex, history of myocardial infarction and low body mass index and between low diastolic pressure and male sex, history of angina and myocardial infarction, use of one or more hypotensive drugs, low body mass index, low corrected arm muscle area. The study results confirm that hypertension in old age is only partially explained by established cardiovascular disease and frailty.

Greenwood et al. (1995) conducted a study on influence of economic status and social support on survival after acute myocardial infarction (AMI). Further in addition, the possible influence of stressful life events and satisfaction with home, social and working / retirement life is also assessed. The study results confirm that lack of social contacts or being unmarried were not significantly associated with survival. Economic status and survival after AMI are associated. They opined that with the dominant psychological prognostic indicator in this study being economic status, attention focuses on the growing gap between the socially deprived and the more affluent and its effects on health.

Lesourd (1995) that indicated elderly individuals, those over 65 years, may be more prone to protein under-nutrition because they may eat less protein-rich food and may use protein less efficiency. He has mentioned that protein under-nutrition in the
elderly may impair immune function, making them more susceptible to infections.

Helmert et al. (1997) conducted a study on poverty and health in West Germany. Poverty was defined as a household income of 50% less than the mean for West Germany. Multiple logistic regression analysis was used to analyze the relationship between poverty and four health variables: individual health behaviour, subjective assessment of health status, cardio-vascular disease risk factors, and self-reported prevalence of life-time chronic diseases. They opined that the most striking poverty-related differences were observed for lack of regular sport activities, subjective health satisfaction, obesity and myocardial infarction / stroke. Significantly lower prevalence rates for study subjects below the poverty line were observed for hypercholesterolemia in females only. The study results confirm that poverty has strong effects on individual health status and the prevalence of chronic diseases.

Barron-Rivera et al. (1998) conducted a study to evaluate the effect of an educational programme on the quality of life of the hypertensive patient. A randomized clinical trial was performed on 150 adult hypertensive patients who were divided into 2 groups. The experimental group received a short educational programme on hypertension and the effects on the patient life-style, specifically concerning their control of the disease. The control group did not receive the educational programme. Quality of life of both groups was determined by an analogous visual scale, before and 6 months after the educational program. They observed that the degree of improvement with respected to physical strength and
emotional condition differed between groups. In the areas of thought capacity, social participation, perceived quality of life and sexual function, only the experimental group showed changes. They concluded that an educational program is effective to modify the quality of life of the hypertensive patients.

Carlsson (1998) conducted a study on serum cholesterol, lifestyle, working capacity and quality of life (QOL) in patients with coronary artery disease. The author indicated that coronary artery diseases (CAD) are main causes of morbidity and hospitalization in Western counties and CAD patients are at considerable risk of suffering further cardiac events. From the observation, he concluded that one month after the event, both somatic and psychological aspects of QOL were negatively affected in AMI and CABG patients compared to population controls. One year after the event, patients differed from controls mainly in somatic systems. Thus, the intervention programme was most successful in affecting lipid levels and food habits in AMI patients. QOL was considerably affected in patients following cardiac event, especially during the initial recovery phase.

Dantas & Aguilar (1998) prepared a profile of patients with AMI admitted to a hospital during May to November, 1992 in Portugal. Data were collected through interviews with the patients and analysis of the medical reports. They found 73.2% of the patients were from 50 to 80 years old; 66.7% were men; 55.5% were hypertensive; 24.4% with dyslipidemia; 20% had diabetes; 51.1% had a positive family history of hypertension, 26.6% of had myocardial infarction (MI) and 71.1% were from low-income group. 82.2% were illiterate or with incomplete primary schooling:
47% were economically active; 88.8% lived a sedentary life; 55.5% were smoker. The authors found presence of 2 to 3 risk factors to cardiac diseases among 62.2% of the patients.

Greil & Trippo (1998), opined that body mass is the most investigated measurement for the evaluation of the nutritional and health status of children and adults. They conducted a survey study on large sample and measured body mass by sex and height is classified by three different concepts and whole body concepts. They were of the opinion that BMI by sex, age and frame type is found to be a good and practical instrument for the assessment of the nutritional and health status.

