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Medicine

THE ASSOCIATION OF ETIOLOGICAL FACTORS IN CHRONIC GASTRITIS

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ABSTRACT
CHRONIC GASTRITIS IS UNDERRATED AROUND THE WORLD, EVEN THOUGH IT'S COMPLICATIONS MAY BE LIFE THREATENING. WITH TIME, THE AGGRESSIVE INFLAMATION OF STOMACH MUCOSA IN LONG-TERM GASTRITIS CAUSES ATHROPHIC GASTRITIS WITH ACID-FREE STOMACH WHICH IS ONE OF THE HIGHEST RISK FACTOR FOR GASTRIC CANCER. OTHER COMPLICATIONS OF CHRONIC GASTRITIS ARE PEPTIC ULCER, BLEEDING ULCER, ANEMIA, FAILURES IN ABSORBTION OF VITAMIN B12 OR NUTRIENTS(IRON, CALCIUM,OR MAGNESIUM).
HELICOBACTER PYLORI - FIRST DISCOVERED IN 1982- IS WELL KNOWN AS THE PRIMARY CAUSE OF CHRONIC GASTRITIS WORLDWIDE.

KEYWORDS: CHRONIC GASTRITIS, HELICOBACTER PYLORI, GASTRIC ULCER, GASTRIC CANCER.

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INTRODUCTION

Chronic gastritis is one of the most common and serious digestive tract disorders characterized by an insidious evolution with severe complications such as gastric ulcer and gastric neoplasm. The notion of chronic gastritis began to be studied a long time ago when Vilardell described for the first time in 1771 the notion of gastritis[8], but only in 1982 was given more attention with the discovery of the gram negative bacillus by Warren and Marshall [9].

The prevalence of *Helicobacter pylori* infection varies greatly depending on the socio-economic status, being over 60% in developing countries and with values somewhere between 20-25% in developed countries.[10]

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MAIN TEXT

AIM OF THE STUDY

In this study we have tried to provide a better understanding and knowledge in chronic gastritis by identifying the incidence and the association of etiological factors in the occurrence of chronic gastritis in 76 patients treated in the Medical Clinic I of the County Clinical Emergency Hospital of Craiova between September 2017 and March 2018.

MATERIAL AND METHODS

The present study was a descriptive study involving 76 patients admitted to the Medical Clinic I of the County Clinical Emergency Hospital of Craiova between September 2017 and March 2018.

The study was conducted in accordance with the ethical and deontological principles of the Helsinki Declaration of Human Rights approved by the local ethics committee and all patients signed an informed consent .

Patient assessment included demographic variables (age, gender, residence area, weight, height, body mass index, personal physiological history). In addition, they were given a questionnaire *(Table 1)* which includes a number of factors known to favor the occurrence of chronic gastritis: eating habits, alcohol consumption, smoking, coffee consumption, chronically non-steroidal anti-inflammatory use, mental stress.

In order to evaluate chronic gastric lesions, the patients included in the study were performed gastroduodenoscopy with gastric mucosa sampling for *Helicobacter pylori* infection detection using rapid urease test.

[8] Boerhaave. Ventrikuli Inflammatio. In: Van Sweiten, ed Commentaria, 1771 (cited by Vilardell);

[9] Marshall BJ, Warren JR. Unidentified curved bacilli in the stomach of patients with gastritis and peptic ulcerations. Lancet 1984; 323: 1311-15.

[10] Bruce MG, Maaroos HI. Epidemiology of Helicobacter pylori infection. Helicobacter. 2008 Oct; 13 Suppl 1:1-6.

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EATING HABITS						
	YES			***NOT***		
Does your diet contain 3 meals a day and do you generally respect their timetable?						
Do you usually eat in the evening after 8 pm and in a larger amount?						
LIFESTYLE AND BEHAVIOR						
Do you frequently drink alcohol? (>3 days/week)						
Do you drink coffee? (>3days/week)						
Do you smoke?						
Do you usually use anti-inflamatory medication? (>7day/month)						
The environment in which you work is an environment with intense psychic demand? (0 - Easy psychic request; 5- Very intense psychic demand)	***0***	***1***	***2***	***3***	***4***	***5***

Table 1. Self-administered questionnaire

RESULTS

Demographics data showed that the age limits were 21 years and 68 years respectively, with a more pronounced distribution over the age range of the third and fifth decade of life (33-55 years). *(Figure 1).*

