PREAMBLE

The effect of western culture has changed Indian youth a lot (Popkin, 2001) in most of their activities such as dressing, food habits, the way of moving with others and so on. Indian society is very old and surviving even after many ups and downs and social issues. Indian society can be understood as a pool of various people belonging to different cultures, backgrounds, status, families, demands and it has been a great symbol of unity in diversity.

There are various types of societies depending upon the interests of the individuals like; civilized society, modern society, class society, western society and so on. Each society runs for common causes of the individuals living into that society. Indian society has gone and still going through various changes, modifications and stratifications. Changes and modifications done into the lives of the people directly bring the changes within the society.

Indian culture is rich and diverse and as a result unique in its very own way. Indian culture, which is one of the oldest and richest cultures, is now a days posing a serious threat as western culture is establishing its strong base in India and slowly and gradually wiping the Indian culture. Our manners, way of communicating with one another and so on are one of the important components of our culture. Even though we have accepted modern means of living, improved lifestyle, our values and beliefs still remain unchanged. A person can change his way of clothing, way of eating and living but the rich values in a person always remains unchanged because they are deeply rooted within our hearts, mind, body and soul which we receive from our culture.
Westernization follows the adoption of the different lifestyles, cultural ways, working styles, organizing styles and even the behavioral pattern of the western countries particularly. When people adopt the patterns and ways of the western countries and follow them in their working, thinking, living and approaching various situations is known as westernization in simple words. In westernization there is no newness and innovation because the individuals only tend to follow the ways or patterns that are already prescribed by a western culture. Indian society has gained a rapid pace in westernization. Majority of families, individuals and youth are showing keen interests in western lifestyles such as dressing, housing, outings, partying, eating and so on.

Westernization has greatly affected our traditions, customs, family and our respect and love for others. Nobody now bothers about others and only cares about himself which is totally contradictory to our Indian culture which teaches to be a part of each others joys and sorrows, to celebrate the moments together and share the grief together. Slowly all our value for which India has the pride is vanishing and western culture is taking its place. People are blindly following the western culture without knowing its consequences. Western culture has affected almost every dimension of our society. The most serious impact of western culture that incorporated with Indian youngsters is the change of lifestyle and food habits. Frequent consumption of fast food, restaurant diet, soft drink and so on hardly changed the lifestyle and health of the child and adolescent to a greater extent (Styne, 2005; Kelishadi et al., 2003; Maffeis et al., 1996).

The youngsters today consume entirely different form of food that completely differ from our old traditional food. Many of our age old nutritious food are quite new to our young generation. They are very fond of the western food items
such as wafers, chocolates, crunches, burgers, pizzas, noodles and so on which are easily available in every nook and corner. Most of these items are high in calories or even empty calories and they are devoid of other important nutrients like vitamins, iron, calcium and so on. Children's food choices are generally influenced by family meals but the parents of today also has the influence of western culture and food. Videon and Manning (2003) reported that four out of five parents of today let their children make their own food decisions. Consumption of such kind of high caloric food all times leads to overweight and obesity among the Indian youngsters.

Modernization and industrialization cause lifestyle changes resulting in reduced physical activity, unhealthy changes in dietary habits consisting of intake of calorie dense, refined sugars and fats and increased stress levels. There is a great concern about the global increase in the prevalence of obesity especially in children and adolescents (Weiss et al., 2004; Ludwig and Gortmaker, 2004). Nearly 68 percent of the children of 12-19 year had at least one metabolic abnormality which increased significantly in the presence of overweight (Ramachandran et al., 2007; Misra and Vikram, 2006; Misra et al., 2004).

Prevalence of overweight and obesity is an increasing trend among the children and adolescents of India (Ramachandran et al., 2002). On the other hand the prevalence of hypertension has also been reported to be higher in obese as compared to non obese children which increases significantly with body mass index in India (Mohan et al., 2004). The term overweight rather than obese is often used in children as it is less stigmatizing (Bessesen, 2008). Obesity is a disorder of energy balance affecting wide range of people belonging to diverse ethnic groups, age and socio-economic status (Ebbeling et al., 2002).
Increasing per capita income of the middle income groups led to an increase in the trend of social gatherings, functions, and celebrations. In the past few years, childhood obesity is increasingly observed with the changing lifestyle of families with increased purchasing power, increased hours of inactivity due to television, video games and computers have replaced outdoor games and other social activities (Singh and Sharma, 2005; Lluch et al., 2000).

