بسم الله الرحمن الرحيم

Shendi University

Faculty of graduate studies and scientific research

Effect of Self-Care Life Style Modification Program on patients With Peptic Ulcer Disease in Elmek Nimir University Hospital Shendi City –Sudan-2019

A thesis submitted for the requirements of fulfillment of PhD in Medical Surgical Nursing

By:

Amna Omer Abdalrhman Alrayah

BSc& MSc nursing science- Shendi University

Supervised by:

Dr. Higazi Mohammed Ahmed Abdallah Awad

Associate professor of MSN-Shendi University

الآيــة

قال تعالى:

{ سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ }

صدق الله العظيم

البقرة الآية(32)

Dedication

To myparent

To my husband

To my son Mohammed

To my brothers and sisters

Acknowledgement

It is not easy for me to do this work in this form without the kind, experienced and confident guidance

Of my supervisor

Dr. Higazi Mohammed Ahmed

For guidance and encouragement to produce a perfect work

I would like to thanks a lot: DR.Ibrahim mohammed SidAhmedstatisticianfor helping with patience throughout this study

I would like to draw great thanks to all my colleges in faculty of nursing sciences – and faculty of medicine at theuniversity of Shendi for their great efforts and support in accomplishingthe teaching program.

I would like also to draw great thanks to Faiza ,Safa,mawada,Enaam, Algzwly,khansa,fatima,mohammedfor their support and cooperation during the study.

I would like to thanks a lot: the patient , hospital administration and staff for helping with patience throughout this study

مستلخص البحث

المقدمه:

تعتبر القرحة الهضميةمن الأمراض التي لها تأثير كبير على النظام الصحي وتشكل سببًا هاماً لمراضة ووفيات المرضى ،كما أنها تؤدي إلى العديد من العواقب النفسية والاجتماعية والعاطفية والاقتصادية ، واضطرابات الجهاز الهضمي لها تأثير كبير ، ليس فقط على نمط الحياة الصحيه للأشخاص المريضة ، ولكن أيضا على أقاربهم وأسرهم ،عند ظهور المرض في سن مبكره من العمر فإنها تتداخل مع الفترة الحيويه للإنسان.

الأهداف :

هدفت هذه الدراسة لتقييم تأثير تغيير نمط الحياة على تحسين نوعية الحياة(الكفاءة الذاتية) للمرضى المصابين بالقرحه الهضميه.

المنهجية :

هذه الدراسة شبه التجريبية التدخليه ، لمرضى القرحه الهضميه،إستهدفت الدراسه عدد مائه وثلاثون مريض من الذين تم دخولهمللمستشفي بغرض العلاج أو حضروا للعياده المحوله بغرض المتابعهبمستشفى الملك نمر الجامعى ، تم إختيارهم بأخذ عينة متيسرة منهم، بإستخدام إستبانة لجمع البيانات المنظمة ، تم قياس نسبة القلق أوالتوتر والإكتئاب وقياس كتلة الجسم علي ثلاث مراحل وهي مرحله التقييم الاولي ما قبل البرنامج ثم تعرض المرضي لبرنامج تدريبي لمدة شهرين وبعد ثلاث أشهر استخدمت نفس الأدوات التي استخدمت في التقييم الأولى لتقييم معرفة المرضي لتقييم للمرحله الثانية ومن ثم بعد شهرين أخري استخدمت نفس الأدوات لتقييم معرفة المرضي للمرحله الثالثة ، و تم تحليل هذه البيانات عن طريق الكمبيوتربإستخدام برنامج الحزم الإحصائيه للعلوم الإجتماعيه إصدار (22) وبعض منها تم تحليلها بواسطة برنامج إكسل.

النتائج:

توصلت نتائج هذه الدراسة أن أكثر من ثلثي (69.2%) مجموعة الدراسة لديهم معرفه جيده عن مفهوم القرحه الهضميه،أكثر من ثلثي (67.7%) مجموعة الدراسة لديهم معرفه جيده عن عوامل الخطر بالنسبه للقرحه الهضميه وأيضا غالبية (70.8%)من مجموعة الدراسة لديهم معرفه جيده عن أسباب القرحه الهضميه والأغلبيه العظمي(86.9%) من مجموعة الدراسة لديهم معرفه جيده عن مضاعفات القرحه الهضميه كما أن هذه المعرفه تحسنت بعد البرنامج التدريبي ، بينما ذاد مستوى المعرفه لديهم في مرحلة المتابعة بصوره واضحه ، هنالك علاقه ذات دلاله إحصائيه معنويه فيما يخص المعرفه وتغيير نمط الحياةلدى مجموعة الدراسة($P<0.05$).

توصلت الدراسه الي أن أهم موانع ممارسة نمط الحياة لدي مجموعة الدراسة أن أكثر من ثلثي(69.2%) مجموعة الدراسه لديهم إعتقادات صحيه ، والغالبيه العظمى (81.5%)منهم لديهم قلة الدخل الإجتماعي والإقتصادي،أكثر من النصف (58.5%) منهم ليس لديهم قبول للإرشادات الطبيه ، والغالبيه (73.8%) منهم بينو أن العلاج غالي الثمن.

الخاتمة :

توصلت الدراسة إلى أن البرامج التعليمية كانت فعالة في زيادة المعرفة ، وتحسين الرعاية الذاتية ، والتحكم في عادات أسلوب الحياة للمرضى المصابين بالقرحه الهضميه .

Abstract

Background:

Peptic ulcer disease has a major impact on the health system and continues to be a considerable cause of patient morbidity and mortality, which lead to many psychosocial, emotional and economic consequences. Gastrointestinal disorders have a great influence not only on health related quality of life of diseased persons, but also on their relatives and families. With the onset in young age, they interfere with a very active period of human life.

Objectives:

The aim of this study is to evaluate the effect of self-care life style modification program on patients with peptic ulcer disease.

Methods:

This quasi-experimental prospective interventional study, conducted among Patients with peptic ulcer disease (N=130), theywere selected from patients attended the refered clinic of ElmekNimir university Hospital and admitted patient. Selection was done via convenience sampling. Before the program was applied the knowledge of patients was assessed by structural standard questionnaire, anxiety scale, and measure body mass index. Then the patients were receiving an educational program for two month , after three months the same tools was used to collect post test data and then after two other months later also the same tools was used to collect post intervention data. The collected data was analyzed by statistical package for social sciences (SPSS) version (22) and excel program.

Results:

This study reflected that more than two third (69.2%) of studied group had good knowledge about definition of peptic ulcer also more than two third (67.7%) of them had good knowledge about risk factors, and the majority (70.8%) of them had good knowledge about causes and also (86.9%) had good knowledge about complication. Knowledge improved in post test phase upgraded in follow up phase

there is significant correlation between the knowledge of patient and of life style modification($P < 0.05$).

The study reflected that barriers to practice life style represented that more than two third (69.2%) of them were Health believes, and majority (81.5%) of them reported low socioeconomic status, more than half (58.5%) of them reported lack of agreement with clinical guidance, also majority (73.8%) of them reported cost medication.

Conclusion:

It was concluded that the educational programs were effective in increasing knowledge, improving self-care, and controlling lifestyle habits of patients with peptic ulcer disease.

List of Content

List of Tables

List of Figures

List of abbreviations

Abbreviation	Full word
ACG	American College Of Gastroenterology
AUGIB	Acute Upper Gastrointestinal Bleeding
BMI	Body Mass Index
CAT	Catalase
CFU	Colony Forming Unit
CI	Confidence Interval
CLO	Campylobacter Like Organism
CLO	Campylobacter Like Organism
COX-2	Cyclo-Oxygenase-2 Selective
DEN	Daily Energy Needs
DNA	Deoxy Ribbon Nucleic Acid
DRIs	Dietary Reference Intakes
DU	Duodenal Ulcer
DUs	Duodenal Ulcer Disease
ECL	Enter Chromafin-Like
EMER	Endoscopic Sub Mucosal Resection
ESD	Endoscopic Sub Mucosal Dissection
FDA	Food And Drug Adminstration
g	Gram
GI	Gastrointestinal
GIT	Gastrointestinal Tract
GPX	Glutathione Peroxides
GUs	Gastric Ulcer Disease
H. Pylori	Helicobacter Pylori
HCl.	Hydrochloride Acid
HCO3	Bicarbonate Ion
HRQOL	Health-Related Quality Of Life
IPU	Idiopathic Peptic Ulcers
kg	Kilogram
Km	Kilo Meter
MALT	Mucosa Associated Lymphoid
Mg	MlGram
NIH	National Institute Of Health
NSAIDs	Non-Steroidal Anti-Inflammatory Drugs

PGR-RFLP	Genetic Polymorphism At The PGR-RFLP Gene Locus A
PH	Hydrogen Number
PPI	Proton Pump Inhibitor
PPU	Perforated Peptic Ulcer
PUD	Peptic Ulcer Disease
QOL	Quality Of Life
RBC	Ranitidine Bismuth Citrate
ROS	Reactive Oxygen Species
SOD	Superoxide Dismutase
SPSS	Statistical Package Of Social Science
TIP	Treatment Improvement Protocol
U.S	United State
UK	United Condom
USA	United States Of American
WHO	World Health Organization

Chapter One

Introduction

Justification

Objectives

1. Introduction

Before the twentieth century, stomach ulceration constituted the bulk of peptic ulcer disease and duodenal ulcers were quite rare, the incidence of duodenal ulcers increased progressively, reaching a peak in the 1950s. The cause of this rise is unclear, because H. pylori are thought to have been ubiquitous in the human Population for thousands of years[(1)].

In developing countries, the prevalence of infection may be 80% or higher in adults. Person to person transmission of H. pylori is likely because familial related clustering of infection occurs. In Sudan, information about the prevalence of H. pylori infection is very patchy, and there is only one study which showed high prevalence (80%) of H. pylori infection among patients with symptoms of gastritis, 56% with duodenal ulcer, while 60% with duodenitis and 16% apparently look normal [(2,3)].

Several studies have been done in Iraq to evaluate the prevalence of H. pylori infection in peptic ulcer disease indicating in the range of 60% - 70%. The annual incidence of H. pylori infection is around 4%- 15% in developing countries, compared with about 0.5% in industrialized countries, prevalence was associated with increasing age, non– white skin level, big family size, low socioeconomic conditions in childhood, higher number of siblings. In Malaysia, the prevalence of H. pylori infection among patients diagnosed with peptic ulcer disease was low but ethnicity and smoking were significant factors associated with the infection [(4, 5)].

Peptic ulcer disease (PUD) is one of the most common human sicknesses, affecting about 50% of the world population. The life time for developing a peptic ulcer is approximately 10%,and they resulted in 301,000 deaths in 2013 down from 327,00,In western countries the percentage of people with Helicobacter pylori infections roughly matches age(i.e.,20% at age 20,30% at age 30,80% at age 80)[(6)].

Peptic ulcer disease is common, affecting millions of Americans yearly, more than one million from patient admitted to hospital, Medical costs associated with PUD are an estimated $5.65 billion every year in the U.S. An estimated 15,000 operations are performed each year on patients hospitalized with PUD, Recent medical advances have increased our understanding of ulcer formation. Improved and expanded treatment options are now available[7, 8,9].

prevalence is higher in developing countries where it is estimated at about 70% of the people, whereas developed countries show a maximum of 40% ratio Researchers in Sabah, Malaysia confirmed a prevalence of 32.26 % Helicobacter pylori infection in 1156 subjects, in age groups 12 to 80 years ,In the past duodenal ulcer was 10 times as common in men as in women and gastric ulcer had a male majority of 3:2,now the frequency is much less, mostly because of H.pylori eradication incidence being more even the sale of antacid drugs worldwide more $5 billion, making ulcer disease a major burden to the public healthcare system[10,11,12].

Worldwide the most common causes of peptic ulcer disease (PUD) are Helicobacter pylori infection and use of non-steroidal anti-inflammatory drugs (NSAIDs). Including aspirin ibuprofen, naproxen, Smoking cigarettes or using tobacco ,the test-and-treat strategy for detecting H. pylori is appropriate in situations where the risk of gastric cancer is low based on age younger than 55 years and the absence of danger symptoms. Most other patients should undergo upper endoscopy to rule out malignancy and other serious causes of dyspepsia. [13, 14]

Peptic ulcer disease (PUD) is a common problem in the United States, with approximately **500,000** new cases diagnosed each year and 4 million cases of ulcer recurrence. Complications related to PUD cause nearly **15,000** deaths every year[15, 16].

Quality of life has emerged as an important concept and outcome in health and health care, in public health and in medicine, the concept of health- related quality of life refers to a person or groups perceived physical and mental health over time tracking health-related quality of life in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health[17].

Although health is one of the important domains of overall quality of life, there are other domains as well—for instance, jobs, housing, schools, the neighborhood. Aspects of culture, values, and spirituality are also key aspects of overall quality of life that add to the complexity of its measurement. Nevertheless, researchers have developed useful techniques that have helped to conceptualize and measure these multiple domains and how they to each other[18].

Long life risk of PUD for each person is about 5%–10%; then disease is important socially and economically. Based on new information the prevalence of PUD in men and women in United States is of 12% and 10% respectively. Additionally, the annual mortality reports, due to PUD complication, are of about 15000 cases, In Iran, PUD is the 31st common disease[20].

Several studies showed that the improvement in Quality Of Life (QOL) in patients with PUD plays an important role in the management of the disease; it is notable that the Quality Of Life is a concept that must include all the somatic aspects, psychosocial functions, physical activities and other related factors of disease. A study indicated that QOL in PUD patients is fewer than in normal population[21].

They newly began in around 53 million people in 2014, About 10% of people develop a peptic ulcer at some point in their life, They resulted in 301,000 deaths in 2013 down from 327,000 deaths in 1990 [22].

1.2 Problem Statement

The lifetime risk for developing a peptic ulcer is approximately 10%, Before the twentieth century, gastric ulceration constituted the bulk of peptic ulcer disease and duodenal ulcers were quite rare, The incidence of duodenal ulcers increased progressively, reaching a peak in the 1950sTherefore,Theprevalence is higher in developing countries where it is estimated at about 70% of the population.

Peptic ulcer Patients are often concerned about the unpredictability of the illness, Lake of nurse teaching Patient about self-care and patient complaining in during life as their health state deteriorate, Assessing and managing life style permit early identification of complication and initiation of management measures prevent and decrease complication.

Good lifestyle changes are further complicated by varying socioeconomic conditions, education levels and poor health care delivery. This study will inform patient on possible education and lifestyle modification, This could augment already existing methods of treatment in the management of patients.

However, educational programs that address patients prevention and management specific to patient, it was critical to develop a lifestyle modification tips to help address the stated problems, This study will be developed to improve quality of life for patients with peptic ulcer, fill the gap in knowledge about disease and it is complication.

1.3 Justifications

Life style modification is the first line of intervention for treatment of patient with peptic ulcer disease and major contribution to science of nurse teaching patient self-care helps to identify the learning needs of the patient and family members

So managing life style permits early identification of complication and initiation of management measures prevent and decrease complication and have numerous psychological benefits for the patients.

However, for unknown reason although about 15% of the infected persons develop PUD many infected persons in Africa never develop PUD. A meta-analysis of the several controlled clinical trials showed that H. pylori eradication therapy enhances a rapid ulcer healing at a higher rate and marked reduction in the recurrence rate of PUD particularly DU from 80 to 4% yearly. On this ground, national institute healthof America in 1994, European H. pylori study group in the Maastricht consensus conference 1996 and FDA of USA in 1998 recommended that all patients with endoscopically documented PUD with H. pylori infection should receive a course of anti-microbial therapy. [23]

The lifetime likelihood of developing peptic ulcer is about 10% for males and 4% for females.[24] The burden of peptic ulcer disease is much greater in Bangladesh and is a major cause of morbidity and significant cause of mortality affecting large fractions of the population largely due to the poor socio-economic conditions and lack of awareness about the disease, in the developed countries (15% vs 1.5%). And it is among the top 25 leading causes of death according to the World life Expectancy Over 95% (95-100%) of DUs and >80% (56-96%) of GU are strongly associated with H. pylori infection[25].

The study is conducted to fill the gap of knowledge and life style modification , and this program can improve quality of life of patients regarding self - care and independence

1.4 Hypotheses

H0

There was significant effect of the program of patient level of knowledge and adherence of life style.

H1

There was no significant effect of the program of patient level of knowledge and adherence of life style.

1.5 Objectives of the study

1.5.1 General objective:

To evaluate the effect of self-care life style modification program onpeptic ulcer patients.

1.5.2 Specific objectives:

1. To assess patients knowledge regarding peptic ulcer(in term of definition, causes, risk factor ,complication)
2. To assess level of practice of life style modification among patient with peptic ulcer disease
3. To determine the most common barrier affect the patient life style to perceive life style
4. To determine the associate between level of knowledge and quality of life with selective demographic characteristic in pre test, post test and follow up test.

Chapter Two

Literature Review

2. Literature Review

2.1Background

The Nobel Prize in Physiology or Medicine 2005 was awarded for the discovery of the bacterium Helicobacter pylori and its role in gastritis and peptic ulcer disease, Awarding of this prestigious prize highlighted the importance of peptic ulcer disease and the potential for improving clinical outcomes and decreasing healthcare costs, older people comprise an increasing proportion of most Western societies[(26)].

The primary goal of treatment for patients with chronic conditions is to maximize their function in everyday life and to achieve the highest level of well-being Measures of a disease activity and duration that are based on the laboratory or endoscopic variables, do not always correlate with well-being, particularly in peptic ulcer diseasethe whole picture of a patient includes limitations in the work and social activities, home and married life, coping, stressful events influence on the clinical course of these diseases , they lead to many psychosocial, emotional and economic consequences and treatment of these conditions requires long-term medical follow-up, frequent invasive endoscopic examinations and continuous drugs' intake [(27).]

Functional gastrointestinal disorders like peptic ulcers are common throughout the world, they can significantly impair patients' quality of life (QOL). These digestive system diseases are important to public health because they are remarkably common, can hinder a person's daily activities, and can cause major social and economic burden, gastrointestinal ulceration and peptic ulcer disease are significant causes of morbidity in the United States and globally. Medications and bacteria play important roles in the pathogenesis of gastrointestinal (GI) ulceration and conditions that are easily managed by a knowledgeable practitioner. The orthopedic patient population as well as patients with rheumatologic disorders

often control their pain with non-steroidal anti-inflammatory drugs (NSAIDs) and are at increased risk of GI ulceration[28,29].

2.2Definition of peptic ulcer

Peptic ulcer disease is a group of disorders characterized by the presence of ulcers in any portion of gastrointestinal tract (GIT) exposed to acid in sufficient concentration and duration, An ulcer is a crater like lesion in a membrane; ulcers that develop in areas of the GIT exposed to acidic gastric juice are called peptic ulcers, Word 'peptic' derives from the Greek term 'peptikos,' meaning related to digestion. Peptic ulcer is due to exposure of stomach and duodenum to pepsin and gastric acid. Imbalance occurs between aggressive factors like acid, pepsin, H. pylori and defensive factors such as gastric mucus, bicarbonate ions, and prostaglandins along with innate resistance of mucosal cells [30, 31, 32].

Peptic ulcer is a lesion of the mucosal lining of the upper gastrointestinal tract characterized by an imbalance between aggressive and protective factors of the mucosa, having H. pylori as the main etiologic factor, Peptic ulcer may be duodenal or gastric. Duodenal ulcers are more common and occur more often in younger adults. Gastric ulcers usually occur after middle age. Although peptic ulcers can occur at any age, individuals aged 30 years to 55 years are more likely to have duodenal ulcers, whereas gastric ulcers occur most often between age 55 years and age 70years [33,34,35].

Peptic ulcer is a hole in the lining of the stomach, duodenum, or esophagus. A peptic ulcer of the stomach is called a gastric ulcer, an ulcer of the duodenum is a duodenal ulcer, and a peptic ulcer of the esophagus is an esophageal ulcer. A peptic ulcer occurs when the lining of these organs is corroded by the acidic digestive juices which are secreted by the stomach cells[36].

A peptic ulcer is an excoriated area of stomach or intestinal mucosa caused principally by the digestive action of gastric juice or upper small intestinal secretions. Peptic

ulcer is a conglomerate of heterogeneous disorders, which manifests itself as a lesion in the lining of the gastrointestinal mucosa bathed by acid and/or pepsin. Peptic ulcers frequently occur along the lesser curvature of the antral end of the stomach or, more rarely, in the lower end of the esophagus where stomach juices frequently reflux[37].

Peptic ulcer disease is an excavation in the mucosa that protects and covers the area near the acid secreting parts of the gastrointestinal and thus penetrating through the muscular is layer in the mucosa covering the esophagus, stomach and duodenum.PUD is one of the much more common diseases in the world and one of the leading causes of deaths also Peptic ulcer disease refers to painful sores or ulcers in the lining of the stomach or first part of the small intestine, called the duodenum and Peptic ulcer is a defect in the mucosa of the gastrointestinal tract (GIT). In order to be called an ulcer, the defect must involve the full thickness of the mucosa reaching muscular ismucosa, though predominantly occurring in the stomach and duodenum [38,39,40].

2.3 History and prevalence

Indigestion and heartburn have been described for thousands of years, but it was only in the 16th century that the disease peptic ulcer was established by autopsy. One of the first autopsies - proven pyloric peptic ulcers was studied in 1586 by Donates of Mantua, concluded that inflammation of the stomach led to a gastric ulcer which then ruptured. The first known gastric hemorrhage was reported in 1704,first classification of stomach diseases came in 1793 from Matthew Baillie, with clear descriptions of acute inflammation (arsenic), trichobezoar, ulcer, perforation, and pyloricstenosis, cirrhoses and ulcerated cancer. In 1817, patients with perforated gastric ulcer were reported in Dublin by Crampon and patients with perforated duodenal ulcer were reported in London by Travers, who also noted bleeding, steno sing and penetrating gastric ulcers. The first epidemiological study on peptic

ulcer in North India was conducted in 1963,Approximately 5,00,000 new cases and 4 million recurrences of peptic ulcer are reported each year, contributing to the approximately 10% of Americans developing peptic ulcer disease during their lifetime, In most countries, duodenal ulcers are about three times more common than gastric ulcers, but gastric ulcers are more common in some locations such as Japan, Sri Lanka, the Andes and some islands off northern Norway [(32)].

The prevalence of peptic disease with or without ulcer was more common in age group of 20- 49 years; prevalence of duodenal ulcer is more common in male than in female, besides prevalence of gastric ulcer in both the sex were same, male and female[(41)].

In Taiwan, a study was conducted on the prevalence of asymptomatic peptic ulcer disease. The prevalence of PUD in asymptomatic subjects is 9.4% in Taiwan. Prior history of PUD, low education level, a high BMI and current smoker are independent risk factors for developing asymptomatic PUD. Of the 572 asymptomatic subjects, 54 (9.4%) were diagnosed as having PUD. The prevalence of gastric ulcer, duodenal ulcer and both gastric and duodenal ulcers were 4.7%, 3.9%, and 0.9%, respectively. Multivariate analysis revealed that prior history of PUD and current smoker were independent predictors of asymptomatic PUD. In contrast, high education level was a negative predictor of PUD[(42)].