Hennekens (1998) showed the review study on risk factors for coronary heart disease in women. From the observation, he concluded that in the United States, coronary heart disease (CHD) is the leading cause of death in both women and men. Most of the modifiable risk factors for CHD and strategies for prevention of CHD are similar for both men & women. Studies have shown that cigarette smoking responsible for more than double CHD incidence and increases CHD mortality by 70%. A cohort study among more than 121,000 female nurses in the US revealed that the risk of CHD was 6 time greater in heavy smokers than non-smoker. The level of blood cholesterol is also a strong risk factor for CHD: levels of high density lipoprotein (HDL) cholesterol are inversely associated with the risk of CHD. Thus, lowering low-density lipoprotein (LDL) cholesterol and increasing HDL cholesterol levels reduce CHD risk in both men & women. Hypertension is a risk factor which responds well to increasing levels of physical activity shown to decrease CHD risk in numerous studies. A study showed
that over-weight women (body mass index values 29) are at 3 times the risk for CHD as those with body mass index values less than 21. Diabetes mellitus is another CHD risk factor which is stronger in women than in men and CHD death rates are 3-7 times greater among diabetic than non-diabetic women.

Nilsson (1998) in a review article identified the biological aging and adoptosis-mechanism in cardiovascular disease. The study results confirm that smoking, lipid disorders, hypertension and diabetes are well known risk factors for cardiovascular disease. Many individuals are characterized by a genetically determined predisposition and moreover, psychological factors and an inappropriate life-style may exert adverse effects on biological variables. Evidence exists which suggests that in such cases various ageing processes may be accelerated.

Tzonou et al. (1998) conducted a study on dietary iron and coronary heart disease risk. They opined that life-style, nutritional nature and dietary iron intake was found to be positively associated with risk for coronary disease among men aged 60 years or older and particularly women aged 60 years or older. They suggested that excess dietary iron intake increases the risk of coronary heart disease, particularly among older women and men.

Weller et al. (1998) conducted a study to examine the relation between physical activity and mortality in a 7-year follow-up of a sample of women more than 30 years of age (N = 6,620) from the Canada Fitness Survey Cohort. Age adjusted relative risks relating quartiles of average daily energy expenditure to mortality were estimated using logistic regression. The associations were
stronger for cardiovascular disease mortality and fatal myocardial infarction for those in the highest quartile. These relations were due mainly to the contribution of non-leisure (household chores) energy expenditure, which represented, on average, 82% of women's total activity. They identified and by these data support the hypothesis that physical activity is inversely associated with risk of death in women.

Kutty et al. (1999) conducted a study on high prevalence of type 2 diabetes in an urban settlement in Kerala, India. The authors opined that the prevalence of type 2 or non-insulin dependent diabetes mellitus is high among Indians living in India as well as abroad. Prevalence among persons of Indian origin in many countries is greater than that of people of other ethnic extraction. The Indian state of Kerala is distinguished by a high level of achievement in the health sector, characterized by both lower mortality rates and greater density of health care institutions that ensure access to most people. The objective of the study was to estimate the prevalence of diabetes among persons 20 years or older in an urban housing settlement in Trivandrum city, the capital of Kerala. Fasting plasma glucose, serum triglycerides, cholesterol, height, weight and blood pressure were measured, and a detailed questionnaire administered to ascertain previous diabetic status and management. They opined that overall prevalence of type 2 diabetes is 16.3%. In the 30-64 age group, age standardized prevalence is 13.7%. Gender differences in prevalence are negligible. Greater prevalence is associated with advancing age, body mass index about 24.99, sedentary habits, serum total cholesterol > 239, serum triglycerides > 149, hypertension and smoking, compare to non-diabetics, diabetics have greater mean
and range of fasting plasma glucose values (8.87 ± 3.6 mM/l against 4.34 ± 0.53 mM/l). 32 out of 38 diabetics among the subjects (82.4%) were already diagnosed even before the survey; of them, 89% were on medication. 3% of subjects had impaired fasting glucose, or FPG level between 110-125 mg/dl. They concluded that prevalence of type 2 diabetes among a group of urban residents in Trivandrum city in Kerala is very high. This is associated also with a high detection rate and compliance to treatment.

