Prevalence Of Peptic Ulcer And Gastritis Among Hostelites And Dayscholars Of An University And Their Life Style And Food Consumption Pattern

By

V. Kural Selvi

A THESIS SUBMITTED TO THE AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN - DEEMED UNIVERSITY, COIMBATORE - 641 043

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE

IN FOOD SERVICE MANAGEMENT AND DIETETICS

APRIL - 1999

PREVALENCE OF PEPTIC ULCER AND GASTRITIS AMONG HOSTELELITES AND DAYSCHOLARS OF AN UNIVERSITY AND THEIR LIFE STYLE AND FOOD CONSUMP TION PATTERN

By

KURAL SELVI, V.

A THESIS SUBMITTED TO THE AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN - DEEMED UNIVERSITY, COIMBATORE - 641 043

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN FOOD SERVICE MANAGEMENT AND DIETETICS

APRIL - 1999

CERTIFIED AS BONAFIDE RESEARCH WORK

SIGNATURE OF THE HEAD OF THE DEPARTMENT	SIGNATURE OF THE DEAN	SIGNATURE OF THE GUIDE

Acknowledgement

Acknowledgement

The investigator records her highest gratitude to Dr.(Tmt.) Rajammal P. Devadas, M.A., M.Sc., Ph.d., (Ohio state), D.Sc., (Madras), Hon.D.H.L. (Oregon state), Hon.D.H.L (Ohio state), Hon.D.Sc., (C.Azad Agri University, Kanpur), Hon.D.Sc., (University of Ulster, Northern Ireland), Chancellor, Avinashilingam Institute for Home Science and Higher Education for Women -Deemed University, Coimbatore, for facilitating the conduct of this study.

The investigator extends her sincere thanks to Dr.(Tmt.) Lakshmi Santha Rajagopal, M.Sc., (Tennesse), Ph.D., (Madras), Vice Chancellor, Avinashilingam Institute for Home Science and Higher Education for Women -Deemed University, Coimbatore for providing the facilities to do her study.

The investigator expresses her profound sense of gratitude and sincere thanks to Dr.(Tmt.) Saroja Prabhakaran, M.A., Dip.Ed., (Madras), Ph.D., (Mother Teresa), Registrar and Director, Hall of Residence, Avinashilingam Institute for Home Science and Higher

Education for Women -Deemed University, Coimbatore, for rendering the required infrastructure for the conduct of the study.

The researcher expresses her reverential gratitude to Dr.(Tmt.) Parvathi Eswaran, M.S (Columbia), Ph.D. (Madras), Dean, Faculty of Home Science, Professor and Head of Department of Food Service Management and Dietetics, Avinashilingam Institute for Home Science and Higher Education for Women -Deemed University, Coimbatore, for her encouragement and interest shown throughout the study.

The researcher acknowledges her sincere thanks to Dr.(Tmt.). K.S.Sarojini, M.Sc., M.Ed., (Madras), M.Phil., (Bharathiar), Ph.D., (Avinashilingam), Reader, Department of Food Service Management and Dietetics for her dynamic guidance, affable help, amicable suggestions and consistent inspiration rendered to carry out every step of this study smoothly and successfully.

She is deeply thankful and happy to record her gratitude to her beloved mother, sisters and family members for their encouragement, support, co-operation and good wishes in

carrying out the study successfully. Also, she thanks all her friends and well wishers.

The investigator regards her sincere thanks to the students (subjects).

Finally she bows to the Glory of God and his manifold mercise and blessings of her father on her to carry out the study sucessfully.

Contents

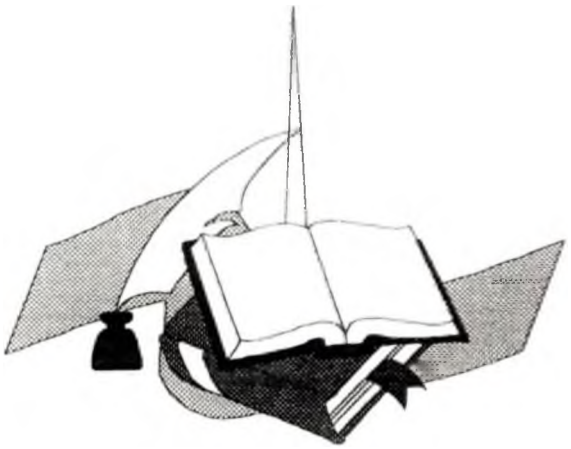
LIST OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

LIST OF APPENDICES



Introduction

I. INTRODUCTION

HEALTH:

When Health is absent
Wisdom cannot reveal itself
Art cannot become manifested
Strength cannot be exerted
Wealth becomes useless and
Reason is powerless.

- Herophilus, 300.B.C.

Health is a precious asset for everyone, the greatest of all possessions and a priceless treasure. It encompasses all aspects of life fit together in a way that is comfortable, so that one enjoys a vibrant life (Subramanian, 1990).

People play a central part in achieving the health they need to lead productive and enjoyable lives. No doubt health is a basic need of all human beings from womb to tomb (Perumalswamy, 1989).

The most crucial segment of our population from the point of view of the quality of our future generation is today's youth. Their health competence will be the major determinant of the health and nutritional status of children of the next generation.

Adolescence is a crucial phase in life since, atleast some of the nutritional insults of childhood can be erased during this period. It provides second

opportunity for undoing the deleterious effects of early childhood malnutrition (Gupta, G.R., 1998).

Adolescence is the period of development between puberty and young adult hood. Its beginning is marked by the physical event of puberty. Its end is a social attainment, an unspecific event that cannot be pinpointed in a time frame.

Adolescence should be the time of greatest hope and promise in life. It can be a spring board, producing self-confident young adults equipped with the knowledge they need to create a successful future for themselves and their societies. If it goes wrong for today's adolescent, it goes wrong for the world.

Urbanization of adolescent population in developing countries may mean,

- Growing exposure to risks - alcohol and drugs, violence, risky sexual practice, HIV/AIDS.
- Loss of culture and isolation from extended family.
- Improved access to better schools youth-friendly health services.
- More employment opportunities.
- Falling birth rate (UNICEF., 1998).

Adolescent girls have nutritional deficiencies more often than boys. Several factors contribute to this one of the major factor is inadequate food intake and

faulty dietary habits. Williams., (1989) also stated that the growth period of adolescence requires increases in energy, protein, minerals and vitamins. Boys usually eat well enough to receive all necessary nutrients than girls.

However studies carried out by Devadas., (1989) indicate that food and nutrient intake was not adequate for females during adolescence.

Small quantities of foods are eaten especially of fruits, vegetables, milk, cheese and meat. Girls usually need more eggs and whole grain cereals than they eat. Also girls, who are dieting often develop nutritional deficiencies because of a low intake of food.

Inadequate knowledge of nutrition influences the development of poor nutrition practices. Many adolescents need to reduce dietary fat and sugar. Social pressures, troubled family relationships and personal adjustments also seem to accompany poor eating habits (Philip., 1993).

Breakfast, the meal which "**Breaks the fast**" most neglected meal among adolescents.

They skip breakfast because of lack of time in morning, because they would rather sleep late, and for the reason that snacks, which make up about one-fourth of the daily intake of food, do not compensate for meals missed because, the snacks are primarily fats, carbohydrates and sugars or because the intake from snack is not sufficient to make up for the food missed.

As a result of faulty dietary habits, neglect of breakfast and craving for fast foods many health problems are found among the adolescent population.

Adolescence is a period full of vigour, ambition, curiosity, innovation and a period of transition. Adolescence due to the major physical and psychological changes and changes in modern life style with food fads result in inappropriate weight, nutrient deficiencies and associated diseases. Their life is so full of hustle and bustle, that they even fail to respond to their hunger pangs. More even adolescents have their desire to emplore new things and are more influenced by their peers. So many of them easily acquire habits like smoking, drinking alcohol, pan chewing which in turn may pave way to peptic ulcer and gastritis.

Of all the health problems, peptic ulcer and gastritis, the more prevalent disease among all age groups envisage adolescents as prime victims.

According to Robinson., (1994) the term peptic ulcer is used to describe any localized erosion of the mucosal lining of those portions of the alimentary tract that come in contact with gastric juice and gastritis is the inflammation of the mucosa of the stomach occurring as an acute or chronic lesion with atrophy or hypertrophy in some persons.

The symptoms of peptic ulcer and gastritis are more or less the same. These include epigastric pain, haemorrhage, obstruction, nausea and vomitting, weightloss and iron deficiency anaemia.

Though this is most commonly present among middle and older adults, the number of young adults and adolescents falling victims to these disease is on the increasing side.

The present study is aimed to find out the prevalence of peptic ulcer and gastritis among dayscholars and hostelites of an university. The reason for concentrating on hostelites as one of the target group is that they are more prone to these diseases, as they frequently avoid meals due to boredom, hatredness to foods, absence of compulsion and feeling deserted. The study is also aimed to find out the life style and food consumption pattern in relation to the incidence of peptic ulcer and gastritis. The objectives set for the study are, to find out

- the prevalence of peptic ulcer and gastritis among hostelites and dayscholars belonging to the age group of 18-22 years.
- the relation between the life style pattern and the prevalence of peptic ulcer and gastritis among hostelites.
- the relation between the life style pattern and the prevalence of peptic ulcer and gastritis among dayscholars.
- the food consumption pattern and the prevalence of peptic ulcer and gastritis among hostelites.
- the food consumption pattern and the prevalence of peptic ulcer and gastritis among dayscholars.

- create awareness about the importance of an adequate diet and management of peptic ulcer and gastritis through diet counselling and
- Evaluate the impact of diet counselling.

Review of Literature

II. REVIEW OF LITERATURE

The available literature pertaining to the study on "Prevalence of peptic ulcer and gastritis among Hostelites and dayscholars of an university and their life style and food consumption pattern" was reviewed and discussed under the following headings:

A. Definitions for peptic ulcer and gastritis.

B. Symptoms for peptic ulcer and gastritis.

C. Causes and Aetiology for pectic ulcer and gastritis

D. Prevalence of peptic ulcer and gastritis.

E. Significance of eating disorders in peptic ulcer and gastritis.

F. Treatment for peptic ulcer and gastritis and

G. Life style and food consumption pattern of adolescents.

A. DEFINITION FOR PEPTIC ULCER AND GASTRITIS

(1) PEPTIC ULCER:

Peptic ulcer is defined by Whitney (1987)as an eroded mucosal lesion in the oesophagus, stomach or duodenum.

Peptic ulcers are defined as sharply circumscribed lesions of the digestive tract resulting from the digestive action of gastric juice. Ulcers can develop

in the lower end of the oesophagus (oesophageal ulcer), in the stomach (gastric ulcer) in the duodenum (duodenal ulcer) (Lewis .C., 1989).

Peptic ulcer occurs in those parts of the gastro intestinal tract which are exposed to acid pepsin mixture. Common sites are lesser curvature of the stomach, when the ulcer is called gastric ulcer or first part of the duodenum it is known as duodenal ulcer (Chaudhuri,S.K., 1993).

The term peptic ulcer is used to describe any localised erosion of the mucosal lining of those portions of the alimentary tract that come in contact with gastric juice. The majority of ulcers are found in the duodenum, although they also occur in the oesophagus, stomach or jejunum (Robinson., 1990; Williams., 1990; Srilakshmi., 1993; Walton., 1994; Krause., 1996; and Antia., 1997).

(2) GASTRITIS:

According to Williams (1990), gastritis is the inflammation of the stomach.

Gastritis is the inflammation of the mucosa of the stomach occurring as an acute or chronic lesion with atrophy or hypertrophy in some persons (Robinson., 1990).

Gastritis is the common disorder characterised by inflammation of the stomach (Krause., 1996).

(B)SYMPTOMS FOR PEPTIC ULCER AND GASTRITIS:

Epigastric pain occurring as deep hunger contractions 1-3 hours after meals. The pain may be described as dull, piercing, burning or gnawing and is usually relieved by the taking of food or alkalis (Srilakshmi., 1993).

Low plasma levels which delay rapid and complete healing of ulcers (Davidson., 1986).

Gilmore (1995) stated that weight loss and iron deficiency anaemia are very common among ulcer patients.

Breslow., (1997) opines that haemorrhage is also possible in some cases. Current data suggest that nausea and constipation is possible because of ulcers (George, 1994).

Vomitting occurs in 70-75 per cent of patients. The vomit is acid to taste and smell. Bleeding ulcer result in vomitting known as haematemesis (Krause., 1996).

Heart burn is encountered in 60-85 per cent of patients. One mechanism of heart burn is associated with motor dysfunction of the oesophagus(Dogge., 1997).

Slendy.,(1994) found that excess secretion, regurgitation and salivation are frequent symptoms of ulcer.

The volume and concentration of HCL in the gastric contents are increased in duodenal ulcer but not in gastric ulcer. (Ettegared., 1997).

There are spasms of pyloric canal and this may give rise to a feeling of sickness, distension and prevent taking food (Mueller., 1998).

(C)CAUSES OR AETIOLOGY FOR PEPTIC ULCER AND GASTRITIS:

Shills., (1994) stated that acid hypersecretion is attributed to an increased number of parietal cells, impaired inhibition of gastric release and possibly more rapid gastric emptying with loss of buffering effect.

Chandramohan., (1999) in his study indicate that the duodenal ulcer patients are known to have a capacity to secrete large total amount of acid particularly in response to a meal. This may be due to an increase in the number of parietal cells capable of secreting the acid and an increased sensitivity of these cells to the stimuli for acid secretion.

It is common in persons with blood group 'O' and twins (Antia., 1997, Chandramohan., 1999).

Kumar (1990), indicate that smokers had a higher risk for peptic ulcer compared with those who are non - smokers.

Tina (1987) opines that 99 per cent of ingested caffeine is absorbed and distributed in all tissues and organs. Intake of fresh fruits, drinking of juice or mineral water, and physical activity on the way to work decreased with coffee and increased with tea consumption (Schwarz **et al.**, 1994).

Niv (1990) point out that inadequate sleep and rest, disease and trauma may be predisposing factors in the development of pepticulcer and gastritis.

Drugs are attributed as a significant risk factor for peptic ulcer and gastritis. Drugs such as Asprin, NSAID (non steroid anti inflammatory drugs and Indomenthacin used in rheumatoid arthritis) can alter the gastric mu cosal barrier by increasing back diffusion of hydrogen. (Williams., 1990, Krause., 1996).

Robinson (1990) and Gargour **et al.**, (1993) opines that highly nervous and emotional individuals seem to be more susceptible to the disease.

Keller **et al.**, (1992) found that fast eating increased load to stomach, since digestion in saliva is not carried out properly.

Fathy **et al.**, (1992) identified too much of hot and spicy foods or very hot or cold foods and irregular food habits also develop peptic ulcer and gastritis.

