

# Assessment of lifestyle of patients with chronic gastritis

\*Mrs. Gehad Ahmed Ghanem, \*\*Prof. Dr. Nabila Ahmed Bedier,  
\*\*\* Assist. Prof. Dr. Gehan Mohamed Desoky, \*\*\*\* Dr. Azza Ibrahim Abdelkader

\* B.Sc. N, Faculty of Nursing, Alexandria University.

\*\*Professor of Medical-Surgical Nursing, Faculty of Nursing, Alexandria University

\*\*\* Assistant Professor of Medical surgical Nursing, Faculty of Nursing, Alexandria University

\*\*\*\*Lecturer of Medical-Surgical Nursing, Faculty of Nursing, Damanhour University

---

**Abstract:** Chronic gastritis is a serious disorder that refers to a group of conditions that cause chronic inflammation of stomach mucosal lining and it can be controlled through efficient lifestyle modifications side by side with use of the prescribed medications. This study aims to: assess life style of patients with chronic gastritis. **Research Design:** Descriptive research design was used in the study. **Subjects:** A Convenience sample included 150 male and female adult patients diagnosed with chronic gastritis in endoscopic and Hematemesis unit in of Damanhur National Medical Institute, El-Beheria governorate, Egypt, 2019. **Tool:** One tool was used for the purpose of data collection "Life style assessment of patients with gastritis interview schedule" to investigate life style for patients with chronic gastritis. **Results** more than half of the patients were male and in the age 50 to 60 years. The result shows that, more than half of the smoker patients 67.4% were smoking cigarettes, while 32.6% of them were smoking shisha, in addition, it was found that, less than half of the studied patients 42.7% had sleeping problems at night, and more than half of them 53.1% had insomnia. The majority of the studied patients 98.0% reported that, they used to drink beverages containing caffeine as coffee, tea and nescafe, and more than half of them 66.7% used to drink them three and more times per day. Regarding the current mood, it was noticed that, the majority of the studied patients 81.3% were in nervous mood, and all of them were always in this mood. **Conclusion:** unhealthy patient's life style as exercise, stress, alcohol intake and beverages containing caffeine were among patients' life style. **Recommendations:** Involve life style modifications within patient's management plan and involve patients and family this plan of care.

**Keywords:** Chronic gastritis, life style, patients.

---

## 1. INTRODUCTION

Chronic gastritis is a common serious gastrointestinal (GIT) disorder that refers to a group of conditions that cause chronic inflammation of the mucosal lining of the stomach. Globally, its average is more than half of the world population (Sipponen& Maaros, 2015; Telaranta et al., 2010; Fledman et al., 2016). When the stomach lining is inflamed, it produces less acid and fewer enzymes. However, the stomach lining also produces less mucus and other substances such as pepsinogen that normally protect the stomach lining from acidic digestive juice (Sepulveda& Patil, 2008; Townsend et al., 2017; Kumar& Abbas, 2015).

Causes of chronic gastritis are numerous, but mostly it is related to Helicobacter pylori (H. pylori) bacterial infection (Hollander, 2013; Johnson& Ottemann, 2017). Other causes include frequent acidic, spicy and hot foods, consuming too much alcohol and certain medications such as non-steroidal anti-inflammatory medications (NSAID), chronic stress or

other immune system problems as pernicious anemia can lead to gastric inflammation. When inflammation occurs the stomach lining changes and loses some of its protective cells (Park & Kim, 2015; Lee et al., 2015; Xing et al., 2017).

Because chronic gastritis is a chronic condition, it can last for years or even a lifelong if left untreated correctly. Commonly, people with chronic gastritis experience a variety of symptoms including; upper abdominal pain, indigestion, recurrent stomach upset, burning or gnawing feeling in the stomach, loss of appetite, sensation of fullness after eating a small amount of food, nausea, vomiting (in some cases, vomiting of blood), belching, unintentional weight loss, bloating, Hiccups and slight fever. Here, it affects physical health and quality of life of patients, (Sipponen & Maaros, 2015; Marshall & Warren, 2010; Pentti & Heidi, 2015).