Lemaitre et al. (1999) conducted a study on Leisure time physical activity and the risk of primary cardiac arrest. They pointed out that because the risks of sudden cardiac death and myocardial infarction are transiently increased during acute bouts of high intensity activity, it is an important question from the public health perspective whether regular participation in moderate intensity activity confers overall protection from sudden cardiac death. They used data from a population-based case-control study to assess the associations of regular high-intensity and moderate-intensity leisure-time physical activity with primary cardiac arrest. Cases were patients with primary cardiac arrest, aged 25 to 74 years, attended by paramedics between 1988 and 1994. Controls were randomly identified from the same community. They opined that compared with subjects who performed none of the activities, the odds ratio for primary cardiac arrest from matched analysis was 0.34 among subjects who performed only gardening activities for more than 60 minutes per week, 0.27, among subjects who walked for exercise for more than 60 minutes per week, and 0.34 among subjects who engaged in any high-intensity activities. The result suggested that, regular participation in moderate intensity
activities, such as walking and gardening, are associated with a reduced risk of PCA and support current exercise recommendations.

Lemaire et al. (1999) intended to observe whether regular participation in moderate-intensity activity confers overall protection from sudden cardiac death. The result of their study suggested that, regular participation in moderate-intensity activities, such as walking and gardening, are associated with a reduced risk of primary cardiac arrest and support current exercise recommendations.

Anstey & Christensen (2000) in a review article have identified a number of health and lifestyle factors that correlate with cognitive function in old age. They wanted to know whether these factors also predict change in cognitive function over time. The study objective was to evaluate published finding on genetic, health and lifestyle predictors of cognitive change in late adulthood. The result showed that education, hypertension, objective indices of health and cardiovascular disease and apolipoprotein E (APOE) were associated with cognitive change. They concluded that despite the lack of data on some predictors, the longitudinal trends are generally consistent with cross-sectional findings on predictors of cognitive performance in old age.

Melo et al. (2000) conducted a study with an aim to evaluate the impact of coronary revascularization surgery on the quality of life (QOL) and identification of some variables which may contribute to influence the patients' own perception of their health condition. Surgery proved beneficial in improving QOL, with better perception after surgery in all dimensions of health. A higher level
of education was related to better perception of the energy dimension. Six months after surgery 62\% of the patients resumed their professional activity and majority had adopted healthier lifestyle with a decrease in tobacco and alcohol consumption and a more balanced diet. They concluded that coronary revascularization improves quality of life with a significant impact of the clinical variables of the psycho-social dimensions.

Murray et al. (2000) intended to explore the impact of social & cultural factors upon perceptions of the patients of cardiovascular risk and life-style changes. The results illustrate potential interplay between 'social' and 'cultural' context and perceptions of cardiovascular risk and incongruency between perceptions of risk and perceptions of the patients' intended lifestyle change.

Halimi et al (2000) conducted a study on whether smoking history is a risk factor of arterial hypertension in men. They identified clearly that former smokers exhibit decreased cardiovascular risk as compared to smokers who continue to smoke. However, smoking discontinuation results in weight gain which may be important and influence arterial pressure. Personal medical history, current treatments and life-style behaviours (specially alcohol and smoking habits), the clinical parameters including age, weight, height, systolic arterial pressure, body mass index (BMI) of the subjects were considered. Non-smokers and former smokers represented 40.0\% and 23.8\% of the population respectively. The prevalence of a BMI 27.0 kg/m\(^2\) or greater was higher in former smokers than non-smokers and current smokers. The result of the study suggested that former smoking status is
associated with a higher prevalence of over weight which may cause a higher prevalence of HTN.

Stahle et al. (2000) conducted a study to identify and describe of the factors and importance for elderly patients is being physically active one year after AMI. The patients in the training group stated that the programme had made them more self-confident regarding physical activities and this seems to be an important factor for continuing to be physically active. Body mass index, age, gender and support from a physically active partner were of minor importance compared to the training programme or earlier experience of regular physical activity.