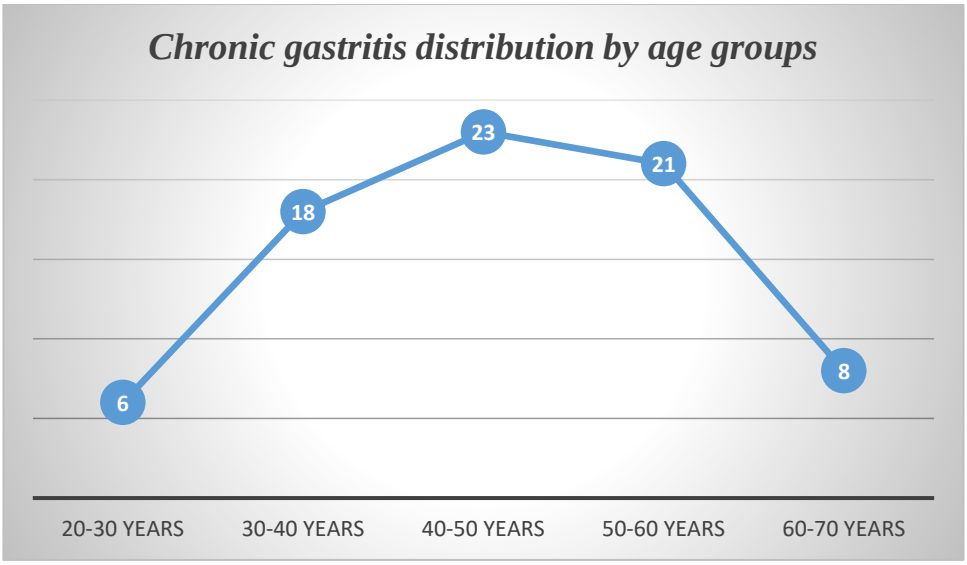

Figure 1. Chronic gastritis distribution by age groups

Regarding gender distribution within the patients group, we found no significant differences. Thus, the gender ratio (female / male ratio) was 0.9, with 40 (52.63%) men, compared with 36 (47.46%) women. *(Figure 2).*

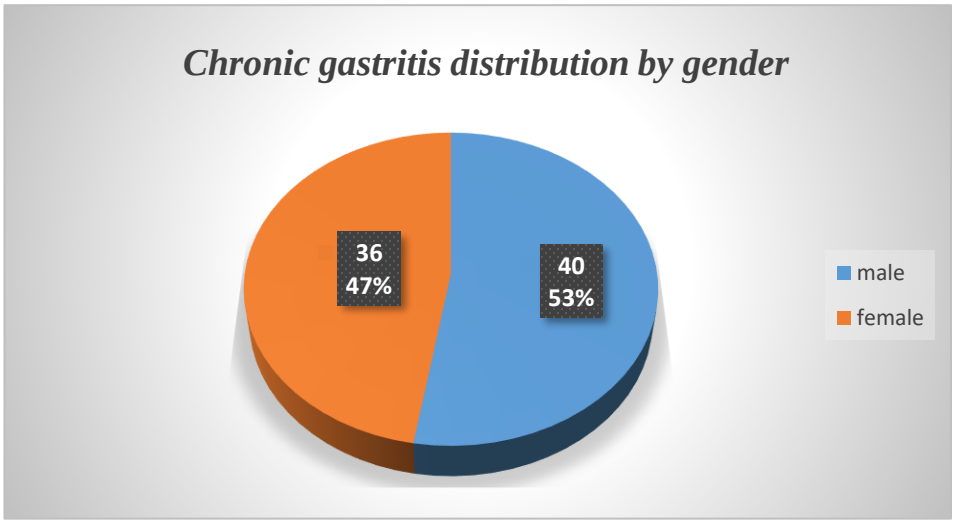

Figure 2. Chronic gastritis distribution by gender

Distribution of patients enrolled in the study by residence area shows a higher share for urban area (53, 69.73%) than the rural one (23, 30.26%). *(Figure 3*)

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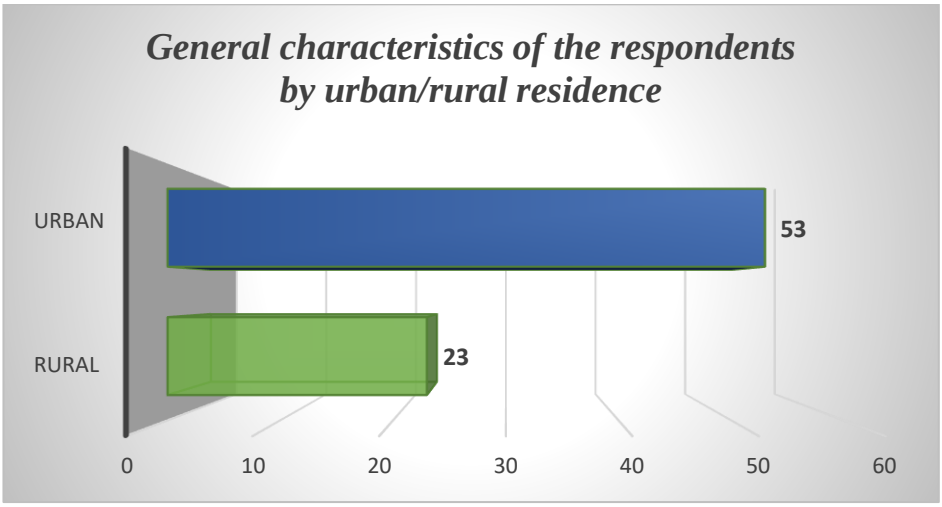

Figure 3. General characteristics of the respondents by urban/rural residence

The importance of *Helicobacter pylori* infection in the occurrence of chronic gastritis is well-known. The results of this study are consistent with similar data from the literature. Thus, following the rapid urease test, 43 patients (56,76%) were found to have *Helicobacter pylori* infection.