Diagnosis of chronic gastritis depends on history of manifestations and risk factors, physical examination of common manifestations and diagnostic studies including serum gastrin level. X-ray of upper digestive system sometimes called a barium swallow and test to detect presence of H.pylori in the gastric or duodenal tissue (Sipponen & Maaros, 2015; Pagana & Pagana, 2014; Park et al., 2014). This diagnostic study may extend to endoscopy, and small biopsies are usually taken during the endoscopy, to identify the presence of H. pylori, or abnormal cell growth in the stomach lining during endoscopy. (Early et al., 2012).

Controlling gastritis can be achieved through efficient lifestyle modifications side by side with use of the prescribed medications (Marshall & Warren, 2010). Chronic gastritis may result in metaplasia, dysplasia, precancerous changes in gastric cells, that can lead to cancer if untreated. Medical treatment including lifestyle modifications could help to keep and improve people's health and well-being. Medical treatment includes symptomatic treatment and treating the underlying cause (Galiatsatos, Gologan & Lamoureux, 2009; Goldbulm et al., 2018).

Life style is a way of life or style of living that reflects the attitudes and values of a person or group of people expressed particularly in activities, interests and opinions (Kick Busch, 2017; Elsayed, 2011). Lifestyle modifications for patients with chronic gastritis include dietary habits through avoidance of high spicy food, fatty diet, high salt diet, diet high in red meat and preserved meats, with stress on diet rich in antioxidants like vitamin C. In addition, avoid cigarette smoking, limiting alcohol intake, the use of unprescribed NSAIDs, and control life stressors. Control, prevention and early proper treatment of infection mainly H. pylori through proper personal hygiene, food and water sanitation and safe waste disposal (Wang et al., 2014; Conteduca et al., 2013). Patient is encouraged to get enough sleep, through going to bed and wake up at the same time daily (Sipponen & Maaros, 2015).

Early detection and proper treatment are a vital part of medical treatment. Most patients with chronic gastritis exhibit poor knowledge about risk factors and complications of chronic gastritis, so they provide minimal attention to its treatment. Poor management may affect treatment and reduce the quality of life of patients (Wen et al., 2014). Hence, nursing role is very important in promoting healthy life style through assessment of lifestyle, planning and implementation for healthy modifications, to improve quality of life in patients with chronic gastritis and reducing its complications. Nursing role should focus on teaching the client about what is gastritis, pathophysiology, identifying risk factors, treatment and plan of care including modification of unhealthy life style and enhance healthy life style including physical and psychological aspects (Hinkle & Cheever, 2014).

#### **- Aim of the study:**

The present study aims to assess life style of patients with chronic gastritis.

#### **-Research question:**

What is the life style of patients with chronic gastritis?

## **2. MATERIALS AND METHOD**

### **MATERIALS**

**Research design:** Descriptive research design was used in the study

#### **Study setting:**

This study was conducted at National medical institute in Damamhur-affiliated to General Organization for Teaching Hospital and Institutes. In the following settings:

## International Journal of Novel Research in Healthcare and Nursing

Vol. 6, Issue 3, pp: (203-213), Month: September - December 2019, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

1-The Hematemesis unit, consisted of three rooms one for males including 13 beds, and two for females every room containing 6 beds.

2-The endoscopic unit consisted of one room (which have 4 beds), the endoscopic unit worked 6 days a week from Saturday to Thursday, from 8.30 am to 1 pm, (received 30 patients per month).

### Subjects:

A Convenience sample included 150 male and female adult patients diagnosed with chronic gastritis.

The Epi info program was used to estimate the subject size according to the following parameters:

1-Population size = 180 over 6 months

2-Expected frequency = 50%

3-Acceptable error = 5%

4-Confidence coefficient = 95%

5-Minimum sample size = 123

### The Subjects were selected according to the following criteria:

1. Patients who had chronic gastritis not less than 3 months.
2. Adult patient's aged from 20-60 years.
3. Able to communicate verbally.