H.Pylori is one of the world's most common bacterial pathogens. In developed nations its prevalence in the general population is about 40 per cent. In developing countries the prevalence is 70 per cent (David., 1996).

Current data suggest that, there is a significantly higher rate of H.pylori infection among those who had chronic gastritis, duodenal and gastric ulcer. (Marian **et al.**, 1993).

Mauoos (1995) pointed that the infection rate of H.Pylori depends to a great extent on the socio-economic conditions of the country and it starts at an early age.

Chang **et al.**, (1995) have found that, H.Pylori infection was associated with a higher prevalence of chronic atrophic gastritis compared with non-atrophic gastritis.

Pan **et al.**, (1997) suggest that, Cag A - positive (cytotoxin - associated gene A) H.Pylori isolates of 98 per cent among Chinese peptic ulcer disease patients and 100 per cent among Chinese chronic gastritis patients.

The increased risk of H.Pylori infection in Chinese and Indians points to either an inherent ethnic genetic predisposition or to socio - cultural practices peculiar to the particular race which may be responsible for transmission of the infection (Goh., 1997).

Seery (1997) indicate that there is no excess of H.Pylori - related pathology in south all immigrant Indians.

Testoni (1996) pointed that, in patients without evidence of gastric phase III of Migrating Motor Complex (MMC) the prevalence of H.Pylori colonization is significantly higher.

Among adults the acquisition rate of H.Pylori infection is low, and the main period of acquisition is childhood. The relationship between the acquisition rate and age is inverse and exponential (Sipponen **et al.**, 1996).

According to Varsky **et al.**, (1998) among HIV-positive subjects with ulcer, chronic active gastritis was more common than H.Pylori and it was associated with other pathogens.

Buso (1997) stated that, the patients had a high frequency of peptic disease, which was closely associated with H.Pylori infection.

Zoli **et al.**,(1993) have found that, among younger subjects, residing in India for 20 years or more was associated with a greater risk of H.Pylori infection.

Rohrbach **et al.**,(1993) indicated that H.Pylori in the body mucosa was strongly associated with chronic superficial gastritis with and without acute inflammation.

Prabhu **et al.**, (1994) evolved that, H.Pylori infection is noticed in almost 25 per cent subjects with histological gastritis in young Indians.

Singh **et al.**, (1998) suggest that H.Pylori is only insignificantly associated with oral mucosal lesions. Due to this infrequent association of H.Pylori in beingn lesions like aphthous ulcer, leucoplakia, or in malignant lesion like squamous cell carcinoma of oral mucosa, its causal relationship with these lesions appears remote.

Frank (1998) identified, Helicobactor infection of the antrum seems to be equally prevalent in the high and low duodenal ulcer areas of India.

(D)PREVALENCE OF PEPTIC ULCER AND GASTRITIS:

Incidence rate is defined by Park and Park (1997) as the number of new cases occurring in a defined population during specified period of time. The term prevalence refers specifically to all current cases (old and new) existing at a given point in time or over a period of time in a given population.

According to Misra **et al.**, (1997) the prevalence of peptic ulcer is low and chronic gastritis is uncommon.

Chandramohan (1999) pointed out the duodenal ulcer to be several times more common than gastric ulcer in both sexes in India.

World wide prevalence of peptic ulcer and gastritis is reported by Premaratnes (1998) there are more 350,000 to 500,000 new cases per year. There are more than one million ulcer-related hospitalizations each year.

Sonnenberg (1996) stated that, in most of the Indian countries and USA, duodenal ulcer occur twice as frequently as gastric ulcer.

Anand **et al.**, (1996) studied that the prevalence of peptic ulcer was 2 per cent.

Cacciarelli **et al.**, (1996) stated that the prevalence of peptic ulcer is lower in AIDS patients.

Malecki **et al.**, (1996) observed that the prevalence of reactive gastritis is more in diabetics than non- diabetics.

Pajares(1996) studied that , the prevalence of H.Pylori infection in chronic gastritis patients in Spain was 85 per cent.

Sipponen **et al.**, (1994) pointed out that, the prevalence rate of gastritis has fallen in Finland in the last 15 years (40-50 per cent). This decrease is caused by a decline of the rate of H.Pylori acquisition in birth cohorts, particularly in childhood and adolescence.

The prevalence of H.Pylori infection in north eastern Malaysia showed that there was 1.5 / 100000 persons-years reflecting a relatively low frequency of peptic ulcer in the adult population (Uyub., 1994).

(E)SIGNIFICANCE OF EATING DISORDER IN PEPTIC ULCER AND GASTRITIS:

Over the past 10 to 15 years it has become apparent that eating disorders have reached epidemic proportions among adolescents. There are two distinct disorders anorexia nervosa and bulimia, which affect adolescents and college age women more frequently than any other group.

Devlin **et al.**, (1997) observed that binge eating gives rise to delayed gastric emptying and blunted post prandial cholecystokinin release, leading to an impaired satiety response which tends to perpetuate the illness.

Woodside **et al.**, (1992) identified that the age onset of anorexia nervosa and bulimia is 15-20 years.

Human Immuno Deficiency virus patients having symptoms of an eating disorder is presented (Fornari **et al.**, 1992).

Relevant studies stated that, the sub-classification of anorexia nervosa is bulimic and non-bulimic or restrictor type. (Woodside **et al.**, 1992).

Binge eating is usually associated with weight loss behaviors in both sexes (Glbbons **et al.**, 1992).

Alvin **et al.**, (1993) point out that the serious complication of eating disorders are weight loss, vomitting or abusers of laxatives, bradycardia, hypertension, hypoglycaemia, hypoplasia, anaemia, thrombocytopenia and acute gastric dilation.

Mc Clain **et al.**, (1993) indicate that the gastro intestinal problems that may be caused by the complication of eating disorders.

Herzog **et al.**, (1992) opines that drug therapy is more frequent in treating patients with bulimia and anorexia nervosa. Because it reduce hyperactivity and anxiety during meal time, as well as to stimulate appetite.

Kirk (1993) in his study on nutritional counselling in bulimia nervosa and anorexia have found that the dietary advice was able to reduce the occurrence of eating disorders.

Oyewumi (1992) pointed out the prevalence rate for anorexia from the high school, University and college samples were 18.6 per cent, 9.1 per cent and 1.7 per cent respectively and bulimic were 21.16 per cent, 22.2 per cent and 19.2 per cent.

(F)TREATMENT FOR PEPTIC ULCER AND GASTRITIS:

Individualised attention to the whole person rather than to the ulcer person is extremely important in the management of persons with ulcer disease (Welt., 1993).

Since medical and dietary therapies produce only symptomatic improvement, in general treatment consist of drugs, rest and diet (Robinson **et al.**, 1990).

(1) DRUGS :

According to Varia **et al.**, (1997), antacids reduces the pain and encourages the healing of peptic ulcer and gastritis. Antacids should be taken one to three hours after eating.

A histamine hydrogen receptor antagonist, cimetidine inhibits basal and stimulated acid secretion and increases the rate of ulcer healing (Hedberg **et al.**, 1997)

Sujit (1996) state that H_2 blockers stop vagal induced/gastrin induced HCL secretion. Krause (1996)indicates the secretion of gastric acid and may also increase the resistance of mucosal cells to injury.

Porro (1995) suggest that anticholinergic drugs and antispasmodics inhibit acid sercetion and delay gastric emptying.

Henry (1993) observed that, the increasing hospitalization rate for peptic ulcer among elderly subjects was only partly explained by the increasing consumption of NANSIDS (Nonsteroidal anti - inflammatory drugs).

Agarwal (1993) studied that NANSIDS are continued while gastro intestinal damage is present, only misoprostol and omeprazole have demonstrated efficacy in healing gastric mucosal injury.

Avunduk **et al.**, (1995) opines that after antimicrobial therapy the gastritis folds are normalised.

Ajay Kumar (1998) point out that the healing of duodenal ulcer is more in winter season.

Kochetkov **et al.**, (1992) stated that Mono Sodium Glutamate (MSG) taken with food stimulated gastric secretion and improved digestion.

(a) HOMOEOPATHY:

Argentnit, tryarsen, hycopodium and noxvomica are recommended when there is flatulence, gnawing pain, experienced diarrhoea, headache, constipation, feels better after vomitting and has no appetite.

(b) NATUROPATHY:

The advice is to eat little and small frequency bland diet by including more vegetables, pulses and grains. Avoid tobacco, alcohol and sugar.

(c) HERBAL MEDICINE:

Liquorice may be recommended for peptic ulcer and gastritis and various ulcers. (Family guide to alternative medicine, 1992)

(2) REST:

Both physical and mental rest are required for healing (Williams, 1990)

Hallas **et al.**, (1995) stated that modification of living and work habits is needed when overwork and physical stress cause exacabations of the disease. Control of emotional stress is equally important.

(3) DIET THERAPY:

The approach to establishing a diet plan for treatment of peptic ulcer has changed considerably in recent times. It's basic objective is to provide a maximal healing and prevent further tissue damage (Antia 1997).

Shabanah **et al.**, (1994) observed that, protein foods buffer gastric acid secretion, but their buffering action is only temporary. Atleast 50 per cent of the dietary proteins should be from milk.

Sobala (1992) stated that dairy fats are recommended for the patients with peptic ulcer and gastritis.

Cerda (1993) have found that fibre rich foods should be avoided as these tend to irritate the stomach and increase gastric motility.

Gorshkov **et al.**, (1993) point out that the protein inhibited and carbohydrates increased proteolytic activity. Vegetable oil induced a moderate decrease in acidity.

Novaderzhkina (1993) suggest that, the diet is supplemented with vitamin containing foods like fruits, vegetables and juices, the healing of ulcer is faster.

Some beverages and food products which stimulate gastric secretion should be avoided. They include caffeine containing beverages, (Coffee, tea and cold beverages) alcoholic drinks, spices and condiments, meat extractives and meat soup (Krause, 1996).

(G) LIFE STYLE AND FOOD CONSUMPTION PATTERN OF ADOLESCENTS

Adolescents have the reputation of having the worst eating habits. They may skip a meal or they may eat fast foods which are generally inadequate in calcium and vitamin A but high in calories, saturated fat and sodium (Sri lakshmi, 1993). Unhealthful dietary practise like restricting caloric intake, skipping meals, fasting and using diet pills, laxatives or intentional vomitting are very common among adolescents (Story **et al.**., 1998).

Intake of cereals, pulses, green leafy vegetables, fats and oils, sugar and jaggery were significantly lower than the recommended dietary intake both rural and urban adolescents (Department of food and nutrition, 1995).

Barigidad **et al.**., (1995) point out that the mean intake of nutrients except fat, calcium and vitamin C for all the age groups (13-19 years) were less than RDA suggested by ICMR.

Saxena, (1996) revealed that total energy, protein, fat, calcium and iron was not adequate for adolescent girls (16-19 years) and consequently these children suffered from deficiency diseases.

Fruit and vegetable consumption of adolescents were well below the recommended levels (Anderson, 1994).

Sadana (1997) reports that significantly high percentage of girls than boys consumed fast food daily. It includes samosa, bread pakoda, potato chips, noodles, hot dog and pastry were the most consumed fast foods.

According to Lewis **et al.**., (1988) many adolescents eat some high calorie foods such as soft drinks, cookies, ice cream and chips without gaining excess weight.

Beverage consumption was very common among female junior college students. Average frequency of beverage intake per person per day was 3.3 times for students (Seki **et al.**.,1998)

Pollit **et al.**., 1992 observed that girls (30 per cent) ate snacks more frequently than boys (17 per cent).

Contento and Isobel (1988) opined that carbonated beverages and snacks like popcorns, chips, biscuits, cakes, candies, bubble gums, ice creams and chocolate are more liked by the adolescents when compared to other age groups.

The study conducted by Samuelson **et al.**., (1996) showed that both girls and boys consumed sweets and snacks more than once per day. Vegetables and fruits/roots were consumed less often.

Studies conducted in Tamil Nadu and Punjab indicated that girls received lower quantity of foods as well as foods low in quality (Gupta and Devadas, 1990).

Absolon and Jane (1990) found that dietary inadequacy was two to five times higher for those who did not consume break fast than who consumed break fast.

Gibson and Sullivan (1995) suggest that teenagers who eat break fast cereals tend to have more desirable nutrient intake than those who do not.

Mc clain **et al.**., (1993) showed that gastro intestinal problems may be caused by complications arising due to faulty eating behaviours.

United Nations International Children's Fund (1995) observed that more percentage of female children suffer from protein energy malnutrition, vitamin A and vitamin B - complex and vitamin - C deficiencies than the male children in the corresponding age group (4-18 years).

The study conducted by Devadas (1992)in Coimbatore that girls (35.4 percent) are more afflicted with Riboflavin deficiency than boys (30.4 per cent). Similarly iron deficiency is more among girls (33.5 per cent) than boys (29.5 per cent). It was also reported the higher incidence of gastro intestinal disorders for girls (29.9 per cent) than boys (27.1 per cent).

Dennis **et al.**., (1998)opines that weight management education for teenagers should emphasise self- esteem enhancement.

The disease prevalent among the adolescence are

- Skin Reactions : Some types of eczema, acne, hives.
- Respiratory Reactions : Asthma, hay fever, bronchitis.

- Musculoskeletal Reactions : Backache, arthritis, rheumatism.
- Cardiovascular Reactions : High blood pressure, migraine, head ache, palpitation of the heart.
- Gastrointestinal Reactions : ulcers, colitis, constipation, hyperactivity.
- Genitourinary Reactions: menstrual disturbances, painful urination, vaginal contractions.
- Endocrine Reactions: glandular disturbances, obesity, hyperthyroidism.
- Nervous system Reactions: anxiety, fatigue, convulsions.
- Sense organ Reactions: Quite varied.

(Dianne., 1994).

Methodology

III. METHODOLOGY

The methodology followed in the conduct of the present study on the "Prevalence of peptic ulcer and gastritis among hostelites and dayscholars of an university and their life style and food consumption pattern" is given below.

(A) Selection of the area

(B) Selection of the sample

(C) Collection of the data

(D) Measurement of the body dimensions

(E) 24 - hours recall survey

(F) Diet counselling and

(G) Analysis of the data

(A) SELECTION OF THE AREA

The study was carried out in five colleges situated at Coimbatore which comes under "Bharathiar University". The various colleges selected for the study were Nirmala College for women, Ramakrishna Nursing College, Kongu Nadu Arts and Science College, P.S.G.R. Krishnammal College and P.S.G. Arts and Science College. These Colleges were selected by convenience or chunk sampling due to the reasons of easy approachability and co-operation of the authorities and subjects. The subjects were located from the I, II and III year of various under graduate courses.

Kothari (1997) stated that chunk is a convenient slice of a population which is commonly referred to as a sample. It is obtained by selecting convenient population units.

(B) SELECTION OF THE SAMPLE

Sample is a small proportion of a population selected for the observation and analysis representing a population (Kothari 1997).