According to a study conducted in Bangladesh, a cross sectional type of observational study was conducted to see the prevalence pattern of peptic ulcer diseases among the children who presented with abdominal pain. Upper gastro – intestinal endoscopy was done followed by Campylobacter like organism (CLO) test and histopathology were used as the diagnostic tools. The affected male to female ratio was 2:1 (approx.). About 35% of the cases had a monthly income of <5000 Taka, 45% earned 5000 – 10000 Taka and only 20% earned more than 10000 Taka. The overall life time prevalence is about 12% for men and 9% for women. 80% of adult

in countries like Bangladesh can have laboratory evidence of an H. pylori infection. In industrialized country the infection is rare in children and only about 40% of adult are infected. Risk of infection is higher for people who live in overcrowded or low socio economic condition[43].

2.4Pathogenesis of Peptic Ulcer

The normal stomach mucosa maintains a balance between protective and aggressive factors ,Some of the main aggressive factors are gastric acid, abnormal motility, pepsin, bile salts, use of alcohol and non-steroidal anti-inflammatory drugs (NSAID), as well as infection with microorganisms (Helicobacter pylori and others). On the other hand, mucus secretion, bicarbonate production, gastro protective prostaglandin synthesis and normal tissue microcirculation protect against ulcer formation. Although in most cases the etiology of ulcer is unknown yet, it is generally accepted that gastric ulcers are multi factorial and develop when aggressive factors (endogenous, exogenous and/or infectious agents) overcome mucosal defense mechanisms [44].

2.5 Types of Peptic Ulcer

Based on location, peptic ulcers are categorized as follows - Gastric ulcer: means occurrence of ulcer in stomach. These ulcers occur more generally in the older age group, duodenal ulcer: Occurrence of ulcer in the duodenum is referred as duodenal ulcer. These ulcers are more common than gastric ulcers. They occur commonly in younger individuals and are evenly distributed among various socio-economic groups. Duodenal ulcer patients have higher than normal levels of acid secretion rates, depending on severity, peptic ulcers are also classified as: Acute peptic ulcers: These ulcers involve tissues to the depth of the sub mucosa. They may arise in the form of single or multiple lesions. They are found in many sites of stomach and in the first few centimeters of duodenum. Chronic peptic ulcers, these ulcers penetrate through the epithelial and muscle layers of stomach wall and

may include the adjacent pancreas or liver. In majority of cases, they occur singly in the pyloric antrum of the stomach and in duodenum[32].

2.6.Etiology

Peptic ulcer disease is the cause of significant morbidity with patients having a low health-related quality of life. Gastric bleeding is a common initial presentation and complications include perforation, penetration and gastric outlet obstruction. The healthcare costs of complicated peptic ulcer disease are considerable; often requiring emergency endoscopy, hospital admission and surgery, The incidence of peptic ulcers in NSAID users during endoscopy is around 20% and this incidence increases linearly with age. It is estimated that over 50% of NSAIDuse is in people over 60 years, of whom approximately15% take these analgesics. NSAID use is frequently associated with gastric ulcers, or with bleeding gastric or duodenal ulcers[45,46,47].

The risk of bleeding from the upper gastrointestinal tract depends on a variety of factors, suchas history of previous complicated ulcer,multiple NSAID use (including aspirin),high-dose NSAID ,anticoagulant therapy Previous uncomplicated ulcer, age over 70 years , H. pylori infection and oral corticosteroids all of these Increased risk of ulcer bleeding has also been reported in users of selective serotonin reuptake inhibitors. This risk is amplified by concomitant NSAIDuse. This mechanism of action is not understood[48,49].

2.6.1Aspirin

Low-dose aspirin increases the risk of gastrointestinal bleeding 2-fold. The risk is higher in users with a history of previous complicated ulcer, advanced age and concomitant use of corticosteroids, NSAID, clopidogrelor anticoagulants, Histamine H2-receptor antagonists are effective in preventing aspirin-induced injury however, proton pump inhibitors are more efficacious[50) (51].

The endoscopic study of Douthwaite and Lintott in 1938 first documented the ability of NSAID to cause ulceration and bleeding in the upper gastrointestinal tract. In that study, the investigators demonstrated the ability of aspirin to damage the stomach. In the years that followed, more potent NSAIDs, such as indomethacin, phenylbutazone and the fermatas, were brought to market. Shortly thereafter, case reports of Melina associated with the use of aspirin and the newer case-control studies began to document the gastrointestinal toxicity of this class of drug. In recent years, the upper gastrointestinal tract damage caused by NSAIDs has been referred to as an `epidemic' by a number of investigators, particularly by patients with osteoarthritis and rheumatoid arthritis. The world market for NSAIDs is approximately $8 billion. The cost of treating NSAID-related gastrointestinal adverse effects almost certainly exceeds this amount (the annual cost of treating NSAID gastropathy in rheumatoid arthritis patients in the USA, for example, having been reported to exceed $4 billion) [(23)].

In another study, NSAIDs are associated with both upper and lower gastrointestinal tract complications which are commonly prescribed for a variety of musculoskeletal complaints such as rheumatoid arthritis and short-term management of pain in osteoarthritis. Prevalence rates vary significantly, as estimates do not take a distinction between causal and non-causal associations or because estimates are observed in high risk populations only. The prevalence of endoscopically confirmed gastrointestinal ulcers in NSAID users is quoted to be between 15% and 30%. About 12% to 30% of NSAID-induced ulcers are gastric ulcers, whereas 2% to 19% are duodenal ulcers. NSAID-induced ulcers are symptomatic only in 1% of patients after three to six months and in 2 to 4% of patients after one year [(23)].

2.6.2Helicobacter pylori Infection

The incidence of H. pylori resistance toclarithromycin is increasing with a resultant reduction inthe efficacy of standard eradication treatments. No longer are these eradication treatments 90 to 95% successfuland alternative regimens have been proposed [(52)].

Regardless of whether NSAID and H. pylori interact, the combination is frequently encountered and managing both reduces subsequent ulcer risk. While gastrointestinal symptoms may alertsthe clinician to peptic ulcer disease, many patients are asymptomatic. Complications such as bleeding are often the first presentation of NSAID-related ulcers. Prompterscognition will assist early hospital admission for appropriate management[(48)].

Despite a decrease in the incidence of peptic ulcer bleeding, the rate of mortality has not diminished. Hospitalization rates remain high for elderly NSAID users(new and long-term users) and range from 12 to 22 per1000 person-years. Deaths in this situation are oftendue to co morbidities'Helicobacter pylori-negative and non-steroidal anti-inflammatory drugs (NSAIDs)-negative idiopathic peptic ulcers (IPU) have attracted attention in Japan and other developed countries [(53,54)].

In United States, a study was conducted on the trends of hospitalization for this disease. The study reveals that infection with Helicobacter pylori increases the risk for peptic ulcer disease (PUD) and its complications. To determine whether hospitalization rates for PUD have declined since antimicrobial drugs to eradicate H-pylori became available, we examined 1998–2005 hospitalization records (using the Nationwide Inpatient Sample) in which the primary discharge diagnosis was PUD. Hospitalizations for which the diagnosis was H. pylori infection were also considered. The age-adjusted hospitalization rate for PUD decreased 21% from 71.1/100,000 population, the hospitalization rate for PUD was highest for adults >65 years of age and was higher for men than for women. The age-adjusted rate

was lowest for whites and declined for all racial/ethnic groups, except Hispanics. The age-adjusted H. pylori hospitalization rate also decreased. The decrease in PUD hospitalization rates suggests that the incidence of complications caused by H. pylori infection has declined[55].

2.6.3 Gastric acid Secretions

The stomach mucosa has two important types of tubular glands: oxyntic glands (also called gastric glands) and pyloric glands. The oxyntic (acid-forming) glands secrete hydrochloric acid, Pepsinogen, intrinsic factor, and mucus. The pyloric glands secrete mainly mucus for protection of the pyloric mucosa from the stomach acid. They also secrete the hormone gastric. A typical stomach oxyntic gland is composed of three types of cells: mucous neck cells, which secrete mainly mucus; peptic (or chief) cells, which secrete large quantities of Pepsinogen; and parietal (or oxyntic) cells, which secrete hydrochloric acid and intrinsic factor. Gastric parietal (oxyntic) cells secrete isotonic hydrochloric acid. The parietal cells secretion is an isotonic solution of essentially pure HCl. The PH of this solution is as low as 0.8, the concentration of hydrogen being a million times higher than that of plasma. Carbonic anhydrate enzyme has been found to be abundantly present in the gastric parietal cell which combines carbon dioxide and water forming carbonic acid, from where bicarbonate ion (HCO3) is exchanged with plasma Cl-Hydrogen ion is pumped out against the concentration gradient into the gastric lumen by H+K+ ATPthat is located in the apical membrane of the parietal cells. This pump generates the largest known ion gradient in vertebrates, with an intracellular pH of about 7.3 and an intracanalicular pH of about 0.8[56].

Hydrochloric acid is secreted by the parietal cells, which contain receptors for histamine, gastrin, and acetylcholine. Gastrin is secreted by endocrine cells in the gastric antrum and duodenum. Zollinger–Ellison syndrome is an uncommon disorder caused by a gastrinsecreting adenoma associated with very severe peptic

ulcer disease, Pepsinogen, the inactive precursor of pepsin, is secreted by the chief cells located in the gastric funds. Pepsin is activated by acid pH(optimal pH of 1.8 to 3.5), inactivated reversibly at pH 4, and irreversibly destroyed at pH7. The main goal for protection of the gastric mucosa from gastric acid is pharmacologic control of gastric acid secretion**.** Mucins are heavily glycosylated glycol proteins that are the major components of the mucus viscous gel covering epithelial tissues. They form lubricants protective selective barrier on epithelial surfaces, and modulates cell-cell and cell extracellular matrix interaction. Their expression is regulated by several cytokines and local hormones[57,58].

2.6.4Histamine

Histamine is a chemical messenger that mediates cellular responses, including allergic and inflammatory reactions, gastric acid secretion and possibly neurotransmission in parts of the brain. Additionally, it is secreted by mast cells as a result of allergic reactions or trauma. Pharmacologically, histamine produces vasodilatation and increase in permeability of blood vessel walls that may contribute to gastric hemorrhage, the main role of histamine in the secretion of acid from acid-producing parietal cells is widely reported. Where, histamine activates histamine-2 receptors on the acid-producing parietal cells to stimulate acid production [57, 59].

2.6.5. Interrupted Sleep

People who work the nightshift have a significantly higher incidence of ulcers than day workers. Researchers suspect that frequent interruptions of sleep may weaken the immune system's ability to protect against harmful bacteria [60].

Oxidative stress:-

Oxidative stress initiates and aggravates many diseases including peptic ulcers and gastric carcinoma. One of the common denominators for the genesis of these diseases is the involvement of free radicals. Reactive oxygen species (ROS) are generated through numerous normal metabolic processes and are needed for

normal functioning of the organism. Various antioxidant enzymes like superoxide dismutase (SOD), catalase (CAT) and glutathioneperoxides (GPX) control their accumulation. Any imbalance in the activity of these enzymes normally leads to faulty disposal of free radicals and its accumulation. These ROS are responsible for oxidation of tissues leading to lipid per oxidation and tissue damage. They are also responsible for oxidation of bases in cellular DNA making them mutagenic, cytotoxic and cross linking agents, which in turn causes uncontrolled expression of certain genes causing increased multiplication of cells leading to cancer[58].

2.6.6.Apoptosis

Apoptosis is cells dying process. In this, process goes through defined morphological changes that involve chromatin condensation, cytoplasm and nuclear blabbing, and eventual cellular demise without loss of membrane integrity. Under normal physiological conditions, the balance between gastric epithelial cell proliferation and death is of great importance in maintaining gastric mucosal integrity [58].

2.6.7 Bile acid

Bile acids are synthesis in the liver. There are four different bile acids like taurocholic acids, taurodeoxycholic acids, tauro—chenodeoxy-cholic acids and tauroursodeoxycholic acid. The most resulting compounds cholic acid and cheno-deoxy-cholic acid conjugated to a taurin or glycin molecules. This new compounds called as bile salts. Bile salts are known to destroy the permeability barrier of gastric mucosa and increase mucosal permeability to acids. It may produces direct injury to the surface cells of the stomach and renders gastric mucosa more susceptible to acid injury[58].

2.7 Risk factors:-

Life style factors like - Smoking may increase the risk of relapse of PUD. Smoking is harmful to the gastro duodenal mucosa, and H-pylori infiltration is denser in the gastric antrum of smokers, hyper secretion of gastric acid (e.g.Zollinger-

Ellisonsyndrome) ,viral infection (e.g. cytomegalovirus),radiation Chemotherapy (eg, hepatic artery infusion) ,the risk of upper GI tract bleeding may be increased in users of the diuretic spironolactone serotonin reuptake inhibitors with moderate to high affinity for serotonin transporter[57].

2.7.1 Genetic

Play an important role in ulcer pathogenesis. The concordance for peptic ulcer in identical twins is approximately 50%,and the lifetime prevalence of developing ulcer in first degree relatives of ulcer patients is about three-fold greater than in the general population. The inheritance of blood group 0 is associated with modest (1.3 fold) increase in duodenal ulcer[2].

2.7.2 Alcohol:

Throughout the world, alcohol has been used for centuries in social, medical, cultural, and religious settings. Currently, it is considered to be one of the most commonly abused drugs, related to a wide range of physical, mental, and social harms, and responsible for 3.8% of deaths and 4.6% of disability-adjusted life years lost worldwide. The World Health Organization (WHO) has estimated that there are about 2 billion people worldwide who consume alcoholic beverages and 76.3 million with diagnosable alcohol use disorders among the various organ systems that mediate alcohol's effects on the human body and its health, the gastrointestinal tract plays a particularly important role. The alcohol absorption into the bloodstream occurs throughout the gastrointestinal tract and its direct contact with the mucosa can induce numerous metabolic and functional changes. These alterations may lead to marked mucosal damage, which can result in a broad spectrum of acute and chronic diseases, such as gastrointestinal bleeding and ulcers alcohol may interact directly with the gastric mucosa or it may act through a more general mechanism affecting the release of hormones and the regulation of nerve functions involved in acid secretion ,Intragastric application of absolute ethanol

has long been used as a reproducible method to induce gastric mucosa lesions in experimental animals The effects of acute administration of absolute ethanol to rats and mice on the gastric mucosa are dose-dependent and the damage appears as early as 30 minutes after ingestion and reaches a peak at about 60 minutes[30].

The ethanol-induced gastric mucosal lesions and erosions are similar to those occurring in gastric ulcer, Thus, alcoholic gastritis leads to the impairment of the integrity of gastric mucosal barrier, contributing to acid reflux into the subluminal layers of the mucosa and relate that intravenous, It is important emphasize that changes induced by short-term exposure to alcoholic beverages are rapidly reversible while prolonged alcohol exposure leads to progressive structural mucosal damage [30].

2.7.3 Cigarette smoking:

Although some studies have found correlations between smoking and ulcer formation, others have been more specific in exploring the risks involved and have found that smoking by itself may not be much of a risk factor unless associated with H-pylori infection. Researchers in Denmark in a series of 2416 subjects found that tobacco smoking and H-pylori infection are the main risk factors for PUD in Danish adults, studies have found that alcohol consumption increases risk when associated with H-pyloriinfection, it does not seem to independently increase risk. Even coupled with H-pylori infection, the increase is modest in comparison to the primary risk factor, satarasinghe and colleagues in a series of 1500 patients found alcohol was a contributory factor in one third of gastrointestinal bleeding (IGIB) patients[61,62].

2.8Signs and Symptoms

The most common peptic ulcer symptom is burning stomach pain. Stomach acid makes the pain worse, as does having an empty stomach. The pain can often be relieved by eating certain foods that buffer stomach acid or by taking an acid-reducing medication, but then it may come back. The pain may be worse between

meals and at night and unexplained weight loss, appetite changes, Feeling of fullness, bloating or belching, Fatty food intolerance, Heartburn, Older patients and patients with alarm symptoms indicating a complication or malignancy should have prompt endoscopy. Patients taking nonsteroidal anti-inflammatory drugs should discontinue their use. for younger patients with no alarm symptoms[63,64].

2.9Diagnosis

The history and physical examination are important to identify patients at risk of ulcer, perforation, bleeding, or malignancy. The American College of Gastroenterology (ACG) recommends testing for H. pylori infection in patients with active PUD or history of PUD, dyspepsia symptoms, or gastric MALT lymphoma.3 The rationale for testing patients with a history of PUD who are currently asymptomatic is that detecting and treating H. pylori infection can reduce the risk of recurrence. The test-and-treat strategy for detecting H. pylori is appropriate in patients with dyspepsia and low risk of gastric cancer (age younger than 55 years and no alarm symptoms such as unexplained weight loss, progressive dysphasia, odynophagia, recurrent vomiting, and family history of gastrointestinal cancer, overt gastrointestinal bleeding, abdominal mass, iron deficiency anemia, or jaundice). Endoscopy is recommended for patients who are 55 years or older, or who have alarm symptoms[65].

2.9.1Ureath breath tests

Urea breath tests require the ingestion of urea labeled with the nonradioactive isotope carbon or carbon, Specificity and sensitivity approach 100%. Urea breath testing is one option for test of cure and should be performed four to six weeks after completion of eradication therapy. Proton pump inhibitors (PPIs) must be stopped for at least two weeks before the test, and accuracy is lower in patients who have had distal gastrostomy. Cost and inconvenience are disadvantages of this test[65].

2.9.2 Stool monoclonal antigen tests

Stool antigen tests using monoclonal antibodies are as accurate as urea breath tests if a validated laboratory-based monoclonal test is used, They are cheaper and require less equipment than urea breath tests. Like urea breath tests, stool antigen tests detect only active infection and can be used as a test of cure. PPIs should be stopped for two weeks before testing, but stool antigen tests are not as affected by PPI use as are urea breath tests [(65)].

2.9.3Serologic tests

Serologic antibody testing detects immunoglobulin G specific to H. pylori in serum and cannot distinguish between an active infection and a past infection. Serologic tests may be most useful in mass population surveys and in patients who cannot stop taking PPIs (e.g., those with gastrointestinal bleeding or continuous NSAID use) because the tests are not affected by PPI or antibiotic use[(65)].

2.9.4Endoscopy with biopsy

Endoscopy with biopsy is recommended to rule out cancer and other serious causes in patients 55 years or older, or with one or more alarm symptoms. In patients who have not been taking a PPI within one to two weeks of endoscopy, or bismuth or an antibiotic within four weeks, the rapid urea's test performed on the biopsy specimen provides an accurate, inexpensive means of diagnosing H. pylori infection. Patients who have been on these medications will require histology, with or without rapid urea's testing. Culture and polymerase chain reaction allow for susceptibility testing but are not readily available for clinical use in the United States[(66)].

2.10 Management

H-pylori infection prevalence is higher in underdeveloped and developing countries and it is shown that the incidence has reduced with eradication therapy and improvement with sanitary conditions, the treatment regimens that attain eradication rates of 90% or greater by per-protocol analysis and 80% or greater by intent-to-treat analysis are recommended for H-pylori infection, the regimens include: triple therapyfirst option Proton pump inhibitor(PPI) in standard dose + clarithromycin 500 mg + amoxicillin 1000 mg each given twice daily second option PPI in standard dose + clarithromycin 500mg + metronidazole 400 mg ,each given twice daily third option Ranitidine bismuth citrate(RBC) 400mg + clarithromycin 500 mg + amoxicillin 1000mg,each given twice daily forth option RBC 400 mg +clarithromycin 500 + metronidazole 400 mg, each given twice daily. Each of above regimen should be given for 7 days, the national Institutes of Health Consensus Conference in 1994 concluded that ulcer disease was an infectious disease that could be cured by bacterial eradication[73, 74].

2.10.1Side Effects

Side effects of PPIs are usually mild and subside once treatment is complete. They can include headache, diarrhea, nausea, abdominal pain and constipation. If prescribed eradication therapy for H. pylori infection patient may experience diarrhea due to one of the antibiotics; amoxicillin. This is common and should stop when finish eradication therapy, if it doesn't speak to the doctor or pharmacist. If experience a rash that believes is due to eradication therapy, seek urgent medical attention as may be allergic to penicillin in amoxicillin. The main side effect with iron tablets is an upset stomach; some patients find iron can cause them some mild diarrhea whereas others may experience some constipation. Iron can also cause stools to become darkened. This is because it provides the deep red color to blood so when it is excreted it can also color stools [85].

2.10.2Treatment of refractory ulcers

Ulcers are considered refractory to therapy when symptoms, ulcers, or both persist beyond 8 weeks (duodenal ulcer) or 12 weeks (gastric ulcer) despite conventional treatment, or when several courses of HP eradication fail. Poor patient compliance, antimicrobial resistance, cigarette smoking, NSAID use, gastric acid hyper-secretion, or tolerance to the antisecretory effects of an H2 receptor antagonist may contribute to refractory PUD. Patients with refractory ulcers should undergo upper endoscopy to confirm a non-healing ulcer, exclude malignancy, and assess HP status. HP-positive patients should receive eradication therapy In HP-negative patients, higher PPI dosages (e.g., omeprazole 40 mg/day) heal the majority of ulcers. Continuous treatment with a PPI is often necessary to maintain healing, as refractory ulcers typically recur when therapy is discontinued, or the dose is reduced. Switching from one PPI to another is not beneficial. Patients with refractory gastric ulcer may require surgery because of the fear of malignancy [(87)].

2.10.3Herbal medicines

Herbal medicines are now used by up to 50% of the western population in a number of instances 10% for the treatment or prevention of digestive disorders. Considering the morbidity caused by peptic ulcer disease and dyspepsia over the world cheap and easily available treatments will always be in demand especially for the people of non-industrialized countrieswhich include Ginger is a widespread herbal medicine mainly used for the treatment of gastrointestinal (GI) disorders including: dyspepsia, nausea and diarrhea. Aromatic, spasmolytic and a number of pharmacological actions which at least in part for some of them anti-ulcer genes or ulcer preventive efficacy may be suggested,Chamomile had anti-inflammatory and spasmolytic effects on the stomach and duodenum, therefore, it is thought to heal ulcers. Previous study reported that chamomile flower extract has a complex effect on the luminal and mucosal environment of the stomach and duodenum. Some of

these actions are important in healing the ulcers and others are important in preventing subsequent ulcer relapse [67].

2.11Complications:

The complications of PUD impose substantial economic and morbidity burden on the health system and the society. On the other hand, gastric cancer in Northern Iranian provinces is quite common, while it is known that gastric ulcers might later lead to gastric cancers[68].