Aguilar-Sarinas et al. (2001) conducted a study on obesity, diabetes, hypertension and tobacco consumption in an urban adult Mexican population. The aim of this study was to describe the prevalence of some of the main coronary risk factors in an open Mexican adult population. They suggested that 40% of the population had a body mass index (BMI) between 25 and 29.9 kg/m²; an additional 28% had a BMI > 30 kg/m². They indicated clearly that a large proportion of the individuals had abdominal fat distribution (62% of men and 81% of women). At the time of the evaluation, 30% of men and 18% of women were regular smokers. The study results confirm that blood pressure (BP) > 140/90 mm Hg was found in 29.4% of the population. Less than one half of the subjects had a previous measurement of plasma cholesterol (47%) or triglycerides (42%). The prevalence of diabetes was 9.02%. A significant percentage of these subjects were < 40 years of age (18.8% of diabetic population). Further they concluded that the
prevalence of obesity, diabetes, and hypertension in the population reported here is among the highest reported in Mexican population.

Kondo et al. (2001) conducted a study on life-cycle nutrition and cardiovascular health of the aged. They were of the world’s population ages, cardiovascular health becomes increasingly important. The ageing process gradually leads to decline in the structure and function of the cardiovascular system. Other factors associated with ageing can hasten this decline, for instance, lifestyle that have become more sedentary. Additionally, the prevalence of hypertension, dyslipidaemia and diabetes, major risk factors for cardiovascular disease increase with age. Nutrition throughout the life-cycle can help prevent the development of these conditions and appropriate food habits instigated later in life can improve the management of these conditions and their impact on cardiovascular health.

Song & Lee (2001) examined effects of the heart camp as a motivation enhancement programme on cardiac risk reduction and behavioural modification in myocardial infarction patients. A total of 86 out patients participated at the first heart camp and 45 returned to the second one in 8 weeks. The first & second heart camps were day long programs, consisted of health assessment, education classes, and Q & A session with interdisciplinary team approach. At the completion of the heart camp, the participants showed significantly lower scores in cardiac risk factors, and significant improvements in motivational variables, especially, perceived benefits and perceived barriers as well as in the performance of diet and exercise behaviours. The study results confirm that it is possible to enhance motivation for chronic
patients like MI patients by even short period of comprehensive educational program.


Borzecki et al. (2002) conducted a study on life-style and the risk of development of circulatory system diseases. Further they observed that circulatory system diseases (c.s.d.) belong to the group civilization diseases. They suggested that the risk factors of circulatory system diseases are: stress, overuse of alcohol, smoking cigarettes, bad eating habits, sitting life-style. Calorie over consumption, animal fat rich diet, sitting life-style result in the development of android obesity, hypercholesterolemia, that
enhance atheromatosis. They opined that the most dangerous consequences of atheromatosis are: angina pectoris, hypertension, myocardial infarction, brain insult, type II diabetes. The results obtained significantly indicate how important is health education about the danger of widely understood and unhealthy life-style.

Borzecki et al. (2002) were interested to evaluate life-style and its correlation with development of circulatory system diseases. They opined that health education is very important to overcome that danger of widely understood unhealthy life-style.

Gleason et al. (2002) conducted a study on cardiovascular risk reduction and dietary compliance. They were of the opinion that lack of adherence to diet contributes to ineffective dietary responsiveness and elevated cardiovascular risk factors in coronary heart disease (CHD) patients. The purpose of the study was to determine if home-delivered, heart-healthy meals and snacks, combined with telephone diet education, would be efficacious in improving dietary compliance, quality of life, and cardiovascular risk factors in CHD patients. Participants were 35 free-living subjects in an 8-week diet intervention. After 8 weeks, significant reductions in weight, waist circumference, hip circumference, body mass index, total cholesterol and LDL cholesterol were achieved without significant changes in high density lipoprotein cholesterol or triglycerides. Significant improvements in quality of life and quality of diet were also demonstrated. This programme could be a useful additive component to traditional medical nutrition therapy improve dietary adherence.