The study included a total of three hundred adolescent girls, both hostelites and dayscholars belonging to the age group of 17 - 21 years. Care was taken to include both hostelites and dayscholars in equal number i.e., 150 each. From each college 30 hostelites and 30 dayscholars were selected.

(C) COLLECTION OF THE DATA

According to Gupta (1991), a questionnaire is a tool or device for obtaining answers to a bunch of questions by respondent or information.

A questionnaire was prepared to elicit information from subjects regarding their socio-economic status which included age, occupation, educational status, income and family size. Life style pattern like food habits and exercising were also included.

After framing the questionnaire a pilot study was conducted on ten samples to assess the suitability of the questionnaire to collect the required

information. Based on the observations, the questionnaire was modified (Appendix 1) and then administered to the selected samples.

(D) MEASUREMENT OF BODY DIMENSIONS

Anthropometric measurements like height and weight were measured to assess their nutritional status by calculating their body mass index.

WEIGHT

Body weight is the most precise biologic measurement even with simple and imperfect conditions.

A portable bathroom weighing scale was used to find the body weight of the adolescents. The bathroom scale was checked for accuracy before weighing the subjects. This was done by noting whether the indicator needle was in zero marking. The subject was made to stand barefoot on the centre of the platform without touching anything else. The weight corresponding to the pointer was recorded to the nearest 1 kg (Plate - I).

HEIGHT

Height is the key anthropometric measurement most in use.

The height of an individual is principally a measure of skeletal body tissue - legs, spine and skull (Jellife 1989).

PLATE I MEASUREMENT OF BODY DIMENSION - WEIGHT

The stature of an individual can be measured in an upright position, recumbent position by alternative methods based on body segment length (American Dietic Association 1996).

After removing the shoes, the subject was made to stand on a flat floor against a wall. Care was taken, that the feet of the subject were parallel with heels, buttocks, shoulders and back of head held comfortably erect and arms hanging at the side in a natural manner. A horizontal scale which could be made up of plastic or wood was gently lowered to touch the top of the subjects. The position was marked . The distance between the pencil mark and the platform was measured by using a fibre glass tape (Plate - II).

The Body Mass Index of the subjects were calculated with the measured height and weight.

(E) 24 - HOURS RECALL SURVEY

A method of dietary assessment in which the individual is asked to remember everything eaten during the past 24 - hours is "24 - hours recall survey" (Krause, 1996)

The success of 24 - hours recall method depends on memory, co-operation and communication activity of the subjects and on the skill of the interviewer (Walter 1990).

PLATE II. MEASUREMENT OF BODY DIMENSION - HEIGHT

24 - hours recall survey was conducted in order to obtain the information regarding the frequency of consumption of various types of foods like fried foods, beverages, ready to eat processed foods and pickles. Based on the details the foods which influenced peptic ulcer and gastritis were identified.

(F) DIET COUNSELLING

The major objective of diet counselling is to educate the patients regarding the nature of the disease, its hazards, how it can be recognised and prevented, advice on personal hygiene, individual instructions on diet and any specific therapy that are essential (Sri Lakshmi 1995).

Diet counselling was given to a sub sample of 20 who were suffering from peptic ulcer and gastritis from all the colleges. The routine dietary pattern of the selected subsamples were collected and analysed. The modification of the dietary pattern to be followed in accordance with the severity of their disease condition was explained to the selected subjects.

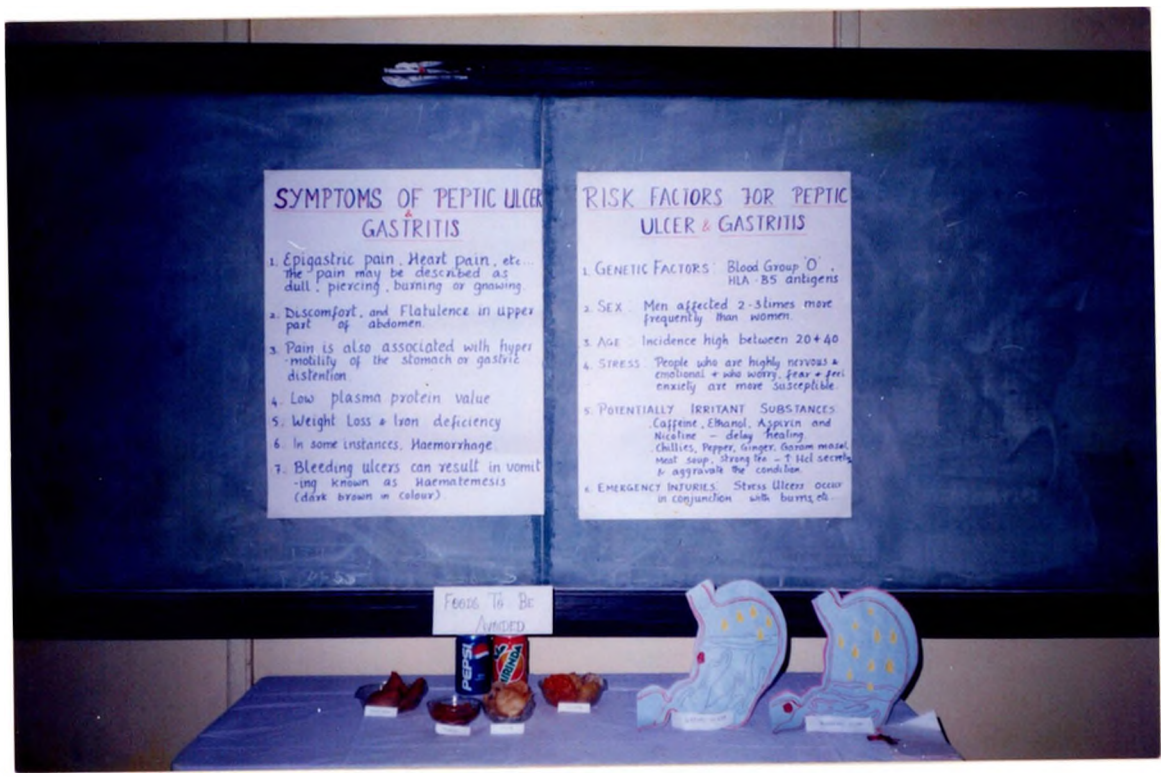
Group counselling was given to subjects for about 15 minutes (Plate - III and IV). Details regarding the foods to be included, foods to be avoided, fried foods, acid stimulating foods were explained by using aids like charts, Book let (Appendix - II), and food models (Plate - V)

A check list was administered to the subjects inorder to assess their knowledge regarding the management of the disease (Appendix -III).

PLATE III. GROUP DIET COUNSELLING PROVIDED TO THE SELECTED SAMPLES

PLATE IV. ISSUING BOOKLET TO THE SAMPLES

PLATE V. AIDS USED FOR DIET COUNSELLING



A checklist is simply a method of providing the respondent a number of options from which to choose i.e., asking respondents to answer 'Yes' or 'No' to a question or to check the category to which they belong.

Information about the diet restriction, risk factors, role of carbonated beverages, fast foods and spices and condiments in the management of condition were assessed - using the check list, before and after diet counselling.

(G) ANALYSIS OF THE DATA

The data collected was consolidated, tabulated, analysed and the details are presented in the following chapter.

Results and Discussion

IV. RESULTS AND DISCUSSION

The results pertaining to this study titled "Prevalence of peptic ulcer and gastritis among hostelites and dayscholars of an university and their life style and food consumption pattern" are discussed under the following heads.

A. General information of the selected subjects.

B. Association of life style factors among samples with peptic ulcer and gastritis.

C. Age of onset of peptic ulcer and gastritis, treatment and dietary modification of the selected samples.

D. Body mass index of the selected subjects and samples.

E. Impact of diet counselling

A. GENERAL INFORMATION OF THE SELECTED SUBJECTS:

The results obtained from the base line survey conducted among selected dayscholars and hostelites to study their age, family background, food consumption pattern, life style pattern and prevalence of disease are discussed in the following pages.

Table - I gives the age of the selected subjects.

TABLE : I

AGE OF THE SELECTED SUBJECTS

N=300

S.No	Age in years	Dayscholars		Hostelites	
		No	%	No	%
1.	170 - 18.5	32	21.0	28	19.0
2.	18.5 - 20.0	89	59.0	75	50.0
3.	20.0 - 21.5	29	19.0	47	31.0

The majority of hostelites (50 per cent) and dayscholars (59 per cent) were in the age group of 18.5 - 20.0 years who were doing II year under graduate programme. Twenty one per cent of dayscholars and nineteen per cent of hostelites were in the age group of 17.0 - 18.5 years who were doing their first year under graduate course.

Table II given below furnishes the family size of the selected subjects.

TABLE II

FAMILY SIZE OF THE SELECTED SUBJECTS

N=300

S.No	Family size	Dayscholars		Hostelites	
		No	%	No	%
1.	2 -3	30	20.0	45	30.0
2.	4 -5	94	63.0	84	56.0
3.	6 -7	26	17.0	19	13.0
4.	>7	-	-	2	1.0

In the families of both hostelites (56 per cent) and dayscholars (63 per cent) the number of members were 4 to 5. This indicates the realisation on the importance of medium family system by the parents of selected subjects.

TABLE III reveals the family income of the selected subjects.

TABLE III

FAMILY INCOME OF THE SELECTED SUBJECTS

N=300

S.No	Monthly Income of the family	Dayscholars		Hostelites	
		No	%	No	%
1	upto 2100	16	11.0	14	9.0
2	>2100 - <4500	25	17.0	23	15.0
3	>4500 - <7500	23	15.0	29	19.0
4	7500 and above	86	57.0	84	56.0

According to Hudco classification (1997) 11 per cent of the families of dayscholars and nine per cent of the hostelites were earning only upto Rs.2100 as their monthly income. Nineteen per cent of the hostelites and fifteen per cent of the dayscholars had the family income from Rs.4500 - 7500. Maximum percentage of both hostelites (56 per cent) and dayscholars (57 per cent) belonged to high income group (Rs.7500 and above).

The life style pattern of the subjects is depicted in Table IV

TABLE IV

LIFESTYLE PATTERN OF THE SELECTED SUBJECTS

N=300

S.No	Life style pattern	Dayscholars		Hostelites	
		No	%	No	%
1.	**Food habits:**				
	Vegetarian	47	31.0	49	33.0
	Non-Vegetarian	103	69.0	101	67.0
2.	**Consumption of coffee (Cups):**				
	0	59	39.0	40	27.0
	1	35	23.0	45	30.0
	2	33	22.0	56	37.0
	3	11	7.0	14	9.0
	4	12	8.0	-	-
	5	-	-	-	-
	6 and >6	-	-	-	-
3.	**Skipping of meals:**				
	Break fast	41	27.0	56	37.0
	Lunch	7	5.0	3	2.0
	Dinner	10	7.0	18	12.
	Nil	92	61.0	73	49.0
4.	**Consumption of ready to eat processed foods:**				
	Yes	136	91.0	132	88.0
	No	14	9.0	18	12.0

Among the 300 adolescent girls studied, majority of the selected subjects 68 per cent were non - vegetarians while only 38 per cent of them were vegetarians respectively.

It is very satisfying to know that maximum percentage of both hostelites and dayscholars did not skip their meals. Apart from this 27 per cent of dayscholars and 37 per cent of hostelites had the habit of skipping break fast. The ICMR (1989) survey showed that 68 per cent of the Indian population consumed two meals daily.

It is very discouraging to know that 91 per cent of dayscholars and 81 per cent of hostelites of the selected subjects consumed ready to eat processed foods.

Majority percentage of selected subjects didnot consume coffee daily. It is very heart warming to know that only 10 per cent of dayscholars consumed 4 cups of coffee per day.

The frequency of consumption of the different food items by the subjects is depicted in Table V.

TABLE - V

FOOD CONSUMPTION PATTERN OF THE SELECTED SUBJECTS

No = 300

S.No	Food items	Dayscholars		Hostelites	
		No	%	No	%
1.	**Early Morning:**				
	Milk	61	41.0	12	8.0
	Coffee	83	55.0	52	35.0
	Tea	16	10.0	33	22.0
2.	**Break Fast:**				
	Iddli	77	51.0	57	38.0
	Dosai	39	26.0	-	-
	Uppuma	5	3.0	12	8.0
	Chappathi	2	1.0	-	-
	Poori	-	-	-	-
	Bread Toast/Egg	10	7.0	47	31.0
	Pongal	7	5.0	34	23.0
	Egg	10	7.0	-	-
3.	**Mid - Morning:**				
	Juices/Snacks	-	-	-	-
	Juices	12	8.0	-	-
	Snacks	-	-	-	-
4	**Lunch:**				
	Sambar rice/Rasam	13	9.0	78	52.0
	Rice/Curd rice/Poriyal/Pappad/Pickles				
	Sambar rice/Poriyal	11	7.0	19	13.0
	Curdrice/Pickles	70	47.0	29	19.0
	Tamarind rice	22	15.0	-	-
	Lemon rice	17	11.0	-	-
	Fried rice	2	1.0	-	-
	Birivani	-	-	-	-
	Rice with Non - Veg	2	1.0	24	16.0
5.	**Tea time:**				
	Coffee/Snacks	23	15.0	12	8.0
	Tea/Snacks	72	48.0	81	54.0
	Milk/Snacks	7	5.0	41	27.0
	Coffee	16	11.0	-	-
	Tea	11	7.0	7	5.0
	Milk	21	14.0	9	6.0
	Snacks	-	-	-	-
5.	**Dinner:**				
	Varietyrice/Milk/Fruit	69	46.0	103	69.0
	Tiffen/Milk/Fruit	57	38.0	12	8.0
	Milk/Fruit	24	16.0	-	-
	Milk	-	-	36	24.0

All the selected subjects (300) consumed cereals, pulses, vegetables, milk and milk products and oil daily.

It is seen that 150 selected subjects consumed fruits daily. The most commonly consumed fruits included banana, oranges and guava.

Among the animal products, 16 per cent of hostelites and one percent of dayscholars consumed non - vegetarian daily. The most of the hostelite is seen that 14 per cent of dayscholars and 31 per cent hostelites consumed egg daily.

Table VI depicts the consumption of spicy foods among the selected subjects.

TABLE VI

CONSUMPTION OF SPICY FOODS AMONG THE SELECTED SUBJECTS

N=300

S.No	Spicy foods	Dayscholars		Hotelites	
		No	%	No	%
1.	Yes	99	66.0	98	65.0
2.	No	51	34.0	52	35.0

The present results showed that a total 197 of the selected subjects (66 per cent) liked spicy foods very much.

Table VII discussed the eating pace and the foods consumed faster by the selected subjects.