2.11.1Gastrointestinal bleeding

Peptic ulcer disease is an important cause of upper-GI bleeding in 50 % of cases. Upper GI bleeding is a common clinical problem, resulting in about 2, 50,000 hospitalizations in the U.S. annually. This disease is recognized the most common origin of upper-GI bleeding, accounting for 45 %-78 % of bleeding episodes. The most frequent and severe complication of peptic ulcer is bleeding, which is reported 50 - 170 per 1, 00,000 with highest risk in people aged older than 60 years. Bleeding is the deadliest complication of duodenal and gastric ulcer, accounting for almost all mortality in the surgical treatment of this disease. Patients whose ulcer reveals a flat dot or clean base (forrest class 3) rarely re-bleed or need hospitalization. However, actively bleeding ulcers or those with evidence of recent hemorrhage (forrest class 1 and 2) are likely to re-bleed and may need intensive care[32].

2.11.2Gastric outlet obstruction

The obstruction at the pylorus from severe duodenal ulcer disease, this can occur because of extensive disease and subsequent scarring in the area, resulting in a mechanical blockage. Propulsive element of stomach, the antrum, becomes ineffective in efforts to evacuate the stomach because of the chronic impairment of normal emptying process from inflammation [69].

On the other hand, some authors have also concluded that gastric outlet obstruction is associated with high H. pylori infection rate. Taskin et al studied 10 consecutive patients presenting with clinically and endoscopically significant gastric outlet obstruction. During each endoscopy, seven gastric biopsy specimens were obtained (from the ant rum, corpus and funds) and analyzedfor H-pylori colonization by both rapid urea's test and histological methods. The mucosal biopsy specimens were H. pylori positive in nine patients, that is, in 90 % of patients[32].

2.11.3Perforation:

Another study complication is perforation of the gastric or duodenal ulcer. Survival is lower in ulcer perforation patients than in general population, perforation is less frequent than bleeding, with an incidence of around 7-10 per 1, 00,000, alcohol intake have different prevalence rates in differing communities and affect the incidence of perforation in various ways with additive effects of multiple factors. We observed in our practice different epidemiological characteristics of peptic ulcer perforation other than those evident in western. Following developments in the medical treatment of PUD in the last two decades, surgical intervention is currently confined to the treatment of complicated disease, namely, ulcer hemorrhage, perforation and obstruction .Simple closure or mental patch repair is the mainstay of treatment of perforated peptic ulcer (PPU), definitive surgery being rarely practiced with dependence now on medical therapy to complete the healing process and prevent recurrence of the disease[70, 71].

Although morbidity from peptic ulcer disease (PUD) is decreasing in the west, the incidence of perforated ulcer remains relatively constant.1: 2Perforated ulcers are decreasing in incidence in younger age patients and are increasingly being observed in the elderly and in women, Different risk factors for PUD and perforation e.g. smoking, NSAID use, a previous history of PUD,Helicobacter pylori infection[72, 73].

2.11.4Intractable Peptic Ulcer Disease

Intractability is defined as failure of an ulcer to heal after an initial trial of 8 to 12 weeks of therapy or if patients relapse after therapy has been discontinued. This is unusual for duodenal ulcer disease in the H. pylori era. Benign gastric ulcers that persist must be evaluated for malignancy. For any intractable ulcer, adequate duration of therapy, H. pylori eradication, and elimination of NSAID use must be confirmed. A serum gastrin level should also be determined in patients with ulcers refractory to medical therapy to rule out gastronome. Although rarely seen today, intractable duodenal ulcer should be treated with an acid-reducing operation. This can be a truncal or highly selective vagotomy, with or without an antrectomy[(9)].

2.12Quality of life:

Quality of life has emerged as an important concept and outcome in health and health care, In public health and in medicine, the concept of health- related quality of life refers to a person or groups perceived physical and mental health over time. Physicians have often used health-related quality of life to measure the effect of chronic illness in their patients in order to better understand how an illness interferes with a person's day-to-day life. Similarly, public health professionals use health-related quality of life to measure the effects of numerous disorders, short and long-term disabilities, and disease in different populations. Tracking health-related quality of life in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health[(74, 75)].

Several studies showed that the improvement in quality of life (QOL) in patients with PUD plays an important role in the treatment of the disease. It is notable that the quality of life is a concept that must include all the somatic aspects, psychosocial functions, physical activities and other related factors of disease. A study indicated that QOL in PUD patients is lower than in normal population[(76)].

Quality Of Life is an effort that mankind do for a healthier and more creative life. This matter is related to everyone's values. There are some influencing factors on the improvement of QOL, such as health status, predisposing factors (such as knowledge and attitude), reinforcing factors and behaviors of a person such as self-management Health status is a concept that defines itself individually and everyone defines it according to its own criterion. This unique definition is influenced by different somatic and psychosocial factors. Self-management is the key point in chronic diseases and improves skills for problem solving and self-efficacy of patients and, also, patients can perform their knowledge in life .One layer of the total three layers includes factors that shape the fourth step of precede model, represented by ecologic and educational factors. This step is superior to behavioral change because it makes reason and motivation for a behavior, reinforcing factors include given rewards and background that learners take from others after behavior and can reinforce or weaken that behavior after that. Enabling factors are resources, skills or barriers that can help or prevent environmental or behavioral changes, considering the lack of studies about Quality Of Life and its related factors and the low level of quality of life in developing countries like Iran, we implemented this study to determine the related factors of quality of life among patients with PUD[77].

2.12.1H pylori infection Impact on Quality of Life

Findings differ regarding H pylori infection and quality of life. Some studies have suggested that H pylori impacts quality of life in patients with dyspepsia and peptic ulcer disease, whereas others have indicated that treatment of H pylori infection does not impact quality of life in patients with dyspepsia or acid reflux disease. Theprovision here is that it is the disease associated with H pylori infection that reduces quality of life[78].

Peptic Ulcer is one of the common gastrointestinal disorders which have wide range of presentation. It is necessary to document exactly how illness affects vocational, social, and personal activities, as well as the general activities of daily living, provides an important basis for interventions designed to improve quality of life, Measurement of quality of life is very important in order to be able to compare different population, different groups of people under certain condition with healthy population[79].

2.13Lifestyle Changes to Manage Peptic Ulcer Disease:

2.13.1 LifestyleChanges (nutrition)

In the past, it was common practice to tell people with peptic ulcers to consume small amounts of blunt foods frequently throughout the day. Research conducted since that time has shown that a blunt diet is not effective at reducing the incidence or recurrence of ulcers and that eating numerous small meals throughout the day is no more effective than eating three meals a day. Large amounts of food should still be avoided, however, because stretching the stomach can result in painful symptoms.

- Fruits and Vegetables. A diet that is rich in fiber may cut the risk of developing ulcers in half and speed the healing of existing ulcers. Fiber found in fruits and vegetables is particularly protective. Vitamin A contained in many of these foods may increase the benefit.
- Milk encourages the production of acid in the stomach, although moderate amounts (2 - 3 cups a day) appear to do no harm. Certain Probiotics, which are "good" bacteria added to yogurt and other fermented milk drinks, may protect the gastrointestinal system.
- Coffee and Carbonated Beverages. Coffee (both caffeinated and decaffeinated), soft drinks, and fruit juices with citric acid increase stomach acid production. Although no studies have proven that any of these drinks

contribute to ulcers, consuming more than 3 cups of coffee per day may increase susceptibility to H. pylori infection.

- Spices and Peppers. Studies conducted on spices and peppers have yielded conflicting results. The rule of thumb is to use these substances moderately, and to avoid them if they irritate the stomach.
- Garlic. Some studies suggest that large amounts of garlic may have some protective properties against stomach cancer, although one study concluded that garlic offered no benefits against H. pylori and, in large amounts, can cause considerable GI distress.
- Olive Oil. Studies from Spain have shown that phenol compounds in virgin olive oil may be effective against eight strains of H. pylori, three of which are antibiotic-resistant.

Vitamins, although no vitamins have been shown to protect against ulcers, H. pylori appear to impair the absorption of vitamin C, which may play a role in the higher risk of stomach cancer [(60)].

2.13.2 Green Tea and Flavonoids-Rich Foods

Emerging research from China shows the potential protective effects of green tea and other foods that are rich in flavonoids against chronic gastritis, H. pylori infection, and stomach cancer. Specifically, these foods seem to inhibit the growth of H-pylori, In addition, one recent laboratory study of green, white, oolong, and black teas indicated that these teas inhibit the growth of H. pylori but cause no harm to beneficial types of bacteria normally found in the stomach, including L. acidophilus, L. plant arum, and B.lungum. However, this was an in vitro study, which means testing occurred directly between teas and bacteria in the laboratory, and we cannot draw direct conclusions as to what would happen inside the human body between these two substances. Beneficial effects in the laboratory were best when tea steeped for a full five minutes. Flavonoids-rich foods include garlic,

onions, and colorful fruits and vegetables such as cranberries, strawberries, blueberries, broccoli, carrots, and snap peas [80].

2.13.3Physical activity:

Physical activity has numerous health benefits and may also represent a cost effective approach to the prevention of peptic ulcers. Furthermore, at the levels observed in this study among the moderately active group (walking or jogging less than 10 miles a week), possible adverse effects—for example, injuries—are minimized. However, in the general population, only about one third of adults undertake this much physical activity. Strategies to promote safe walking, jogging, and cycling may benefit many aspects of health in addition to the cardiovascular and musculoskeletal systems, some evidence suggests that exercise may help reduce the risk for ulcers in some people[81].

2.13.4Stress relief:

Stress relief programs have not been shown to promote ulcer healing, but they may have other health benefits, Avoid food allergies and food sensitivities. Increased numbers of I.e. containing cells were found in patients with gastric and duodenal ulcers upon biopsy of the tissue surrounding the ulceration. Eat small frequent meals. Eliminate fatty foods, and chocolate. Eliminate salt as it can irritate mucous membranes, andensuredrinking adequate water[60, 82].

2.14. List of Home Remedies for Peptic Ulcer

It's very important to follow a diet rich in fiber and low in fats. Eat steamed green vegetable like alfalfa, broccoli, and tomatoes.

- TIP: Did know that deficiency in vitamin K has been linked to ulcers? Vitamin K prevents bleeding and promotes healing. Our body produces enough of this vitamin but people with deficiency are prone to develop ulcers. Vitamin K it's found in, tomatoes, cheese, and egg yolks, liver and in most green leafy vegetables.

- Eat small portions to avoid producing too much digestive acid, but eat frequently to keep these acids from attacking the stomach linings.
- Studies have shown that cabbage juice cures ulcers in less than ten days, prepare cabbage juice and drink one quarter a day divided in four doses (must be taken immediately after juicing). If can't tolerate the taste or odor of cabbage there is a Chinese remedy made with dried cabbage that has been used for many years with excellent results.
- For bleeding ulcers eat organic baby food and drink brown rice water to soothe the digestive system.
- Avoid milk; although it soothes the digestive tract and neutralizes stomach acid, it also stimulates the production of more acid, further irritating the ulcerated area.
- Avoid coffee, alcohol, citrus juices, sugar, hot and spicy foods, these substances irritate the stomach and encourage the production of gastric acid.
- Take 5000 IU of vitamin A four times a day, for six weeks, to heal the mucus membrane. Take vitamin E to heal the stomach linings [(83)].

2.14.1. Nutritional therapy of peptic ulcers in adults.

Nutrition and its recommendations define aspects of a healthy diet, and then seed to establish nutritional benchmarks is long recognized as a way to promote health and prevent and treat diseases. Accordingly, diet therapy has played a key role in the prevention and treatment of Peptic ulcer, with the main purpose of recovering and protecting the gastrointestinal lining, improving digestion, relieving pain, and contributing to a satisfactory nutritional status, peptic ulcer is a disease known since antiquity, but there are few studies innovating diet therapy as treatment for this disease[(33)].

2.14.2 Characteristics of nutritional therapy

The objective of peptic ulcer diet therapy is to prevent hyper secretion of peptic chloride in order to reduce the sore and pain in the gastric and duodenal mucosa. In addition, nutritional therapy aims to promote healing, based on a complex sequence of events going from the initial trauma to the repair of the damaged tissue. Investigation of nutritional deficiencies is essential in the preparation of an appropriate recovery diet. In the early 20th century, Sippy proposed a diet based on milk and milk cream, combined with antacids, for treatment of gastrointestinal ulcer, based on the principle that milk would provide gastric alkalization and relieve pain. Today milk is not recommended due to the buffering effect and the significant gastric acid secretion effect of milk. According to Marot and Floch18, calories distribution for patients with peptic ulcer should be normal, with values ranging from 50-60% of carbohydrates, 10-15% of proteins, and 25-30% of lipids, with total energy value sufficient to maintain or recover the nutritional status[(33)].

Reis suggested that calories distribution should be adjusted according to the patient's needs to normalize the nutritional status, having as recommended macronutrients a protein intake of up to 1.2 g/kg/weight/day in the acute stage (5th to 8th week) and up to 1.5 g/kg/weight/day in the recovery stage. Carbohydrates should be adjusted to the patient's needs, without disaccharides concentration, so as to avoid fermentation, and lipids without concentration of saturated fats,To accelerate the healing process, in addition to protein, there are specific micronutrients such as zinc, which is essential to maintain the immune system function, as a response to oxidative stress, and to heal wounds Selenium may reduce infection complications and improve healing. In addition, vitamin A may be used as a supplement, but the research that supports this practice is of limited effectiveness, because very high dosages do not promote cure, and excessive intake may be toxic [(33)].

2.15 Nutritional recommendations for patients with peptic ulcer:-

Characteristics	Recommendations	
Daily energy needs (DEN)	Sufficient to maintain or recover the nutritional status -25 Kcal/Kg: weight loss -30 Kcal/Kg: maintenance -35 Kcal/Kg: weight gain	
	Acute phase	**Recovery phase**
Carbohydrate	50-60	50-60
Protein (g/Kg/weight)	1.2	1.5
Lipid (%)	25-30	25-30
Zinc (mg)	11	40
Selenium (µg)	55	400
Vitamin A (µg	900	300
Vitamin C (mg)	75	500
Vitamin B^{12} (µg)	2.4	2.4
Folic acid (µg)	400	400
Iron	45	45
Fibers (g)	20-30	20-30
Probiotics (UFC/day)	^{9} to 10^{11} lactic acid bacteria	^{9} to 10^{11} lactic acid bacteria

2.15.1Use of food fibers in peptic ulcer treatment

The physicochemical properties of fiber fractions produce different physiological effects in the organism. Soluble fibers, found in apple, oatmeal, and pear are responsible, for instance, for an increased viscosity in the intestinal content. Insoluble fibers (whole grains, granola, flaxseed) increase stool bulk, reduce transit time in the large intestine, and make fecal elimination easier and quicker. Fibers regulate the bowel function, which make them vital for the wellbeing of healthy people and in the dietary treatment of much pathology. a large number of patients with peptic ulcer having diets poor in fibers and antioxidants. A diet rich in fibers for individuals with peptic ulcer is advisable (20 to 30 g/day, according world Health Organization, because fibers act as buffers, reducing concentrations of bile

acids in the stomach and the intestinal transit time, resulting in less abdominal bloating, thus decreasing discomfort and pain in the gastrointestinal tract[33].

Study conducted in outpatient department of hospital in Hoskote area, Bangalore, India, reported a diet rich in fiber may cut the risk of developing ulcers in half and speed the healing of existing ulcers. Fiber found in fruits and vegetables is particularly protective; vitamin A contained in many of these foods may increase the benefit. Studies show smoking increases the chances of getting an ulcer, slows the healing process of existing ulcers, and contributes to ulcer recurrence. This is yet another health-related reason for children and teenagers who smoke to quit. Coffee and Carbonated Beverages, Coffee (both caffeinated and decaffeinated), soft drinks, and fruit juices with citric acid increase stomach acid production. Although no studies have proven that any of these drinks contribute to ulcers, consuming more than 3 cups of coffee per day may increase susceptibility to H. pylori infection. Emotional stress is no longer thought to be a cause of ulcers, people with ulcers often report that emotional stress increases ulcer pain. Physical stress, however, may increase the risk of developing ulcers, particularly in the stomach. For example, people with injuries (such as severe as burns) and people undergoing major surgery often require rigorous treatment to prevent ulcers and ulcercomplications. Studies conducted on spices and peppers have yielded conflicting results. The rule of thumb is to use these substances moderately, and to avoid them if they irritate the stomach. Some studies suggest that high amounts of garlic may have some protective properties against stomach cancer, although a recent study concluded that garlic offered no benefits against H. pylori and, in large amounts, can cause considerable GI distress. Milk actually encourages the production of acid in the stomach, although moderate amounts (2 - 3 cups a day) appear to do no harm [84].

2.15.2Use of proboscis in peptic ulcer

Probiotics are defined as a food supplement based on live microorganisms, which affect beneficially the human organism by providing a microbial balance. There is a special interest in Probiotics for treating infection by H. pylori, because it plays a crucial role in the pathogenesis of chronic gastritis and peptic ulcer in adults. Probiotics have therapeutic agents against H. pylori, which can be shown by clinical data that prove the efficacy of some Probiotics in diverse gastrointestinal diseases and also due to the increasing resistance of pathogenic bacteria to antibiotics [(33)].

One of the measures that may contribute to reduce the infection rate by H. pylori is dietary modulation with the addition of Probiotics. However, Probiotics organisms do not appear to eradicate H. pylori, but have the ability to reduce the bacterial load and infection in animals and humans Studies on humans indicate that Probiotics improve slightly the elimination rate in treatment against H. pylori, being useful to decrease the bacterial load and likely improve dyspeptic symptoms. Thus, an intake of 10^9 to 10^{11} CFU/day of lactic acid bacteria is recommended, Among the clinical applications of Probiotics, reduction of the side effects associated with antibiotics is the best indication documented. According to Cats et al,who conducted an intervention study, 14 patients infected with H. pylori receiving L. acidophilus (108 CFU) for three weeks, it was capable of inhibiting the growth H. pylori in 64% of the volunteers. Similarly, in a study by Wang et al.with 59 volunteers, they received Bifid bacterium animals and L. acidophilus (10^10 CFU) twice a day during six weeks, and concluded that regular intake of yogurt containing Bifid bacterium animals and L. acidophilus can effectively suppress the infection caused by H- pylori in humans[(33)].

2.15.3Use of antioxidants to eradicate Helicobacter pylori

Some authors show that the best treatment is the eradication of the bacteria. Accordingly, some studies in humans40 used antioxidants to eradicate H. Pylori and observed that vitamin C has important effects in the bacteria eradication in patients with peptic ulcer. But these studies showed that smaller doses of vitamin C for a longer period of time had a better response when compared with higher doses. Thus, it is observed that patients with peptic ulcer by H. pylori can take up to 500 mg/day of vitamin C for a period of three months, which does not exceed the recommended UL of 2000 mg, according to DRIs13.Another antioxidant used to eradicate H. pylori is the capsaicin present in pepper and chilies. Studies on animals showed that capsaicin has effect in healing gastrointestinal lesions. Likewise, some researchers39 studied the effect of capsaicinoids in individuals with peptic ulcer by H. pylori or aspirin and showed that these substances are gastro protective only in individuals with aspirin-induced lesions. It is worth noting that peppers may be associated with irritations in the gastric mucosa, and may not have a gastro protective effect in some individuals with peptic ulcer [(33)].

2.16 Body Mass Index: BMI

A measure of someone`s weight in relation to their height. It is measured by dividing the subject`s weight by the square of the height. It is the most widely used measurement for obesity. A BMI from 21-25 is considered normal, 25-29 is considered overweight and a BMI over 30 is considered obese .A body mass index (BMI) is the ratio for weight to height. This is a simple calculation and creates a standardized measurement by which obesity can be measured [(92)].

Many studies to date have assessed the association of PUD with anthropometric indices, nutritional components, and lifestyle. Obesity and visceral obesity have been related to disruptions in normal epithelial barrier function and to systemic inflammation , However, although several studies have reported an association of

PUD with anthropometric indices such as body mass index (BMI), waist-to-height ratio (W ,Ht, R), and waist circumference (WC), the association between PUD and obesity remains unclear , Several studies have reported a relationship between PUD and anthropometric indices including BMI, WHtR, and WC , alsoRegarding anthropometric indices, weight was highly associated with PUD in the crude analysis ($p = 0.0003$)[93].

Chapter Three

Material and Method

3. Materials and Methods

3.1Study design:

This study was quasi experimentalprospective hospital based study done in the period from October 216 to February 2019

3.2. Study area:

The study was conducted in River Nile State, in Shendi town which is 176km north to Khartoum and 110 km south to Elddamer, the capital of River Nile State; Shendi town is lies on the eastern bank of the River Nile with a total area of about 14596 Km2. The total population of Shendi 'locality ' is estimated at about 197589 of whom 116713 live in rural areas and 80876 in urban centers, most of them are farmers, Shendi is the center of the jaaliin tribe and an important historic trading center.Shendi University was established in the early 1990s and stands as a landmark institution in Higher Education. There are three big hospital; ElmekNimer university hospital, Shendi hospital teaching and military hospital.

3.3.Setting:

The study was conducted at ElmekNimer university hospitalElmekNimer hospital established in 2002, it including many department such as medicine, pediatric, surgery, obstetric, renal center and cardiac center. Ophthalmic, dental unit, dialysis, laboratory, pharmacies and referral clinics, Cardiac center which containing cardiac care unit which contain 8beds , intermittent cardiac care unit , stress test electrocardiogram room ,echocardiogram room ,cardiac catheterization lab with 2 room for follow up the patient after cardiac cateterization,with6-8 nurses over three shift. Intensive care units in surgery which contains 4 beds with 4 nurses over three shift. And intensive care units in medicine which contains 8 beds with8-12 nurses over three shifts.

3.4. Study population:

Patients with peptic ulcer disease, who attended the refer clinic and admitted to the hospital during the time of the study.

3.4.1. Inclusion criteria:

- Patients diagnosed as peptic ulcer disease on medications for at least one month with or without other co-existing medical conditions and having medical history of peptic ulcer.
- Age: ≥20 year.
- Sex: Both males and females.
- Patients who are willing to participate in the study
- Patients who will be able to communicate

3.4.2. Exclusion criteria:

- Patients who are not present at the time of data collection.
- Patients who refuse to participate.

3.5. Sampling

3.5.1 Sampling techniques

Convenience sample from patient`s were visited the outpatient clinic from 8:00am through 11:00am on Monday, Tuesday, Thursday in the selected hospitals and patient admitted to the hospital, who met the inclusion criteria.