**Tools of the study:** One tool was used for the purpose of data collection.

"Life style assessment of patients with gastritis interview schedule". This tool was developed by the researcher, based on review of related literatures (Zojaji et al., 2009; Bebbi et al., 2003; Vonkeman et al., 2007; Tursi et al., 1998). It was used to investigate life style for patients with chronic gastritis. It comprised two parts:

**Part I: "Socio demographic and clinical data".** It included the items regarding:

- **Socio demographic data** (age, sex, marital status, level of education, occupation, and area of residence).
- **Clinical data** including patients past medical history as, Previous hospitalization, **patients' present medical history**. In relation to symptoms of gastritis as (heartburn, belching, nausea, vomiting, abdominal pain, appetite change, diarrhea and loss of weight) and prescribed or unprescribed medications.

**Part II: "Life style for patients with chronic gastritis":** It was used to assess patients' life style. This part included group of questions related to dietary habits, smoking, rest and sleep, exercise, alcohol intake, stress and medications.

### Scoring System:

A scoring system for assessment of life style for patients with chronic gastritis was used as following:

- Every participant was asked to express his/her lifestyle for each item. The answer was scored one for yes and zero for no answer. A total score for every participant was summed up, transferred to percentage and calculated as the following:
- Scoring of less than 50% was considered as unhealthy.
- Scoring of 50% to less than 65% was considered as neutral.
- Scoring of 65% or more was considered as healthy.

## METHOD

This study was carried out using the following steps:

### 1- Written approval:

- Approval from ethical committee, Faculty of Nursing, Alexandria University was obtained.
- An official written approval was obtained from the Faculty of Nursing, Alexandria University directed to the responsible authorities at the Hematemesis and endoscopic units to obtain their permission to conduct the study after explanation of the aim of the study.

### 2- Content validity:

- The tool was submitted to a jury from five experts in the field of Medical Surgical Nursing department at Faculty of Nursing, to examine the content validity of the tool. The necessary modifications were carried out accordingly.

### 3- Reliability testing:

- Reliability of the tool was tested using Alpha Cronbach's test and it was reliable (0.781).

### 4- Pilot study:

- A pilot study was carried out on 10% of studied patients (15 patients) and they were excluded from the studied sample, to test clarity, feasibility, and applicability of the tool and the necessary modifications were done.

### 5- Data collection:

- Data collection of this study was conducted over period of 6 months from (September 2018 to February 2019) by the researcher.
- Every participated patient was interviewed individually to assess life style of chronic gastritis.
- Interview was done before or after doing the endoscopy in the morning shift at endoscopic unit in about 20-30 minutes after explaining the aim of the study.

### 6- Statistical Analysis:

- After data collection, data was coded and transferred into specially designed format, so as to be suitable for computer feeding.
- Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp). Qualitative data were described using number and percent.
- Quantitative data were described using range (minimum and maximum), mean, and standard deviation. Significance of the obtained results was judged at the 5% level.

### - The used tests were:

1. **Chi-square test:** For categorical variables, to compare between different groups
2. **Fisher's Exact or Monte Carlo correction:** Correction for chi-square when more than 20% of the cells have expected count less than 5.

### 7- Ethical Considerations:

- A written informed patient's consent was obtained from each study subject before data collection and after explanation of the aim of the study.
- Anonymity, confidentiality and privacy were asserted.
- The patient was informed that his/her participation in the study is voluntary and he/she can withdraw without any effect on care he/she receives at the hospital.

### 3. RESULTS

**Table (1): Percentage distribution of the studied patients according to socio-demographic data.**

Socio-demographic data	Studied patients (n = 150)	
	No.	%
<b>Age (years):</b>		
20 –	16	10.7
30 –	21	14.0
40 –	34	22.7
50 – 60	79	52.7
<b>Sex:</b>		
Male.	90	60.0
Female.	60	40.0
<b>Marital status:</b>		
Single.	13	8.7
Married.	131	87.3
Divorced.	2	1.3
Widow.	4	2.7
<b>Level of education:</b>		
Illiterate.	76	50.7
Read and Write.	56	37.3
Primary education.	0	0.0
Preparatory education.	2	1.3
Secondary education.	6	4.0
University education.	10	6.7
<b>Occupation:</b>		
Employee.	15	10.0
Manual work.	76	50.7
Retired.	0	0.0
House wife.	59	39.3
<b>Area of residence:</b>		
Urban.	17	11.3
Rural.	133	88.7

**Table I: Percentage distribution of the studied patients according to their socio-demographic characteristics: show that,** the age of more than half of the patients 52.7% ranged from 50 to 60 years, while about 10.7% of them were in the age group of 20 years to less than 30 years. Also, it can be noticed that, male patients represented a higher percentage 60.0%.