TABLE VII
EATING PACE AND FOODS CONSUMED FASTER BY THE SELECTED SUBJECTS

N = 300

S.No	Eating pace and the food items	Dayscholars		Hotelites	
		No	%	No	%
1.	Eating pace:				
	Fast eater	54	36.0	57	38.0
	Slow eater	96	64.0	93	62.0
2.	Food items:				
	All	38	70.0	29	51.0
	Bread	4	8.0	3	5.0
	Snacks	3	6.0	2	4.0
	Iddly	7	13.0	9	16.0
	Dosai	11	20.0	13	23.0
	Chillies/Spices	17	31.0	15	26.0
	Non-Veg items	6	11.0	3	5.0
	Noodles	2	4.0	7	12.0
	Fried items	8	15.0	4	7.0

The above Table indicates that about 70 per cent of dayscholars and 51 per cent of hostelites were found to consume almost all foods fastly.

While 31 per cent of dayscholars and 26 per cent of hostelites consumed chillies/spices faster. Minimum of 4 per cent dayscholars consumed noodles faster and 4 per cent of hostelites consumed snacks faster.

Table VIII reveals the frequency of consumption of processed foods and carbonated beverages by the selected subjects

TABLE VIII

FREQUENCY OF CONSUMPTION OF PROCESSED FOODS AND CARBONATED BEVERAGES BY THE SELECTED SUBJECTS

N=300

S. No.	Food items	Daily				Weekly											
						Dayscholars						Hostelites					
		Dayscholars		Hostelites		Once		Twice		More		Once		Twice		More	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Biscuits	2	4	-	-	-	-	21	46	-	-	-	-	23	50	-	-
2	Chips	-	-	-	-	13	20	17	26	-	-	18	27	12	18	-	-
3.	Cutlet	-	-	-	-	11	55	-	-	-	-	2	10	-	-	-	-
4.	Burger	-	-	-	-	4	22	-	-	-	-	3	17	-	-	-	-
5.	Pizza	-	-	-	-	-	-	-	-	-	-	1	17	-	-	-	-
6.	Cakes	-	-	-	-	-	-	7	16	-	-	-	-	32	71	-	-
7.	Puff	-	-	-	-	21	31	-	-	-	-	31	43	-	-	-	-
8.	Paratha	-	-	-	-	14	24	-	-	-	-	17	29	-	-	-	-
9.	Pongal	-	-	-	-	3	21	-	-	-	-	2	14	-	-	-	-
10	Chappathi	-	-	-	-	7	17	-	-	-	-	20	48	-	-	-	-
11	Bhel puri	-	-	-	-	2	8	-	-	-	-	-	-	-	-	-	-
12.	Pani puri	-	-	-	-	3	33	-	-	-	-	-	-	-	-	-	-
13	Noodles	-	-	-	-	7	41	-	-	-	-	4	24	-	-	-	-
14.	Cocola	-	-	-	-	13	25	-	-	-	-	14	27	-	-	-	-
15	Mirinda	-	-	-	-	11	35	-	-	-	-	6	19	-	-	-	-
16	Fanta	-	-	-	-	5	35	-	-	-	-	3	21	-	-	-	-
17.	Pepsi	-	-	-	-	16	24	-	-	-	-	17	25	-	-	-	-
18.	Ice cream	-	-	-	-	19	29	-	-	-	-	7	11	-	-	-	-
19.	Non-veg	-	-	-	-	9	15	-	-	-	-	30	51	-	-	-	-
20	Pickles	23	12	112	69	-	-	11	7	-	-	-	-	-	-	-	-

TABLE VIII (Contd.)

FREQUENCY OF CONSUMPTION OF PROCESSED FOODS AND CARBONATED BEVERAGES BY THE SELECTED SUBJECTS

N=300

S.No	Food itmes	Fortnightly												Montly									
		Dayscholars						Hostelites						Dayscholars						Hostelites			
		Once		Twice		More		Once		Twice		More		Once		Twice		More		Once		Twice		More	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Biscuits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Chips	2	3	-	-	-	-	3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	Cutlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	35	-	-	-	-
4.	Burger	-	-	-	-	-	-	-	-	-	-	-	-	3	17	-	-	-	-	8	44	-	-	-	-
5.	Pizza	-	-	-	-	-	-	-	-	-	-	1	-	2	33	-				3	50				-
6.	Cakes	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	5	11	-	-	-	-
7.	Puff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	9	-	-	9	13	-	-	-	-
8.	Paratha	6	10	-	-	-	-	3	5	-	-	-	-	8	14	-	-	-	-	11	19	-	-	-	-
9.	Pongal	-	-	-	-	-	-	1	7	-	-	-	-	5	36	-	-	-	-	-	-	3	21	-	-
10	Chappathi	7	17	-	-	-	-	-	-	-	-	-	-	3	7	-	-	-	-	5	12	-	-	-	-
11	Bhel puri	-	-	-	-	-	-	8	31	-	-	-	-	-	-	7	27	-	-	-	-	9	35	-	-
12.	Pani puri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	67	-	-	-	-	-	-	-	-
13	Noodles	-	-	-	-	6	10	5	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.	Cocola	-	-	-	-	-	-	3	6	-	-	-	-	15	29	-	-	-	-	6	12	-	-	-	-
15	Mirinda	-	-	2	6	-	-	-	-	-	-	-	-	3	10	-	-	-	-	9	29	-	-	-	-
16	Fanta		-	-	-	-	-	-	-	-	-	-	-	2	14	-	-	-	-	4	29	-	-	-	-
17.	Pepsi	-	-	-	-	-	-	5	7	-	-	-	-	12	18	-	-	-	-	18	26	-	-	-	-
18.	Ice cream	-	-	-	-	-	-	-	-	-	-	-	-	21	32	-	-	-	-	-	-	19	29	-	-
19.	Non-veg	-	-	-	-	-	-	9	15	-	-	-	-	5	8	-	-	-	-	6	10	-	-	-	-
20	Pickles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Among all the 300 subjects 136 dayscholars and 137 hostelites consumed ready to eat processed foods.

Among the food items like pongal, paratha, chappathi and Non - vegetarian were consumed once in a week by the majority of the selected subjects (65 dayscholars and 62 hostelites). Forty four selected subjects (13 dayscholars and 31 hostelites) consumed once in fortnightly, 86 selected subjects consumed once in a month and 9 selected subjects (6 dayscholars and 3 hostelites) consumed twice in a month.

Snacks like chips, cutlet, burger, pizza, cakes, bhelpoori, panipuri and ice cream were consumed once in a week by the selected subjects (55 dayscholars and 75 hostelites). Thirty dayscholars and thirty two hostelites consumed twice a week, fourteen hostelites consumed once in fortnightly. Forty one dayscholars and 25 hostelites consumed once in a month, 23 dayscholars and 53 hostelites consumed on the basis of twice in a month.

It is seen that 135 selected subjects (23 dayscholars and 112 hostelites) consumed pickles daily, 28 selected subjects (11 dayscholars and 7 hostelites) consumed pickles once in a month.

Table IX depicts the prevalence of disease among the selected subjects.

TABLE IX

PREVALENCE OF DISEASES AMONG THE SELECTED SUBJECTS

N=300

S.No	Disease	Day scholars		Hostelites	
		No	%	No	%
1.	Peptic ulcer				
	a.Duodenal ulcer	7	5.0	12	8.0
	b.Gastric ulcer	6	4.0	2	2.0
2.	Gastritis	14	9.0	19	13.0
3.	Respiratory tract infection	13	9.0	16	11.0
4.	Anaemia	6	4.0	13	9.0

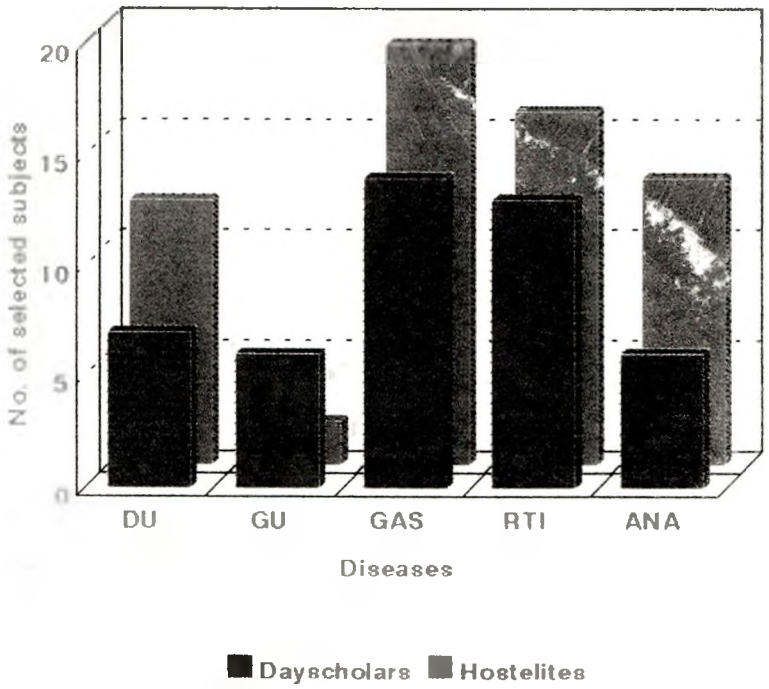
The above Table clearly shows that the prevalence of diseases among the selected subjects (Fig 1 and 2).

Gastritis was found to be more prevalent among hostelites amounting to 13 per cent and gastric ulcer was the least prevalent disease with 2 per cent of hostelites suffering from it (Fig 3).

Among dayscholars the incidence of gastritis and respiratory tract infection was higher (9 per cent) than the other mentioned disease conditions (Fig 4).

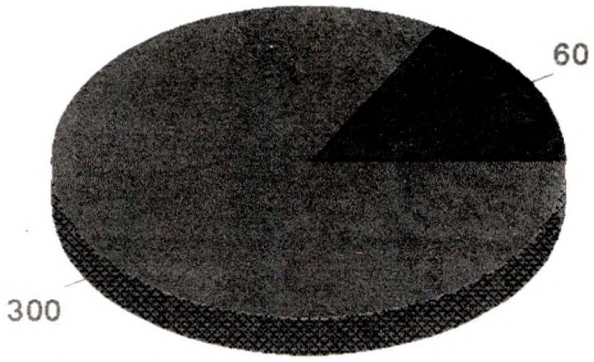
(B) Association of life style factors among subjects with peptic ulcer and gastritis samples.

Life style factors which influence the onset of peptic ulcer and gastritis like distribution of vegetarians and non-vegetarians, consumption pattern of coffee, skipping of meals, consumption of ready to eat processed foods, food consumption

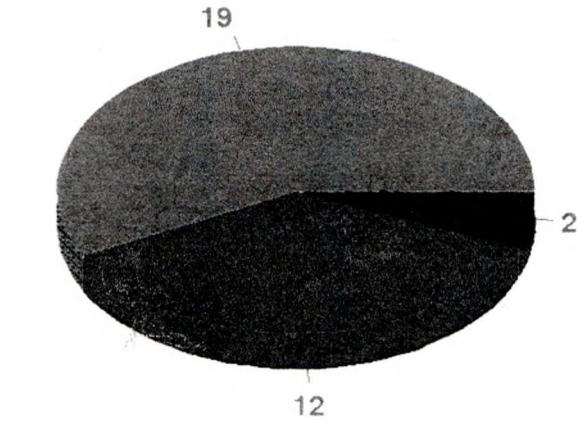


DU- Duodenal ulcer
GU- Gastric ulcer
GAS - Gastritis
RTI - Respiratory Tract Infection
ANA - Anaemia

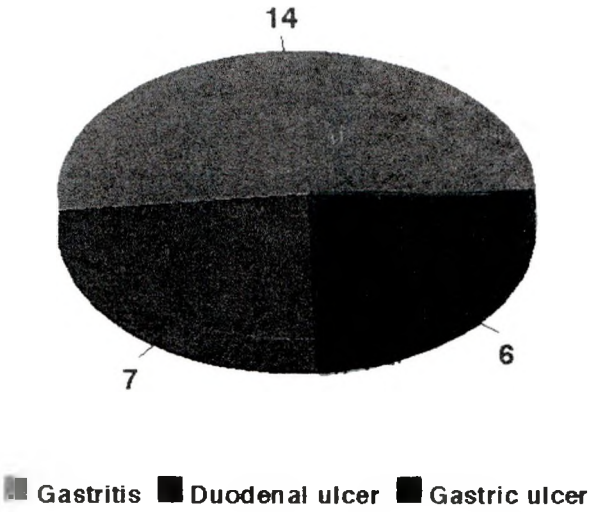
Prevalence of duodenal ulcer, gastric ulcer and gastritis among the selected dayscholars and hostelites
Fig. 1



Prevalence of peptic ulcer and gastrids among the selected subjects
Fig. 2



Prevalence of duodenal ulcer, gastric ulcer and gastritis among the selected hostelites
Fig. 3



Prevalence of duodenal ulcer, gastric ulcer and gastritis among the selected dayscholars
Fig. 4

pattern, eating pace and the frustration pattern of the selected subjects are presented in the following tables.

Table X lists the distribution of vegetarianism and Non-vegetarianism among the selected samples.

TABLE X

DISTRIBUTION OF VEGETARIANS AND NON-VEGETARIANS AMONG THE SELECTED SAMPLES.

N=60

S.No	Type of food	Day scholars(27)	Hostelites (33)
		No	No
1.	Vegetarians	8	7
2.	Non-Vegetarians	19	26

The above Table indicated that the samples were predominantly non-vegetarians. About 19 dayscholars and 26 hostelites were non-vegetarians.

Table XI gives the consumption pattern of coffee among the selected samples.

TABLE XI.

CONSUMPTION PATTERN OF COFFEE AMONG THE SELECTED SAMPLES

N=60

S.No	Number of cups	Day scholars(27)	Hostelites (33)
		No	No
1.	0	7	10
2.	1	9	7
3.	2	5	15
4.	3	3	1
5.	4	3	11
6.	5	-	-
7.	6 and >6	-	-

According to Wardlaw (1990), caffeine containing beverages stimulates acid secretion in the stomach. This may have been pre disposing factor to peptic ulcer and gastritis.

Among the selected samples, 20 dayscholars and 23 of hostelites were found to consume coffee daily. The number of cups consumed/day ranged from 1 to 4. About 9 dayscholars consumed 1 cup/day while 15 hostelites consumed 2 cup/day.

Table XII states the pattern of skipping meals among the selected samples.

TABLE XII

PATTERN OF SKIPPING MEALS AMONG THE SELECTED SAMPLES

N=60

S.No.	Type of meals	Day scholars (27)	Hostelites (33)
1.	Break fast	12	16
2.	Lunch	7	4
3.	Dinner	8	13
4.	Nil	-	-

It is evident from the Table the skipping of meals was very common among both the dayscholars and hostelites.

Breakfast was found to be the most reflected meal of the day with a maximum of 12 dayscholars and 16 hostelites. It followed by dinner and then lunch.