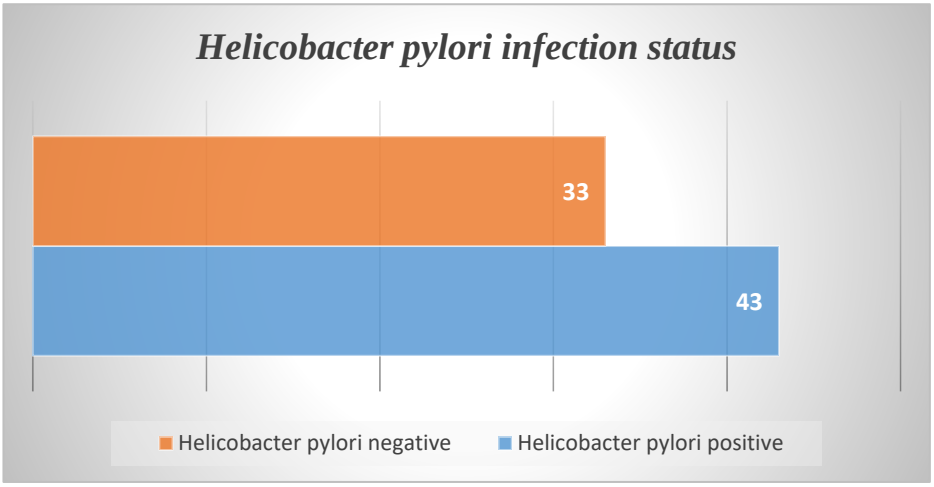

Figure 4. Helicobacter pylori infection status

The results of the self-administered questionnaire analysis presented in the table below *(Table 2)(Figure 5)* show an increased incidence of unhealthy eating habits (non-observance of meals schedule or food consumption especially during the evening hours) *(Figure 6)*. Thus, 66 patients (86.84%) said they do not have a balanced diet in terms of regimented eating schedule or food consumption after 8pm. Among them, *Helicobacter pylori* infection was found in 40 patients

(52.63% of the total number of patients enrolled in the study, respectively 60.6% of patients with unhealthy eating habits). *(Figure 7)*

EATING HABITS		
	YES	***NOT***
Unhealthy eating habits	***66***	***10***
LIFESTYLE AND BEHAVIOR		
Chronic alcohol consummers	***46***	***30***
Coffee drinkers	***59***	***17***
Smokers	***48***	***28***
NSAIDs consummers	***52***	***24***
Patients who described an intense stress exposure	***49***	***27***