**In relation to marital status,** it was noticed that a higher percentage of the studied patients 87.3% were married .on the other hand, 1.3% of the studied patients were divorced, 8.7% of them were single and 2.7% of them were widows. **Concerning level of education,** it was evident that about half of the studied patients 50.7% were illiterate, while 1.3% had preparatory education.

**Regarding the occupation,** it was found that about half of the studied patients 50.7% had manual work, while 10.0% of them were employee and 39.3% of them were house wife.

Concerning area of residence, it was observed that, rural residents constituted the highest percentage of the studied patients 88.7%. In relation to monthly income; it was observed that a higher percentage of studied patients 88% hadn't monthly income. More than half of patients who had monthly income 55.6% reported that the income was enough.

Table (2): Percentage distribution of the studied patients according to clinical data

Patient's clinical data	Studied patients (n = 150)	
	No.	%
<b>Patient's past history:</b>		
<b>Previous hospitalized because of chronic gastritis disease</b>		
Yes.	62	41.3
No.	88	58.7
<b>If yes, please mention why? (n = 62)</b>		
Surgery.	38	61.3
Vomiting.	24	38.7
<b>Have you ever been infected with Helicobacter Pylori bacteria?</b>		
Yes.	55	36.7
No.	64	42.7
Don't know.	31	20.7
<b>Patient's present medical history:</b>		
<b>current symptoms #</b>		
Heart burn.	135	90.0
Epigastric pain.	115	76.7
Nausea.	70	46.7
Abdominal pain.	54	36.0
Vomiting.	38	25.3
Indigestion.	36	24.0
Belching.	23	15.3
Appetite change.	16	10.7
Cramps.	16	10.7
Loss of weight.	13	8.7
Constipation.	9	6.0
Diarrhea.	1	0.7
<b>The aggravating factors #</b>		
Spicy food.	128	85.3
Stress.	87	58.0
Hot food.	58	38.7
Smoking.	49	32.7
Activity.	33	22.0
Certain medications.	19	12.7
Certain illnesses such as diabetes, kidney failure.	7	4.7
Fasting.	3	2.0
Inflammation causes loss of stomach its protective cells.	1	0.7
<b>What are the alleviating factors? #</b>		
Antacid medications.	149	99.3
Rest.	23	15.3
Deep breathing& cough exercise.	1	0.7

#: More than one answer was selected

Table 2: Percentage distribution of the patients according to their clinical data:

This table shows that, concerning previous hospitalizations, it was found that, less than half of the studied patients 41.3% had previous hospitalization with chronic gastritis and more than half of them 61.3% had previous hospital admission for surgery.

Regarding patients previous infection with H.pylori bacteria, it was observed that, 36.7% had been previously infected with H.pylori bacteria, while, 20.7% of them didn't know if they had been previously infected with it or not.

The result show that, the majority of the studied patients 90.0% complained from heartburn, while more than three quarters of the studied patients (76.7%) complained from epigastric pain, others complained from nausea, abdominal pain, vomiting and indigestion (46.7%, 36.0%, 25.3%, 24.1% respectively).

Regarding the aggravating factors of pain, the majority of studied patients 85.3% had eaten spicy food and 58% of them had stress. The table shows also, almost all of the studied patients 99.3% had antacid medications as alleviating factor of pain.

**Table (3): Percentage distribution of the studied patients according to overall life style of patients with chronic gastritis.**

Overall life style of patients with chronic gastritis	Studied patients (n = 150)					
	Unhealthy		Neutral		Healthy	
	No.	%	No.	%	No.	%
1-Dietary habits and food intake.	7	4.7	35	23.3	108	72.0
2-Smoking (n = 43).	0	0.0	5	11.6	38	88.4
3-Rest and sleep.	27	18.0	79	52.7	44	29.3
4-Exercise.	84	56.0	66	44.0	0	0.0
5-Alcohol & beverages containing caffeine.	133	88.7	14	9.3	3	2.0
6-Stress (n = 130).	130	86.7	0	0.0	0	0.0
7-Medications.	0	0.0	7	4.7	143	95.3
Overall life style of patients with chronic gastritis.	12	8.0	114	76.0	24	16.0
	Total score			% score		
Min. – Max.	8.0 – 18.0			36.36 – 75.0		
Mean ± SD.	13.05 ± 1.81			58.21 ± 7.06		