Table XIII gives the consumption of ready to eat processed foods among the selected samples.

TABLE XIII

CONSUMPTION OF READY TO EAT PROCESSED FOODS AMONG THE SELECTED SAMPLES

N = 60

S.No	Consumption of ready to eat processed foods	Day scholars (27)	Hostelites (33)
1.	Yes	27	33
2.	No	-	-

It is very clear from Table XIII that all the hostelites and dayscholars consumed ready to eat processed foods.

Table XIV illustrate the consumption pattern of snacks and beverages.

TABLE XIV

CONSUMPTION PATTERN OF SNACKS AND BEVERAGES AMONG THE SELECTED SAMPLES

N =60

S.No	Frequency	Snacks		Beverages	
		Day scholars (27)	Hostelites (33)	Day scholars (27)	Hostelites (33)
1	**Daily**	2	-	-	-
2	**Weekly**				
	Once	9	6	10	4
	Twice	3	-	2	3
	More	2	8	-	-
3	**Fortnightly**				
	Once	-	-	2	5
	Twice	-	3	-	-
	More	3	-	-	-
4	**Monthly**				
	Once	-	-	4	2
	Twice	5	-	6	8
	More	3	16	3	11

It is clear from the study that among the selected samples 27 dayscholars and 33 hostelites consumed snacks, either daily, weekly, fortnightly or monthly. The snacks items consumed were biscuits, chips and cutlet.

The consumption of beverages were also very popular among the adolescent girls. These beverages included Coca-Cola. mirinda, pepsi, fanta and thumbs-up.

Table XV depicts the consumption pattern of Bakery items and pickles among the selected samples.

TABLE XV

CONSUMPTION PATTERN OF BAKERY ITEMS AND PICKLES AMONG THE SELECTED SAMPLES

N = 60

		Bakery items		Pickles	
S.No	Frequency	Day scholars (27)	Hostelites (33)	Day scholars (27)	Hostelites (33)
1	**Daily**	-	-	27	33
2	**Weekly**				
	Once	5	5	-	-
	Twice	2	3	-	-
	More	1	2	-	-
3	**Fortnightly**				
	Once	-	-	-	-
	Twice	3	4	-	-
	More	-	-	-	-
4	**Monthly**				
	Once	6	11	-	-
	Twice	2	7	-	-
	More	8	3	-	-

Majority of both hostelites and dayscholars consumed bakery items daily, weekly, fortnightly and monthly. It includes cake, pizza, burger, and puff. It is

also evident from the Table XV cake is the most frequently consumed bakery item by 11 dayscholars and 13 hostelites for evening tea. Invariably, all hostelites, and dayscholars were found to consume pickles daily.

Table XVI represents the details about pattern of eating outside by the selected samples

TABLE XVI
DETAILS ABOUT EATING OUTSIDE AMONG THE SELECTED SAMPLES

N=60

S.No.	Frequency	Day scholars(27)	Hostelites (33)
1.	**Daily**	-	-
2.	**Weekly**		
	Once	14	11
	Twice	2	-
	More	-	6
3	**Fortnightly**		
	Once	-	-
	Twice	7	2
	More	-	-
4	**Monthly**		
	Once	-	2
	Twice	-	6
	More	4	6

It is very clear from the study that all the dayscholars (27) and hostelites (33) had the habit of eating outside every week. These foods consumed were pongal, paratha, chappathi, noodles, poori, idly, dosai and non-vegetarian items.

Table XVII reveals the food consumption pattern of the selected samples.

TABLE XVII

FOOD CONSUMPTION PATTERN OF THE SELECTED SAMPLES

N=60

S.No.	Food items	Day scholars(27)	Hostelites (33)
1.	**Early Morning**		
	Milk	5	7
	Coffee	20	23
	Tea	2	3
2	**Break fast**		
	Iddli	11	13
	Dosai	2	-
	Uppuma	1	10
	Chappathi	2	-
	Poori	-	-
	Bread/Egg	68	-
	Pongal	1	10
	Egg	2	-
3	**Mid Morning**		
	Juice/Snacks	-	-
	Juices	4	-
	Snacks	-	-
4	**Lunch**		
	Sambarrice/Rasamrice/Curd rice/ Pickles /Poriyal /Pappad	4	20
	Sambar rice/Poriyal	3	8
	Curd rice/Pickles	12	5
	Tomato rice	2	-
	Lemon rice	5	-
	Fried rice	-	-
	Biriyani	-	-
	Non-Vegetarians item	1	-
5	**Tea-Time**		
	Coffee/Snacks	15	23
	Tea/Snacks	2	3
	Milk/Snacks	5	7
	Coffee	5	-
	Tea	-	-
	Milk	-	-
	Snacks	-	-
6	**Dinner**		
	Variety rice/Milk/Fruit	1	14
	Tiffin/Milk/Fruit	17	12
	Milk/Fruit	5	-
	Milk	4	7

All the selected samples (60) consumed cereals, pulses, vegetables, Milk and Milk products and oil daily.

It is very satisfactory to know that majority of the selected samples 23 dayscholars and 26 hostelites consumed fruits daily. The fruits consumed were guava, banana, orange, and apple. Apart from this, only one of the dayscholars consumed non-vegetarian daily. Non vegetarian consists of only chicken in the form of chicken gravy and chicken fry.

Table XVIII shows the consumption pattern of spicy foods among the selected samples.

TABLE XVIII

CONSUMPTION PATTERN OF SPICY FOODS AMONG THE SELECTED SAMPLES

No = 60

S.No	Spicy foods	Dayscholars (27)	Hostelites (33)
1.	Yes	22	28
2.	No	5	5

It is evident from the Table that the consumption of spicy foods were high in both dayscholars (22) and hostelites (28) of the selected samples. According to Swaminathan (1993) spices like pepper, chillies, cinnamon, cardamom stimulate gastric secretion in the stomach, which may be predisposing factor to peptic ulcer and gastritis.

Table XIX States the eating pace and the foods consumed faster by the fast eater among the selected samples.

TABLE XIX

EATING PACE AND FOODS CONSUMED FASTER BY THE FAST EATER AMONG THE SELECTED SAMPLES

N = 60

S.No	Eating pace and the food items	Dayscholars (27)	Hostelites (33)
1.	**Type of pace**		
	Fast eater	18	29
	Slow eater	9	4
2	**Food items**		
	All	11	9
	Bread	-	2
	Snacks	3	5
	Iddly	-	-
	Dosai	-	-
	Chillies/Spices	7	8
	Non-Veg items	2	4
	Noodles	-	1
	Fried items	4	4

It is observed from the Table that a majority of the selected samples 18 dayscholars and 29 hostelites were fast eater.

It is also evident from the Table that a high percentage of the selected samples consumed chillies/spices, snacks, non-veg items and fried items faster.

Table XX indicates the details regarding the frustration pattern of the selected samples.

TABLE XX
FRUSTRATION PATTERN OF THE SELECTED SAMPLES

N = 60

S.No	Frustration	Dayscholars (27)	Hostelites (33)
1.	Yes	18	23
2.	No	9	10

According to Wardlaw (1990), that stress and tension increases the acid secretion by the parietal cells of acid and eventually the acid through the mucus layer in the stomach, into the stomach tissue or into the tissue of the duodenum.

In the study it was noted that there were not much difference in the frustration pattern of the selected samples. Majority 18 dayscholars and 23 hostelites had frustration in the classroom and home.

(C) AGE OF ONSET OF PEPTIC ULCER AND GASTRITIS, TREATMENT AND DIETARY MODIFICATION OF THE SELECTED SAMPLES.

Table XXI illustrate the age of onset of peptic ulcer and gastritis among the selected samples.

TABLE XXI
AGE OF ONSET OF PEPTIC ULCER AND GASTRITIS AMONG THE SELECTED SAMPLES.

N = 60

S.No	Age of onset	Peptic ulcer		Gastritis	
		Dayscholars (27)	Hostelites (33)	Dayscholars (27)	Hostelites (33)
1.	0 -5	-	-	-	-
2.	5 -10	-	-	-	2
3.	10 - 15	3	4	3	6
4.	15 - 20	8	9	8	11
5.	20 - 25	2	1	3	-
	Total	13	14	14	19

Peptic ulcer was found to be more or less equally prevalent among dayscholars and hostelites (13 and 14). The incident of the disease was more in the age group of 15 - 20 among both the section i.e., dayscholars and hostelites.

Gastritis was more prevalent among dayscholars (14) than among Hostelites (19). The frequency of gastritis was more in the age of 15 - 20.

Table XXII represents the symptoms experienced by the selected samples.

TABLE XXII
SYMPTOMS EXPERIENCED BY THE SELECTED SAMPLES

No = 60

S.No.	Symptoms	Dayscholars (27)	Hostelites (33)
1.	Epigastric pain	16	17
2.	Nausea and vomitting	8	9
3.	Irritation during hunger	3	7

It is seen that majority of the selected samples had epigastric pain followed by nausea and vomitting. But least percentage of selected samples experienced irritation during hunger.

Table XXIII Brings out the treatment undertaken by the selected samples

TABLE XXIII
TREATMENT UNDERTAKEN BY THE SELECTED SAMPLES

N = 60

S.No	Treatment	Dayscholars (27)	Hostelites (33)
1.	Allopathy	21	23
2.	Ayurvedic	-	-
3.	Sidha	6	7
4.	Homeopathy	-	3

Among the selected samples, 21 dayscholars and 23 hostelites had undertaken allopathy treatment. And only very few 22 per cent of the dayscholars and 21 per cent of the hostelites had undertaken sidha treatment.

The Medicines taken by the selected samples is given in Table XXIV

TABLE XXIV
MEDICINES TAKEN BY THE SELECTED SAMPLES

N=60

S.No.	Medicines	Dayscholars (27)			Hostelites (33)		
		Once	Twice	More	Once	Twice	More
1.	Gelusil	6	-	-	-	9	-
2.	Omerpcazole	2	1	-	1	-	-
3.	Fancotidine	2	-	-	3	-	-
4.	Murcainegel	2	-	-	4	-	-
5.	Diavol	1	-	-	-	3	-
6.	Zinetac	2	-	-	2	3	-
7.	Domitol	1	-	-	-	2	-
8.	Ulgel	-	5	-	-	7	-
9.	Semitidine	2	-	-	-	3	-
10.	Ranitidine	-	-	2	4	-	-
11	Polygroclortygel	1	-	-	1	-	-

It is seen that out of 60 samples 19 dayscholars and 15 hostelites took gelusil, omerpcazole, fancotidine, mucainegel, diavol, zinetac, domitol, semitidine, and polygroclortygel. According to Paul (1990) antacid medications are the first line of medical treatment. They prevent histamine related acid secretion in the stomach.

Schiamberg (1988) observed that cimetidine and antacids should not be taken together. Because, antacids inhibit the absorption of cimetidine. Similar findings is observed in the present study.

Table XXV indicates the details regarding the samples who followed dietary modification after diagnosis of disease.

TABLE XXV
DETAILS REGARDING THE SELECTED SAMPLES WHO FOLLOWED DIETARY MODIFICATION AFTER DIAGNOSIS OF DISEASE

N = 60

S.No	Modification	Dayscholars (27)	Hostelites (33)
1.	Yes	19	12
2.	No	8	21

It is encouraging to note that 19 dayscholars and 12 hostelites followed dietary modification after diagnosis of the disease.

Table XXVI illustrates the food items included and avoided after diagnosis of peptic ulcer and gastritis.

TABLE XXVI
FOOD ITEMS INCLUDED AND AVOIDED AFTER DIAGNOSIS OF PEPTIC ULCER AND GASTRITIS BY THE SELECTED SAMPLES

N=60

S.No	Included and avoided items	Dayscholars (27)	Hostelites (33)
1.	**Included items**		
	Steamed foods	4	12
	Malted drinks	3	2
	Green leafy vegetables	7	11
	Ash gourd juice	6	8
	Tender coconut water	4	5
	Milk	3	-
2	**Avoided items**		
	Beverages (carbonated)	2	1
	Sweets	4	2
	Chillies/spices	11	14
	Pickles	12	17
	Hot foods	5	9
	Acid foods	7	7
	Fried foods	6	8

It is heart warming to note that majority of the selected samples have included steamed foods, green leafy vegetables, and ash gourd juice in their diet.

According to Frildmen **et al.,** (1987) milk also stimulates the gastric secretion in the stomach, because of its calcium and protein content. It was found that milk was included only 3 dayscholars and hostelites did not consume milk.

The three foods more often mentioned as injurious to health during peptic ulcer and gastritis were chillies/spices, pickles and acid foods. These were considered hazardous as they would directly irritate the mucosa of the stomach (Krause 1996). From the above Table it may be observed that the foods are avoided by a greater number of samples followed fried foods (6 dayscholars and 8 hostelites), hot foods (5 dayscholars and 9 hostelites), sweets (4 dayscholars and 2 hostelites and carbonated beverages (2 dayscholars and 1 hostelites).

(D) BODY MASS INDEX OF THE SELECTED SUBJECTS AND SAMPLES

a. Table XXVII brings out the body mass index of the selected subjects

TABLE XXVII
BODY MASS INDEX OF THE SELECTED SUBJECTS

N=300

S.No	Body mass index	Dayscholars		Hostelites	
		No	%	No	%
1.	<18.5	35	23.0	41	27.0
2.	18.5 - 20.0	59	39.0	67	45.0
3.	20.1 - 25.0	49	33.0	35	23.0
4.	25.1 - 30.0	5	4.0	7	5.0
5.	>30	2	1.0	-	-

According to Linda **et al.**,(1989) adolescents body images, are based not only on what their bodies look like at present but on a life long accumulation of perceptions and feeling about their appearance. Twenty three per cent dayscholars and 27 per cent hostelites had chronic energy deficiency I - stage. Thirty nine per cent dayscholars and forty five per cent hostelites and thirty three per cent dayscholars and twenty three per cent hostelites had a BMI of 18.5 - 20.0 and 25.1 - 35.0 respectively. A minimum percentage (4 per cent dayscholars and 5 per cent hostelites) of the selected subjects were found to be obese.

b.Table XXVIII lists the body mass index of the selected samples.

TABLE XXVII

BODY MASS INDEX OF THE SELECTED SAMPLES

N = 60

S.No.	Body Mass Index	Dayscholars	Hostelites
		No	
1.	<18.5	2	4
2.	18.5 -20.0	11	10
3.	20.1 - 25.0	7	5
4.	25.1 - 30.0	3	8
5.	>30	4	5

It is evident from the Table that 2 and 4 samples from the dayscholars and hostelites had chronic energy, deficiency I - stage. Eleven dayscholars and 10 samples from the hostelites had a BMI of 18.5 - 20.0 finally a maximum number of (4 dayscholars and 5 hostelites) of the selected samples were found to be obese.