Table 2. The results of the self-administered questionnaire

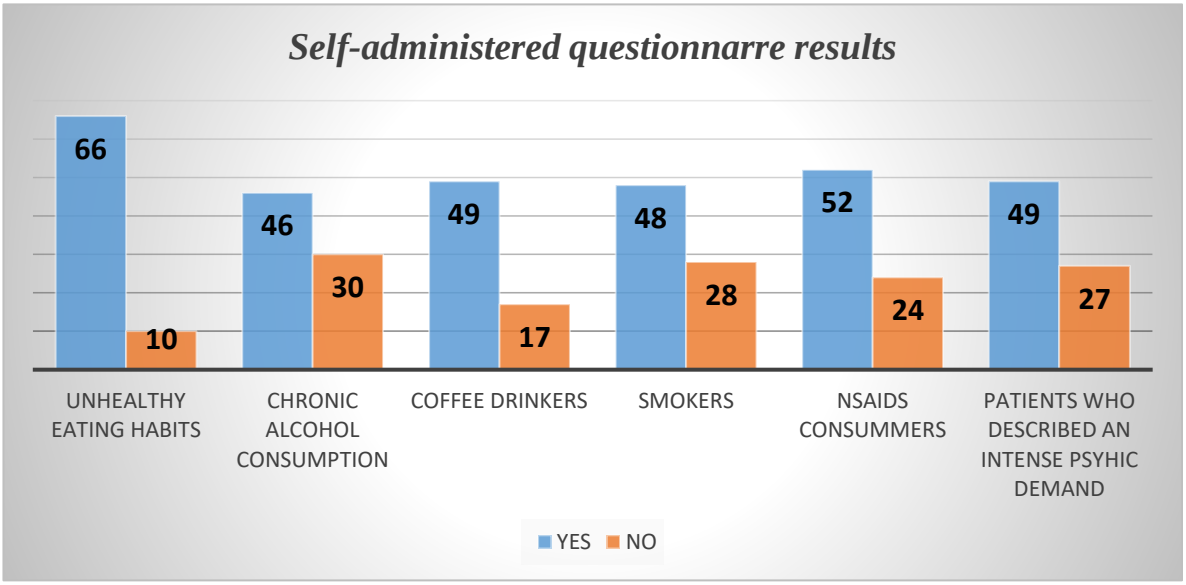

Figure 5. Self administered questionnaire results

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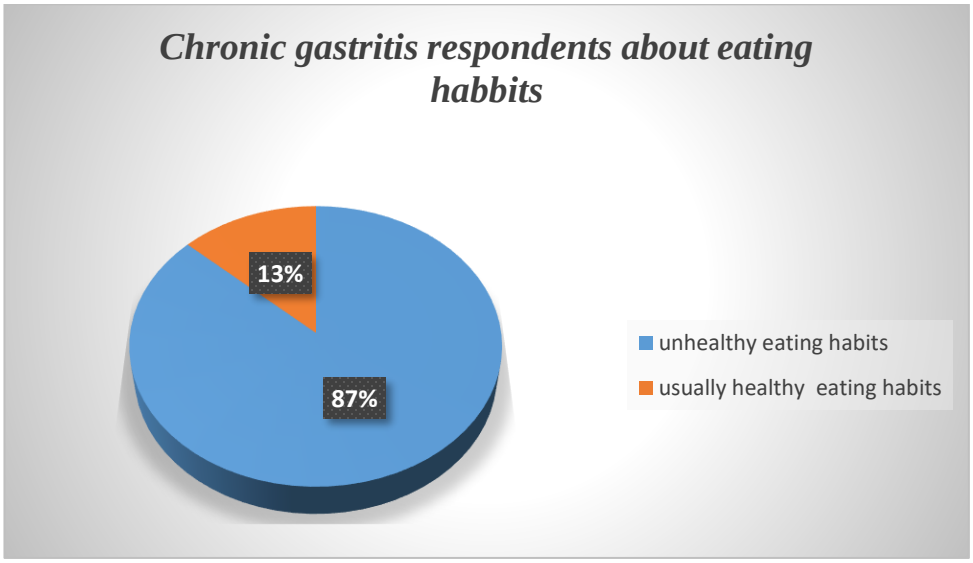

Figure 6.. Chronic gastritis respondents about eating habbits

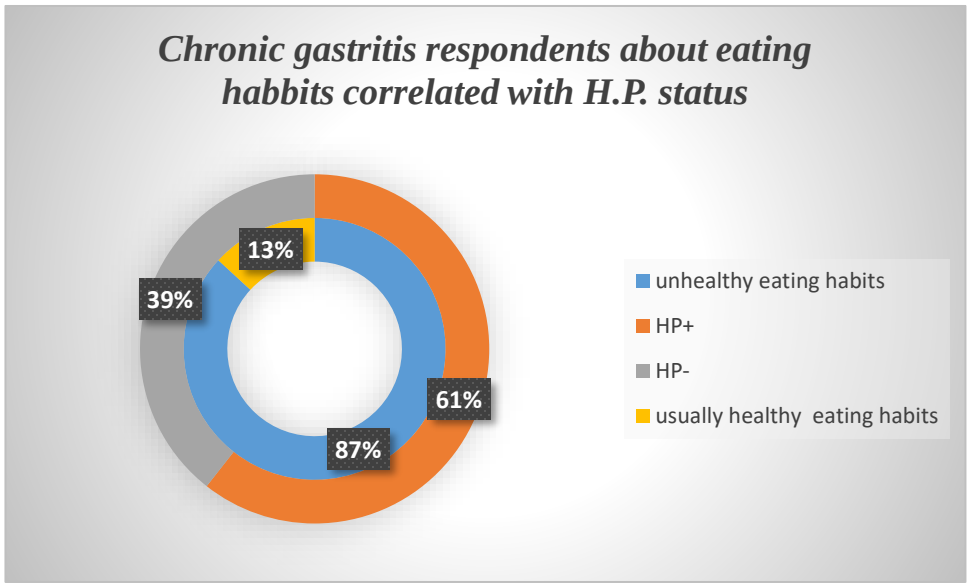

Figure 7. Chronic gastritis respondents about eating habits correlated with H.P. status

Regarding alcohol consumption, 46 patients (60.52%) declared alcohol consumption more than 3 times / week, compared to 30 patients (39.48%) who do not frequently consume alcohol. *(Figure 8).* Among respondents who frequently drink alcohol, *Helicobacter pylori* infection was found in 31 patients (40.79% of the total patients enrolled in the study, respectively 67.39% of the chronic drinkers). *(Figure 9)*