**Table 3: Percentage distribution of the studied patients according to overall life style of patients with chronic gastritis: regarding dietary habits and food intake**, it was healthy in the majority 72.0% of the studied patients. While, the highest percentage (88.4%) of them were healthy with smoking. On the other hand, more than half 52.7% of them were neutral on rest and sleep. Concerning exercise, more than half 56.0% of them were unhealthy, while in relation to taking alcohol & beverages containing caffeine the majority of them 88.7% was unhealthy. Also, regarding stress the majority 86.7% of studied patient was unhealthy and it was healthy in relation to medications in the majority 95.3% of the studied patient. The table demonstrated that, the overall life style of patients with chronic gastritis was neutral life style in the majority (76.0%) of them. The table demonstrates that, the total mean score of overall life style of patients with chronic gastritis was 13.05+1.81.

**Table (4): Relation between overall life style of patients with chronic gastritis with socio-demographic data (n = 150).**

Socio-demographic data	Overall life style of patients with chronic gastritis						$\chi^2$	p
	Unhealthy (n=12)		Neutral (n=114)		Healthy (n=24)			
	No.	%	No.	%	No.	%		
Age( years):								
20-	2	16.7	14	12.3	0	0.0	13.640*	MC p=0.020*
30-	1	8.3	16	14.0	4	16.7		
40-	7	58.3	22	19.3	5	20.8		
50-60	2	16.7	62	54.4	15	62.5		

<b>Sex:</b>									
Male.	4	33.3	66	57.9	20	83.3	9.211*	0.010*	
Female.	8	66.7	48	42.1	4	16.7			
<b>Marital status:</b>							6.216	MC P=0.314	
Single.	1	8.3	12	10.5	0	0.0			
Married.	11	91.7	98	86.0	22	91.7			
Divorced.	0	0.0	2	1.8	0	0.0			
Widow.	0	0.0	2	1.8	2	8.3			
<b>Level of education:</b>							5.611	MC P=0.637	
Illiterate.	4	33.3	59	51.8	13	54.2			
Read and Write.	6	50.0	40	35.1	10	41.7			
Preparatory education.	0	0.0	2	1.8	0	0.0			
Secondary education.	1	8.3	4	3.5	1	4.2			
University education.	1	8.3	9	7.9	0	0.0			
<b>Occupation:</b>							4.686	MC P=0.297	
Employee.	0	0.0	11	9.6	4	16.7			
Manual work.	5	41.7	57	50.0	14	58.3			
House wife.	7	58.3	46	40.4	6	25.0			
<b>Area of residence:</b>							0.221	MC P=0.902	
Urban.	1	8.3	14	12.3	2	8.3			
Rural.	11	91.7	100	87.7	22	91.7			

$\chi^2$ : Chi square test      MC: Monte Carlo      FE: Fisher Exact

p: p value for associating between the different categories

**Table 4: Relation between overall life style of patients with chronic gastritis and bio-socio demographic data: the finding reveal that, statistically significant differences** were found between life style of patients with chronic gastritis and patient's age, where the highest score for healthy life style were among adult age (50-60 years). In addition, **statistically significant differences** were detected between the patient's life style scores and sex where, the highest score for healthy life style were for male 83.3%. There was no **statistically significant difference** regarding marital status, level of education, occupation, area of residence and income.

#### 4. DISCUSSION

Chronic gastritis is a multifactorial, common, serious and risky disease all over the world. Prevention can be achieved through avoidance of risk factors including unhealthy life style. (Abdel Fatah, 2014; Eusebi, Zagari & Bazzoli, 2014; Du et al., 2014). Based on the current results, the present study was carried out in order to assess life style of patients with chronic gastritis.

As for the overall life style of patients with chronic gastritis, it was healthy regarding dietary habits and food intake, smoking and medications. This may be related to increase awareness of healthy habits to avoid pain. The results of the current study were contradicted by (Jannathul, Noorzaid & Norain, 2016) who found that, the majority of the studied patients had unhealthy dietary habits mainly regarding spicy food and irritant like hot pepper.