(E) IMPACT OF DIET COUNSELLING

Table XXIX illustrate the awareness regarding the facts about peptic ulcer and gastritis of the selected samples before and after diet counselling.

TABLE XXIX

AWARENESS REGARDING THE FACTS ABOUT PEPTIC ULCER AND GASTRITIS BY THE SELECTED SAMPLES BEFORE AND AFTER DIET COUNSELLING

N=60

		Dayscholars (27)		Hostelites (33)	
S.No	Details	Before	After	Before	After
1.	Beneficial effect of diet restriction	7	30	11	30
2.	**CONTRIBUTING FACTORS**				
	Familial inheritance	6	30	-	30
	Stress	-	30	13	30
	Excess coffee intake	10	30	-	30
	Habit of eating outside	-	30	9	30
	Habit of fast eating	-	30	-	30
	Excess intake of spicy foods	11	30	8	30
	Missing break fast	4	30	10	30

Among the two groups of peptic ulcer and gastritis, hostelites were more aware of facts regarding the disorder even before diet counselling, when compared to the dayscholars. Before diet counselling out of 60 selected samples in dayscholars and hostelites, only 7 and 11 know that the beneficial effect of diet restriction in peptic ulcer and gastritis. Excess coffee intake, excess intake of spicy foods and missing break fast were known to be the major contributors for peptic ulcer and gastritis by the selected samples in both groups. Majority of selected samples were unaware of the risk arising due to the stress, habit of fast eating and eating outside. From the table it is

encouraging to note that after diet counselling, the awareness regarding the disorder rose to cent per cent in all the 2 groups. This increase awareness shows the interest of the selected samples to know about the disorder and get rid of it through the correction of faulty dietary habits as diet therapy is a lowcost but an effective non-pharmacoligic treatment.

Table XXX indicates the awareness regarding foods contributing to peptic ulcer and gastritis by the selected samples before and after diet counselling.

TABLE XXX

AWARENESS REGARDING FOODS CONTRIBUTING TO PEPTIC ULCER AND GASTRITIS BY THE SELECTED SAMPLES BEFORE AND AFTER DIET COUNSELLING.

N = 60

S.No	Details	Dayscholars (27)		Hostelites (33)	
		Before	After	Before	After
CONTRIBUTING FOODS					
1.	Carbonated beverages	-	30	7	30
2.	Bakery products	-	30	11	30
3.	Chips	9	30	-	30
4.	Pickles	20	30	17	30
5.	Chicken	-	30	-	30
6.	Chillies	18	30	20	30
7.	Pepper	9	30	8	30
8.	Burger	-	30	-	30
9	Pizza	-	30	-	30
10.	Bhelpuri	-	30	-	30
11.	Panipuri	-	30	-	30

As many foods being the major contributors of peptic ulcer and gastritis, it becomes necessary to collect the details regarding the knowledge of such foods from the selected samples. Before diet counselling out of 60 selected samples only few of them were aware of pickles, chillies, Pepper and chips as the major contributors for peptic ulcer and gastritis fast foods, carbonated beverages and bakery items were found to be less aware among the selected samples as the contributors of the condition.

After diet counselling majority of the selected samples gained a good knowledge about the foods contributing to the disease except for a very few foods like burger, pizza, chips and chicken.

Table XXXI depicts the modification of the diet and foods included after diet counselling.

TABLE XXXI

MODIFICATION OF THE DIET AND FOODS INCLUDED BY THE SELECTED SAMPLES AFTER DIET COUNSELLING

N=60

		Dayscholars (27)		Hostelites (33)	
S.No	Details	Before	After	Before	After
a.	Modification of the diet after diet counselling	-	30	-	30
b.	**INCLUDED FOODS**				
1.	Refined cereals and cereal products	-	30	15	30
2.	Strained fruit juice	7	30	-	30
3.	Milk	5	30	4	30
4.	Plain jelly and honey	-	30	-	30
5.	Tender coconut water	8	30	6	30
6.	Vegetable salad	11	30	7	30
7.	Ash gourd juice	-	30	-	30
8.	Butter milk	3	30	-	30

From the above Table, it is very encouraging to note the effectiveness of imparted diet counselling as all the selected samples among dayscholars and hostelites had modified their diet by including protective foods for peptic ulcer and gastritis such as refined cereal and cereal products, strained fruit juice, milk, plain jelly and honey, vegetable salad, tender coconut water, ash gourd juice and buttermilk.

Summary and Conclusion

V. SUMMARY AND CONCLUSION

Health is a precious asset for everyone, the greater of all possessions and a priceless treasure. The most crucial segment of our population from the point of view of the quality of our future generation is today's youth. Their health competence will be the major determinant of the health and nutritional status of children of the most generation. Inadequate knowledge of nutrition influences, faulty dietary habits, neglect of breakfast and craving for fast foods leads to many health problems among the adolescent population. Of all the health problem pepticulcer and gastritis, the more prevalent disease among all age groups envisage the adolescence as a prime victim. The present study is aimed to find out the prevalence of peptic ulcer and gastritis among day scholars and hostelites of an university.

The general survey was made among 300 samples in the age group of 18-22 years (150 dayscholars and 150 hostelites). Information regarding socio-economic status, life style pattern, food consumption pattern, prevalence of disease, age of onset of peptic ulcer and gastritis and treatment were obtained through questionnaire.

The major findings of the present study are

- Majority 50 per cent hostelites and 59 per cent dayscholars of the selected samples (N=300) were in the age group of 18.5 - 20.0 years. In families of 56 per cent hostelites and 63 percent dayscholars four to five members were present.

- The selected subjects belonged to all grades of income group, but 11 per cent dayscholars and 9 per cent hostelites among N=300 were in the economically lower section.
- Higher percentage (68) of the selected subjects were non-vegetarians. It is also observed that the selected subjects consumed ready to eat processed foods and they did not consume coffee daily.
- All the selected subjects (N=300) consumed cereals, pulses, vegetables, milk and milk products and oil daily. Among this 150 subjects consumed fruits daily.
- Spicy foods were very much liked by most (66 per cent) of the selected subjects.
- Seventy per cent of dayscholars and 51 per cent hostelites were found to consume all foods hurriedly.
- Out of 300 subjects 60 had peptic ulcer or gastritis. Among the selected subjects (N=300) gastritis was found to be more prevalent among both hostelites and dayscholars accounting to 13 per cent (N=27) and 9 per cent (N=33) respectively and gastric ulcer was the least prevalent and only 2 per cent of hostelites suffering from it. Totally 20 per cent (N=60) had peptic ulcer and gastritis.

- Non - vegetarian was very common among both hostelites and dayscholars of the selected samples (N=60) who were suffering from peptic ulcer or gastritis. Majority 20 dayscholars and 23 hostelites consumed coffee daily. The number of cups of coffee consumed/day ranged from 1 to 4. It is also observed that the skipping of meals was very common among both the dayscholars and hostelites. Breakfast was found to be the most neglected meal of the day with a maximum of 12 dayscholars and 16 hostelites.

- The sixty selected samples consumed ready to eat processed foods. It is also evident from the study majority of the selected samples consumed snacks like biscuits, chips and cutlet, beverages like Coca-Cola, mirinda, pepsi, fanta and thumps-up, bakery items like cake, pizza, burger and puff and pickles.

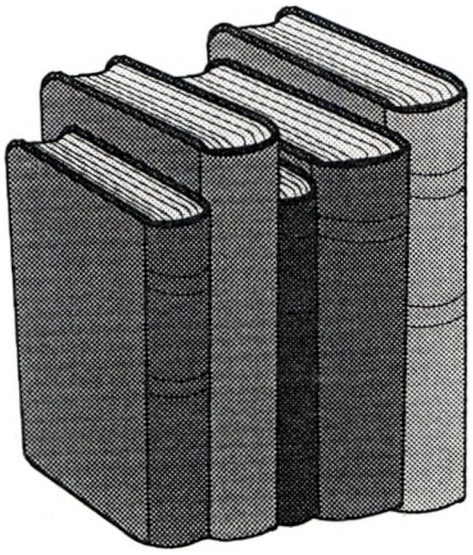
- Twenty seven dayscholars and thirty three hostelites of the selected samples (N=60) had the habit of eating outside. The food consumed were pongal, paratha, chappathi, noodles, poori, idly, dosai and non-vegetarian items. The study also shows that, all the selected samples (N=60) consumed cereals, pulses, vegetables, milk and milk products and oil daily.

- Twenty two dayscholars and 28 hostelites liked spicy food very much. Most of the selected samples (18 dayscholars and 29 hostelites) were fast eater.

- There were not much difference in the frustration pattern of the selected samples (N=60).

- Peptic ulcer and gastritis was found to be more or less equally prevalent among dayscholars and hostelites. The incident of the disease was more in the age group of 15-20 among both the sections. Majority of the selected samples had epigastric pain followed by nausea and vomiting.
- Twenty one dayscholars and twenty three hostelites had undertaken allopathy treatment.
- Most of the selected samples (19 dayscholars and 12 hostelites) followed dietary modification after diagnosis of the disease. The foods like steamed foods, green leafy vegetables and ashgourd juice are included and the foods like chillies / spices, pickles and acid foods are avoided by the majority of the selected samples (N=60).
- Higher percentage (39 per cent dayscholars and 45 per cent hostelites) of the selected subjects and majority (11 dayscholars and 10 hostelites) of the selected samples (N=60) had the BMI of 18.5 - 20.0.
- After diet counselling, the awareness regarding the disorder, and [illegible] good knowledge about the contributing foods rose cent per cent in all the 2 groups.

From the study it was concluded that the prevalence of peptic ulcer and gastritis were greater among the hostelites when compared to dayscholars.



Bibliography

BIBLIOGRAPHY

Absolon and Jane.S. (1990), "Dietary quality and eating patterns of adolescent girls in south western Ontario", Journal of Nutrition education, 20(2), Apr, Pp.77-81.

Agrawal, N.M and Majani, E.Z. (1992), "Prevention and treatment of ulcers induced by NAFD", Department of gastro enterology, Ochshes clinic, Apr. 3, 3(4), Pp.142-148.

Ahmad, F, Arnold, J.D., Seery, J.P., Henshaw, D.J., Sandhu, P.J, Mather, H.M. and MuNeil, I (1997), "Helicobacter pylori infection and upper gastro intestnal pathology in a British immigrant Indian community", Europen Journal of Gastroenterol Hepatol, Feb.9, Pp.191-194.

Anderson, A.S. (1994), "Dietary patterns among adolescents in the west of scotland", British Journal of Nutrition, 71(1), Jan, Pp.111-122.

Antia, F.P. and Abraham, P. (1997), "Clinical Dietetics and Nutrition", VI edition, Oxford University Press, Calcutta, Pp.101-104.

Avanduk, C, Navab, F, Hampt, F and Coughlin, B (1995), "Prevalence of Helicobacter pylori infection in patients with large gastric folds : evaluation and follow-up with endoscopic ultrasound before and after antimicrobial therapy", Nov, 90(11),Pp.1969-1973.

Barigidadm, M.P, Shaeada, G.S, subloini.R, Adwani, M.R. and Rama.N. (1995), "Nutritional status of Adolescence in the urban area of Karnataka", Indian journal of Nutrition and Dietetics, May, vol.32, No.5, p.135.

Becgon, R. and Singh, R.B. (1993), "Prevalence of stomach disorders and its risk factors in the urban population of south India and north India",Mcgraw - Hill companies, Pp.227-240.

Beyer, M and Peter, L.(1998), "Gastrointestinal disorders - roles of nutrition and the dietetics practitioner", Journal of the American Dietetic Association, 98(3), Mar, Pp.272-277.

Breslow, Rosalind, A, Nancy, and Bergstrom. (1994), Nutritional prediction of pressure ulcers", Journal of the American Dietetis Association, Nov, 94(11), Pp.1301-1304.

Bruess.C. and Richardson, G. (1992), "Decisions for health", III edition, W.m.C.Brown Publishers, P.8.

Caceiarelli, A.G., Marano, B.J., Gualtieri, N.M, Zuretti, A.R., Torres, R.A., Starpoli, A.A. and Rubilotti, J.G. (1996), "Lower Helicobacter pylori infection and peptic ulcer disease prevalence in patients with AIDS and suppressed CD_4 counts", American Journal of Gastroenterol, Sep, Vol.91, No.9, Pp.1783-1785.

Cerda, J.J. (1994), "Diet and gastrointestional disease", Journal of Indian council of Medical Research, Vol.64, No.4, P.373.

Chandramohan, S.M. (1999), "Planning diet for health", Department of Home Science, Women's christian college, Diabetic's club, Madras, Pp.223-225.

Chang, C.J. Wulffen, V, Yang, G.R., Mumoz, N, Correa, P. and Wabrendrof, J. (1995), "Prevalence of H.pylori infection and gastritis among young adults in china", German cancer research center, Department of epidemiology, Heidelberg, Feb, 4(1), Pp.73-79.

Chaudhuri, K.S. (1993), "Concise medical physiology", New central book agency, India,II edition, P -407.

Chaudhuri, S.K (1993), New central book agency, Calcutta, India, II edition, P.107.

Contento, and Isobel. B. (1988), "Food choice among adolescents: Population segmentation by motivations", Journal of Nutrition Education, 20 (6), Dec, Pp.289 - 298.

Cupecus, R. and Thankachan, M.V. (1996), "Eating patterns in functional dyspepsia - a case control study", European Journal of clinical Nutrition, Aug, 50 (8), Pp.520-523.

David, C. and Karen, C (1998), "Men's and Women's dieting beliefs", Australian Journal of Nutrition and Dietetics, Aug, 55(3), Pp.122-129.

David, R, Cave, S. and Jame (1996), "Management of H.pylori infection in ulcer disease", Hoffman Tofts university, publication of Mcgraw - Hill companies, Jan.15, p.63.

Department of food science and Nutrition, (1995), "Nutrition of status of adolescent girls and food craving during menstruation", The Indian journal of Nutrition and Dietetics, Nov, vol.33, No.11, Pp.268 - 269.

Devadas, R.P. (1989), "Midday meal for children in Tamil Nadu", Social welfare, Vol.34, No.2, P.9.

Devadas, R.P. (1996) "Health statys of adolescent girls", The Indian journal of Nutrition and Dietetics, Avinashilingam Institute for home science and higher education for women, vol.31, No.4, Pp 1 - 9.

Devaney, B.L., Gordin, A.R. and Burghardt, J.A (1995), "Dietary intakes of college students", American Journal of clinical Nutrition, Jan, 61 (supplement), Pp.2055-2125.

Devlin, J.M, Walsh, B.T., Guss, J.L, Kissileff, H.R. and Pet kova, E. (1997), "Postprandial cholecystokinin release and gastric emptying in patients with Bulimia nervosa", American Journal of clinical Nutrition, Sep, Pp.114-120.