3.5.2 Sample size

Sample size calculations were made based on the followingdata formula

From previous study the prevalence of disease about (80%)[3]

$$n = Z^2 p q / d^2$$

Where by

n = there acquired minimum sample size

d = margin of error (5%)

p = estimated proportion of compliance 9%

z = standard normal deviate corresponding to 95% confidence level=1.96

N= (1.96)2 (0.8) (0.2)/0.0043904 = 140

q =p – 1*(Robert mason)*[19]

Considering a margin of error of 5% and a 95% confidence level, then the minimum required sample size 140 patients who agreed to participate were included in the study, and however ten participants refused to participate

3.6.Data collection tool

Data was collected using structured data collection instrument; questions were developed by the researcher according to the research objectives, the literature review, as well as the theoretical framework of the study, structured data collection instrument consisting of closed ended questions and anxiety scale were used during the interviews, the structured data collection instrument permitted the researcher to ask the same questions to all participants and mark their responses using predetermined response options data was collected within a period of (8) month

3.6.1 Structured questionnaires:

Structured questionnaire composed of three parte which include:

Part one:-

The first part used to collect data about sociodemographic characteristics ,it included age, sexOccupation, level of education, marital status, resident, blood grouping, personal habit, dietary habit, family history of peptic ulcer disease This part included (9) closed questions

Part two:-

The second part used to collect data about knowledge about peptic ulcer disease, it included: definition, causes, risk factors, complication and historical background it include duration of disease, types of ulcer, ,common signs and symptom, appetite health problem other than peptic ulcer and mood of diagnosis This part included (15) closed questions .

Part three:-

The third part used to collect data aboutawareness of lifestyle modification it included: awareness of Medication regimen, awareness of nutrition regimen, bodyweight, physical activity ,smoking ,alcohol ,stress management, follow up, awareness of Benefits to mange life style, awareness complications that develop and barrier to practice life style This part included (6) closed questions

3.6.2 Measurement Body weight and height (BMI):

Height:

Height was measured using health scalestadiometer .It measures 150 cm.

Weight:

Weight was measured using house hold scale (measuring 150kg).

Body mass index:

Body mass index was calculated according to the equation.

$$\text{Body mass index} = \left(\frac{Wieght\ (kg)}{Height\ (m)}\right)^2$$

Then the body mass index compared to charts.

3.6.3. Hospital Anxiety and Depression Scale:

Determine the level of anxiety which illustrated 0-7 = normal, 8-10 = borderline abnormal and11-21 = abnormal [(94)].

3.6.4Score system

Each question three to four option that consider good knowledge if answer three to four option, consider satisfy knowledgeif answer twooption ,consider poor knowledgeif answerone option.

3.7.Variable:

3.7.1 Dependent variable

Life style modification for patient with peptic ulcer disease

3.7.2 Independent variables

1. Social demographic characteristics are age, sex , Occupation ,level of education, marital status, resident, blood grouping, personal habit, dietary habit ,family history of peptic ulcer disease.
2. Psychosocial, perceived severity of disease, perceived susceptibility to complications of disease, perceived benefit of complying with treatment , perceived barriers to comply with treatment, and cues to action for life style modification.

3.8. Validity and Reliability of the Questionnaire:

The questionnaire in its initial form has been presented to the supervisor who gave his opinion by adding, excluding or amending some of the statements of the questionnaire. He recommended that the statements ought to cover and express the hypotheses of the study and measure them properly.

To verify the validity of the study, the researcher after that presented the questionnaire to a committee of three experienced medical and nursing staff at the University of Shendi, faculty of medicine and faculty nursing , to approve and reassure the validity and to what extents the questionnaire statements and phrases were clear and appropriate to the study. They all gave their valuable contribution by adding, excluding or amending some of the statements of the questionnaire. So the questionnaire validity was of a high stability and an internal consistency. After the verification of the validity of the questionnaire, then questionnaire was distributed to 15 patients in whom were not included later in the study sample.

A pilot study was carried before embarking on the actual study (data collection). It was conducted during October 2016 in order to test applicability of the tools of data collection, and to estimate the time required for filling the required forms. It was carried out on (15 patient) to evaluate the content of tools in order to

determine whether the patient understood the items. Cronbach's alpha =0.92 - Degree of confidence=√0.92=0.96 ,The samples of pilot study were not included in the research result.

3.9. Data collection technique

Data collected in three phases before implementation of education program **pretest phase:**

In this phase the structured data collection instrument was distributed for patients after divided to small groups (3-7) and each one of traineeswas allowed sufficient time to fill it with patient in (May ,June, July 2018) , after collection of pretest data the patients were received the training program, the training was continued, questionnaire was filled after explanation verbally the purpose of the study ,verbal consent was obtained from each participant, The questions were designed to elicit details of age, gender, address and phone number of patient and their life style in detail (smoking habit, drinking of alcohol, Coffee and Carbonated Beverages, Milk, consumption of fruits and vegetables, Spices and Peppers, Garlic and use of non-steroidal anti-inflammatory drugs) then the researcher and trainees filled the structured data collection instrument , after that the trainees implement the program in the outpatient clinic at the hospital.

Post test phase:

After three months later for the identified group the same tools used in pretest was used to collect post test phase in(August September October 2018)

Follow up test phase:

After another two month (November, December 2018) for the same identified group post test two (follow up test) data was collected, to find out effectiveness of education.

3.10. Field work:

The field work was carried out along a period of 8 months starting from may 2018 to December 2018, 1-3 days weekly. The assessment phase lasted for three months. The implementation phase of the program took eight months and post-test took three months.

Program implementation was in the form of small group sessions, the program content has been sequenced through 7 sessions (2 sessions for pre-test, 2 session for program implementation, 3 sessions for theory each group consisted of 3-7patient Different educational methods and media were used. Post-tests were conducted at the end of the program.

3.10.1Health Education Program:

An intense educational program has been designed by the researcher based on actual assessment of patient needs to improve life style in the light of the available researches and literature. The intervention has been developed in a simple Arabic language to cover the relevant theoretical aspects of life style modification.

3.10.2Modules

- Real objects (weight scale, two measuring tape).
- The researcher used different media showing

3.10.3The program implementation:

The intervention program was conducted in almikNimer university hospital include all patient admitted to medicine word and attended to refer clinic after intervention the researcher evaluated the patient understanding regarding the lecture by used questions and discussion after three mouth from program post test was conducted to evaluate the effect of interventional program in improvement of patient awareness using the same tools.

3.11. Data management

The following statistical measures were used

Frequency and percentage distributions then crosstab analysis using chi-squire and one sample T test between variables, cross tabulationwas done between time period of the program (pre test (p1),post test (p2), follow up test (p3)) ,and patient data was done with life style modification as the outcome variable.

Data was entered into the computer using SPSS software program, The data collected from all the participants was recorded in a spread sheet format , analysis was performed by using SPSS(version22) software programfor any statistical significance, and some questions analyzed by excel, Information was summarized using frequency tables, the chi-square test was used to compare proportions, correlation (cross tabulation) analysis was done, analysis was done to obtain the strongest predictor variable between all variables. A P-value of equal or less than 0.05 was considered a statistically significant.

3.12. Limitation of study

Patients in the study may differ from the general population in terms of access to medical care, socio-economic status, general health co morbidity status and other factors.

There is no standardized instrument available to assess patient with peptic ulcer disease and lifestyle modificationknowledge, attitudes and perceptions. The researcher used the existing literature and previous study to design a datacollection instrument that would be comprehensive and detailed. Furthermore, the sample size wassmall, the researcher does not claim that theresults of this study are representative of the entire Sudanese population due to diversity of believers and cultures and difficult transportation to patient.

3.13. Ethical consideration

Ethical clearance was sought and granted from the Research and Publication Ethical Committee of the Shendi University the permission to conduct the study was obtained from ElmekNimir university hospital, , confidentiality was guaranteed by storing data and only the researcher was having the data, Participation in this study was voluntary and details about the aim and objectives of the study was explained to the participants, verbal consent was obtained, the participants were free to withdraw at any stage without incurring any consequences.

Chapter Four

Results

4. Result

Table (1): Demographic characteristics of study group

N=130		
Items	**Frequency**	**Percent**
Age		
20-30years	34	26.2%
31-40years	26	20%
41-50 years	31	23.8%
>50 year	39	30%
Gender		
Female	54	41.5%
Male	76	58.5%
occupation		
Housewife	42	32.3%
Government employee	24	18.5%
Free worker	38	29.2%
Retrained	5	3.8%
Student	21	16.2%
Educational Level		
Illiterate	23	17.7%
Khlwa	8	6.2%
Primary school	40	30.8%
Secondary school	34	26.2%
Graduate	19	14.6%
Postgraduate	6	4.6%
Blood grouping		
A	17	13.1%
B	5	3.8%
O	71	54.6%
Not found	37	28.5%
AB	0	0%

The above table clarified that that less than one third (30%, 32.3%, 30.8%)of study group were above fifty years old,housewife, primary school respectively, more than half (58.5%, 54.6%)) of them were male and blood groping o respectively

Table (2): Personal and Dietary Habits of study group:

N=130		
Items	**Frequency**	**Percent**
Personal habit		
Smoker	13	10%
Snuff	14	10.8%
Smoker +snuff	6	4.6%
Non	96	73.8%
Snuff alcohol	1	.8%
Dietary habit		
n spicy food		3%
icy food	5	.5%
ly vegetable		5%
erage spicy food		7%

The above table explained that majority (73.8%) of study group had no bad habit and most (88.5%) of them used spicy food.

Table (3):knowledge of study group about peptic ulcer disease pre, post and follow up phase

N=130							
	Patient knowledge	Pre test		Post test		Follow up	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
Definition	Good	1	.8%	86	66.2%	90	69.2%
	Satisfy	2	1.5%	37	28.5%	35	26.9%
	Poor	127	97.7%	7	5.4%	5	3.8%
		P1=0.000		P2=0.000		P3=0.000	
Risk factors	Good knowledge	2	1.5%	85	65.4	88	67.7%
	Satisfied knowledge	0	0%	36	27.7	35	26.9%
	Poor knowledge	128	98.5%	9	6.9	7	5.4%
	P1=0.000		P2=0.000		P3=0.000		
Causes	Good knowledge	2	1.5%	89	68.5%	92	70.8%
	Satisfied knowledge	3	2.3%	34	26.2%	32	24.6%
	Poor knowledge	125	96.2%	7	5.4%	6	4.6%
=0.000	P2=0.000	P3=0.000					
Complications	Good knowledge	1	.8%	108	83.1%	113	86.9%
	Satisfied knowledge	2	1.5%	17	13.1%	13	10%
	Poor knowledge	127	97.7%	5	3.8%	4	3.1%
	P1=0.000		P2=0.000		P3=0.000		

Key: P1: comparison of knowledge between pretest phase and post test phase

P2: comparison of knowledge between post test phase and follow up phase

P3: comparison of knowledge between pretest phase and follow up phase

The above table explained that more than two third (69.2%, 67.7%) of study group had good knowledge about definition of peptic ulcer and risk factors respectively, majority (70.8%) of them had good knowledge about causes and most (86.9%) of them had good knowledge about complication.

Table (4): Historical background of study group

N=130		
	Frequency	**Percent**
Duration of disease		
Less than 5years	53	40.8%
5-10 years	47	36.2%
Above10 years	30	23.1%
Type of ulcer		
Gastric	96	73.8%
Duodenal	33	25.4%
Don't know	1	.8%
Common symptom*		
Pain	122	93.8%
Vomiting	75	57.6%
Hematmesis	20	15.3%
Constipation	71	54.6%
Melana	5	3.8%
Change in weight	101	77.6%
Change in appetite	96	73.8%
Blooting	77	59.2%
Nausia	107	82.3%
Heartburn	114	87.6
Appetite		
Normal	39	30%
Increased	9	6.9%
Decreased	82	63.1%
Health of problem other than peptic ulcer		
Diabetes	3	2.3%
Hypertension	18	13.8%
Diabetes + Hypertension	3	2.3%
Romatoid	12	9.2%
Not found	94	72.3%
Mode of diagnosis		
Clinically	119	91.5%
Procedure	11	8.5%

The above table showed that more than one third (40.8%) of study group had been ulcer for less than 5years, majority (73.8%) of them had gastric ulcer, ,less than two third of them (63.1%) decrease appetite , few (13.8%) of them had hypertension and all most (91.5%)of them diagnosed clinically.

Table (5):Historical background of study group regarding pain

N=130		
Site of pain	**Frequency**	**Percent**
Epigastric	127	97.7%
Epigastric and right Hypochondrium	3	2.3%
character of pain		
Burning	44	33.8%
Burning and hunger pangs	57	43.8%
Dull aching	17	13.1%
Discomfort	12	9.2%
Aggravating factors		
Empty stomach	41	31.5%
Full stomach	87	66.9%
Activities	1	.8%
Stress	1	.8%
Reliving factors		
Diet	28	21.5%
Hunger	24	18.5%
Vomiting	24	18.5%
Antacid	53	40.8%
Herbal	1	.8%

The above table illustrated that all most (97.7%) of study group had pain site epigastric area, also less than half (43.8%, 40.8) of them the character of pain burning and hanger, pain relived by antacid respectively, more than two third (66.9) of them aggravating factor when stomach fully.

Table (6): Adherence to life style modification among study group regarding uses of medication pre, post and follow up phase

N=130							
Life style	Patient adherence	**Pre test**		**Post test**		**Follow up**	
		Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Medication taken	Medicine	24	18.5%	-	-	-	-
	Herbal	1	0.8%	-	-	-	-
	Medicine and herbal	105	80.8%	-	-	-	-
Side effect of medicine*	Headache	44	33.8%	-	-	-	-
	Diarrhea	68	52.3%	-	-	-	-
	Abdominal pain	95	73%	-	-	-	-
	Constipation	47	36.1%	-	-	-	-
	Darken stool.	7	5.3%	-	-	-	-
	No side effect	16	12.3%	-	-	-	-
use of NSAID	Sometime	49	37.7%	38	29.2%	38	29.2%
	Always	60	46.2%	33	25.4%	33	25.4%
	Never	21	16.2%	59	45.4%	59	45.4%
	P1=0.000		**P2=0.000**		**P3=0.000**		

Key:
P1: comparison of patient adherence between pretest phase and post test phase
P2: comparison of patient adherence between post test phase and follow up phase
P3: comparison of patient adherence between pretest phase and follow up phase

*__Multi response taken by respondent.__

The above table illustrated that majority (80.8%,73%)) of study group used herbal and medicine to manage disease , most common side effect abdominal pain respectively, less than half(45.5%) of them never used NSAIDs.

Table (7): Adherence to life style modification among study group regarding medication pre, post and follow up phase

N=130							
Life style	Patient adherence	**Pre test**		**Post test**		**Follow up**	
		Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
rget to take medication	Sometime	67	51.5%	64	49.2%	63	48.5
	Always	40	30.8%	35	26.9%	35	26.9
	Never	23	17.7%	31	23.8%	32	24.6
	P1=0.000		**P2=0.000**		**P3=0.000**		
	Feel better	113	86.9%	-	-	-	-
top to take medication	Feel worse	6	4.6%	-	-	-	-
	Believes	2	1.5%	-	-	-	-
	Fair from side effect	1	.8%	-	-	-	-
	Use traditional medicine	3	2.3%	-	-	-	-
	Religions believes	1	.8%	-	-	-	-
	Avoid addiction	4	3.1%	-	-	-	-
know medication	Name	18	13.8%	-	-	-	
	Color	35	26.9%	-	-	-	
	Baket	77	59.2%	-	-	-	
provement in symptom after triple therapy	Improved	117	90%	-	-	-	
	Not improved	13	10%	-	-	-	-

Key:

P1: comparison of patient adherence between pretest phase and post test phase
P2: comparison of patient adherence between post test phase and follow up phase
P3: comparison of patient adherence between pretest phase and follow up phase

***Multi response taken by respondent.**

The above table showed that near to half (48.5%) of study group sometime Forget to take medication, most (86,9%)of them stop to take medicine when feel better also more than half (59.2%) known medication by baket and all most(90%) of them improvement in symptom after triple therapy.

Table (8) Adherence to life style modification among study group regarding diet pre, post and follow up phase (fruit, vegetables, Fiber diet, carbonated beverages)

N=130							
Diet	**Patient adherence**	**Pre test**		**Post test**		**Follow up**	
		Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Fruits	Sometime	94	72.3%	14	10.8%	12	9.2%
	Always	35	26.9%	115	88.5%	117	90%
	Never	1	.8	1	.8%	1	.8%
P1=0.001		**P2=0.002**		**P3=0.001**			
Vegetables	Sometime	85	65.4%	9	6.9%	7	5.4%
	Always	44	33.8%	120	92.3%	123	94.6%
	Never	1	.8%	1	.8%	0	0%
	P1=0.012		**P2=0.000**		**P3=0..052**		
Fiber diet	Sometime	86	66.2%	54	41.5%	54	41.5%
	Always	43	33.1%	60	46.2%	67	51.5%
	Never	1	.8%	16	12.3%	9	6.9%
	P1=0.000		**P2=0.000**		**P3=0.000**		
Carbonated beverages	Sometime	88	67.7%	114	87.7%	118	90.8%
	Always	39	30%	14	10.8%	10	7.7%
	Never	3	2.3%	2	1.5%	2	1.5%
	P1=0.001		**P2=0.000**		**P3=0.051**		

Key:

P1: comparison of patient adherence between pre test phase and post test phase

P2: comparison of patient adherence between post test phase and follow up phase

P3: comparison of patient adherence between pre test phase and follow up phase

The above table showed that all most (90%, 94.6%,90.8%) of study group eat fruits always, vegetables always, carbonated beverages sometime respectively, more than half (51.5%) of them eat fibers diet always.

Table (9): Adherence to life style modification among study group regarding diet pre, post and follow up phase (spices, peppers, fat, garlic, coffee, Milk and dairy milk)

N=130							
Diet	Patient adherence	Pre test		Post test		Follow up	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
Spices	Sometime	65	50%	19	14.6%	16	12.3%
	Always	54	41.5%	6	4.6%	4	3.1%
	Never	11	8.5%	105	80.8%	110	84.6%
		P1=0.000	P2=0.000	P3=0.000			
Fat	Sometime	50	38.5%	2	1.5%	1	.8%
	Always	61	46.9%	44	33.8%	44	33.8%
	Never	19	14.6%	84	64.6%	85	65.4%
Garlic	Sometime	72	55.4%	65	50%	59	45.4%
	Always	43	33.1%	16	12.3%	22	16.9%
	Never	15	11.5%	49	37.7%	49	37.7%
		P1=0.000	P2=0.000	P3=0.000			
Coffee	Sometime	66	50.8%	65	50%	47	36.2%
	Always	38	29.2%	1	.8%	15	11.5%
	Never	26	20.0%	64	49.2%	68	52.3%
		P1=0.000	P2=0.000	P3=0.000			
Milk and dairy milk	Sometime	60	46.2%	43	33.1%	40	30.8%
	Always	44	33.8%	84	64.6%	87	66.9%
	Never	26	20.0%	3	2.3%	3	2.3%

Table showed that majority(84.6%) of study group never used spices food ,less than two third (65.4%) of them never used diet contains fat food, less than half(45.4%) of them never used garlic in food, more than half(52.3%) of them never drink coffee, more than two third (66.9%) of them always used diary milk

Table (10): Adherence to life style modification among study group regarding Body weight pre, post and follow up phase

N=130							
Life style	**Patient adherence**	**Pre test**		**Post test**		**Follow up**	
		Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Regarding body weight reduction	Try to lose body weight	34	26.2%	31	23.8%	36	27.7%
	Dose not had trial to lose weight	64	49.2%	33	25.4%	29	22.3%
	Had desire to lose body weight	20	15.4%	60	46.2%	62	47.7%
	Dose not had desire to lose body eight	12	9.2%	6	4.6%	3	2.3%
P1=0.000		**P2=0.000**		**P3=0.000**			
Body mass index	Normal	17	13.1%	20	15.4%	20	15.4%
	Under weight	17	13.1%	26	20.0%	26	20.0%
	Over weight	54	41.5%	55	42.3%	55	42.3%
	Obese	42	32.3%	29	22.3%	29	22.3%
	P1=0.000		**P2=0.000**		**P3=0.000**		

Key:

P1: comparison of patient adherence between pretest phase and post test phase

P2: comparison of patient adherence between post test phase and follow up phase

P3: comparison of patient adherence between pretest phase and follow up phase

The above table showed that near to half (47.7%) of study group have desire to lose body weight and less than half (42.3%) of themwere overweight and less than one third (32.3%) were obese.

Table (11): Adherence to life style modification among study group regarding physical activity pre, post and follow up phase

N=130							
Life style	**Patient adherence**	**Pre test**		**Post test**		**Follow up**	
		Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Physical activity (exercise)	Engaged in physical exercise	62	47.7	68	52.3%	68	52.3%
	Not engaged	16	12.3	8	6.2%	6	4.6%
	Had desire to exercise	48	36.9	51	39.2%	54	41.5%
	Haden't desire to exercise	4	3.1	3	2.3%	2	1.5%
P1=0.000		**P2=0.000**		**P3=0.000**			
Type of exercise	Walking	95	73.1%	80	61.5%	68	52.3%
	Swimming	5	3.8%	5	3.8%	5	3.8%
	Play foot ball	4	3.1%	5	3.8%	5	3.8%
	Usual home exercise	26	20%	40	30.8%	52	40%
P1=0.000		**P2=0.000**		**P3=0.000**			
Exercise regimen	Dailey	116	89.2%	118	90.8%	121	93.1%
	Sometime	11	8.5%	9	6.9%	7	5.4%
	Never	2	1.5%	1	.8%	0	0%
	Increase body weight	1	.8%	2	1.5%	2	1.5%
P1=0.000		**P2=0.000**		**P3=0.000**			

Key:
P1: comparison of patient adherence between pretest phase and post test phase
P2: comparison of patient adherence between post test phase and follow up phase
P3: comparison of patient adherence between pre test phase and follow up phase

The above table explained that less than half (41.5%, 40%) of study group had desire to exercise, used usual home exercise respectively and all most (93.1%) of them daily exercise.

Table (12): Adherence to life style modification among study group regarding bad habits pre, post and follow up phase

N=130							
Life style	**Patient adherence**	**Pre test**		**Post test**		**Follow up**	
		Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Smoking	Smoker	21	16.2%	21	16.2%	21	16.2%
moking cessation trails	Try to stop	6	4.6%	6	4.6%	6	4.6%
	Had desire to stop	12	9.2%	12	9.2%	12	9.2%
	Doesn't had desire to stop	3	2.3%	3	2.3%	3	2.3%
Number of cigarettes smoking per day	10 cigarette	4	3.1%	3	2.3%	3	2.3%
	20 cigarette	3	2.3%	10	7.7%	10	7.7%
	more than 20cigartte	12	9.2%	6	4.6%	6	4.6%
	seldom	2	1.5%	2	1.5%	2	1.5%
Alcohol	Drink	2	1.5%	2	1.5%	2	1.5%
atients consume alcohol per day	A few time per week	1	.8%	1	.8%	1	.8%
	About once a week	1	.8%	1	.8%	1	.8%
alcohol cessation trials	Try to stop	2	1.5%	2	1.5%	2	1.5%

Key:

P1: comparison of patient adherence between pretest phase and post test phase

P2: comparison of patient adherence between post test phase and follow up phase

P3: comparison of patient adherence between pre test phase and follow up phase

The above table clarified that few percent (16.2%, 9.2%, 7.7%) of study group smoker, had desire to stop, used 20 cigarette per day respectively also few percent (1.5%, .8% ,1.5%)) of them drink alcohol ,drink about once a week and were try to stop.