Moreover, the overall life style of patients with chronic gastritis was unhealthy regarding Stress and beverages containing caffeine. For example, the majority of the studied patients complained from being nervous all the time due to exposure to life stressors, these finding may be due to psychological stress that lead to stress gastritis, which result from increased acid secretion leads to the development of erosions which causes chronic gastritis (Siddiqui & Siddiqui, 2019). This finding was in the same line with (Jannathul, 2016) who reported that, more than half of the sample was stressed 56.7%, stress can lead to excessive gastric secretion and ruptured mucosal lining of the stomach causes gastritis. As a result, the Overall life style of patients with chronic gastritis in the current study was neutral.

**Concerning the relationship between life style of patients with chronic gastritis and bio-socio demographic data,** the study shows that, there were statistically significant differences between the patient's life style with chronic gastritis score and patient's age and sex where the majority of the patients aged 50-60 years old and males. These findings may be



related to the strong correlation between age and effect of chronic gastritis disease and age-related changes that decrease gastric mucosa of the stomach, causes irritation in wall of the stomach which is supported by (Fischbach et al., 2016) who found that, most of males and females who developed gastritis in age 45-65 years. This due to the risk of gastritis generally increased with age. Regarding gender, it may be related to the presence of more risk factors among males in the Egyptians society due to, smoking and psychological stressors. These findings were in the same line with (Padmavathi et al., 2013) who stated that, the majority of the sample 94% was males. This significance was contradicted by (Padmavathi et al., 2013; Janani, 2016) who reported that, there were no statistically significant difference between patient's life style and their age and sex. This also may be related to increase awareness in these countries about risk factors of chronic gastritis disease.

There was no significant relation regarding marital status, level of education, **occupation** and **area of residence**. **Concerning marital status**, this study revealed that, the higher percentage of the studied patients was married. This may be due to that, married individuals hold wide responsibilities and tasks which increase their stress, that considered a major risk factor, that causes chronic gastritis disease. These findings were in agreement with (Zhengwei et al., 2014) who reported that the majority of the patients with chronic gastritis were married 83.1%.

**Regarding level of education**, the present study findings revealed that, illiterate patients formed the greatest proportion of the study sample. This study finding may be related to the association between illiteracy and presence of many harmful traditional habits (as smoking, fatty and spicy food) and poor knowledge, that increase risk of chronic gastritis. This result is in contrast with (Oktoruddin, 2017 & Janani, 2016) who reported that, the education level of most of the participants was up to advanced level.

**As regards occupation**, the findings of this study showed that, the highest percentage of the studied patients were manual workers and housewives. This result may be justified by spreading of unhealthy habits among housewives such as increasing adding black pepper, lemon juice, salt and vinegar on food. These findings were supported by (Korean & Fam, 2012) who conducted a study on chronic gastritis among employment, and found that manual workers were more often diagnosed with gastritis. These findings were consistent with (Abdel Fatah, 2014) who reported that, occupational workload was one exogenous risk factors leading to increased acid secretion, causes irritation in the stomach and leading to gastritis.

**In relation to area of residence**, the findings indicated that, the highest percentage of the studied patients were from rural areas. This may be due to increasing water pollution and low socioeconomic status in rural area (Vakil, 2016). These findings were disagreed by (Janani, 2016) who reported that, Participants from urban areas 40% and suburban areas 41% were higher than the number of participants from rural area 19%.

## 5. CONCLUSION & RECOMMENDATIONS

### ❖ Conclusion:

**Based on the findings of the present study, it can be concluded that:**

- Chronic gastritis disease was most common among male and in the age group of 50-60 years. In addition to, unhealthy patient's life style were observed more in patients who not practice exercise, and beverages containing caffeine and stress, with statistically significant difference between the patients' life style mean percent scores and patients' age and gender.