Dodge, J.A. (1994), "Dietary fats and gastrointestinal function", European Journal of clinical Nutrition, Aug, 48(2), Pp.8-16.

Dyewoni, L.K. and Kazariun S.S (1992), "Abnormal Eating disorders among a group of nigerian youths", East African medical journal, Clinical evaluation unit, London, Pp.667-669.

Ellegard, Lars.M. and Ingvar (1994), "Cholesterol absorption and excretion in ileostomy subjects on high and low dietary - cholesterol intakes", The American Journal of clinical Nutrition, Jan, 59(1), Pp.48-52.

Facchini, F., Chen, Y.D.I. and Reaven, G.M., (1994), "Light to moderate alcohol intake is associated with enhanced insulin sensitivity", Pp.115-119.

Fathy, T.A., Eislier, I. and Russell, G.F.M.(1997), "A place bowntrolled trial of d-fenfluamine in bulimia nervosa", British Journal of psychiatry, Kings college hospital, Decrespigny park, London, Pp.-597-603.

Feller, M, Pan, Z.J, Vander Hulst, R.W.,Xiau, S.D., Tytgat, G.N, Dankert, J. and Vander Ende, A. (1997), "Equally high prevalences of infection with Cag.A - Positive Helicobacter pylori in chinese patients with petic ulcer disease and this with chronic gastritis - associated dyspepsia", Journal of clinical microbiology, Jun, 35, Pp.1344-1347.

Fornari, V and Katz, J.Z, (1992), "An Eating disorder complicated by HIV infection", Indian Journal of Eating disorder, North store university hospital, USA, Pp.275-278.

Franki, P. and Michael (1998), "Classification relation between polyunsaturated fattyacid and H.pylori associated with duodenal ulcer disease - a dietary intervension study", Department of surgery, uni college, London, Pp.170-175.

Friedman,s and sleward,A.C.(1987) "Child development Infancy through Adolesence:, John Willey and Sons, Newyork, P.288.

Gargouri, D., Carbonnel, F., Beanyeririe, L., Lemann, M, Gendu, T.P. and Cosnes, J(1993), "Prodictive factors of failure of intensive intravenous treatment in

severe de gastroenterologic and nutrition", Hospital Rothschild, Paris Cadex, France, 33 (755 71), P. 38.

Georges, Jane, M. and Margaret, T. (1994), "Dietary fiber and distressing gastrointestinal symptoms in midlife women", Nursing Research, Nov-Dec, 43(6), Pp.357-361.

Gibson, S.A, and Sullivan, K.R. (1995), "Breakfast cereal consumption patterns and nutrient intakes of British teenagers", heatherhead food Research Association, Survey, Dec, 115(6), Pp.366-370.

Gilmore. and Shirley, A (1995), "Clinical indicators associated with unitentional weight loss and pressure ulcers in elderly residents of nursing facilities", Journal of the American Dietetics Association, Sep, 95(9), Pp.984-992.

Gopalan, C. (1989), "Dairy products for the elderly", Nutrition, NIN, Vol.32, No.2 P.19.

Gopalan, C. (1998), "Journal of Tropical pediatrics", Vol.4, P.87.

Gorshkov, V.A. and Microskaya, M.O. (1993), "Qualitative effect of different foods on acidity and proteolytic activity in differnt parts of the stomach of duodenal ulcer patients", Journal of Indian council of Medical Research, No.5, P.465.

Gupta, G.R. (1998), "The progress of Nations", UNICEF, P.21.

Gupta, S.P. (1997), "Statistical methods", 28th edition, Sultan Chand and Sons, Publishers, New Delhi, P.E. 4.9.

Guthire, H.A. (1989), "Introductory Nutrition", Timex/Mirror/Mushy college pubishers, VII Edition, Toronto, p.356.

Hales, D. (1994), "An Invitation to health", VI edition, The Bunjamin publishing company, california, P.3.

Hallas, J, Lauitsen, J, Villadse, H.D. and Gram, L.F. (1995), "Nonsteroidal antiinflammatory drugs and upper gastrointestinal bleeding, identifying

high-risk groups by excess risk estimates", Department of clinical pharmacology, odense university medical school, Denmark, May, 30(5), Pp.438-444.

Hedberg, M, Ogren, M, Janzon, L and Sternby, N.H (1997), "Pancreatic carcinoma following gastric resection. A case-control study based on 21, 660 consecutive clinical necropsies at Malm university Hospital", Department of surgery, Lund university, University Hospital MAS, Malm O, Sweden, Jun.21(3), Pp.219-224.

Heizog, D.B, Keller, M.B, Strober, M. and Yeh.C.J.(1992), "The current status of treatment for anorexia nervosa and bulimia nervosa", Indian Journal of Eating disorder, Massochusetts general hospital, boston, P.5.

Henry, D. and Robertson, J (1993), "Nonsteroidal anti-inflammatory drugs and peptic ulcer hospitalization rates in New south wales", Discipline of clinical pharmacology, Faculty of Medicine, University of New castle, 104(4), Pp.1083-1091.

HUDCO, (1997), "Indian at 50's". Express publication, P.394.

ICMR. (1992), "Nutrient Requirements and recommended Dietary allowances for Indians", National Institute of Hyderabad.

Imai, K, Kadowaki, T, Aizawa, Y. and Fukutomi, K (1996), "Problems in the health management of persons with spinal cord injury", Journal of clincial Epidemology, May, Vol.49, No.5, Pp.505-510.

Insel, M.P. and Walton, T. (1991), "Core concepts in health", Mayfield publishing company, London, VII edition, p - 313.

Jellife, D.B. and Jelliffe, E.F.P. (1989), "A text book of community Nutrtiional Assessment", Oxford medical Publication, Pp.14-18.

Karmel,L.O, and Karmel,L.J,(1984), "Growing and Becoming: - Development from conception through Adolescence", Macmillan Publishers, London, Pp. 440-451.

Katelaris, P, Tippett, G, Zoli, G, Lowe, D, Norbu, P and Farthing, M (1993), "An evaluation of factors affecting Helicobacter pylori prevalence in Tibetans exied in India", Department of Gastroenterology, St.Bartholemen's Hospital, London, UK, Jul-Aug, 87(4), Pp.400-403.

Keller, M.B., Herzog, D.B., Lawori, P.W., Bradburn and Mahoney, E.M. (1992), "The neutralistic history of bulimia nervosa; extra ordinary high rates of chroncity, relapse, reoccurence and psychosocial morbidity," International journal of eating disorders, Department of psychiatry and human behaviours, Brown university, USA, Pp.106-108.

Kochet-Kov, A.M, Shlygin, G.K, Loranshaya, J.I, Vasilevskaya, L.S. and Kondrashov, S (1992), "Use of MSG in combined treatment of atrophin gastritis", Institute of pitaniya RAMN, Moscow, Russia, No.5-6, Pp.19-22.

Kothari. C.R. (1996), "Research Methodology - methods and techniques" 2nd edition, Wishwa Prakashan publishers, New Delhi, p.45.

Krause's W.B. (1996), "Food nutrition and diet theraphy", Saundy company, moritreal sydney, Tokyo, Pp. 601-603.

Krik, S(1993), "Nutritional counselling in Bulima Nervosa - A case study", Journal of human nutrition and dietitics, UK, Pp.57.61.

Kumar, N. and Anand, B.S. (1996), "Long term behaviour of healed duodenal ulcer disease with or without maintenance therapy", Journal of physicians, India, Pp.707-711.

Lecki, M, Bie, N, Galicka, L, Stacheua, J. and Sieradzki, J (1996), "The prevalence of Helicobacter pylori infection and types of gastritis in diabetic patients", 104 (5), Pp.365-369.

Lewis, C. (1989), "Nutrition and Nutritional theraphy in nursing", Applecton century crof, Norwalk, connecticut, P -577.

Lewis,M. and Mary, (1988), "Teenagers and food choices: the impact of nutrition education", Journal of Nutrition Education, 20 (6), Nov - Dec, Pp.336 - 340.

Linda. K.B, Sharm R.R. and Elenor, N.W. (1996) "Life cycle Nutrition - conception through adolescence, corst publishing company, New York, p. 16, 23,24.

Lykins, Clark, T and James S (1998), 'Comprehensive modified diet simplifies nutrition management of adults with short-bowel syndrome", Journal of American Dietetic Association, Mar, 98(3), Pp.309-315.

Manna, N, Caterina, R and Lucie, J. (1997), "The protective effect of the olive oil, Poly phenol (3, 4 - dihydroxy phenyl) - ethanol counteracts reactive oxygen metabolite : induced cytotoxicity in caco-2 cells", The journal of Nutrition, Feb, 127(2), Pp.286-292.

Marian, E. and Beratan, M.C.S. (1993), "H.Pylori in peptic ulcer disease", Nutritional library of medicine, Hamilton, P.43.

Mary.S, Sztainer, D.N, Resnick, M.D. and Blum, R.W.m(1998), "Psychosocial factors and Health Behaviours Associated with Inadequate Fruit and vegetable Intake among American - Indian and Alaska - Native Adolescents", Journal of Nutrition Education, Vol.30, No.2, Mar-Apr, Pp.100-106.

Mary.S, Sztainer, D.N, Sherwood, N, Stang, J, Merray, D. (1998), "Dieting status and its relationship activity behaviours in a representative sample of US adolescent", Journal of the American Dietetic Association, Vol.98, No.10, Oct, P.1127.

Meclain, C.J. (1993), "Gastrointestinal and Nutritional aspects of eating disorders", Journal of the American college of Nutrition, Aug, 12(4), Pp.466-474.

Michael, J.D, Timothy, B.W, Janet, L.G, Hary, R. and Kissileff (1997), "Post prandial cholecystokinin release and gastric emptying in patients with bulimia nervosa", American journal of clinical Nutrition, Pp.114-120.

Misra, V, Misra, S.P., Dwivedi, M. and Singh, P.A. (1997), "Point prevalence of peptic ulcer and gastric histology in healthy Indians with Helicobacter pylori infection", American Journal of gastroenterol, Sep, Vol.92, No.9, Pp.1487-1491.

Nivy, Ben-Shushan (1990), "Seasonal variation in duodenal ulcer disease in the upper instestine", Oxfort and IBH publishing co.pvt. Ltd., New Delhi, Pp.193-195.

Novoderzhkina, Yu.G. and Cherentsov, A,M. (1993), "Changes in Vit.C in blood and wine of patients with chronic gastritis and gastric or duodenal ulcer during diet treatment", Journal of Indian council of Medical Research, Vol.65, No.3, P.570.

Papendick, R.E., Munson, L, Brien, T.D. and Johnson, K.H.(1997) "Systemic AA amyloidosis in captive cheetahs", Department of pathology, college of veterinary Medicine, University of Tennessee, USA, Nov.34(6), Pp.549-556.

Park.J.E and park. K. (1997) "Preventive and social medicine", M/s.Banassiders Bhanot publishers, Jabalpur, p.17

Pollit.E.(1995) "Does breakfast make a difference in school?" Journal of American Dietetic Assocation, vol. 1134, p.9.

Porro, G.B. and Parents, F (1995), "Nature of non-ulcer dyspepsia and related conditions", Gastrointestinal unit, L SACCO Hospital, Milan, Italy, Sep. 9(3), Pp.49-562.

Potet, F, Florent, C, Benhamoci, E, Cabrieres,F, Bommelaer, G, Hustein, J, Bigarel, M.A., Varannes, B,S, Colombel, J.F, and Rampal, P (1993), "Chronic gastritis : Prevalence in the French population", Journal of clinical biology, 17(13), Pp.103-108.

Powell, J.J, Greenfield, S.M. and Thompson, R.P.H. (1994), "Concentrations of metal in gastric juice in health and Peptic ulcer disease", Journal of Indian council medical Research, Vol.64, No.7, P.680.

Prabhu, S.R, Ranganathan, S. and Amarapurkar, D.N (1994), "Helicobacter pylori in normal gastric mucosa" Department of pathology, BYL Nair, Ch Hospital, Bombay, Nov.13, 42(11), Pp.363-365.

Premaratne.S, Behling, A.F and Namaa, J.J, (1998), "Preventing Peptic ulcer", Faculty of Medicine, Dec.-3, 40(4), Pp.264-268.

Rice, P.F. (1993), "The Adolescent - Development, Relationships and culture, VII edition, Allyn and Bacon, Canada, P.189.

Robinson, H.C., Lawler, R.M., Wanda, L., Chenowed. and Gaurick, A. (1990)."Normal and therapeutic Nutrition", Macmillan publishing Company, New York, VII edition, Pp.430-431.

Rohebach, M.A., Ferguson, D.A., Farnum, J.B., and Thomas, E (1993), "Chronic gastritis associated with infection due to Helicobacter pylori in southern Appalachian veterans with dyspepsia", South Medical Journal, Department of Medicine, James Quillen college of Medicine, East Tennessee state university, Dec.4, 86(12), Pp.1354-1359.

Sadana.B. (1997), "Consumption pattern of fast foods among teenagers", Applied Nutrition, 22(1), June, Pp.14-17.

Sanuselson, G, Bratleby, L.E., Enghardt, H and Hedgren, M (1996), "Food habits and energy and nutrient intake in swedish adolescents approaching the year 2000", Department of clinical physiology, University of uppsala, Sweden, Sep. 415(1), Pp.1-19.

Saxena.A. (1996), "Dietary survey of rural Rajput childient" Indian journal of Nutrition and Dietetics, Aug, vol.33, No.8, p.203.

Schiamberg,L.B, (1988), :Child and Adolescent Development:, Macmillan publishing company, London, Pp. 706-713.

Schwarz, B, Bishop, P.p. and Kunze, M.(1994) "Coffee, tea and life style, preventive medicine", No.23, Pp.377-384.

Scottish diet report"(1996), Nutrition abstractsw and Review, Mar, vol.66, No.3, p.215.

Shabanah, A.L. Gharably, N.A., Islam, M.W, and Harbi, M.M. (1994), "Effect of Cathinone, an active constitutent of Khat and amphetamine on experimental Gastric ulcer and Secretions, Medical science research, Vol.64, No.1, P.72.

Sharma, L, Agot, Tidehag, M. and Sagar. (1995), "Anxiety, anger expression and chronic gastric ulcer", Psychological studies, Nov, 40(3), Pp.187-191.

Shendy, S and Geeta, M (1996), "Gastrointestinal disorders - common problems", Journal of the diabetic Association of India, 36(1), Jan-Mar, Pp.5-10.

Shills, E.M., Olson, A.J. and Mosheshike, (1994), "Modern nutrition in health and disease", Times/Mirror/Moshy college publishers, New York, VIII edition, Vol.2, Pp.1035-1037.

Singh, K, Kumar, S, Jariswal, M.S.D., Mam chandra and Mastan singh, P.V. (1998), "Absence of H.pylori in oral mucosal lesions", Jouranl of Indian Medical Association, Vol.196, No.6, P.177.