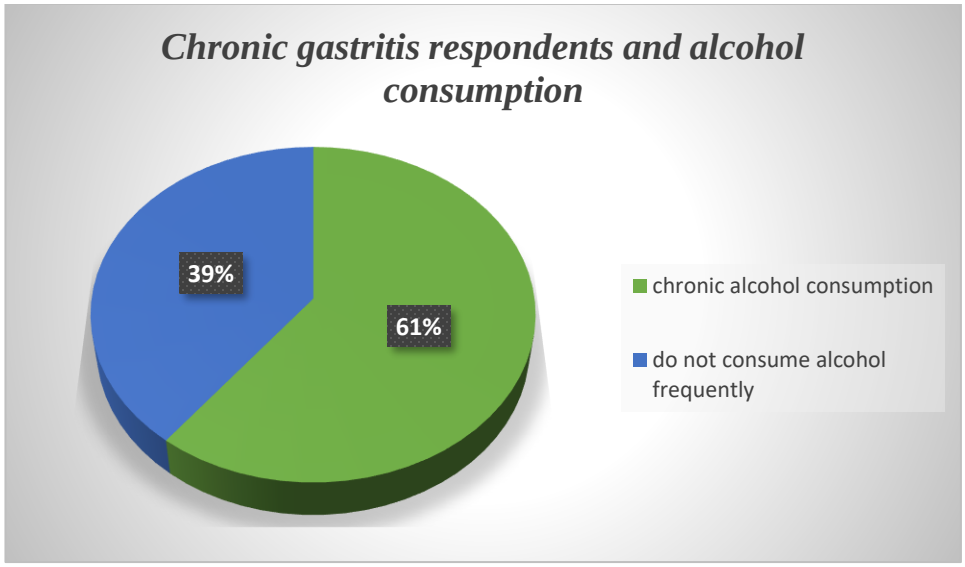

Figure 8. Chronic gastritis respondents about alcohol consumption

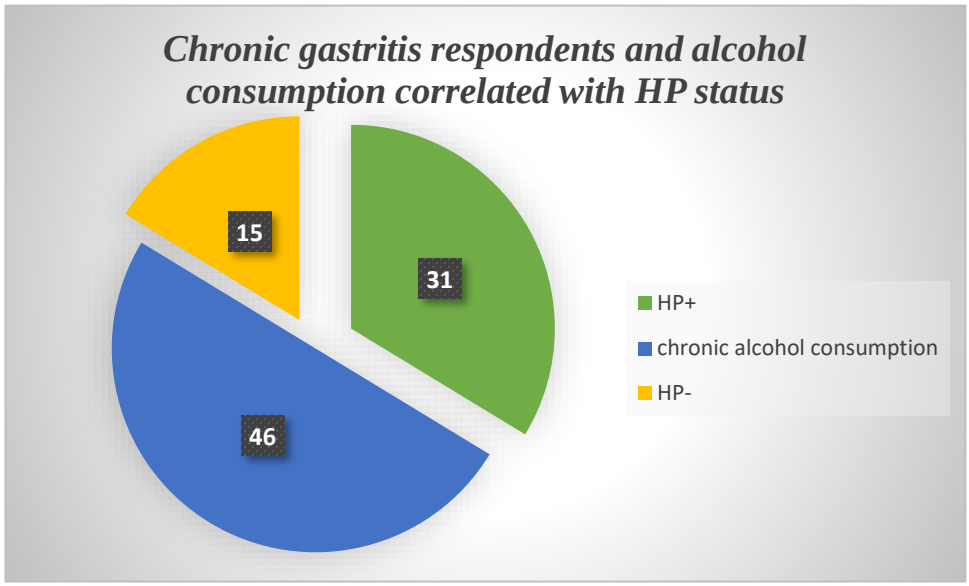

Figure 9. Chronic gastritis rspondents and alcohol cpnsumption correlated with HP status

In terms of coffee consumption, 59 respondents reported frequent coffee consumption, accounting for 77.63% of the total number of patients included in the study *(Figure 10).* Among the coffee users in the studied group, the number of patients who experienced *Helicobacter pylori* infection (28, 47.45%) was similar to those in whom the rapid urease test was negative (52.55%). *(Figure 11)*

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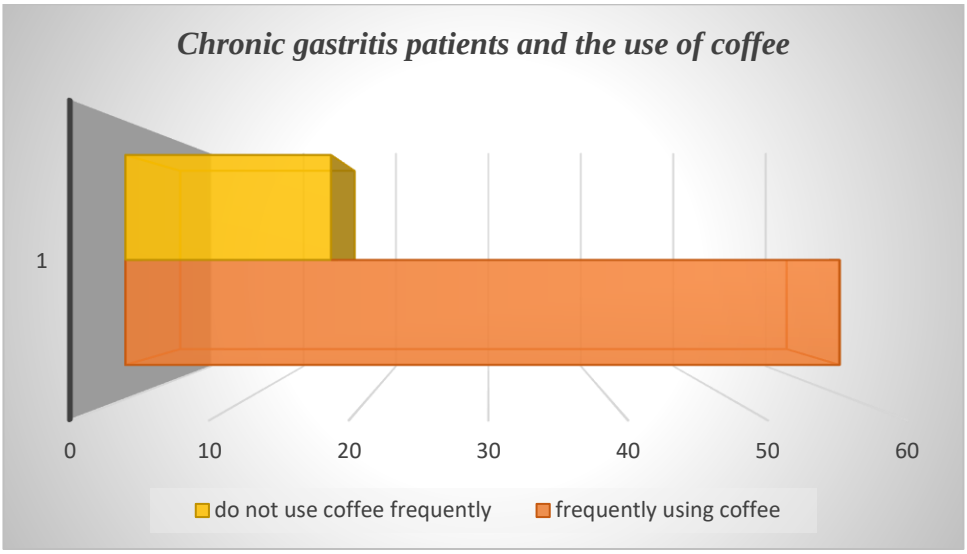

Figure 10. The use of coffee among chronic gastritis patients

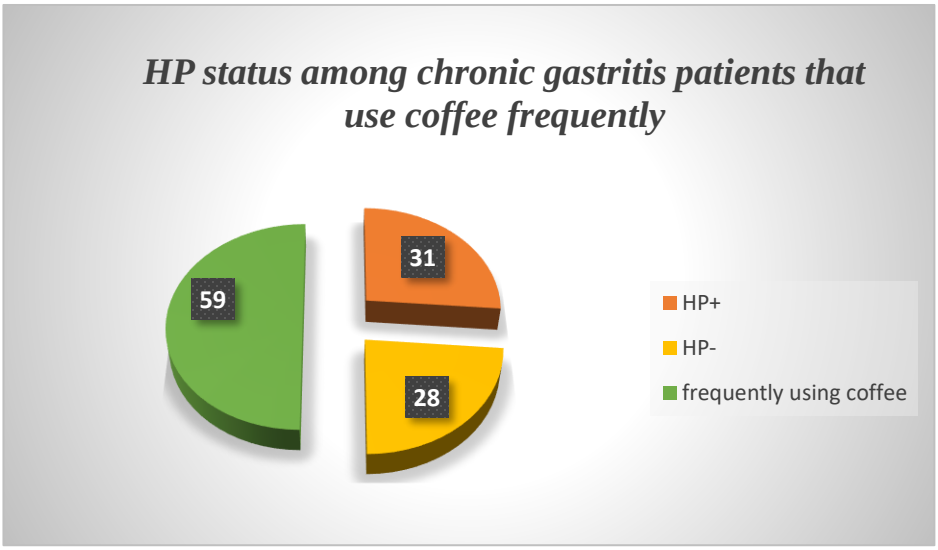

Figure 11. H.P. status among coffee users with chronic gastritis

In the case of smokers - 48 (63.16%) *(Figure 12)* - a large proportion of them - 34 (44.73% of the total number of patients included in the study, respectively 70.83% of the total who were declared smokers) also had *Helicobacter pylori* infection *(Figure 13).*