King (2002) conducted a study between 1996 and 1998 to investigate, perceptions of illness following a myocardial infarction
The sample of the study was 24 male & women hospitalized in Victoria, Australia. They found that stress was the most commonly cited cause of illness. Men and women demonstrated distinct differences in illness attribution. Participants who verbalized concerns about their loss of autonomy and their subsequent ability for self-management were predominantly females and uniformly members of the lowest socio-economic group. They pointed out risk factors of circulatory system disease and are: stress, overuse of alcohol, smoking cigarettes, bad eating habits, sitting life-style.

Kutty et al. (2002) conducted a study on random capillary blood sugar and coronary risk factors in a South Kerala population. They observed that high prevalence of type 2 diabetes in one subdivision of a district in south India prompted us to look at the prevalence of other major coronary risk factors, and relate these to random blood sugar values. They suggested that the prevalence of all risk factors increases with age. Risk factor prevalence varied with area of residence, with urban population reporting highest prevalence for type-II diabetes and obesity, and coastal population for hypertension. They concluded that risk factor prevalence varies with area of residence within the study population. Mean plasma lipid levels are high among both sexes, tending to rise with increasing mean fasting plasma glucose levels.

Pihl et al. (2002) conducted a study to compare the occupational and leisure-time physical activity (LTPA) patterns, musculoskeletal disorders and cardiovascular disease risk factors among the physical education teachers (PETs) and their fellow workers (controls). They opined that PETs had maintained their
physically active life-style and 59.3% of them were regularly active in their leisure time. The result of the questionnaire did not reveal any major between group differences in their health status and health habits. PETs had a significantly lower adjusted risk of overweight, hypertension and all musculoskeletal disorders, in comparison with the control group. They concluded that it is reasonable to assume that long-term physical activity is associated with a lower risk of overweight, hypertension and all musculoskeletal disorders in PETs in comparison with sedentary fellow workers.

Pitsavos et al. (2002) investigated the combine effect of physical activity and Mediterranean diet on coronary risk in hypertensive hospitalized patients. The study was conducted on 848 (691 males & 535 females) hospitalized patients with a first event of CHD. They found that the adoption of Mediterranean diet by physically active subjects seems to reduce significantly the coronary risk and prevent, approximately, the one-third of acute CHD, in controlled hypertensive subjects.

Reddy et al. (2002) conducted a study on socio-economic status and the prevalence of coronary heart disease risk factors. They have mentioned that South Asian countries have a high prevalence of coronary heart disease (CHD) in line with their economic development. India, in particular has a high burden of CHD. The aim of the study was to assess the prevalence of CHD risk factors in a semi-urban population of Andhra Pradesh, India, in different socio-economic status (SES) groups. They concluded that in both sexes, the prevalence of hypercholesterolemia, hypertriglyceridemia and sedentary life-style, increased among...
higher SES groups. Further they indicated that also, an increase in the level of social class was positively associated with mean levels of serum cholesterol and triglycerides in both men and women. The results demonstrate that higher SES groups have greater prevalence of CHD risk factors than lower SES groups. They concluded preventive measures are required to reduce the risk factors among higher SES groups.

Shetty (2002) in an article discussed nutrition transition in India. The primary objective of this review was to examine the demographic and nutrition transition in India in relation to its contribution to the emerging epidemic of chronic non-communicable diseases in this country. The study results indicate that the demographic changes, rates of urbanization and changes in dietary patterns are contributing to the changing trends in chronic disease in India. From, the observation, he concluded that there is clear evidence of a demographic, epidemiological and nutrition transition in India, that is fuelling the epidemic of chronic diseases and obesity, particularly in the urban areas.