Table (13): Adherence to life style modification among study group regarding stress pre, post and follow up phase

N=130							
Life style	**Patient adherence**	**Pre test**		**Post test**		**Follow up**	
		Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Regarding stress	Anxious	104	80%	90	69.2%		.3%
	Irritable	16	12.3%	17	13.1%		.1%
	Confused	4	3.1%	11	8.5%		%
	Mood swings	5	3.8%	10	7.7%		%
	Cope with stress	1	.8%	2	1.5%		%
P1=0.000		**P2=0.000**		**P3=0.000**			

Key:

P1: comparison of patient adherence between pre test phase and post test phase

P2: comparison of patient adherence between post test phase and follow up phase

P3: comparison of patient adherence between pre test phase and follow up phase

The above table explained that less than two third (62.3%) of study group had being anxious and less than quarter (13.1%) being irritable.

Table (14):Barrier to practice life style among study group

N=130		
Personal barrier	**Frequency**	**Percent**
Ineffective of the medicine to stabilize ulcer	13	10%
lack of motivation	57	43.8%
Not had enough time to exercise	7	5.4%
lack of displace to comply with the dietary restriction	51	39.2%
lack of motivation to stop smoking	2	1.5%
Psychological barrier		
Health believes	90	69.2%
Health literacy	27	20.8%
Self-efficacy	13	10%
Socio cultural factors		
Socioeconomic status	106	81.5%
Lack of social support	16	12.3%
Cultural values	8	6.2%
Provider barrier		
lack of agreement with clinical guidance	76	58.5%
Confidence to implement strategy	54	41.5%
Therapy related barrier		
Adverse effect	20	15.4%
Cost	96	73.8%
Complicity of the regimen	14	10.8%
Access to care		
Lack of insurance	69	53.1%
Lack of transports	61	46.9%

The above table showed that less than half (43.8%) of study group were reported lack of motivation because cannot be cured from ulcer as a personal barrier, more than two third (69.2%) of them were Health believes as Psychological barrier, majority (81.5%) of them reported low socioeconomic status as a socio cultural barrier, also majority (73.8%) of them reported cost medication as a therapy related Perrier and more than half (53.1%, 58.5%) of them had Lack of health insurance, lack of agreement with clinical guidance as a provider barrier respectively.

Relation between Studies Variables

Table No (15):Correlation between patient's awareness of benefit to adapt life style and adherence to life style modification

Life style	Pre test (sig)	Post test (sig)	Follow up (sig)
Medication adherence	.871	.928	.980
Body weight reduction	.576	.973	.798
Exercise regimen	.272	.050	.754
Alcohol cessation trails	.000	.000	.000
Smoking cessation trials	.000	.000	.000
Stress	.219	.174	.166
Follow up	.307	.303	.195

***P.V Significant = 0.0 5**
**** P.V Highly Significant <0.0 5**

Table No (16): Correlation between patient awareness of complication develop and adherence to life style modification:

Life style	Pre test (sig)	Post test (sig)	Follow up (sig)
Comply with triple therapy	.002	.686	.581
Body weight reduction	.218	.267	.811
Physical activity (exercise)	.603	.609	.238
Alcohol cessation trails	.000	.000	.000
Smoking cessation trials	.000	.050	.000
Stress	.999	.746	.417
Follow up	.842	.950	.400

***P.V Significant = 0.0 5**
****P.V Highly Significant <0.0 5**

Table No (17): Correlation between patient awareness of risk factor with peptic ulcer disease and adherence to life style modification:

Life style	Pre test (sig)	Post test (sig)	Follow up (sig)
Stop to take medicine	.020	.140	.052
Body weight reduction	.512	.729	.407
Physical activity (exercise)	.325	.235	.627
Alcohol cessation trails	.000	.000	.000
Smoking cessation trials	.000	.050	.000
Stress	.019	.011	.040
Follow up	.095	.014	.145

***P.V Significant = 0.0 5**
****P.V Highly Significant <0.0 5**

Table No (18): Correlationof Study group age and adherence to life style modification

Life style	P value
Medication adherence	.000
Body weight reduction	.000
Physical activity (exercise)	.000
Alcohol cessation trails	.000
Smoking cessation trials	.000
Stress	.000
Follow up	.000

***P.V Significant = 0.0 5**
****P.V Highly Significant <0.0 5**

Table No (19): Correlation of study group gender and adherence to life style modification

Life style	P value
Medication adherence	**.000**
Body weight reduction	**.000**
Physical activity (exercise)	**.000**
Alcohol cessation trails	**.000**
Smoking cessation trials	**.000**
Stress	**.000**
Follow up	**.000**

***P.V Significant = 0.0 5**
****P.V Highly Significant <0.0 5**

Table No (20): Correlation of study group marital status and adherence to life style modification:-

Life style	P value
Medication adherence	.000
Body weight reduction	.000
Physical activity (exercise)	.000
Alcohol cessation trails	.000
Smoking cessation trials	.000
Stress	.000
Follow up	.000

***P.V Significant = 0.0 5**
****P.V Highly Significant <0.0 5**

Table No (21): Correlation of study group educational level and adherence to life style modification

Life style	P value
Medication adherence	.000
Body weight reduction	.000
Physical activity (exercise)	.000
Alcohol cessation trails	.000
Smoking cessation trials	.050
Stress	.000
Follow up	.000

***P.V Significant = 0.0 5**
****P.V Highly Significant <0.0 5**

Table No (22): Correlation of study group of body mass index before and after program

Body mass index	MI	P value
Body mass index before	23.08	0.000
Body mass index after	24.12	

***P.V Significant = 0.0 5**
****P.V Highly Significant <0.0 5**

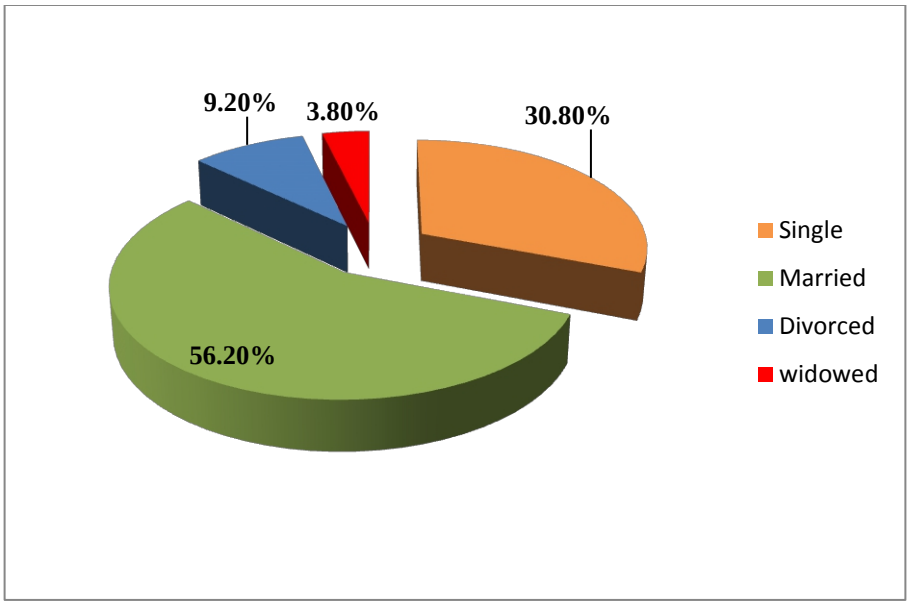

Figure (1): Demographic characteristics of study group regarding marital status.

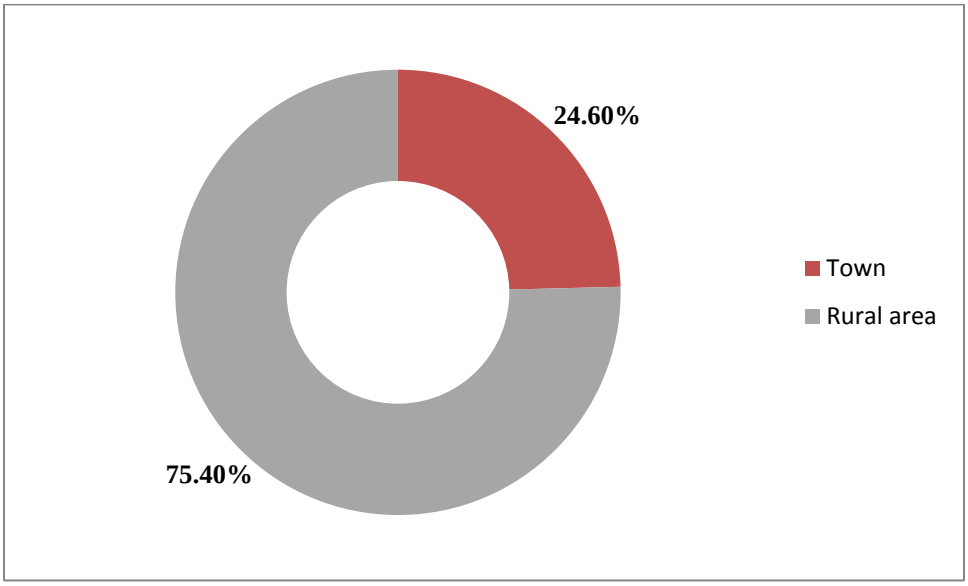

Figure (2): Demographic characteristics of study group regarding resident.

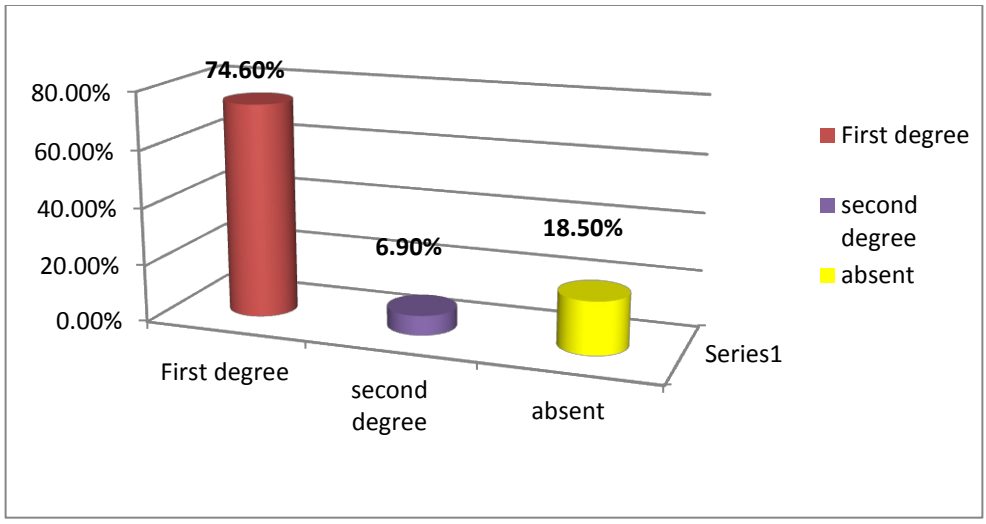

Figure (3): Demographic characteristics of study group regarding family history of peptic ulcer disease.

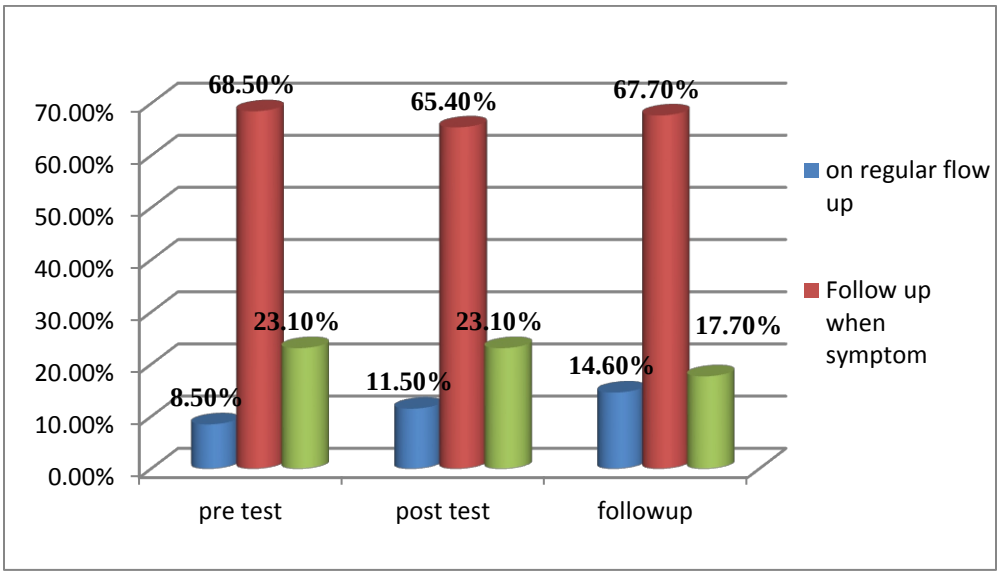

Figure (4) Comparison between pre test and post test and follow-up in patient regarding follow up.

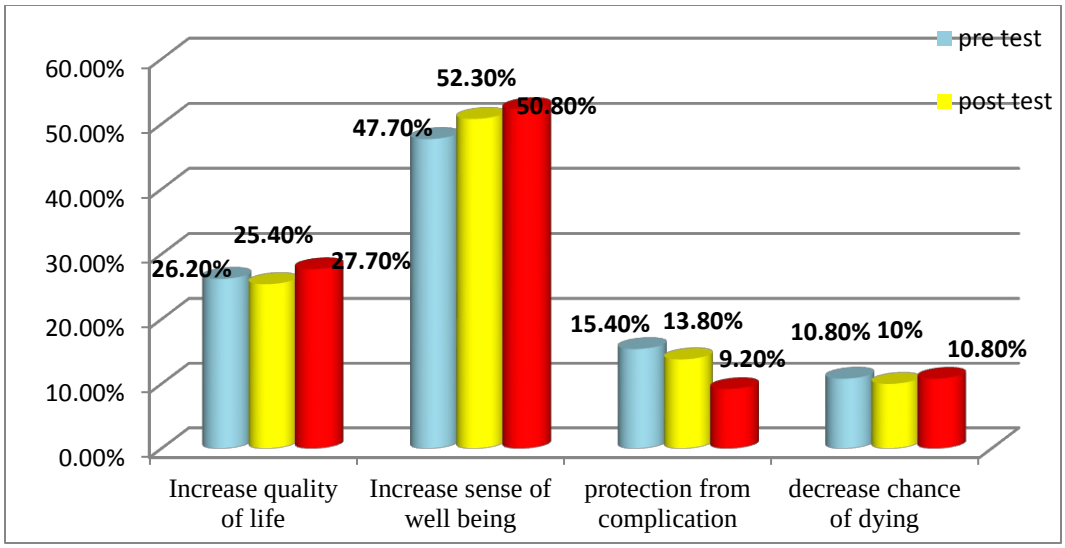

Figure (5): Comparison between pre test and post test and follow-up in patient regarding benefit to manage life style

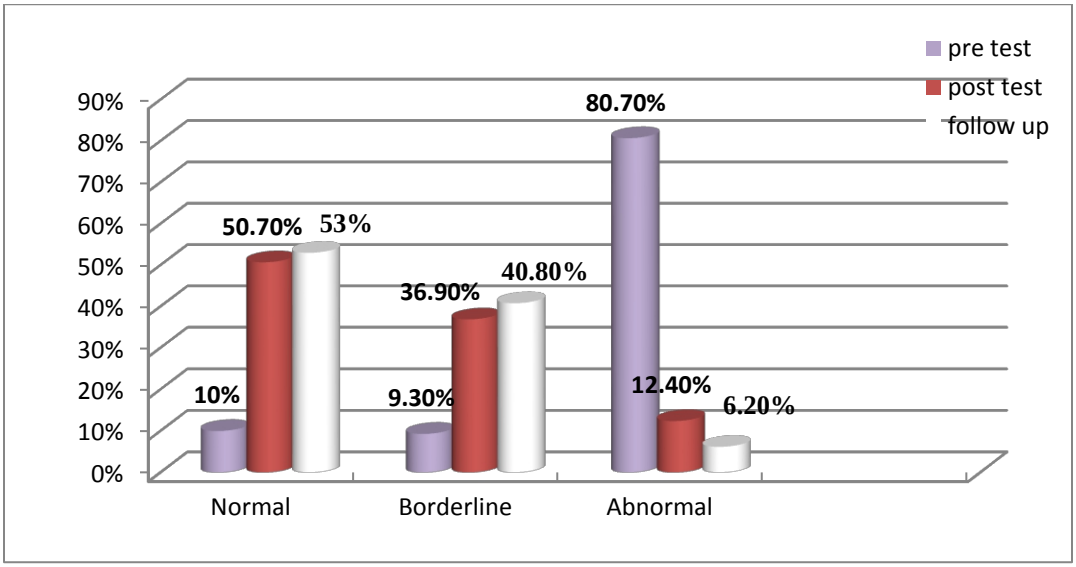

Figure (6): Comparison between pre test and post test and follow-up in patient to assess level of anxiety.

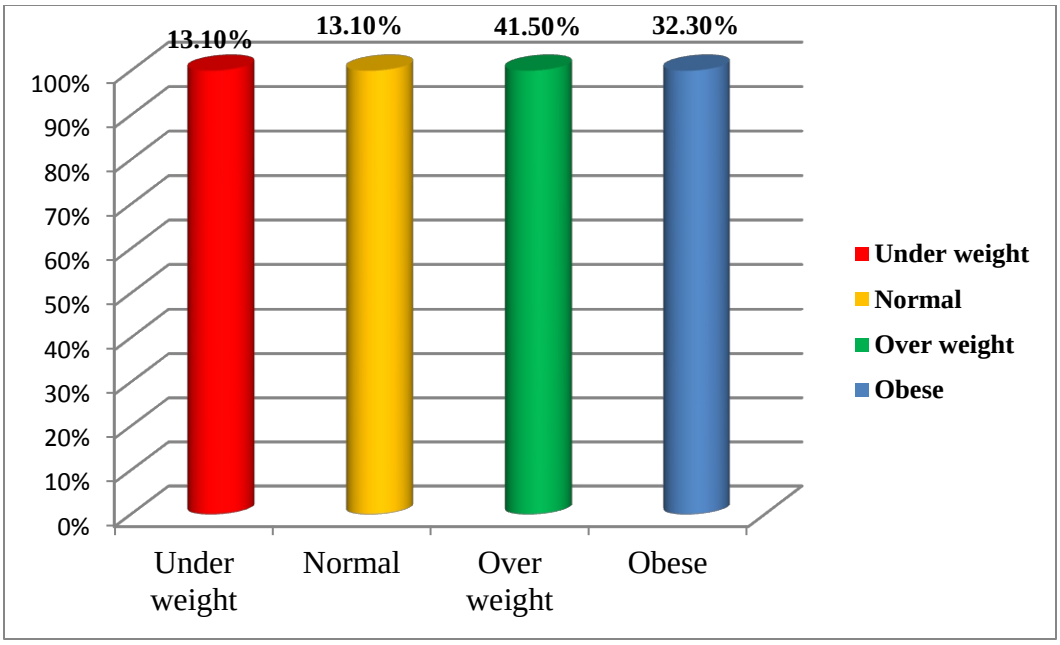

Figure (7): Body math index of study group before program

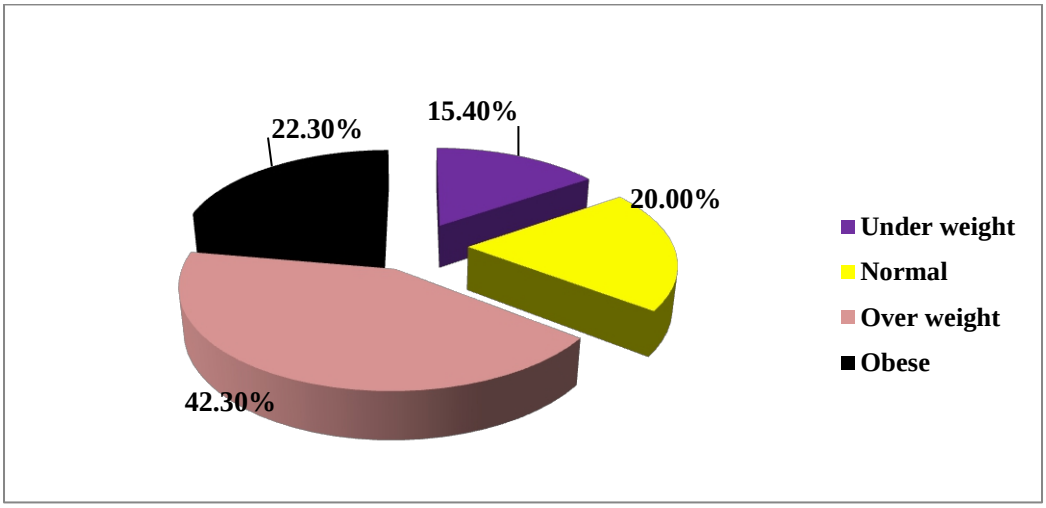

Figure (8): Body math index of study group after program

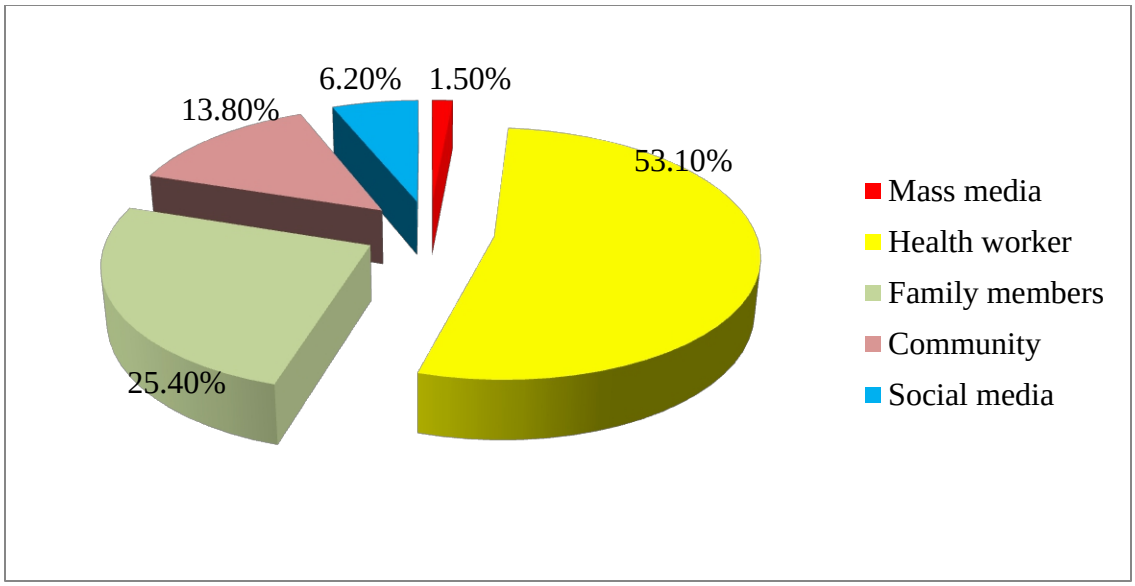

Figure (9): Distribution study group according to source of knowledge about peptic ulcer disease.