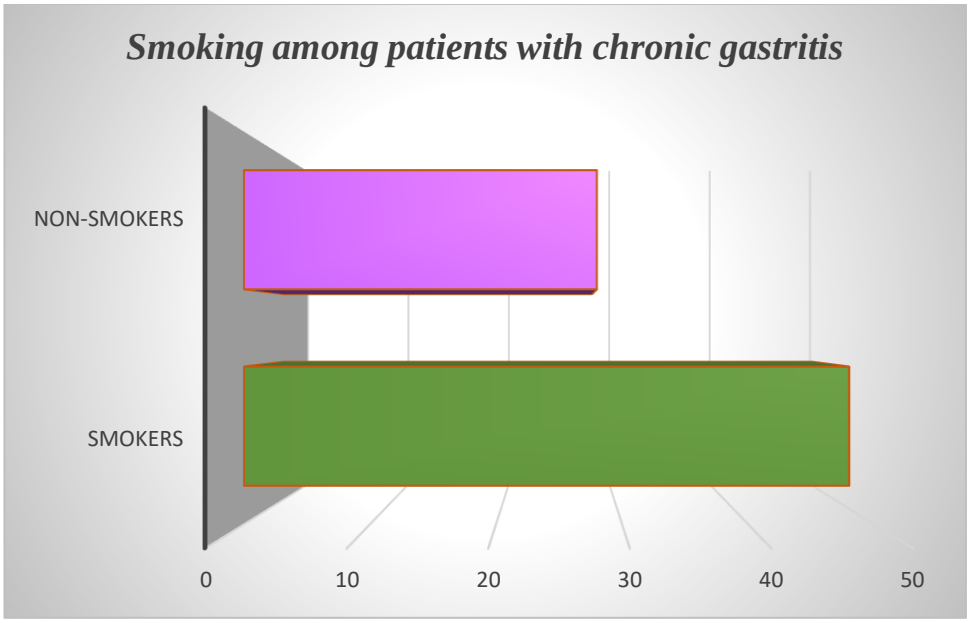

Figure 12. Smoking habit among patients with chronic gastritis

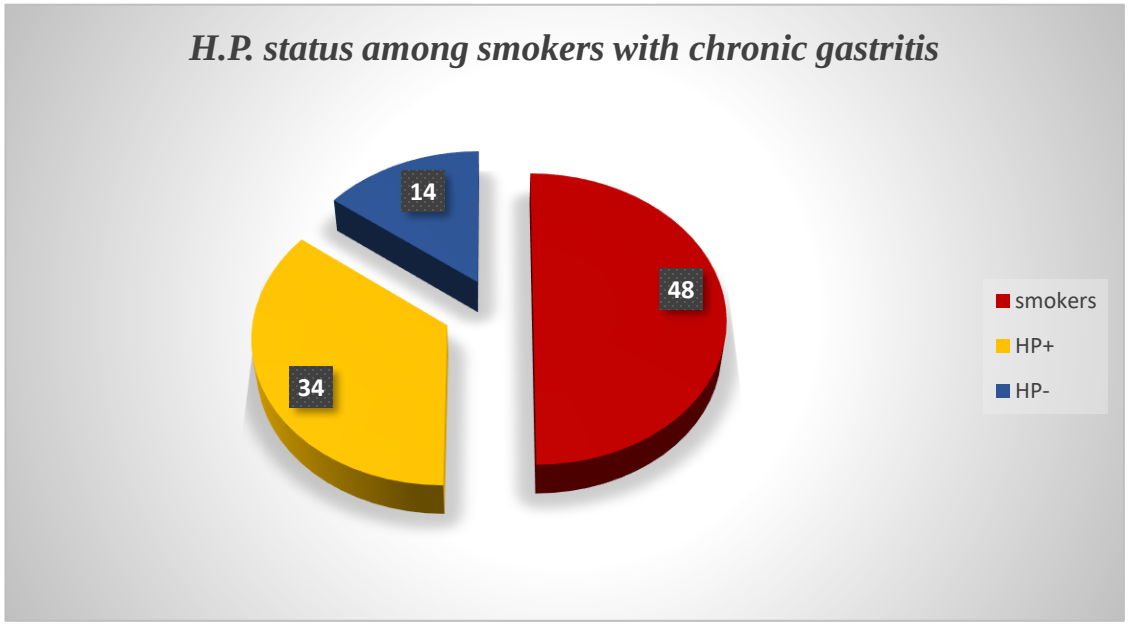

Figure 13. HP status among smokers with chronic gastritis

Regarding the consumption of non-steroidal anti-inflammatory drugs, 52 patients (68.42%) reported their frequent consumption. *(Figure 14).* Among them there were no significant differences between patients who had *Helicobacter pylori* infection - 24 (46, 15%) and those in whom urease fast test was negative -28 (53.85%) *(Figure 15)*