In India presence of overweight and cardiometabolic abnormalities are more common in the higher socio-economic group, which is probably related to the differences in lifestyle. In an earlier study in school children, it was noted that unhealthy lifestyle was common in the higher socio-economic stratum (Ramachandran et al., 2002). Over the past 25 years, the prevalence of overweight and obesity in children and adolescents has risen, with the most substantial increases observed in economically developed countries (Lobstein et al., 2004; Strauss, 1999; Roberts, 1995).

Today’s way of lifestyle inactivates the youngsters to a greater extent. Long school hours, the ordeal of getting ready for school and tuitions increase inactivity. Erosion of open spaces for exercise and lack of parental time to supervise play are all part of new lifestyles. The obese children are 35% less active on school days and 65% less active on weekends compared to non-obese children (Ortega et al., 2007). Staying physically inactive leaves unused energy in the body, most of which is stored as fat. Reducing the time for television viewing and computer use reduced the calorie intake by the youngsters and decrease thought to be the greatest risk of BMI to a greater extent (Epstein et al., 2008).

Numerous studies have shown that sedentary behaviors like watching television and playing computer games are associated with increased prevalence of
obesity (Ludwig and Gortmaker 2004; Gordon-Larsen et al., 2004; Tremblay and Willms, 2003; Kaur et al., 2003; Swinburn and Egger, 2002). In addition, increased proportions of children who are being driven to school and low participation rates in sports and physical education, particularly among adolescent girls (Swinburn and Egger, 2002) are also associated with increased obesity prevalence. Since both parental and children's choices fashion these behaviors, it is not surprising that overweight children tend to have overweight parents. Many studies have demonstrated the association between the duration of television viewing and levels of obesity in both children and adolescents (Anderson et al., 1998). Watching TV for two or more hours per day were twice as likely to become overweight (Kaur et al., 2003; Hu et al., 2003). The TV viewing not only promotes sedentary behavior but also it stimulates food intake (Coon et al., 2001; Woodward et al., 1997; Furnham et al., 1997).

Soft drinks are viewed by many as a major contributor to obesity and related health problems (Pereira et al., 2002; Ludwig et al., 2001). Several studies reported a positive association between soft drink consumption development of obesity and type II diabetes among children (Allen and Myers, 2006; James and Kerr, 2005; Davy et al., 2004; Schulze et al., 2004; Yoo et al., 2004; Rodriguez-Artalejo et al., 2003; Almiron-Roig and Drewnowski, 2003; Bowman, 2002; Ludwig et al., 2001; DiMegilo and Mattes, 2000).

Fast food is another important contributor of obesity (French et al., 2001; McNutt et al., 1997; Cusatis and Shannon, 1996). Frequent fast food consumption may contribute to weight gain (Bowman and Vinyard, 2004). Establishment of fast food restaurants near schools increase the risk of obesity among the student population (Davis and Carpenter, 2008; Thompson et al., 2004; Guthrie et al., 2002;
Several dietary factors inherent to fast food may cause excessive weight gain such as massive portion size, high energy density, high content of saturated and trans fat, high glycemic load, and low content of fiber (Ebbeling et al., 2002; Young and Nestle, 2002; Foster-Powell et al., 2002; Ludwig, 2002; Pawlak et al., 2002; Raben, 2002; Nielsen et al., 2002; French et al., 2001).

Bakery products are another important part of the diet today. Consumption of bakery food has also been associated with increased consumption of trans-fatty acids intake of high energy and sugars (Rodriguez-Artalejo et al., 2003). Several studies in both industrialized and developing countries showed that bakery products were highly consumed by children and adults resulted in obesity (Vanelli et al., 2005; Bartina et al., 2004; Agle et al., 2002; McMahon et al., 1993; Park and Yetley, 1993).

Epidemiological studies have shown a progressive increase in the incidence of hypertension, diabetes mellitus, and coronary heart disease, insulin resistance, hyperinsulinaemia, glucose intolerance (Pouliot et al., 1992; Colditz et al., 1990) sleep apnea syndrome, and certain cancers in obese persons (Ramachandran et al., 2007; Despres et al., 2001). Epidemiological and metabolic studies conducted over the last decades have confirmed the notion that a high proportion of abdominal fat is a major risk factor for coronary heart disease, type II diabetes mellitus, and related mortality (Keys et al., 1972).