Viberti (2002) observed the need for strict control of cardiovascular risk factors in type 2 diabetic patients. He indicated that the clinical and metabolic anomalies observed in patients with type 2 diabetes are associated with high risk of cardiovascular disease (particularly CHD), which is responsible for 75% of all deaths in diabetic patients. Further, he reported that classical risk factors such as hypercholesterolemia, smoking and hypertension in the development of ischemic heart disease and compared with the general population. From the observation, he concluded that other risk factors in the diabetic patients include risk associated with the
metabolic anomalies as well as to left ventricular hypertrophy and microalbuminuria, which are often found together in hypertensive diabetics. He focused that the importance of these risk has led several organizations to issue guidelines, particularly regarding the need for stricter blood pressure control. He concluded that the regular screening for microalbuminuria and renal dysfunction is also recommended, as well as more rigorous objectives for lipid levels.

Ashaye and Giles (2003) conducted a cross-sectional study on heart disease patients and their healthy life-style behaviours. The objective of the study was to determine whether persons with CHD were more likely to engage in healthy life-style behaviors (HLBs) than persons without CHD. HLBs included maintaining an ideal body weight, eating five or more fruits and vegetables daily, performing at least 30 minutes of leisure time physical activity (LTPA) at least five times per week and non-smokers. The study results confirm that only 6.3% of persons with CHD and 6.8% among persons without CHD engaged in all four HLBs. In the crude analysis, persons with CHD were 10% less likely than persons without CHD to engage in all four HLBs. From, the observation, they concluded that only a small proportion of persons engaged in all four HLBs. After adjusting for covariates, persons with CHD were just as likely as persons without CHD to engage in all four HLBs. Additional efforts are needed to increase the proportion of adults engaging in all HLBs, particularly among persons with CHD. Further, they concluded that it is important to include elderly patients in cardiac rehabilitation programmes after an acute coronary event, since even a short period of supervised exercise training has the potential to positively influence physical activity level as long as three to six years.
Crane et al. (2003) attempted to explore older women’s lifestyle changes after myocardial infarction. The researchers explored the failure of older women to attend cardiac rehabilitation after myocardial infarction, and examined facilitating and inhibiting factors in making life-style changes. Three global categories emerged; physiological changes, health decisions and actions, and life outcomes of the change process.

Hage et al. (2003) conducted a study on long-term effects of exercise training on physical activity level and quality of life in elderly coronary patients. Physical activity and exercise as part of cardiac rehabilitation after an acute coronary event improves exercise capacity and quality of life in most patients. The aim of the study was to evaluate physical activity level, health-related quality of life (HRQL) and perceived health three to six years after an acute myocardial infarction or an episode of unstable angina pectoris in elderly patients and compare this to earlier follow-up examination data. Study population consisted of 101 patients admitted to the coronary care unit at the Karolinska Hospital because of an acute coronary event between 1994 and 1997. The patients were randomized to either a 3 month period of aerobic group training three times a week or served as control subjects. The study results confirm that intervention group improved their level physical activity significantly over time in contrast to the control group. Further, they concluded that it is important to include elderly patients in cardiac rehabilitation programmes after an acute coronary event, since even a short period of supervised exercise training has the potential to positively influence physical activity level as long as three to six years.
Kristofferzon et al. (2003) conducted a study on myocardial infarction in relation to gender differences in coping and social support. The purpose of the study was to summarize current knowledge about gender differences in perceptions of coping and social support among patients who have experienced myocardial infarction. They were of the opinion that women with CHD have physical, social and medical disadvantages compared with their male counterparts, which can influence their perception of recovery after cardiac events. They suggested from their findings that women used a variety of coping strategies, minimize the impact of the disease, tended to delay in seeking treatment and did not want to bother others with their health problems. Household activities were important to them and aided their recovery. Further they concluded that caregivers required to be sensitive to gender-specific needs with regard to risk profiles, social roles, and the patient's own role identity. For many women, especially older ones, household duties and family responsibilities may be an opportunity and a base for cardiac rehabilitation.