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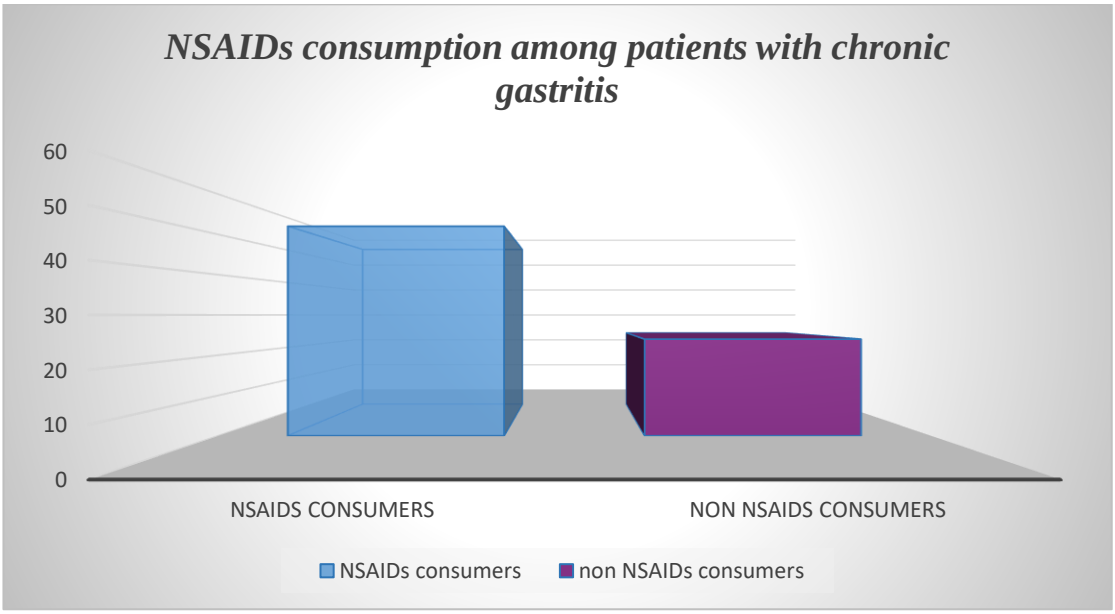

Figure 14. NSAIDs consumption among patients with chronic gastritis

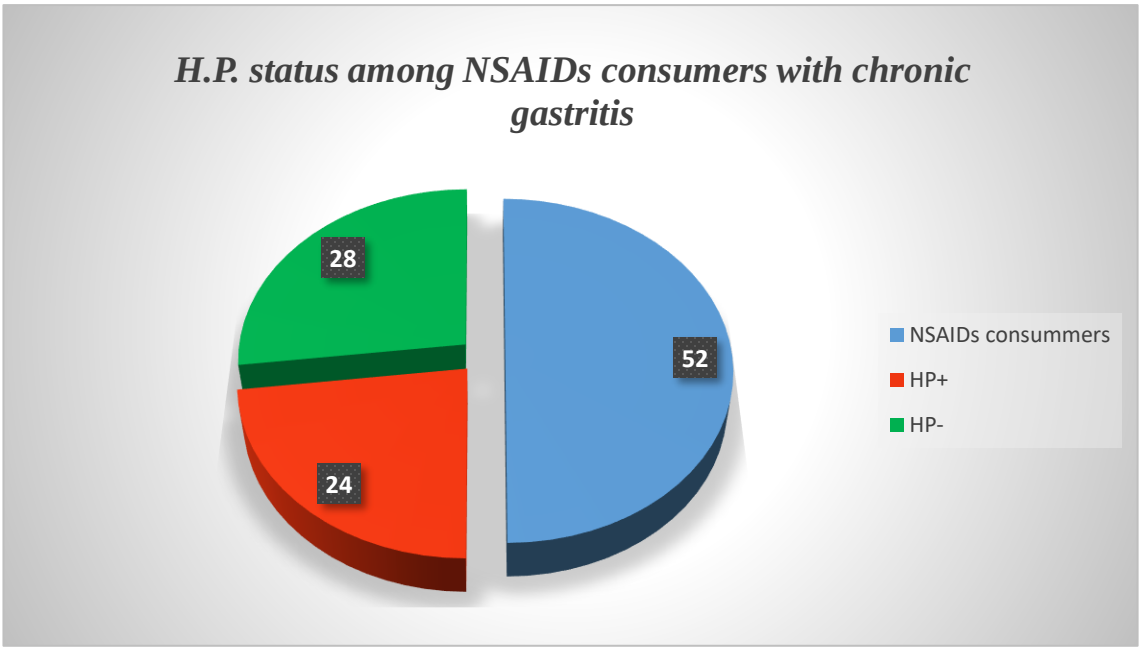

Figure 15. H.P. status among NSAIDs consumers with chronic gastritis

Regarding the psychological solicitation of patients due to the environment in which they work, 49 respondents (64,47%) declared that the environment in which they operate is quite psychological intense (corresponding to the values 3,4 and 5 of the questionnaire) *(Figure 16).* Of these, *Helicobacter pylori* infection was detected in a total of 35 patients, representing 46.05% of

the total number of patients enrolled in the study, respectively 71.42% of the number of respondents who are working in a stress exposed environment *(Figure 17).*