Chapter Five

Discussion
Conclusion
Recommendations

5.1 Discussion

Peptic ulcer disease is an important disease state that warrants vigilance in a patient population where exposure to NSAIDs, oral corticosteroids, and anticoagulants is frequent, Gastrointestinal ulceration and peptic ulcer disease are significant causes of morbidity in the United States and globally. [29]

The result of study represented that less than one third (30%) of study group were above fifty years old this result agree with literature reviewwhich state (Older people comprise an increasing proportion of most Africa) [26],more than half (58.5%) of them were male this result agree with previous study done in Iraqi, Sulaimani which reported (Relative to their gender, more than half of them were males (58%) [79],also Another study conducted in China reported that (peptic ulcer was more common in men than in women 61.9%) [89] and study in Arar, Saudi Arabia another study reported that (peptic ulcer prevalence was higher in female than male 71.2% and 28.8%, respectively, but with no significant effect (**pv**=0.356) [90]also it was found that less than one third (32.3%)of them were housewife, less than one third (30.8%)of them were Primary school this result agree with previous study done in Taiwanwhich demonstrated (that subjects with low education level had a higher risk of peptic ulcer (p=0.045) [42], more than half of them (56.2%) were married this result agree with previous study conducted in Bangladesh which reported (56.6% of study group were married)[23] and majority (75.4%) of them live in ruler area.

The study reflected that more than half (54.6%) of study group were blood groping O this result agree with literature reviewwhich state(The inheritance of blood group 0 is associated with modest (1.3 fold) increase in duodenal ulcer) [2]majority (73.8%) of them had no bad habit this result disagree with previous study done in Bangladesh which reported**(**Majority of the respondents (63.3%) smokes)[23] most (88.5%) of them used spicy food this result corresponding with literature

reviewwhich state (Dietary factors such as spice consumption, were hypothesized to cause ulcers until late in the 20th century, but have been shown to be of relatively minor importance)[56], majority(74.6%) of them had first degree family history this result corresponding with literature reviewwhich state (Genetic play an important role in ulcer pathogenesis, the concordance for peptic ulcer in identical twins is approximately 50%,and the lifetime prevalence of developing ulcer in first degree relatives of ulcer patients is about three-fold greater than in the general population) [2]

The result of study clarified that more than half (53.1%) of study group source of knowledge about disease from health worker this result agree with previous study done in Bangladesh which reported (32.7% from Health worker,)[23] ,the patient knowledge about peptic ulcer disease had been improved in the post test and follow up phase with highly significant result (**pv**= 0.000) , also the study group had good knowledge about risk factorsto develop ulcer, causes and complication , in pre test, their knowledge had been improved in the post test and follow up test with highly significant results (**pv**= 0.000).

Moreover the study showed that more than one third (40.8%) of study group had ulcer for less than 5years, majority (73.8%) of them had gastric ulcer this result agree with literature reviewwhich state(Although these ulcerations most commonly occur in the stomach (gastric ulcer))[31], all most (93.8%)of them pain was the common symptom, all most (97.7%) of them had pain site epigastria area this result agree with previous study done in Bangladesh which reported (97.4% had pain in the epigastria region) [23] , also less than half (43.8%) of them the character of pain burning and hanger this result agree with previous study done by Avajeetmukherjee and et al which reported(40.3%) The commonest character of pain in ulcer) was burning with hunger pangs)[40], more than two third (66.9) of them aggravating factor when stomach fully this result agree with previous study

done by Avajeetmukherjee and et al which reported (more than two third (71.4%)of the gastric ulcer patients experienced aggravation of pain with intake of food)[40]more than one third (40.8%) pain relived by antacid also this result corresponding with literature review which state (Pain relief following the intake of food or antacids)[67], less than two third of them (63.1%) decrease appetite , less than quarter (13.8%) of them was hypertensive patient this result near with previous study done in Sudan-Atbara city which reported (less than quarter (20.9%) of study group was hypertensive) [3], and all most (91.5%) of them diagnosed clinically this result agree with literature reviewwhich state (The history and physical examination are important to identify patients at risk of ulcer, perforation, bleeding, or malignancy. However, a systematic review of models using risk factors, history, and symptoms found). [65]

The result of study illustrated that majority (80.8%) of study group used herbal and medicine to manage disease this result corresponding with literature review which state (over the world cheap and easily available treatments)always be in demand especially for the people of non-industrialized countries)[67]. majority (73%) of them most common side effect abdominal pain this result corresponding with literature review which state (The main side effect with iron tablets is an upset stomach) [85] less than half(45.5%) of them never used NSAIDs on follow up test this result corresponding with previous study done in Hoskote area, Bangalore, India which state(Non-Steroidal Anti Inflammatory drugs (NSAID) is one of the important factor causing ulcer.)[84], near to half (48.5%) of them sometime Forget to take medication ,most (86,9%)of them stop to take medicine when feel better also more than half (59.2%) known medication by baket,, and all most(90%) of them improvement in symptom after triple therapy this result agree with literature review which state (The treatment regimens that attain eradication rates of 90% of case triple therapy is consists of: a PPI,a combination of two antimicrobials such as amoxicillin and clarithromycin).[74]

As regard to nutrition the study reflected that less than one third (26.9%)of study group always eat fruit, (88.5%) of them always eat fruits in pre and post test , most (90%) of them eat fruits always in follow up test , more than one third (33.8%) of study group always eat vegetables in pre test, almost (92.3%)them always eat vegetablesin post test, almost (94.6%) of them always eat vegetable in follow up test this result corresponding with literature reviewwhich state (Fruits and Vegetables. A diet that is rich in fiber may cut the risk of developing ulcers in half and speed the healing of existing ulcers. Fiber found in fruits and vegetables is particularly protective. Vitamin A contained in many of these foods may increase the benefit)[60], one third of study group (33.1%) eat fibers diet always ,near to half (46.2%) of them eat fibers diet always in pre and post test ,more than half (51.5%) of them eat fibers diet always in follow up test, more than two third (67.7%) of study group eat carbonated beverages sometime in pre test, most(87.7%) of them eat carbonated beverages sometime in post test, almost(90.8%) of them eat carbonated beverages sometime in follow up test, half (50%) of study group sometime used spices food, majority (80,8%) of them used never used spices food in pre and post test, majority(84.6%) of them never used spices food in follow up test, near to half(49.2%) of study group used peppers food always in pre test, most (94.6%) of them almost never used peppers food in post test, all most(96.9%) of them never used peppers food in follow up test this result corresponding with literature reviewwhich state (Spices and Peppers. Studies conducted on spices and peppers have yielded conflicting results(irritate the stomach)) [60], near to half (46.9%) of study group always used diet contains fat food ,less than two third (64.6%) of them never used diet contains fat food in pre and post test respectively alsoless than two third (65.4%) of them never used diet contains fat food in follow up test, more than half (55.4%) of study group ,half (50%) of them sometime used garlic in food in pre and post test respectively alsoless than half(45.4%) of them sometime used garlic in food in follow up test ,more than

half (50.8%) of study group, half (50%) of them sometime drink coffee in pre and post test,alsomore than half(52.3%) of them never drink coffee in follow up test this result corresponding with literature review which state (consuming more than 3 cups of coffee per day may increase susceptibility to H. pylori infection) [(60)], near to half(46.2%) of study group ,less than two third (64.6%) of them sometime used milk and dairy milk in pre and post test,more than two third (66.9%) of them always used milk anddairy milk in follow up test this result agree with literature reviewwhich state (Certain Probiotics, which are "good" bacteria added to yogurt and other fermented milk drinks, may protect the gastrointestinal system) [(60)] all result in the pre test**,**post test and follow up phase had highly significant result (**pv**= 0.000)

The study represented regarding life style modification the study group were improved in post test and follow up testalsothe study group had desire to lose body weight, engaged in physical exercise, regular exercise program mainly walking in the pre test , and follow up test with highly significant results(**pv**= 0.000) ,also the body mass index were improved in the post test , and follow up test with highly significant results(**pv**= 0.000) this result agree with previous study done in Korea which reported (Regarding anthropometric indices, weight was highly associated with PUD in the crude analysis (**pv** = 0.0003)[(93)] other of study group reported that few percent (16.2%, 7.7%, 9.2%)) of them were smoker ,were used 20 cigarette per day and try to stop respectively this result disagree with previous study done in Malaysia which reported(smoking were significant factor associated with infection)[(4)]also disagree with previous study done in Kano, Nigeria which reported (a strong correlation between H. pylori infection and cigarette smoking (P< 0.01)[(91)]and few percent(1.5%,.8%,1.5%) of them were drink alcohol drink about once a week and try to stop respectively also patient knowledge about importance to prevent smoking and alcohol consumption had been improved through all test.

The study reflected that regarding stress the study group were being anxious during the pre test , post test, and follow up test with highly significant results(**pv** 0.000) , regarding follow up they had follow up when symptoms in post test, and follow up test with highly significant results **(pv 0.000)** , regarding benefit to manage life style more than half (52.3%) of them were increase sense of well being These findings showed that, there was great variation in study group adhered and practiced of life style modification and reflected an increased in their quality of life through excellent behavior change and they can reduce the risk of disease complication this result corresponding with literature reviewwhich state(The complications of PUD impose substantial economic and morbidity burden on the health system and the society. On the other hand, gastric cancer in Northern Iranian provinces is quite common, while it is known that gastric ulcers might later lead to gastric cancers).[(68)]

The study clarified that barriers to practice lifestyle presented that less than half (43.8%) of study group were reported lack of motivation as a personal barrier, more than two third (69.2%) of them were health believes as Psychological barrier, majority (81.5%) of them reported low socioeconomic status as a socio cultural barrier this result corresponding with previous study done in Atbara Hospital which reported (the ulcer associated with low socio-economic status, poor hygiene and overcrowding) [(3)], more than half (58.5%) of them reported lake of agreement with clinical guidance as a provider barrier, also majority (73.8%) of them reported cost medication as a therapy related barrier, more than half (53.1%) of them had Lack of health insurance as barrier to access to care .

The study reflected that there was significant relation between the study group awareness of benefit to adapt life style and their adherence to life style modification, adherence to medication with no statistical significant (**pv** = .871, .928, .980) in pre and post test and in follow up test , also study clarified that

there is adherence to body weight reduction program with no statistical significant (**pv** =.576, .973, .798) in pre and post testand in follow up test, adherence to exercise regimen with no significant (**pv**.177,.754)in pre test, follow up test with statistical significant(**pv**.050) in post test respectively,regardingAlcohol cessation trails and Smoking cessation trials with highlystatistical significant (**pv** =.000, 000, 000) in pre and post test and in follow up test respectively this result disagree with previous study reported that(Although some studies have found correlations between smoking and ulcer formation ,Others have been more specific in exploring the risks involved and have found that smoking by itself may not be much of a risk factor unless associated with H. pylori infection, Studies have found that alcohol consumption increases risk when associated with H. pylori infection; it does not seem to independently increase risk. Even coupled with H. pylori infection)[(86)], also regarding Stressno statistical significant (**pv** =.219, .174, .166) in pre and post testand in follow up test, regarding follow up no statistical significant (**pv** =.307, .303, .195) in pre and post test and in follow up test.

In addition to the result of study illustrated that there was significant relation between the study group awareness of complication and their adherence to life style modification, comply with triple therapy with no statistical significant (**pv** = .686, .581) in post test and in follow up test , with statistical significant(**pv** = .002) in pre, also study clarified that there is adherence to body weight reduction program with no statistical significant (**pv** =..218, .267, .811) in pre and post test phase and in follow up test, adherence to physical activity with no significant (**pv**.603, .609, . .238)in pre test, post test phase and follow up test respectively,regardingAlcohol cessation trails and Smoking cessation trials with highlystatistical significant **(pv =.000, 000, 000)**in pre and post test and in follow up test respectively, and Smoking cessation trials with highlystatistical significant (**pv** =.000, 000, 000) in pre and follow up test , with significant(.050) post test, also regarding Stressno statistical significant (**pv** =..999, .746, .417) in pre and post testand in follow up test, in pre and

post testand in follow up test ,regarding follow up no statistical significant (**pv** =..842, .950, .400) in pre and post testand in follow up test.

On the other hand the result of the study explained that there was significant relation between the study group awareness of risk factor and their adherence to life style modification, Stop to take medicine with no statistical significant (**pv** = .140) in post test, with statistical significant(**pv** = .020 ,.052) in pre and in follow up test, also study clarified that there is adherence to body weight reduction program with no statistical significant (**pv**.512,.729,.407) in pre and post testand in follow up test, adherence to physical activity with no significant (**pv**.325,.235,.627) in pretest, post test and follow up test respectively.

RegardingAlcohol cessation trails and Smoking cessation trials with highlystatistical significant (**pv** =.000,000, 000) in pre and post test and in follow up test respectively, and Smoking cessation trials with highlystatistical significant (**pv** =.000,000, 000) in pre and follow up test , with significant(.050) post test, also regarding Stressstatistical significant (**pv** =.019, .011, .040) in pre ,post testand in follow up test ,regarding follow up no statistical significant (**pv** =.095,.145) in pre and follow up test with statistical significant(.014) in post test.

The study clarified that regarding demographic characteristics of study group highly statistical significant between their age , sex ,marital status and educational level and adherence to life style modification (**pv** = .000,.000,.000) in adherence to medication, body weight reduction ,physical activity respectively, with highly significant (**pv** =.000,.000,.000) in stress and follow up respectively this result agree with previous study done in Northern Saudi Arabia which reported(There were significant relations between peptic ulcer with gender, marital status, educational level)**(88)**

The study reflected that regarding hospital anxiety and depression scale of study group majority (80.7%) was abnormal in pre test , more than half(50.7%) of them was normal in post test also more than one third(36.9%) of them in borderline in post test and more than half (53%)of them normal in follow-up test.

5.2 Conclusion

Based on the study finding the study concluded that:

The study group knowledge about peptic ulcer disease improved in the phases of the program

The study group had acceptance level of life style modification upgraded in post test and follow up phases andalso good response to life style modification program with significant results.

Regarding barrier to practice life style that less than half of study group were reported lack of motivation as a personal barrier, more than two third of them were health believes as psychological barrier, majority of them reported low socioeconomic status as a socio cultural barrier,, more than half of them reported lack of agreement with clinical guidance as a provider barrier, also majority of them reported cost medication as a therapy related barrier, more than half of them had lack of health insurance as barrier to access to care.

The current study indicated that the educational programs were effective in increasing knowledge, improving self-management, and controlling lifestyle habits of the patients with peptic ulcer disease.

4.3Recommendations

Based on the study finding the study recommended:

Ministry of health:

- providing health assurance and conducting further multi centers studies in order to demonstrate the differences in quality of life issues for PUD patients
- Provision of H. Pylori test which are already in place should be enhanced and enforced along with the proper establishment of the health assurance system.
- Increase awareness through mass media and education among the people smokers are two times more likely to develop the disease.

Patients:

- Patients with peptic ulcer diseaseneed advice, support and information from health professionals in order to be able to understand the importance of using life style modification, and should be counseled every time whenever they visit to physician to improve the compliance with life style modification.
- Special care must be taken to ensure that the elderly patient understands the regimen and can see and read instructions, the elderly person's family should be included in the teaching program so that they can understand the patient's needs, encourage adherence to life style modification, and know when and whom to call if problems arise or information is needed.
- The patient must also be educated about the H. pylori eradication therapy as if discontinued so may reoccur to the patient
- The study recommends that young adults, particularly Individuals with blood group (O) should be highly aware from gastrointestinal (GI) symptoms and avoids risk factors for the development of peptic ulcer disease
- Patients must be advised to take care of oral hygiene and to proper wash their hands so that chances of H. pylori infection decrease.

Appendix

References

Research educational Program

Questionnaire

Hospital Anxiety and Depression Scale

Researchers:

- Further research should be done about this topicin all country due to different cultural aspect of the population.

Reference

1. *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4017537/ 0n 12/10/2016at1:57pm*
2. *Carroll KC, Brooks GF, Butel JS, Morse SA, Mietzner TA. Medical Microbiology, Twenty Fifth Editions, 2010, 235-240*
3. *Omer Salah Eldeen Hamid &Walid Ahmed Hamid Eldaif. et al. association of helicobacter pylori infection with lifestyle chronic diseases and body-index / Journal of Science / Vol 4 / Issue 4/ 2014 / 255. www.journalofscience.net*
4. *Kadhim G, Omar H, Ismail A (2015) Risk Factors Associated with Peptic Ulcer Disease. J Bioengineer & Biomedical Sci 5: 142. Volume 5 • Issue 1 • 1000142 pp3-4*
5. *Pillay KVK, Htun M, Naing NN, Norsa'adah B (2007) Helicobacter Pylori Infection in Peptic ulcer disease: the importance of smoking and ethnicity. Southeast Asian J. Trop Med Public Health 38: 1102-1110.*
6. *Murtaza Mustafa, Jayaram Menon2, RK.Muiandy,R.Fredie, MM.Sein5 ,A.Fariz, Risk Factors,Diagnosis, and Management of Peptic ulcer Disease IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 14, Issue 7 Ver. VIII (July. 2015), PP 40-43 www.iosrjournals.org*
7. *http://www.medicinenet.com/imagecollection/peptic_ulcer_picture/picture.htmon11/10/2016at 10:7A*
8. *www.cdc.gov/ncidod/dbmd/hpylori.htm on 15/10/2016 at 10:54am.*
9. *online.help@elsevier.com 2013.*
10. *http://www.ganfyd.org/index.php?title=Peptic_ulcer_disease on 11:10,at 2:54pm*
11. *http://accesspharmacy.mhmedical.com/content.aspx?bookid=856&sectionid=49755000 on 11:10,at 3:00pm*
12. *Wikipedia. Peptic ulcer. 2010. Jan 3, http://en.wikipedia.org/wiki/Peptic_ulcer [Accessed 3 Jan, 2010]*
13. *Majumdar D, Bebb J, Atherton J. Helicobacter pylori infection and peptic ulcers. Medicine. 2007;35:204–209.*
14. *American Academy of Family Physicians, 2015;91(4):236-242. Copyright © 2015*
15. *McQuaid KR. Gastrointestinal disorders. In: SJ McPhee, MA Papadakis, MW Rabow, eds. Current MedicalDiagnosis& Treatment. New York, N.Y.: The McGraw-Hill Companies, Inc.; 2011:540-541, 586-595*
16. *Del Valle J. Peptic ulcer disease and related disorders. In: Longo DL, Fauci AS, Kasper DL, et al, eds. Harrison'sPrinciples of Internal Medicine. 18th ed. New York, N.Y.: The McGraw-Hill Companies, Inc.; 2012:2438.*
17. https://www.google.com/search?q=17.+Centers+for+Disease+Control+and+Prevention.+Healthrelated+quality+of+life%3F+2007, *0n 12/10/2016at1:57pm.*
18. *Babaee G, Keshvarz M, Shaigan M. Effect of health education program on quality of life in patients undergoing coronary artery bypass surgery. ActaMedicaIranica. 2007;45:69–75.*
19. *RobertMason(Ph.D.,UniversityofConnecticut)Professor of Marine Sciencesrobert.mason@uconn.eduPhone: 860-405-9129Fax: 860-405-9153 http://mason.mercury.uconn.edu/.*

20. *Ghadem H. Cure of peptic ulcer. Available from: http://Daneshnamehroshd.ir/mavara/mavara-index.php*
21. *Zboralski K, Florkowski A, Talarowska-Bogusz M, Macander M. Quality of life and emotional functioning in selected psychosomatic disease. PostepyHig Med Dosw (Online). 2008;62:36–41. [PubMed]*
22. *SubrataRoy .: Asian Journal of Biomedical and Pharmaceutical Sciences, 6(53), 2016, 41-43.*
23. *Rafi AbulHasnathSiddique ,Prevalence of Peptic Ulcer Disease among the Patients with Abdominal Pain Attending the Department Of Medicine in Dhaka Medical College Hospital, Bangladesh, IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 13, Issue 1 Ver. IX. (Feb. 2014), PP 5-9 www.iosrjournals.org*
24. *Kumar, Abbas, Fuasto. Robins and Cotran Pathologic Basis of Disease. 7th edition. Elsevier Publications, 2008. Pages 797-847*
25. *Health profile Bangladesh, World health rankings. World life expectancy 2010. Available online athttp://www.worldlifeexpectancy.com/country-health-profile/bangladesh(Accessed on October 28, 2013)*
26. *Michael Woodward,Stephen, Campbell and etal , Peptic Ulcer Disease in Older People Journal of Pharmacy Practice and Research Volume 41, No. 1, 2011.pp58-60.*
27. *Mokrowiecka„Jurek, Pińkowski, Małecka-Panas E1,The comparison of Health-Related Quality of Life (HRQL) in patients with GERD, peptic ulcer disease and ulcerative colitis,Advances in Medical Sciences · Vol. 51 · 2006 ·pp143-145*
28. *http://www.biomedcentral.com/1471-230X/14/149Wen et al 2014 on 15/10/2016 at 4:54pm.*
29. *http://www.healio.com/orthopedics/infection/journals/ortho/2009-2-32-2/%7B61fa9ada-7c51-48f2-915f-d3793ea5f96b%7D/peptic-ulcer-disease-clinically-relevant-causes-and-treatments,0n13/10/2016at10:53amFebreyary 2009,volume32,issu2 Ryan P. Mynatt, PharmD; George A. Davis, PharmD, BCPS; Frank Romanelli, PharmD, MPH, BCPS*
30. *Helms RA, Herfindal ET, Quan DJ, Gourley DR. Peptic Ulcer Disease and Gastroesophageal Reflux Disease. In: Text Book of Therapeutics Drug and Disease Management. Edn. 8th, Lippincott Williams and Wilkins Publication, Philadelphia, 2006, pp. 1227-1256*
31. *Tortora GJ, Derrickson B. Peptic Ulcer Disease. In: Principles of Anatomy and Physiology. Edn. 11th, Wiley Publication, USA, 2006, pp. 942-943*
32. *RakeshPahwa, Neeta, Vipin Kumar, KanchanKohli, Clinical Manifestations, Causes and Management Strategies of Peptic Ulcer Disease International Journal of Pharmaceutical Sciences and Drug Research 2010; 2(2): 99-106, ISSN 0975-248X*
33. *NatháliaDalcinvomero, Elisângelacolpo , nutritional care in peptic ulcer abcdArq Bras Cir Dig 2014;27(4):298-301*
34. *Benjamin Kunbuor Hon. Minister for Health, Standard Treatment Guidelines2010, 6th Edition ,pp 28-29.*
35. *McQuaid KR. Gastrointestinal disorders. In: SJ McPhee, MA Papadakis, MW Rabow, eds. Current MedicalDiagnosis& Treatment. New York, N.Y.: The McGraw-Hill Companies, Inc.; 2011:540-541, 586-595*
36. *http://www.medicinenet.com/imagecollection/peptic_ulcer_picture/picture.htmon11/10/2016at 10:7AM*