### ❖ Recommendations:

**Based on the findings of the present study, the following recommendations had been suggested:**

- Health educational program through using different social media to increase the awareness of dangers of gastritis, its causes and complications and how to eliminate risk factors with stress on different hospital departments and different health care settings.
- Involve life style modifications within patient's management plan and involve patients and family this plan of care.
- Patients' assessment sheet should include items related to patients' life style.
- Update nurses knowledge and attitude regarding chronic gastritis risk factors, manifestations, complications, treatment and nursing care through scheduled in-services training program.

## REFERENCES

- [1] **Abdel Fatah, D. (2014)**. Assessment of health related knowledge and practices of patient's with peptic ulcer. Unpublished master thesis. Faculty of Nursing, Alexandria University.
- [2] **Bebba, J., Jamesb, M., & Athertonc, J. (2003)**. Gastritis and Peptic Ulcer. *Gastroenterology*, 31(1), 1-44.
- [3] **Conteduca, V., Sansonno, D., Lauletta, G., & Russi, S. (2013)**. H.pylori infection and gastric cancer. *Int J Onco*, 42(1), 5-18.
- [4] **Du, Y., Xie, P., Fang, J., Wang, X., Hou, X., et al. (2014)**. Chronic gastritis in china:a national multicenter-survey. *BMC gastroenterology*, 14(1), 21.
- [5] **Early, D., Ben, T., Decker, G., Evans, J., et al. (2012)**. Appropriate use of GI endoscopy. *Gastrointestinal Endosc*, 75, 1127-31.
- [6] **Elsayed, E. E. (2011)**. Life style of schoole-age children with bronchial asthma. Unpublished master thesis. Faculty of Nursing, Alexandria University.
- [7] **Eusebi, L., Zagari, R., & Bazzoli, F. (2014)**. Epidemiology of helicobacter pylori infection. *Gastroentology*,19,1-5.
- [8] **Fischbach, W., Malfertheiner, P., Lynen, J. P., Bolten, W., Bornschein, J., & Buderus, S. (2016)**. Helicobacter pylori and gastroduodonale. *Z Gastroenterol*, 54, 327-36.
- [9] **Fledman, M., Friedmon, L., & Brandi, L. (2016)**. Sleisenger and Fordtrans Gastrointestinal and liver disease. (10<sup>th</sup> ed. 868-80). *Philadelphi: Elsevier*.
- [10] **Galiatsatos, P., Gologan, A., & Lamoureux, E. (2009)**. Autistic Enterocolitis. *Can J Gastro enteral*, 23(2), 95-8.
- [11] **Goldbulm, J., Lamps, L., Mckenney, J., & Myers, J. (2018)**. Rosai and ackermans surgical pathology. (11<sup>th</sup> ed. 528-67). *Philadelphi: Elsevier*.
- [12] **Hinkle, J., & Cheever, K. (2014)**. Brunner & Suddarth's Textbook of Medical-Surgical Nursing. (13<sup>th</sup> ed). *Philadelphi: Lippincott Williams & Wilkins*.
- [13] **Hollander, W., Sostres, C., Kuipers, E., & Lanas, A. (2013)**. Helicobacter pylori and nonmalignant diseases. *Helicobacter*,11, 24-7.
- [14] **Janani, B. (2016)**. Factors influencing gastritis: a preliminary study for assessment knowledge, attitudes and practices among patients with gastritis. *Department of health sciences, the open university of Sri lanka*.
- [15] **Jannathul, F., Noorzaid, M., & Norain, A. (2016)**. A descriptive study on life style factors influencing gastritis among university students of unkl PCMP in Malaysia. *Faculty of medicine, university of kulala lumpur, Indian journal of natural sciences*, 976-997.
- [16] **Johnson, K., & Ottemann, M. (2017)**. Colonization, Localization and inflammation:the roles of H.pylori chemotaxis in vivo. *Curr opin microbial*, 14, 51-7.
- [17] **Kick, B. L. (2017)**. The contribution of the world health organization to a new public health and health promotion. *Am J public health*, 93(3), 383-8.
- [18] **Korean, J., & Fam ,M. (2012)**. Relationship between occupational stress and gastric disease in male workers. *Korean Journal of family medicine*, 33(5), 311-19.
- [19] **Kumar, V., & Abbas, A. (2015)**. Aster Inflammation and Repair. In Robbins and cotran pathologic basis of disease. (9<sup>th</sup>ed. 69–11). *Philadelphi: Saunders*.
- [20] **Lee, S., Sung, I., Kim, J., Lee, S., Park, H., & Shim, C. (2015)**. The Effect of Emotional Stress and Depression on the Prevalence of Digestive Diseases. *Journal of Neurogastroenterology and Motility*, 21(2), 273-28.
- [21] **Marshall, B., & Warren, J. (2010)**. Unidentified curved bacilli in the stomach of patients with gastritis and peptic ulceration. *Scand J Gastroenterol*, 45, 1036–41.
- [22] **Oktoruddin, H. (2017)**. The correlation of knowledge and education level of the patients with the gastritis incident. *Sindangbarang public health center*.
- [23] **Pagana, D., & Pagana, J. (2014)**. Mosby's Manual of Diagnostic and Laboratory Tests. (5<sup>th</sup> ed). *Philadelphi: Elsevier*.