Kurth et al. (2003) conducted a study on body mass index and the risk of stroke in men. They opined that obesity is an established risk factor for coronary heart disease but its role as a risk factor for stroke remains controversial. From their findings they indicated a significant increase in the relative risk of total stroke and its 2 major subtypes with each unit increase of BMI that is independent of the effects of hypertension, diabetes & cholesterol. Because BMI is a modifiable risk factor, the prevention of stroke may be another benefit associated with preventing obesity in adults.
Schroll (2003) in a review article discussed physical activity and associated changes during aging from age 50-85 in the 1914 cohort in Glostrup, Denmark, and analysed the association between physical activity and mortality, myocardial infarction, hip fractures and functional ability. The 1914-Cohort in Glostrup was examined at age 50 in 1964 and re-examined 1974, 1984, 1989, 1994 and 1999. Some analyses were based on pooled data from three longitudinal population studies. The life-time risk from a sedentary leisure time was analyzed in multivariate regression analysis controlling for covariates describing gender, age, life-style, education and chronic diseases. Physical activity definitely influenced healthy and quality of life over the life course in a positive way: compared to the group of inactive men and women, the mortality was about 60%, the incidence of myocardial infarction 70% and the incidence of hip fractures 75% in the moderate active groups on top the physically active persons gained independency in activities of daily living.

Arbab-Zadeh et al. (2004) conducted a study on effect of aging and physical activity on left ventricular compliance. They observed that left ventricular compliance appears to decrease with aging, which may contribute to the high incidence of heart failure in the elderly. However, whether this change is an inevitable consequence of senescence or rather secondary to reduce physical activity is unknown. They opined that there was substantially decreased left ventricular compliance in healthy but sedentary seniors compared with the young control subjects, which resulted in higher cardiac pressures for a given filling volume and higher myocardial wall stress for a given strain. Lastly they concluded that a sedentary life-style during healthy aging is associated with
decreased left ventricular compliance, leading to diminished diastolic performance. Prolonged, sustained endurance training preserves ventricular compliance with aging and may help to prevent heart failure in the elderly.

Geleijnse et al. (2004) conducted a study on impact of dietary and life-style factors on the prevalence of hypertension in Western populations. They observed that the impact of the many dietary and life-style factors on the prevalence of hypertension in Western societies are lacking. This study qualified the contributions of body weight, physical inactivity and dietary factors to the prevalence of hypertension in Finland, Italy, the Netherlands, United Kingdom (UK) and USA. They concluded that diet and life-style have a substantial impact on hypertension in western societies, with being overweight, physical inactivity, high sodium intake and low potassium intake being the main contributors. The relative significance of difference risk factors varies among populations, which is important for preventive strategies.

Newton (2004) stated that the increased focus on risk factors for coronary heart disease in women has greatly improved our understanding of this disease in women. The evidence against cigarette smoking, elevated serum cholesterol, and high blood pressure is strong, and sustained campaigns are underway to prevent and appropriately manage these conditions. The importance of adequate physical activity and weight control is well established, and research continues on other emerging risk factors.

Norris et al. (2004) conducted that study on women with coronary artery disease and health related quality of life (QOL)
compared to men. They suggested that although there have been substantial medical advances that improve the outcomes following cardiac ischemic events, gender differences in the treatment and course of recovery for patients with coronary artery disease (CAD) continue to exist. The purpose of this study was to compare health related quality of life (HRQOL) outcomes of men and women in Alberta. They concluded that women with CAD consistently reported worse HRQOL at one year follow-up compared to men. These findings underline the fact that conclusions based on research performed on men with CAD may not be valid for women and that more gender related research is needed.

Regidor et al. (2004) conducted a cross sectional study of 4009 subjects investigated on socio-economic position in childhood and cardiovascular risk factors in older Spanish people. The objective of the study was the association between childhood social class and the prevalence of cardiovascular risk factors in the elderly. They estimated the prevalence of hypertension, obesity, diabetes mellitus, physical inactivity, smoking and alcohol intake.