Some of the other disorders would include liver disease, early puberty or menarche, eating disorders such as anorexia and bulimia, skin infections, asthma and other respiratory problems (Must et al., 1992). Obese children often suffer from teasing by their peers and are harassed or discriminated by their own family (Janssen
et al., 2004). As with many conditions, childhood obesity can be brought on by a range of factors which often act in combination (Speiser et al., 2005; Miller et al., 2004; Kimm and Obarzanek, 2002; Ebbeling et al., 2002). On the other hand, some cross-sectional studies have found a positive relationship between fat intake and adiposity in children (Tucker et al., 1997; Maffeis et al., 1996). Higher calcium intake and more dairy servings per day are associated with reduced adiposity in children (Skinner et al., 2003; Heaney et al., 2002; Pereira et al., 2002; Carruth and Skinner, 2001).

David et al., (1989) concluded that in addition to the amount and type of food eaten, the frequency of meals may be an important determinant of fasting serum lipid levels, possibly in relation to changes in insulin secretion. High fat intake could be attributed to the fact that children hail from middle and upper class families with no economic constraints and had excess consumption of junk food resulted in obese and their fat reserve also showed a remarkable increase (Davis and Carpenter, 2008). Demographic studies suggest that low cholesterol is associated with increased mortality, mainly due to depression, cancer, haemorrhageic stroke, aortic dissection and respiratory diseases (Jacobs et al., 1992).

**Statement of the problem**

The environmental conditions in school create a lot of problems and troubles to the physical, mental and physiological status of the children to a greater extent. Till today no much work has been recorded on the health status of children and also the influence of school and social environment on the health status of the children. The social environment today creates a lot of physical, mental and physiological changes in the body of the youngster. Hence the present study was undertaken. In
this study the prevalence of overweight/obesity among the school children of Tirunelveli and their other contributing factors that aggravating this problem was also assessed.

**Reason for selection of the problem**

Today the western type of food consumption is a fashion and a common feature among young generations. Today they totally avoid our traditional food. This resulted in the increased percentage of obesity and related problems among the present day youth. In order to assess the impact of western food culture among the youngsters, the researcher mainly concentrates his study on the school going children. In this study the researcher made more concentration on the school and home environmental conditions on the children’s health. The researcher also made more attempts on the implications of obeic condition on the children such as their physical status, hematological status, health status, functioning of the heart and so on. Even though there are some works on the obesity and related disorders on school going children are available from abroad, the word on Indian scenario are in paucity. Hence the researcher has planned this study.

**Study area profile**

The population of Tirunelveli district has grown from 16,98,578 in 1961 to 27,40,065 in 1991. The growth rate of population has been in an increase at about 2.32% per annum during the period of 1981-91 (Census of India, 2001). There has been a significant growth of two, three and four wheeler vehicles in the district over the ten years. The city has many prestigious old government and private colleges and several number of government and government aided schools of all categories. The researcher has chosen few high and higher secondary schools for his study. The
schools chosen include both sexes of students and also include all types of schools such as municipal, aided, unaided and Government (Tirunelveli District Environment Profile-Final Report, 2009).

Figure A Location map of Tirunelveli District, Tamilnadu
Objectives of the study

The present study is an attempt to peep into the impact of western culture on the health status of the school going children of Tirunelveli. The study was carried out using the following objectives.

☆ To assess the prevalence of underweight, overweight and obesity among school going children aged 13 to 17 years, in relation to their changed feeding habit influenced by the western culture.

☆ To assess the prevalence of obesity among school students and the impact of influencing factors such as parental income, eating habits, special fondness for particular food and inactiveness influenced by TV watching, usage of computer and other electronic devices and so on.

☆ To ascertain the blood pressure of school going children and their alterations in relation to underweight, overweight and obeic.

☆ To assess the correlation between blood chemistry and hematology of the obeic students in relation to their obeic condition.

☆ Assessment of the socio-economic status of the parents of students and its impact on the behaviour, feeding habit and increasing trend of obesity among the students.

☆ To suggest remedial measures to minimize the rate of obesity among the school going children.