37. *Swati kansara*, Bhumika. D. Sakhreliya, PEPTIC ULCER - Its Pathogenesis and Recent Approaches for the Treatment journal of pharmaceutical science and bio scientific research Volume 3, Issue 4: Aug Sept 2013 (136-139)*
38. *ABIDULLAH1, HAYA HUSSAIN2, SHUJAT AHMAD3, ZUL KAMAL4& SHAFI ULLAH5 IMPACT: PHARMACOTHERAPEUTICAL STUDY OF PEPTIC ULCER DISEASE International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS) Vol. 1, Issue 3, Aug 2013, 30-31*
39. *SubrataRoy .: Clinical Study of Peptic Ulcer Disease Asian Journal of Biomedical and Pharmaceutical Sciences, 6(53), 2016, 42.*
40. *Avijeet Mukherjee et al., A Clinical Study of Peptic Ulcer Disease and its Complications in Rural ,Population , Scholars Journal of Applied Medical Sciences., 2014; 2(4E):1484-1485, ISSN 2347-954X*
41. *Sharma SK1, Maharjan DK2, Thapa , Hospital based analytic study of peptic ulcer disease in patients with dyspeptic symptoms, Kathmandu University Medical Journal (2009), Vol. 7, No. 2, Issue 26, 136.*
42. *Fu-Wei Wang, Ming-ShiumTu, Guang-Yuan Mar, Hung-Yi Chuang, Hsien-Chung Yu, Lung-Chih Cheng and Ping-I Hsu (2011) 'Prevalence and risk factors of asymptomatic peptic ulcer disease in Taiwan', World J Gastroenterology, 17(1199), pp. 1199–1203[Online]. Available at: http://hinarigw.who.int/whalecomwww.ncbi.nlm.nih.gov/whalecom0/pmc/articles/PMC3063914 (Accessed: 11th July 2013).*
43. *Kashem MA, Shoma AK, Hossain S, Uddin M, Alam D. Endoscopic Evaluation of Children Presenting With Abdominal Pain.Medicine Today 2011; 23(01): 39-41. http://www.banglajol.info/index.php/MEDTODAY/article/viewFile/11945/8716 (accessed 10 July 2013).*
44. *Jianyuan Chai, Peptic Ulcer Disease, Copyright november 2011 Published by InTechJanezaTrdine 9, 51000 Rijeka, Croatia, p 4-5*
45. *Barkun A, Leontiadis G. Systematic review of the symptom burden, quality of life impairment and costs associated with peptic ulcer disease. Am J Med 2010; 123: 358-66.Non-Steroidal Anti-Inflammatory Drugs*
46. *Boers M, Tangelder MJ, van Ingen H, Fort JG, Goldstein JL. The rate of NSAID-induced endoscopic ulcers increases linearly but not exponentially with age: a pooled analysis of 12 randomised trials. Ann Rheum Dis 2007; 66: 417-18.*
47. *) Bardou M, Barkun AN. Preventing the gastrointestinal adverse effects of nonsteroidal anti-inflammatory drugs: from risk factor identification to risk factor intervention. Joint Bone Spine 2010; 77: 6-12*
48. *Lanas A. A review of the gastrointestinal safety data – a gastroenterologist's perspective. Rheumatology (Oxford) 2010; 49 (suppl 2): ii3-ii10.*
49. *Gasse C, Christensen S, Riis A, Mortensen PB, Adamsen S, Thomsen RW,Preadmission use of SSRIs alone or in combination with NSAIDs and 30-daymortality after peptic ulcer bleeding. Scand J Gastroenterol 2009; 44: 1288-95.*
50. *Cryer B. Reducing the gastrointestinal risks of low-dose aspirin,Gastroenterology 2010; 138: 30-3.*

51. *Ng FH, Song SY, Lam KF, Chu WM, Chan P, Ling YH, et al. Famotidine is inferior to pantoprazole in preventing recurrence of aspirin-related peptic ulcers or erosions. Gastroenterology 2010; 138: 82-8.*
52. *Graham DY, Fischbach L. Helicobacter pylori treatment in the eara of increasing antibiotic resistance. Gut 2010; 59: 1143-53.*
53. *Lanas A. Upper GI bleeding-associated mortality: challenges to improving a resistant outcome [editorial]. Am J Gastroenterol 2010; 105: 90-2.*
54. *Takeshi Kanno, KatsunoriIijima, Yasuhiko Abe,etal Helicobacter pylori-negative and non-steroidal anti-inflammatory drugs-negative idiopathic peptic ulcers show refractoriness and high recurrence incidence: Multicenter follow-up study of peptic ulcers in Japan*
55. *Lydia B. Feinstein, Robert C. Holman, Krista L. Yorita Christensen, Claudia A. Steiner,David L. Swerdlow 'Trends in Hospitalizations for Peptic Ulcer Disease, United States, 1998–2005', Emerg Infect is, 10(1609.091126), pp. 1410–1418 [Online], 2010, Available at: http://hinari-gw.who.int/whalecomwww.ncbi.nlm.nih.gov/whalecom0/pmc/?term=peptic+ulcer+disease (Accessed: 10th July 2013).*
56. *Goodman, C.S., Gilman, B.T. (Eds.), Goodman and Gilman's:The Pharmacological Basis of Therapeutics, 10th ed. McGraw-Hill, New York,2007:.1005–1019*
57. *JAMES M RITTER. A Textbook of Clinical Pharmacology and Therapeutics published by Hodder Arnold, 2008: 247-262.*
58. *Swati kansara*, Bhumika. D. Sakhreliya,journal of pharmaceutical science and bio scientific research Volume 3, Issue 4: Aug Sept 2013 (136-144)*
59. *Muobarak J T. et al. Gastric ulcer disease pathogenesis complication and strategies for prevention. Gastroenterology, 2011: 2:3.*
60. *http://umm.edu/health/medical/reports/articles/peptic-ulcers on 12/10/2016 at 2:24pm*
61. *SalihBarik,MFatihAbasiyanik,NizamettinBayyurt,EtAl.H.Pylori Infection And Other Risk Factors Associated With Peptic Ulcers In Turkish Patients: A Retrospective Study. World J Gastroenterol.2007;13(23):3254-8*
62. *SatarasingheRL,De Silva AP,ArulnithyK,EtAl.AetiologyAnd Other Features Of A Cohort Of Adult Sri Lankans Presenting With Upper Gastrointestinal Bleeding(UGIB).J Ceylon College Physic.2010;41:57-60*
63. *Mayoclinc,http://www.mayoclinic.org/diseases-conditions/peptic-ulcer/symptoms-causes/dxc-20231407 on 11.10 2016,at2:27pm*
64. *kalyanakrishnanramakrishnan, md, frcse, and robert c. salinas, md, Peptic Ulcer Disease, American Family Physician, Vol 76, No 7 ◆ October 1, 2007,p1006*
65. *Girdalidze AM, Elisabedashvili GV, Sharvadze LG, Dzhorbenadze TA. Comparative diagnostic value of Helicobacter pylori infection testing methods [in Russian]. Georgian Med News. 2013;(225):53–60*
66. *JULIA FASHNER, MD, and ALFRED C. GITU, MD, Diagnosis and Treatment of Peptic Ulcer Disease and H. pylori Infection,Copyright © 2016 American Academy of Family Physicians, V91(4) pp 238-240*

67. *El-Sayed H. BakrandSameh M. Baz. Therapeutic role of ginger and chamomile aqueous extract for peptic ulcer using experimental rats. Life Sci J 2015;12(6):92-93]. (ISSN:1097-8135). http://www.lifesciencesite.com*
68. *Farhad Barazandeh1, Abbas Yazdanbod2, Farhad Pourfarzi2, SadafGhajarieh Sepanlou1, Mohammad H Derakhshan3, Reza Malekzadeh1,Epidemiology of Peptic Ulcer Disease: Endoscopic Results of a Systematic Investigation in IranMiddle East Journal of Digestive Diseases/Vol.4/ No.2/ April 2012,pp 91.*
69. *Passaro E, JR. Peptic ulcer disease. http://web.squ.edu.om/med-Lib/MED_CD/E_ CDs/Surgery/CHAPTERS/CH18.PDF Accessed 21 Oct 2009.*
70. *Malfertheiner P, Chan F KL, McColl K EL. Peptic ulcer disease. Lancet. 2009; 374: 1449-1461.*
71. *FawazChikhTorab, Mohamed Amer, Fikri M. Abu-Zidan and Frank James Branicki, Perforated Peptic Ulcer: Different Ethnic, Climatic and Fasting Risk Factors for Morbidity in Al-Ain Medical District, United Arab EmiratesASIAN JOURNAL OF SURGERY VOL 32 • NO 2 • APRIL 2009,pp95-96*
72. *Pillay KV, Htun M, Naing NN, et al. Helicobacter pylori infection in peptic ulcer disease: the importance of smoking and ethnic-ity. Southeast Asian J Trop Med Public Health 2007;38:1102–10*
73. *Andreson H, Sillakivi T, Peetsalu M, et al. Persistence of Helicobacter pylori infection in patients with peptic ulcer perfora-tion. Scand J Gastroenterol 2007;42:324–9*
74. *Babaee G, Keshvarz M, Shaigan M. Effect of health education program on quality of life in patients undergoing coronary artery bypass surgery. ActaMedicaIranica. 2007;45:69–75.*
75. *Centers for Disease Control and Prevention. Health-related quality of life? 2007. www.cdc.gov/nccdphp/hrqol[Accessed 3 Jan, 2011]*
76. *Zboralski K, Florkowski A, Talarowska-Bogusz M, Macander M. Quality of life and emotional functioning in selected psychosomatic disease. PostepyHig Med Dosw (Online). 2008;62:36–41*
77. *MH Baghianimoghadam, S Mohamadi, M Baghianimoghadam, A Falahi, and HS Roghani, Survey on Quality Of Life related factors in patients with Peptic Ulcer based on PRECEDE Model in Yazd, Iran,journal of medicine and life, v.4(4); 2011 Nov 14.*
78. *Benjamin D. Gold, Mark A, Steven J. CzinnGilger New Diagnostic Strategies for Detection of Helicobacter pylori Infection Gastroenterology &Hepatology Volume 10, Issue 12, Supplement 7 December 2014,pp4.*
79. *Yasin M. Mussa, MScN,Mohammad O. Mohammad, PhD Sana'a H. Abdulsahib, PhD, Quality of Life among Adult Patients with Peptic Ulcer in the City of Sulaimani, Iraqi National J. for Nursing Specialties, Vol. 24(1) 2011.p81-82*
80. *Ankolekar C et al. Inhibitory potential of tea polyphenolics and influence of extraction time against Helicobacter pylori and lack of inhibition of beneficial lactic acid bacteria. Journal of Medicinal Food. 2011;14:1321-9*
81. *Yiling Cheng1, Caroline A Macera2, Dorothy R Davis1, Steven N Blair[3]Does physical activity reduce the risk of developing peptic ulcers? & British Association of Sport and Exercise Medicine,2016,V34,issu2.*
82. *http://www.ndhealthfacts.org/wiki/Peptic_Ulcer,12/10/2016at 10:56am*

83. *https://www.homemademedicine.com/home-remedies-peptic-ulcer.html on 12:10:2016 at 11:36am.*
84. *ShahnooshiJavad F*, Anita DadollahiSarab, effectiveness of life style education in peptic ulcer patient, World Journal of Pharmaceutical Research Volume 3, Issue 2, 2880-2881.*
85. *http://www.patient.co.uk/dils.asp on 24/10/2016,at 8pm*
86. *Aghareed M. Asali, Mohammed A. AlghamdiSumayah A. Fallatah, Walaa A. Alholaily,Raja G. Aldandan, Alaa H. Alnosair,Ali A. AlKhars, Moroj F. Alreheli,Mohammad O. Almohaini , Rawabi A. Alharbi,Risk factors leading to peptic ulcer disease,International Journal of Community Medicine and Public Health,2018 Oct;5(10):4620,http://www.ijcmph.com*
87. *Amrish Kumar, VrishDhwajAshwlayan, MansiVerma, Diagnostic approach & pharmacological treatment regimen of Peptic Ulcer Disease,Pharmacy and Pharmaceutical Research Open Access Journal Phar Pharm Res Open Acc J. (2019);1(1):p11. DOI: 10.30881/pproaj.00001,Submit your Article | www.ologyjournals.com/submit-article Ology.*
88. *MashaelJaza H Alshammari , Omar Mohamed Bakr Ali , Samar khaled al-shamlani , ShadaKhaledBashantoof , Zahra Ali Qalib , BashayrZayed Al-Amri , Nora HenafHiaAlrwelySulaimanZayed S Alamri , Abduljawad Salem S Alharbi , Elham Hamid O Alfallaj,Peptic Ulcer Disease in Elderly Population of Arar City, Northern Saudi Arabia,The Egyptian Journal of Hospital Medicine (October 2018) Vol. 73 (4),Received: 05/8/2018 ,Accepted: 15/8/2018 Page 6494).*
89. *Li Z, ou D, Ma X et al. (2010): Epidemiology of peptic ulcer disease: endoscopic results of the systematic investigation of gastrointestinal disease in China. Am. J. Gastroenterol., 105:2570–2577.*
90. *Albaqawi AS, el-Fetoh NMA, AlanaziRF et al. (2017): Profile of peptic ulcer disease and its risk factors in Arar, Northern Saudi Arabia.Electronic Physician, 9(11):5740-5745.*
91. Ahmad Kumo Bello, Ali Bala Umar, Musa Muhammad Borodo,Prevalence and risk factors for helicobacter pylori infection in gastroduodenal diseases in Kano, Nigeria ,African journal of Medical and Health science,2018 Vol 17 Issue1 Page45, C:\Users\nurse\Downloads\Prevalence and risk factors for helicobacter pylori infection in gastroduodenal diseases in Kano, Nigeria Bello AK, Umar AB, Borodo MM - Afr J Med Health Sci.html
92. *Centers for Disease Control. (2014). Healthy weight -It's not a diet, it's a lifestyle. RetrievedOctober2014,fromhttp://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html?s_cid=tw_ob064*
93. *Jihye Kim, Keun Ho Kim, Bum Ju Lee*Association of peptic ulcer disease withobesity, nutritional components, and blood parameters in the Korean population, PLoSONE12(8):e0183777 · August2017,*https://www.researchgate.net/publication/319286533_Association_of_peptic_ulcer_disease_with_obesity_nutritional_components_and_blood_parameters_in_the_Korean_population.
94. Ali Montazerir, Mariam Vahdaninia, Mandana Ebrahimi and Soghra JarvandiThe Hospital Anxiety and Depression Scale(HADS): translation and validation study of the Iranian version*Health and Quality of Life Outcomes*2003 **1**:14 licensee Bio Med Central Ltd. 2003https://doi.org/10.1186/1477-7525-1-14

Research educational Program

Educational hand out Summary

The hand out was developed to provide educational information and resources to manage patient, the book was designedas a reference guide to address the gaps identified in care of patient, it aims to establish evidence-based strategies to help the target Populations to prevent and manage patient.

An intense educational program designed by the researcher based on actual assessment of patient needs to improveself-care practice in the light of the available researches and literature, the intervention developed in a simple Arabic language to cover the relevant aspects of self-care of patients as usual life style routine , the impact of the program based on the improvement of the quality of life , patient will be more compliant to treatment regimen, life style modification and decrease the occurrence complications.

General objective: To provide the patient with and educational tools necessary to provide basic education to patients.

Specific objectives: By the end of this hand out any client should be able to :-

1. Explain definition of peptic ulcer disease
2. Explain types of peptic ulcer disease
3. Explain signs and symptoms of peptic ulcer disease
4. Diagnostic investigation should be done
5. Describe complication ofpeptic ulcer disease
6. Explain life style modification measures
7. Explain medication regimen and instruction regarding medication.

Program (patient)

Section one:

Introduction about of peptic ulcer disease

Objectives	Teaching methods &media	contains	Evaluation
By the end of this section any client should be able to 1-define of peptic ulcer disease	Lecture +discussion +slides show+ image	Definitions of peptic ulcer disease	Patient define of peptic ulcer disease
2-explain types of peptic ulcer disease	Lecture +discussion +slides show+image	types of peptic ulcer disease	Patient understand
3-Discus causes of peptic ulcer disease	Lecture +discussion +slides show + image	causes of peptic ulcer disease	Patient understand
4-Explain risk factor of peptic ulcer disease	Lecture +discussion +slides show+ image	risk factor of peptic ulcer disease	Patient understand
5-describe sign and symptoms of peptic ulcer disease	Lecture +discussion +slides show+ image	Obtains information about symptoms of hypertension	Patient understand

Section two:

Describing peptic ulcer pain:

Objectives	Method & media	Contains	Evaluation
By the end of this section any client should be able to : Identify sit of pain	Lecture +discussion +slide show	Discussion site of pain in four quadrant region	Patient know site of pain
Identify character of pain	Lecture +slide show +discussion +booklet	Discussion Character of pain	Know about Character of pain
1. List aggravating factor	Lecture +slide show	Discussion aggravating factor	Know aggravating factor
2. List relieving factor	Lecture +slide show	Discussion relieving factor	Know relieving factor

Section three:

Diagnostic test:

Objectives	Method & media	Contains	Evaluation
By the end of this section any client should be able to 2-numerate investigation	Lecture +slide show +discussion +image	Discussion about types of investigation done	Know about investigation
1-numerate complication of peptic ulcer disease	Lecture +discussion +slide show		Know complication of peptic ulcer disease

Section four:

Life style modification

Objectives	Method & media	Contains	Evaluation
By the end of this section any client should be able to : 1-understand medication	Lecture +discussion +slide show	Medication Instruction regarding adherence and compliance regimen	Pt understand
2-Description to manage heart burn	Lecture +discussion +slide show +image		Pt understand

Section five:

Life style modification

Objectives	Method & media	Contains	Evaluation
By the end of this section any client should be able to : 1-numerate type of nutrition(herbal)	Lecture +discussion +slide show +image	Nutrition guide recommended , not recommended type of diet diet rich resources	Know about nutrition

Section six:

Life style modification

Objectives	Method &media	Contains	Evaluation
By the end of this section any client should be able to : 1- understand life style measure	Videos+ discussion	Stop smoking Stop alcohol Exercise regimen Weight reduction Mange stress Importance of follow up	Patient on trail to accept modification

جامعه شندي
كليه الدراسات العليا والبحث العلمي

Questionnaire about effect of self-care life style modification program on peptic ulcer patients.

Part one (Socio demographic data)

1. **Age:**

a. 2o-30years ( ) b.31-40 years ( ) c.41-50 years ( )d.More than 50 years ( )

2. **Sex:**

a. Male( ) b. Female( )

3. **Occupation:**

a House wife(.)b.Government employee ( ) c. Free warker( ) d. Retraine( ) e.student( )

4. **Level of education:**

a. Illiterate ( ) b. khlwa( ) c.Primaryschoo l( ) d. Secondary school( ) e. graduate ( ) f.post graduate( )

5. **Marital status:**

a. Single ( ) b.Married ( ) c. Divorced ()d.Widowed().