Van den Berg-Emons et al. (2004) conducted a study on whether aerobic training lead to a more active life-style and improved quality in patients with chronic health failure. They observed that due to dyspnoea and fatigue, patients with chronic health failure (CHF) are often restricted in the performance of everyday activities, which gradually may lead to hypo-activity. Purpose of the study was to assess whether aerobic training leads to a more active life-style and improved quality of life (QOL) in patients with CHF. They identified that training did not result in a more active life-style or improved peak power, 6-min walk.
distance, muscle strength and depression. They concluded that
group level training did not result in a more active life-style or
improved QOL. However correlations between training related
changers suggest that aerobic training has the potential to increase
levels of every day physical activity in CHF.

Bijlani et al. (2005) conducted a study on 98 subjects (67
male, 31 female) to observe short term impact of a brief life-style
intervention based on yoga on some of the bio-chemical indication
of risk of cardiovascular disease and diabetes mellitus. They
suggested that a short life-style modification and stress
management education programme leads to favourable effects
with in a period of 9 days.

Nanchahal et al. (2005) conducted a study on coronary heart
disease risk in men and the epidemic of overweight & obesity. The
objective of the study was to evaluate the contributions of socio-
economic, life-style and body weight factors to predicted risk of
coronary heart disease (CHD) in the population and thus provide a
focus for policies on prevention. They took data on sex, age,
systolic blood pressure and antihypertensive medication, total and
high-density lipoprotein cholesterol levels, diabetes, and their
association with the incidence of MI and fatal CHD. The study
results showed that 32% of men in England had predicted 10 y
CHD risk. Such high risk was significantly associated with body
mass index (BMI, kg/m²), waist: hip ratio (WHR), smoking and
levels of physical activity, educational attainment, and income.
Further they concluded that over weight and obesity now dominate
the standard risk factors of CHD in men and should be the focus of
national policies for prevention.
Rafanelli et al. (2005) conducted a study to observe role of stressful life event in the pathogenesis of CHD. The study was conducted on 97 patients with first episode of CHD and 97 healthy subjects matched for socio-demographic variables. 30% of patients were identified as suffering from a major depressive disorder and 20% for demoralization. The authors established the relationship between life events and acute CHD. Further, they indicated that life events should also be considered as cardiac risk factors along with traditional factors.

Scrutinio et al. (2005) indicated that a sedentary life-style is one of the five major risk factors for CHD along with Hypertension (HTN), abnormal values of blood lipids, smoking and obesity. Regular physical exercise has been shown to improve exercise capacity and quality of life, to reduce symptoms and to decrease the risk of new coronary events in patients with CHD.

Zyriax et al. (2005) conducted a study on 200 pre and post menopausal women with incident of coronary heart disease (CHD). They identified clearly that dietary habits is a serious risk factor on CHD in women. They opined that in clinical practice the potential of nutrition as part of a healthy life-style is commonly greatly underestimated in favour of drug treatment.

Medhi et al. (2006) conducted a study to compare morbidity, disability along with behavioural and biological correlates of diseases and disability of two elderly population groups (tea garden workers and urban dwellers) living in same geographical location. Two hundred and ninety three (293) and 230 elderly from urban setting and tea garden respectively aged > 60 years were included.
in the study. They observed that hypertension (urban 68% and tea garden 81.4%), musculoskeletal diseases (urban 62.5% and tea garden 32.2%), COPD and other respiratory problem (urban 30.4% and tea garden 32.2%), cataract (urban 40.3% and tea garden 33%), gastro-intestinal problems (urban 13% and tea garden 6.5%) were more commonly observed health problems among community dwellings elderly across both the groups. However, in contrast to urban groups, Ischaemic Heart Disease (IHD) and diabetes were yet to emerge as health problems among tea garden dwellers. Infections morbidities, under nutrition and disability were more pronounced among tea garden dwellers.

Teo et al. (2006) conducted a big service study on 27,089 participants, 52 countries with AMI and control subjects. The authors assessed relation between risk of AMI and smoking habits, type of tobacco, effect of smokeless tobacco and exposure to second hand smoker. The authors found that current smoking was associated with greater risk of non-fatal acute myocardial infraction (AMI) compared with never smoking group. Further they shown the chewing tobacco along were associated with AMI and smoker who also chewed tobacco had the highest increased in risk. They opined that tobacco used is one of the most important causes of AMI globally, especially in men.