- [24] **Park, Y.H. & Kim, N. (2015).** Review of atrophic gastritis and intestinal metaplasia as a premalignant lesion of gastric cancer. *J Cancer Prev*, 20(1), 25-40.
- [25] **Pentti, S., & Heidi, I. (2015).** "Chronic gastritis". *Scandinavian Journal of Gastroenterology*, 50 (6), 657–67.
- [26] **Sepulveda, A., & Patil, M. (2008).** Practical approach to the pathologic diagnosis of gastritis. *Arch Pathol Lab Med*, 132(10), 158693.
- [27] **Siddiqui, A., & Siddiqui, F. (2019).** Curling Ulcer (stress induced gastritis). *Stat pearls publishing, Treasure Island (FL)*.
- [28] **Sipponen, P., & Maaros, H. (2015).** Chronic gastritis. *Scandinavian Journal of Gastroenterology*, 50(6), 657-67.
- [29] **Telaranta, A., Kara, R., Paloheimo, L., Härkönen, M., et al. (2010).** Prevalence of undiagnosed advanced atrophic corpus gastritis in Finland. *Scand J Gastroentero*, 45, 1036–41.
- [30] **Townsend, C., Beauchamp, D., Evers, M., & Mattox, K. (2017).** Sabiston Textbook of surgery. (20<sup>th</sup> ed. 37-45). Philadelphia: Elsevier.
- [31] **Tursi, A., Cammarota, G., Papa, A., et al. (1998).** Effect of adequate alcohol intake with or without cigarette smoking on the risk of Helicobacter pylori infection. *Hepatogastroenterology*, 45, 1892–5.
- [32] **Vakil, N. (2016).** Helicobacter pylori infection. Retrieved from <https://www.merckmanuals.com/professional/gastrointestinal-disorder/gastritis-and-peptic-ulcer-disease/helicobacter-pylori-infection>.
- [33] **Vonkeman, H., Fernandes, R., & van de Laar, M. (2007).** Under-utilization of gastroprotective drugs in patients with NSAID-related ulcers. *Int J Clin Pharmacol*, 45(5), 281-8.
- [34] **Wang, F., Meng, W., Wang, B., & Qiao, L. (2014).** Helicobacter Pylori-induced gastric inflammation and gastric cancer. *Cancer Lett*, 345(2), 196-202.
- [35] **Wen, Z., Brunson, J., Zhao, M., & Tan, J. (2014).** Health related quality of life in patients with chronic gastritis and peptic ulcer and factors with impact. *BMC Gastroenterology*, 14, 149-52.
- [36] **Xing, J., Min, L., Zhu, S., Zhang, H., Zhao, Y., & Li, H. (2017).** Factors associated with gastric adenocarcinoma and dysplasia in patients with chronic gastritis. *Chin J Cancer Res*, 29, 341-35.
- [37] **Zhengwei, w., Xiaomei, L., Julie, B., Miao, Z., Jianfeng, T., & Chonghua, W. (2014).** Health related quality of life in patients with chronic gastritis and peptic ulcer and factors with impact. *BMC Gastroenterology*, 14: 149.
- [38] **Zojaji, H., Talaie, R., Mirsattaria, D., et al. (2009).** The efficacy of Helicobacter pylori eradication regimen with and without vitamin C supplementation. *Digestive and Liver Dis*, 41, 644-7.