6. **Resident:**

a. Town ( ) b.rural area( )

7. **Blood grouping:**a.A( ) b.B ( ) c.AB ( )d.O ( )e.Idont no( )
8. **Personal habit:**a.Smoker ( ) b. Alcohol consumption ( ) c.snuff () d.Not used( )
9. **Dietary habit**

a.Non Spicy food( ) b.Spicy food( ) c.Only vegetables( ) d.Average spicy food( )

10. **family history of peptic ulcer disease:** a.First degree( ) b. second degree( ) c. Absent( )

B. Part two (Knowledge of peptic ulcer):

1. **knowledge of peptic ulcer Information from:**

a Mass media( ) b. Health worker( ) c. Family members( ) community ( ) e. social media( )

2. **Definition of peptic ulcer:**

a. Is a group of disorders characterized by the presence of ulcers in any portion of gastrointestinal tract. ( )
b. Is an excoriated area of stomach or intestinal mucosa. ( )
c. Refers to painful sores or ulcers in the lining of the stomach and duodenum. ( )
d. Is a defect in the mucosa of the gastrointestinal tract. ( )
e. I don't know( )

3. **Risk factors of peptic ulcer :-**

a. Smoking( ) b. Viral infection( ) c. Radiation( ) d. Chemotherapy( )
e. Hyper secretion of gastric acid ( ) f.Alcohol( ) m.Idont know( )

4. **Causes of peptic ulcer:**

a. H. pylori infection( ) b. NSAID( ) c. oral corticosteroids( )
d. Gastric acid Secretions ( ) e.Oxidative stress ( ) f.Idont know

5. **Duration of disease**

a. less than 5years ( ) b-5-10 years ( ) c-above 10 years( )

6. **Type of Ulcer:**

a. Gastric( ) b. Duodenal( ) c.Esophagel ulcer( )d.Idont know( )

7. Common symptom:

a. pain( ) b. vomiting( ) c. hematmesis( ) d.constipation( )
e.melana( ) f. change in weight( ) g. change in appetite( )
h.blooting( ) i.nausia( ) j.heartburn( )

8. Site of pain:

a. Epigastrium ( ) b. Right Hypochondrium ( ) c. Epigastrium and right hypochondria ( )
d. Epigastrium and umbilicus ( )
e. Umbilical and rightHypochondrium ( ) f.Umbilical and leftHypochondrium( )
g.chest pain ( ) i.back pain( ) j.lower abdominal pain( )

9. Character of pain:

a. Burning( ) b. Burning and hunger pangs ( )
b. c. Dull aching( ) d. Discomfort( )

10. Aggravating factor:

a. When the stomach is empty( ) b.When the stomach is full ( ) c. activity( ) d.stress( )

11. Relieving factor:

a.diet( ) b. hunger( ) c. Vomiting **( )**d. antiacid( ) e.herbal( )

12. Appetite:

a. Normal ( ) b. Increased ( ) c. Decreased( )

13. Health problem other than peptic ulcer do you have

a.Diabetes mellitus( ) b.hypertntion( ) d.romatoiud arthritis( ) e.not found( )

14. Mode of diagnosis

a. Clinically ( ) b. procedure ( )

15. Complications of peptic ulcer:

f. Perforation ( ) b. GIT bleeding( ) c. Pyloric Stenosis( ) d. Gastric out let obstruction( ) e. interactable peptic ulcer( ) I don't know( )

C. Part three: life style:

A.Awareness of Medication regimen:

1. Category of peptic ulcer medicine:

A. medication did you take

a. Medicine () b.herbal( ) c. Medicine and herbal ( )

B. Side effect of medicine:

a. headache ( ) b. diarrhea ( ) c. abd pain( ) d. constipation ( ) e. darken stool( ) e.no side effect ( )

2. Use of non-steroidal anti-inflammatory drugs

a. Sometime ( ) b.always( ) c.never( )

3. Regarding medication adherence you:

a. Forget to take your medicine
b. Sometime ( ) b.always( ) c.never( )
c. stop taking your medicine because:
d. feel better( ) b.feel worse( ) c.believe that they are ineffective( ) d.fear side effects. ( ) e.using traditional medicine (healer) or Religions belief( ) e.avoid addiction( ) f.cost of medication. ( )

4. Cues to Action (comply with your triple therapy):

a. Advice from my doctor()
b. Advice from friends ( )
c. Advice from health care workers other than my Doctor ( )
d. Advice from family member ( )
e. Do faith or spiritual preference ( )
f. Do practices help you heal or deal with stress ( )

g. provide hand book( )

5. **you know medication by**:a.name ( ) b.color ( ) c.baket ( )
6. **Improvement in symptoms after triple therapy**a.Improvement ( ) b.No improvement ( )

B: Awareness of Lifestyle Modification regimen:

A) Diet:

1. Fruits:
a. Sometime ( ) b.always( ) c.never( )
2. .vegetables:
a. Sometime ( ) b.always( ) c.never( )
3. fiber diet :
a. Sometime ( ) b.always( ) c.never( )
4. Carbonated Beverages:
a. Sometime ( ) b.always( ) c.never( )
5. Spices:
a. Sometime ( ) b.always( ) c.never( )
6. Peppers:
a. Sometime ( ) b.always( ) c.never( )
7. Eat diet containing fat:
1. Always 2. Sometimes 3.never
8. Garlic
a. Sometime ( ) b.always( ) c.never( )
9. Coffee
a. Sometime ( ) b.always( ) c.never( )
10. Milk and dairy milk
a. Sometime ( ) b.always( ) c.never( )

B) Body weight:
a. Try to lose weight ( )
b.doesn' have trial ( )
c.have desire to lose weight ( )
d. Doesn't have desire to lose body weight ( )

C) Physical activity:
1. Exercise:
a. You engage in physical exercise ( )
b. You not engaged ( )
c. Have desire to exercise ( )
d. haven't desire to exercise ( )
2. Type of exercise you do:

a. Walking ( ) b. Swimming( ) c.paly football( ) d.usual home exercise( )

3. Exercise regimen:

a.dialy regular( ) b.sometimes( ) c.neglect ( ) d.when you feel your weight increased( )

D) bad habits:

(A)smoking

1. cigarettes do you smoke per day:

a.10 cigarette( ) b.20 cigarette( ) c .more than20 cigarette( ) d. Seldom( )**e.**Not use( )

2. smoking cessation trails:

a.try to stop ( ) b.doesn't try to stop ( )

c.have desire to stop ( ) d. Doesn't have desire to stop( )

(B) **Alcohol**:

3. patient consume alcohol per day :

a. More than once per day ( ) b. Once per daily ( )

c.A few times per week ( ) d.About once a week ( )

e.Seldom (rarel) ( ) f. Not use ( )

1. **alcohol cessation trails**:

a.try to stop ( ) b.doesn't try to stop ( )

c.have desire to stop ( ) d. Doesn't have desire to stop( )

E) In stress and crisis you:

a. Being anxious( ). b.Being irritable ( ) c. Being confused ( ).

d. Being mood swings( ). e.cope with stress( ).

F) Follow up:

a.on regular flow up ( ) b.follow when have symptoms( ) c.notflow up ( )

E. Benefits to manage life style:

a. Increasing my quality of life.( ) b**.** Increasing my sense of well-being( )

c. Protecting me from complications.( ) d**.** Decrease my chance of dying( )

F.Barriers to practice life style:

1. personal barrier:

a. ineffective of the medicine to stabilize my ulcer. ( )

b. Lack of motivation because I cannot be cured. ( )

c. Not having enough time to exercise. .( )

d. Lack of discipline to comply with the dietary restrictions. .( )

e. Lack of motivation to stop smoking. .( )

2. Psychological factors:

a. Health believes.( ) b. Health literacy.( ) c. Self-efficacy.( )

3. Sociocultural factors:

a. Socioeconomic status ( ) c. Lake of social support ( ) d. Cultural values( )

4. Provider berrier:

a. Lack of agreement with clinical guidance ( ) b. Confidence to implement strategy( )

5. Therapy related berrier:

a.Adverse effects. ( ) b. Cost ( ) c. lack of Complicity of regimen ( )

6. Environment:

1. **Access to care:**a. Lake of insurance( ) b. Lake of transports ( )

جامعه شندي
كليه الدراسات العليا
استبيان حول تحسين نمط الحياة لدى مرضي القرحة الهضمية بمستشفي المك نمر الجامعي

الجزء الأول (البيانات الشخصيه)

1. العمر:
أ.20-30سنه( ) ب.31-40 سنه ( ) ج- 41-50 سنه ( ) د.أكثرمن 50 سنه ( )

2. الجنس:
ا. ذكر ( ) ب. أنثي ( )

3. الوظيفة:
أ.ربه منزل( ) ب. موظف حكومي ( ) ج.أعمال حره( ) د.متقاعد( ) ه.طالب( )

4. مستوى التعليم:
ا. أمي ( ) ب.خلوه ( ) ج.ابتدائي( ) د.ثانوي( ) ه.جامعي( ) و.فوق الجامعي( )

5. الحالة الاجتماعية:
ا. متزوج ( ) ب. غيرمتزوج ( ) ج. مطلق ( ) أرمل( )

6. السكن:
أ. مدينه ( ) ب.القريه( )

7. فصيله الدم:( ) a.A( ) b.B ( ) c.AB ( ) d.O

8. العادات الشخصية:
أ.التدخين ( ) ب.الكحول ( ) ج. التمباك ( ) د. الشيشه ( ) ه.عدم الإستعمال( )

9. العادات الغذائية:
أ.أطعمه مبهره () ب.أطعمه غير مبهره ( ) ج.أطعمه قليله البهار( ) د. الخضروات فقط( )

10. ا لتاريخ المرضي للقرحة الهضمية في الأسره:
أ.الوالدين( ) ب.الإخوه والأخوات ج.الأجداد ( ) د.لايوجد( )

الجزء الثاني (معرفة المريض عن القرحة الهضمية):يمكن إختيارأكثرمن إجابه

1. مصدر معرفه القرحه الهضمية من:
أ.وسائل الإعلام ( ) ب. الفريق الصحي ( ) ج. أفراد الأسرة ( )د.المجتمع ( ) ه.النت ( )

2. تعريف القرحة الهضمية هي:
أ. مجموعة من الاضطرابات التي تتميز بوجود قرحة في أي جزء من الجهاز الهضمي( ).
ب. تهتك المعدة أو الغشاء المخاطي في الأمعاء.
ج. تقرحات مؤلمة أو تقرحات في بطانة المعدة والاثني عشر( ).
د. خلل في الغشاء المخاطي في الجهاز الهضمي( ).
ه. لا اعرف( )

3. عوامل الخطر للقرحة الهضمية: -
ا. التدخين ( ) ب. عدوى فيروسية ( ) ج. الإشعاع ( ) د. العلاج الكيميائي ( )
ه. فرط إفراز حمض المعدة ( ) و. الكحول ( ) ز.لاأعرف( )

4. أسباب القرحة الهضمية:
ا. جرثومه المعده( ) ب. الأدوية المضادة للالتهاب ( ) ج.أدويه الكورتيزون ()
د. إفرازات حامض المعدة () ه.القلق والتوتر ( ) و.لا أعرف

5. مدة المرض
ا. أقل من 5سنوات ( ) ب-5-10 سنة ( ) ج-فوق 10 سنوات ( )

6. نوع القرحة:
أ. قرحه معدة ( ) ب. قرحه الإثني عشر ( ) ج.قرحة المرئ( ) د.لا أعرف( )

7. الأعراض والعلامات الشائعه:
ا. الألم ( ) ب. القيء ( ) ج..الإمساك ( ) د.الإستفراغ المصحوب بدم( )
ه.البراز المصحوب بدم ( ) و. التغيير في الوزن( ) ز. (. فقدان الشهية( ) ح.الإحساس بالإمتلأ
ط.الطمام( ) ك.حرقان( )

8. موقع الألم:
ا. فم المعده () ب. الجزء العلوي الأيمن للبطن ( ) ج. فم المعده و الجزء العلوي الأيمن للبطن الأيمن ( ) د. فم المعده والسرة ( ) ه. السرة و الجزء العلوي الأيمن للبطن الأيمن( ) و.السرة و الجزء العلوي الأيسر للبطن( )) ز.ألام الظهر( ) ح.ألم أسفل الظهر( ) ط.ألم في الصدر( )

9. خصائص الألم:
ا. حرقان ( ) ب. آلام مع الجوع ( ) ج.ألام مع الشبع( ) د.ألم غير واضح
ه. عدم ارتياح( )

10. العوامل التي تزيد الألم:
ا. عندما تكون المعدة فارغة ( ) ب.عندما تكون المعدة ممتلئه ( )
ج. عند النشاطات( ) د.القلق والتوتر ( )
11. العوامل التي تخفف الألم:
أ.الطعام ( ) ب. الجوع ( ) ج. القيء ( ) د. مضادات الحموضه ( ) ه.الأعشاب( )
12. الاعراض:
ا. ألم في المعده ( ) ب. لا توجد علامات ( )
13. الشهية:
ا. عادية () ب. زايدة ( ) ج. ناقصه( )
14. وزن الجسم:
ا. طبيعي ( ) ب. تحت الوزن الطبيعي () ج. أكثر من الوزن الطبيعي ( ) ه.سمنه( )
15. وجود مشكلات صحية أخرى غير القرحة الهضمية :
أ. السكري ( ) ب.الضغط ( ) ج.التهاب المفاصل ( ) د.لايوجد( )
16. كيف يتم تشخيص المرض:
أ.عن طريق الفحص السريري( ) ب.عن طريق المنظار( )
17. مضاعفات القرحة الهضمية:
ا. إنفجار القرحه ( ) ب. نزيف معوي ( ) ج. تضيق في المعده ( ) د.إنسداد في الأمعاء( )ه.قرحه متكرره( )

<u>الجزء الثالث: نمط الحياة:</u>

أ.مدي وعي المريض عن نظام الدواء:
1. ادوية القرحة الهضمية تأخذها
أ.أدويه طبيه( ) ب.أدويه الأعشاب:
أ.صداع( ) ب.إسهال( ) ج.ألم في البطن( ) د.إمساك( ) ه.برازأسود( ) و.طفح جلدي( ) ز.لايوجد ( )
2. استخدام الأدويه المضادة للالتهابات
أ. أحينا ( ) ب.دائما( ) ج.لاأستخدمها( )
3. الأدويه الأخرى المستخدمة:
أ.الأدويه المضاده للإلتهاب( )
ب. الأدويه المستخدمة لعلاج التهاب المفاصل وتخفيف الآلام ( )
ج.مضادات الاكتئاب ( )
د.الأعشاب ( )
ه.المخدرات ( )
4. الإلتزام بالدواء
أ.هل تنسي تناول الدواء أ.أبدآ ( ) ب.دائما( ) ج. . أحينا ( )
ب. عدم تتناول الدواء لأنك تشعر بأنك أفضل ( )
ج. عدم تتناول الدواء لأنك تشعر اسوء ( )
د. عدم تتناول الدواء لأنك تعتقد أنها غير فعالة ( )
ه. عدم تناول الدواء خوفا من الآثار الجانبية ( )
و. عدم تناول الدواء بسبب محاولة تجنب الإدمان ( )
ز. عدم تناول الدواء لأنك تستخدم الأعشاب والرقيه الشرعيه ( )
ح. عدم تناول الدواء بسبب تكلفة الدواء ( )
5. معرفة المريض بالعلاج (العلاج الثلاثي الخاص بك):
أ. نصيحة من طبيبك( ) ب. نصيحة من الأصدقاء( )
ج. نصيحة من العاملين في مجال الرعاية الصحية ( ) د. المشورة من أفراد الأسرة( )
ه. معلومات من الدورات التعليمية( ) و. من العلاج الروحي (الرقيه الشرعيه)( ) ز. العلاج عن طريق الكاهن (الفقير)( ) ي. من الكتب ( ) المواقع الإلكترونيه( ) وسائل الإعلام( )
6. التعرف علي الدواء عن طريق:
أ.الإسم ( ) ب.الصندوق ( ) ج.اللون( )
7. التحسين في الأعراض بعد العلاج
أ.تحسنت ( ) ب. لم اتحسن ( )
ب. وعي المريض عن تحسين نمط الحياه:
أ.إتباع النظام الغذائي:
1. الفواكه:
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )

2. الخضروات:
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )
3. الألياف:
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )
4. البهارات والتوابل:
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )
5. الفلفل:
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )
6. الأغذيه التي تحتوي علي دهون:
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )
7. الثوم
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )
8. القهوة
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )
9. الحليب ومشتقاته
أ. أحيانا ( ) ب.دائما( ) ج.لاأستخدمها( )

ب) وزن الجسم:
أ. أحاول إنقاص وزني ( )
ب. ليس لدي محاولة لانقاص وزني ( )
ج.لدي رغبه لانقاص وزني ( )
د. ليس لدي رغبة لانقاص وزني ( )

C) النشاط البدني:
1. التمرين:
ا. أمارس الرياضة البدنية ( )
ب. لا أمارس الرياضة البدنية ( )
ج. لدي الرغبة في ممارسة الرياضه البدنيه ( )
د. ليس لدي الرغبه في ممارسة الرياضة البدنية ( )
2. نوع التمارين التي تقوم بها:
ا. المشي ( ) ب. السباحة ( ) ج.كرة القدم ( ) د.التمارين المنزليه اليوميه ( )
3. نظام التمرين:
أ.يوميا بإنتظام( ) ب.غالبا ( ) ج.عندما اشعر بأن وزني زائد( ) د.لاأمارس الرياضه( )

D) العادات سيئة:
(أ) التدخين
1. كميه السجائر التي يتم تدخينها في اليوم:
أ. عشره سجائر ( ) ب. عشرين سجاره ( ) ( ) ج. أكثر من عشرين سجائهر ( ) ( )
د. نادرا ما أدخن ( ) ز.لاأدخن ( )
2. محاولات الإمتناع عن التدخين:
أ.أحاول إيقافه ( ) ب.لا أحاول إيقافه ( ) ج.لدي رغبه في إيقافه( ) د. ليس لدي رغبه في إيقافه( )
(ب) الكحول:
1. كميه للكحول التي يتم تناولها في اليوم:
ا. مرة واحده في اليوم ( ) ب .أكثرمن مرة في اليوم ( )
ج.مرة واحدة في الأسبوع ( ) ه.عدة مرات في الأسبوع ( )
و.نادراماأستخدمها ( ) ز. لا أستخدامها ( )
2. محاولات إيقاف شرب الكحول:
أ .أحاول إيقافها ( ) ب.لا أحاول إيقافها ( ) ج.لدي رغبه في إيقافها( ) د. ليس لدي رغبه في إيقافها( )

E) التوتر و القلق:
أ. لدي قلق ( )ب. عصبي ( ) ج. مشوش ( )د. متقلب المزاج ( ) ه. أحاول التأقلم( )

F) المتابعة:
أ.أتابع بإنتظام ( ) ب.عندما يكون لدي أعراض ( ) ج.لاأتابع

E) فوائد معالجه نمط حياة المريض:
ا. تحسن من نمط الحياه ( ) ب. زيادة الرفاهيه ( )ج. الحماية من المضاعفات. ( ) د. تقلل من الموت ( )

f) المعوقات **التي تحول دون ممارسة المريض لتحسين نمط الحياة:**

1. المعوقات الشخصيه:

أ. الدواء غير فعال لإستقرار القرحة. ( )

ب. عدم وجود المحفز ( )

ج. عدم وجود الوقت الكافي لممارسة الرياضة ( )

د. عدم الالتزام بالقيود الغذائية ( )

ه. عدم وجود الرغبه للتوقف عن التدخين ( )

2. العوامل النفسية:

ا. إعتقادات صحية. ( ) ب. الأمية ( ) ج. الكفاءة الذاتية. ( )

3. العوامل الاجتماعية الثقافية:

أ. الوضع الاجتماعي والاقتصادي ( ) ب. عدم وجود الدعم الاجتماعي( ) ج. القيم الثقافية( )

4. المعوقات المعرفيه:

ا. عدم وجود اتفاق مع التوجيهات السريرية( ) ب . عدم وجود الثقة لتنفيذ الخطه العلاجيه ( )

5. معوقات العلاج:

أ.الآثار الجانبيه ( ) ب. التكلفة ( ) ج. عدم التأقلم مع نظام العلاج ( )

6. المعوقات البيئة:

1. **الوصول لمركز الرعاية الصحيه :**

أ. عدم وجود تأمين( ) ب قله وسائل النقل ()

Hospital Anxiety and Depression Scale (HADS)

Patients are asked to choose one response from the four given for each interview. They should give an immediate response and be dissuaded from thinking too long about their answers. The questions relating to anxiety are marked "A", and to depression "D". The score for each answer is given in the right column. Instruct the patient to answer how it currently describes their feelings.

	I feel tense or 'wound up':	
	Most of the time	
	A lot of the time	
	From time to time, occasionally	
	Not at all	

	I still enjoy the things I used to enjoy:	
	Definitely as much	
	Not quite so much	
	Only a little	
	Hardly at all	

	I get a sort of frightened feeling as if something awful is about to happen:	
	Very definitely and quite badly	
	Yes, but not too badly	
	A little, but it doesn't worry me	
	Not at all	

	an laugh and see the funny side of things:	
	As much as I always could	
	Not quite so much now	
	Definitely not so much now	
	Not at all	

	Worrying thoughts go through my mind:	
	A great deal of the time	
	A lot of the time	
	From time to time, but not too often	
	Only occasionally	

	feel cheerful:	
	Not at all	
	Not often	
	Sometimes	
	Most of the time	

	can sit at ease and feel relaxed:	
	Definitely	
	Usually	
	Not Often	
	Not at all	

	feel as if I am slowed down:	
	Nearly all the time	
	Very often	
	Sometimes	
	Not at all	

	get a sort of frightened feeling like 'butterflies' in the stomach:	
	Not at all	
	Occasionally	
	Quite Often	
	Very Often	

	have lost interest in my appearance:	
	Definitely	
	I don't take as much care as I should	
	I may not take quite as much care	
	I take just as much care as ever	

	eel restless as I have to be on the move:	
	Very much indeed	
	Quite a lot	
	Not very much	
	Not at all	

	ook forward with enjoyment to things:	
	As much as I ever did	
	Rather less than I used to	
	Definitely less than I used to	
	Hardly at all	

	get sudden feelings of panic:	
	Very often indeed	
	Quite often	
	Not very often	
	Not at all	

	can enjoy a good book or radio or TV program:	
	Often	
	Sometimes	
	Not often	
	Very seldom	

	Scoring (add the As = Anxiety. Add the Ds = Depression). The norms below will give you an idea of the level of Anxiety and Depression.	
	0-7 = Normal	
	8-10 = Borderline abnormal	
	11-21 = Abnormal	

University of Shendi
The Graduate College
THE HOSPITAL ANXIETY AND DEPRESSION SCALE

التاريخ ----------

رقم الاستبيان----------

هذا الاستبيان صمم ليساعدك لمعرفة احساسك.

أقرأ كل وحده وضع علامة ( ) أمام أصح جمله تعبر عن احساسك خلال الاسبوع الماضى.

لاتستغرق وقتا طويلا للاجابه . تفاعلك الاول مباشرة بعد قراءة الوحده ربما يكون أكثر دقه من لو أخذت وقتا طويلا .

A:

1. هل تحس بالتوتر والضجر

(3) طول الوقت

(2) معظم الوقت

(1) احيانا

(0) ابدا

2 .هل ينتابك شعورا بحدوث شئ مروع علي وشك الحدوث

(0) نعم بالتأكيد وهو سئ للغايه

(1) نعم ولكن ليس بدرجه سئه

(2) قليلا ولكن لا يزعجني

(3) ابدا

3. **هل تدور بخلدك أفكار مقلقه؟**

(3)طوال الوقت

(2) معظم الوقت

(1) احيانا وليس غالبا

(0) احيانا فقط

4. هل تستطيع الجلوس هادئا ومسترخيا؟

(0) بالتأكيد

(1) عادة

(2) ليس غالبا

(3) أبدا

5. **هل ينتابك شعورا بالخوف يخفق له قلبك؟**

(3) كثيرا جدا

(2) كثيرا

(1) احيانا

(0)ابدا

6. هل تشعر بالقلق وكأنما عليك ان تظل متحركا ؟

(3) كثيرا بالتأكيد

(2) كثير

(1) ليس كثيرا

(0) أبدا

7. هل ينتابك أحساس مفاجئ بالرعب؟

(0) كثيرا بالتأكيد

(1) كثيرا

(2) ليس كثيرا

(3) أبدا

1. هل تستطيع الابتسام ورؤية الجانب المشرق للاشياء

(3) تماما كما تعودت دائما

(2) ليس كثيرا الآن

(1) بالتأكيد ليس كثيرا الآن

(0) ابدا

2. هل تشعر بالمرح؟

(0) معظم الوقت

(1) أحيانا

(2) ليست غالبا

(3) أبدا

3. هل تشعر كأنك محبطا؟

(3) أبدا

(2) أحيانا

(1) بكثره

(0) كل الوقت تقريبا

4. هل ما ذلت تستمتع بالاشياء التى اعتدت الأستمتاع بها؟

(3) تماما بالتأكيد

(2) ليس كثيرا

(1) فقط قليلا

(0)ابد

5. هل فقدت الاهتمام بمظهرك العام

(0) بالتأكيد

(1) لا أهتم به كما يجب

(2) قد لا أهتم

(3) لم يقل اهتمامي بمظهري

6. هل تنظر بمرح للامور المستقبليه؟

(3) تماما كما كنت أفعل من قبل.

(2) أقل مما كنت متعودا من قبل.

(1) بالتأكيد أقل مما تعودت.

(0) لا يكاد يحدث.

7. هل في استطاعتك الاستمتاع بقراءة كتاب أو متابعة برنامج ازاعي أوتلفزيوني ؟

(0) غالبا

(1) أحيانا

(2) ليس غالبا

(3) نادرا جدا