Sipponen, P, Kosunen, T.V, Samloff, I.M., Heinonen, O.P. and Sicerala, M(1996), "Rate of Helicobacter pylori acquisition among finnish adults: a fifteen year follow-up", scand Journal of Gastroenterol, Department of pathology, Jorvi Hospital, University of Helsinki, Finland, Mar.31, No.3, Pp.229-232.

Sipponen,p, Helske,T, Arvixen,P, Sepp, al.a.k. and Siurala,M (1994), "Fall in the prevalence of chronic gastritis over 15 years: analysis of outpatient series in finland from 1977, 1985 and 1992:, Sep, Vol. 35, No.9, Pp. 1167-1171.

Sobala, G.M. (1992), "Ascorbic acid in gastric juice", Journal of Indian council of Medical Research, vol.64, no.3, Pp.236-246.

Sonnenberg, A. and Everhart, J.E. (1996), "The prevalence of self-reported peptic ulcer in the united states", American Journal of Public Health, Feb, Vol.86, No.2, Pp.200-205.

Srilakshmi,B. (1993), "Dietetics", New age international (P) Limited, Publishers, Formerly Wiley Eastern Limited, Madras. Pp. 174, 175, 291.

Swaminathan, m. (1993), "Essentials of food and Nutrition", vol.II. The Bangalore Printing and Publishing Co.Ltd, Bangalaore, p. 163.

Testoni, P.A., Bagnolo, F, Bologna, P, Colomba, E, Bonassi, U, Lella, F and Buizza, M(1996), "Higher prevalence of Helicobacter pylori infection in dyspeptic patients who do not have gastric phase III of the migrating motor complex", Institue of Internal Medicine, University of Milan, Italy, Nov.31, Pp.1063-1068.

The Reader's digest family guide to alternative medicines", (1992), Reader's digest sydney, P.350.

Thombs, D.L, Mahoney, C.A. and Mclaughlin, M.L.(1998), "Expectancies, self-Esteem, knowledge and Adolescent weight Reduction Behaviour", Journal of Nutrition Education, Vol.30, No.2, Mar-Apr, Pp.107-112.

Tina, K.L.,Ronald, Watson, and Mary, E, Mohr. (1987). "The effects of caffeine on various body systems - A Review", Journal of American Dietitic Association, 87 (879), Pp.1048-1053.

Tulokar, S, Koivisto, V.A., Toivonen, M. and Pulkoren, R. (1993), "Alcohol with a meal has no adverse effect on post prandial glucose homeostasis in diabetic patients", Pp.1612-1614.

UNICEF, (1995), "The state of world children", Pp.95.

Vaira, D (1996), "How to manage the dyspeptic patient", Department of pathology, college of veterinary medicine, University of Tennessee, Knoxville, USA, Dec.1, No.4, Pp.261-263.

Varsky, C.G., Correa, M.C, Sarmiento, N, Bonfanti, M, Peluffo, G, Dutack, A, Maciel, O, Capece, P., Valentinerzzi, G and Weinstock, D(1998), "Prevalence and etiology of gastroduodenal ulcer in HIV-positive patients", American Journal of Gastroenterol, Jul-Aug, 39(4), Pp.209-212.

Wardlaw, G and Insel, P.M. (1990), "Perspectives in Nutrition", Times/Mirror/Mosby college publishng, Boston, Pp.481-483.

Welt, (1993), "Diagnostic and Therapeutic steps in Gastro Intestinal Disorders", p.200.

Wertheim, E.H., Paxton, S.J. Maude, D, Sznurklerg, Globbons, K and Hiller, Z (1992), "Psychosocial predictors of wer behaviours and binge eating in adolescent girls and boys", Indian Journal of Eating disorders, Department of psychology, Latrobe university, Australia, P.80.

Whitney, E.N. and Cataldo, C.B, (1987), "Understanding normal and clinical Nutrition", West publishing company, Newyork, P.

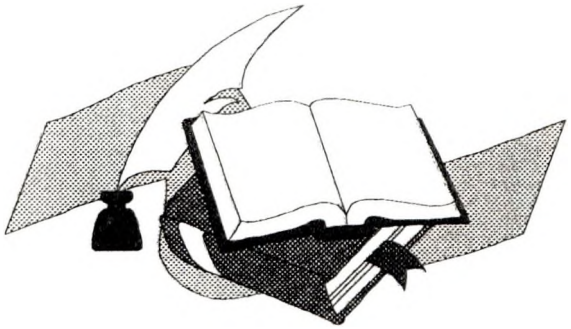
WHO (1998), World Health Forum, Vol.19, No.11, P.60.

WHO, (1995), "Physical status, the use and Interpretation of Anthropometry", Report of WHO expert committee, WHO, Gieneva, P - 39.

Williams, S. (1990), "Essentials of nutrition and diet therapy", Times/mirror/mishy college publishers, New Yorks, V edition, p - 439.

Woodside, D.B and Garfinkel, P.E (1992), "Age of onset of eating disorder, Indian Journal of Eating disorder", Eating disorder centre, caneda, Pp.184-186.

Yoshikawa, Aman and Per. (1993), "Antoxidant therapy in digestive disease", Journal of Nutrition science and Vitaminology, Mar, 124(3), Pp.35.41.



Appendix

APPENDIX - I

QUESTIONNAIRE TO ELICIT INFORMATION ON THE PREVALENCE OF PEPTIC-ULCER AND GASTRITIS AMONG HOSTELITES AND DAY SCHOLARS OF AN UNIVERSITY AND THEIR LIFESTYLE AND FOOD CONSUMPTION PATTERN

1. Name of the subject :
2. Age :
3. Sex :
4. Name of the university :
5. class/Major :
6. Day scholar/ Hostelite :
7. Address :
8. Family background

Name	Relation to the head of the family	Sex	Age	Education	Occupation	Income

LIFE STYLE PATTERN

9. Please indicate whether you are a

Vegetarian ☐ Non-vegetarian☐

10. Do you drink coffee

Yes ☐ No☐

If yes indicate the number of cups consumed per day

11. Do you have the habit of skipping meals?

Yes ☐ No☐

If yes, indicate the meal you skip

a. Breakfast
b. Lunch
c. Dinner

12. Do you consume ready to eat processed foods?

Yes ☐ No☐

If yes, please mention the following

Items	Quantity (gms)	Frequency of eating
1. Snacks:		
Biscuits		
Chips		
Cutlet		
Burgers		
Pizza		
Noodles		
2. Carbonated beverages		
Coca-Cola		
Miranda		
Fanta		
Thumbsup		
Limca		
Pepsi		
Citra		
7-Up		
Soda		
3. Pickles		

13. Do you have the habit of eating outside?

Yes ☐ No☐

If yes, mention the following

Item	Quantity (gms)	Frequency of eating outside
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

14. Mention your dietary pattern

Time	Items
Break-fast	
Mid-morning	
Lunch	
Tea time	
Dinner	

15. Do you like to have more spicy foods?

Yes ☐ No☐

16. Are you a fast eater ☐ Slow eater☐

If your are fast eater, mention the foods you eat faster

17. Are you suffering from any one of the following diseases?
    a. peptic ulcer, (Duodenal ulcer or gastric ulcer)
    b. Gastritis
    c. Respiratory tract infection
    d. Anaemia

If is a or b
    a. Mention the age of onset of disease
    b. Mention the symptoms
        i. Epigastic pain
        ii. Nausea and vomitting
        iii. Initiating during hunger

18. Mention the treatment undertaken by you?
    a. Allopathy
    b. Ayurvedic
    c. Sidha
    d. Homeopathy

If is allopathy, mention the following

Medicine	Frequency of administration /day			
	Once	Twice	Thrice	More

19. Have you modified your diet after diagnosing the problem?

Yes ☐ No ☐

If yes please indicate the mode of modification

20. Do you have frustration in the class room or home?

Yes ☐ No ☐

21. Height :

22. Weight :

APPENDIX - II

KNOW ABOUT PEPTIC ULCER, GASTRITIS AND DIETARY MANAGEMENT

KURAL SELVI V

AVINASHILINGAM DEEMED UNIVERISTY
COIMBATORE

THE RIGHT KIND OF

FOOD IS THE MOST

IMPORTANT SINGLE FACTOR IN

THE PROMOTION OF HEALTH

AND

THE WRONG KIND OF FOOD IS

THE MOST IMPORTANT

SINGLE FACTOR IN THE

PROMOTION OF DISEASE

- BAKHUR (1997)

PEPTIC ULCER

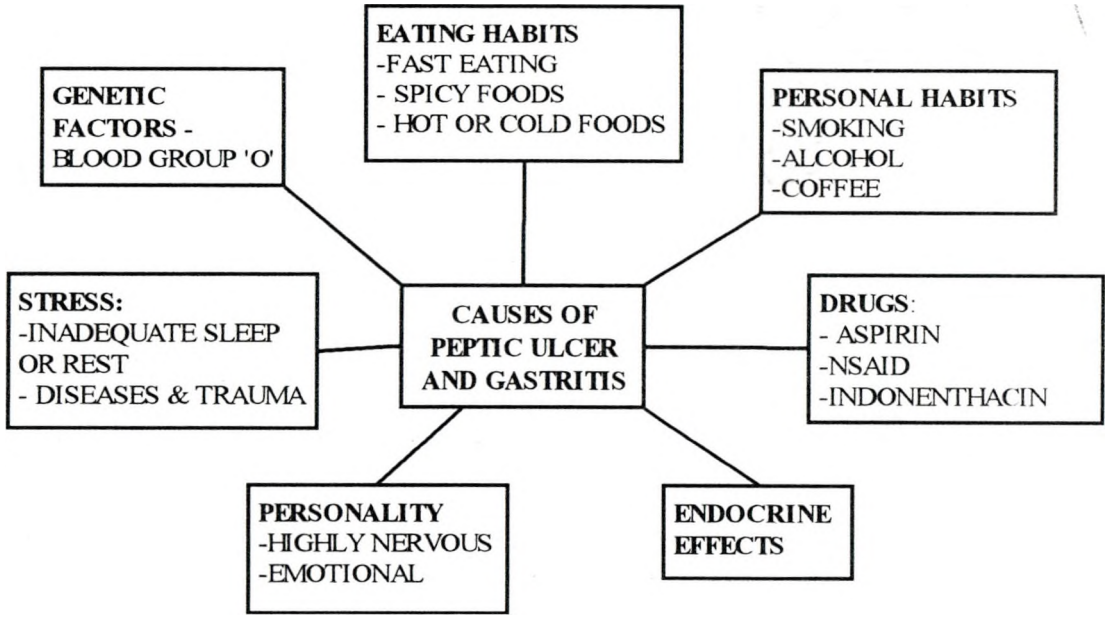
It refers to lesions in the alimentary tract that come in contact with gastric acids.

If the ulcer is located in the stomach it is a gastric ulcer.

If the ulcer is located in the duodenum it is a duodenal ulcer.

Gastritis

It refers to inflammation of the mucosal lining of the stomach.



*Non steroidal and inflammating drugs

SYMPTOMS OF PEPTIC ULCER AND GASTRITIS

* Epigastric pain
* Heart burn
* discomfort
* Pain is associated with hypermotility
* Weight loss
* Iron deficiency anaemia
* Nausea and vomitting
* Feeling of fullness

KEEP THIS IN MIND

* Do not become engulfed in a whirl-pool of worries "Worry is like a locking chain that never takes you any where".
* Get over fear and anxiety. Face your fears, analyse them day light dis-misses devils.
* Face your problem attack them boldly.
* Live in the present. "Past is Past". Do not worry about the future.
* Have good friends confide, confess and consult.
* Think positively.
* Give auto suggestions like
  -Stress

-tolerance.

* Relax through proper organisation
* Exercise, walk, play muscular need activity.

Trust in God.

* Avoid overeating.
* Eat slowly and chew thoroughly.
* Avoid hungry and fatigue.
* Avoid monotony in diet.
* Do not drink more than a glass of liquid with each meal, but drink as much as desired between meals.
* Use limited spices or seasonings.
* Avoid carbonated beverages and concentrated sweets.
* Take medications regularly as directed.

PRINCIPLES OF THE DIET

Diet should be bland which is mechanically, chemically and thermally non irritating. It should provide sufficient amount of carbohydrates, proteins and vitamins.

Early morning - (6.30 a.m)skimmed milk (1 cup)

Break fast (9.30 am). - Pongal with samber (100g)

- Egg (30 gm)
- Banana (50 g)

Mid morning - (10.30 am.) -Sweet lime Juice (100 ml)

Lunch - (12.30 pm) -Rice (100 gm)

Ash gourd samber (50 ml)

Rasam (100 ml)

Carrot Kheer 1/2 cup

Curd - 1 cup

Mid afternoon (2.30 pm.)- Dates milk shake (1 cup)

Evening - 4.30 pm. - Skimmed milk (1 cup)

Mid evening - (6.30 pm)- Chicken soup (1 cup) or vegetable soup (1 cup)

Dinner (8.30 pm.) -Iddli (3)

Chocho chutney (50 g)

Bed time - (9.30 pm.) - Skimmed milk (1 cup)

INSTEAD OF THIS	TRY THIS
Whole grain and cereal products	Refined gran and cereal products
Brown rice	Parboiled rice
Whole grain bread	Refined bread
Tea, Coffee and Carbonated beverages	Strained fresh fruits
Halwa, burfi, cakes	Plain jelly, honey, sugar
French fries	Vegetable salad

APPENDIX : III

QUESTIONNAIRE TO ANALYSE THE KNOWLEDGE OF THE SAMPLES HAVING PEPTIC ULCER AND GASTRITIS

1. Name and age of the sample :

2. Do you think that diet restriction has a beneficial effect on peptic ulcer and gastritis: Yes/No

3. Do you think the following are contributing factor to peptic ulcer and gastritis.

Familial inheritance	: YES/NO
Stress	: YES/NO
Excess coffee consumption	: YES/NO
Habit of fast eating	: YES/NO
Habit of eating outside	: YES/NO
Excess intake of spicy foods	: YES/NO
Missing breakfast	: YES/NO

4. Are you aware that these foods leads to peptic ulcer and gastritis.

Carbonated beverages	: YES/NO
Bakery products	: YES/NO
Chips	: YES/NO
Pickles	: YES/NO
Chicken	: YES/NO

Chillies : YES/NO

Pepper : YES/NO

Burger : YES/NO

Pizza : YES/NO

Bhel puri : YES/NO

Pani puri : YES/NO

5. Have you modified your diet after diet counselling : YES/NO

6. If yes, indicate whether these foods are included in your daily diet.

Refined cereals and cereal products : YES/NO

Strained fruit Juice : YES/NO

Milk : YES/NO

Plain jelly and honey : YES/NO

Vegetable salads : YES/NO

Tender coconut water : YES/NO

Butter milk : YES/NO