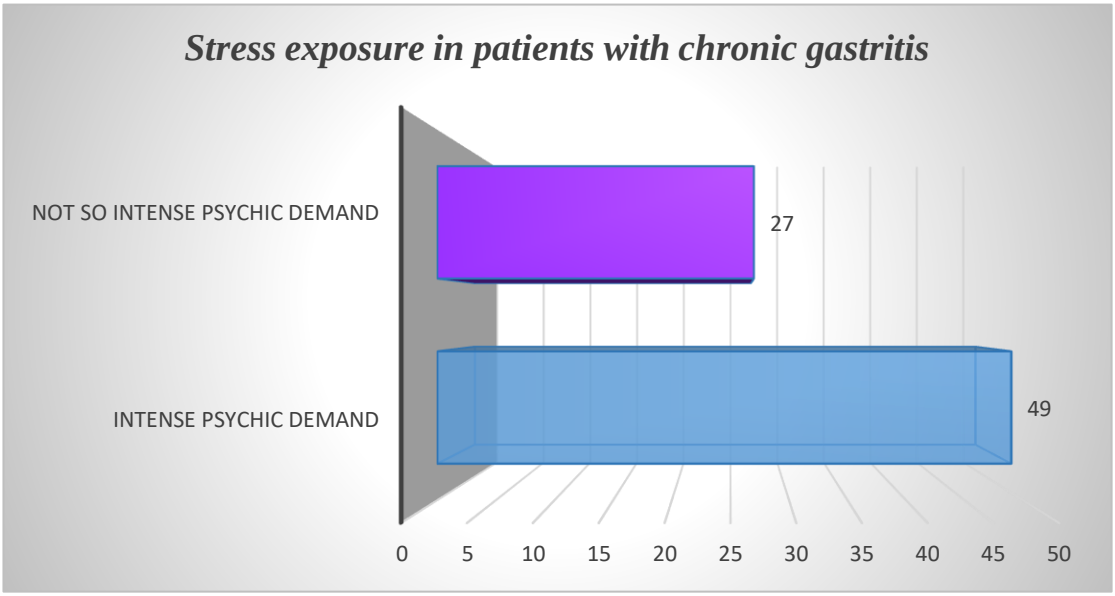

Figure 16. Stress exposure among patients with chronic gastritis

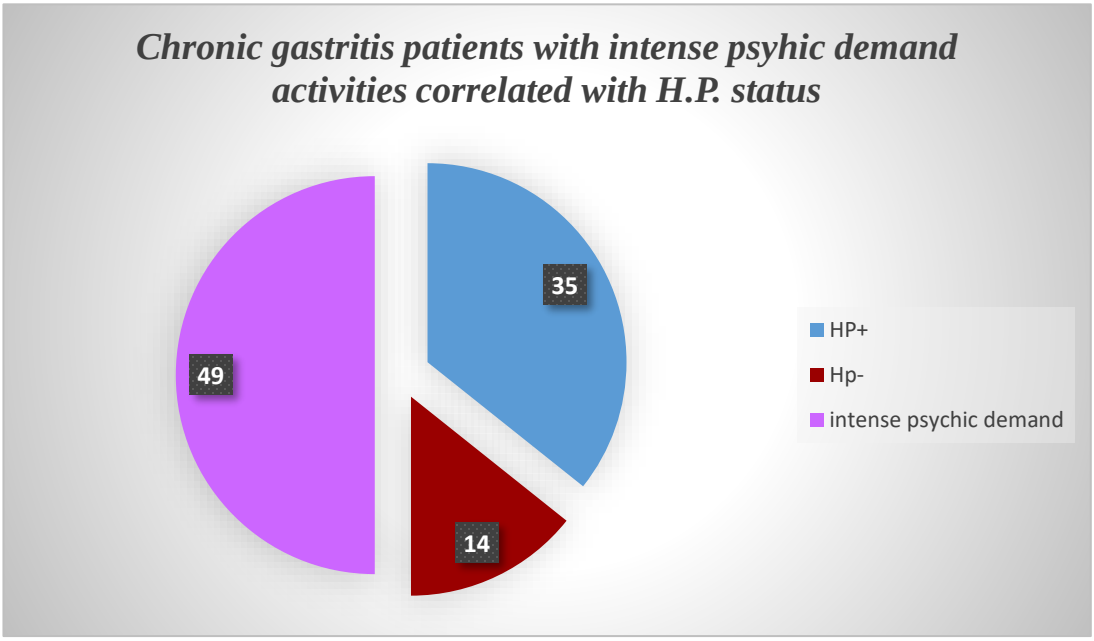

Figure 17 Hp. Status in chronic gastritis patients with intense psychic demand activities

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DISCUSSIONS AND CONCLUSIONS

The results of the presented study are similar to those presented in medical literature. We observed an increased incidence of *Helicobacter pylori* infection in patients with chronic gastritis - again proving its role in the etiopathogeny of chronic gastritis.

Analysis of demographic data in this study shows an increased incidence of chronic gastritis within the active age range (30-60 years), which is explained by a more pronounced influence of the etiological factors of chronic gastritis (especially unhealthy eating habits, psychological solicitation , drinking alcohol, coffee and smoking) over the above mentioned age range.

At the same time, gender distribution of patients without significant differences is similar to that present in the medical literature and can be explained by the fact that the presence and influence of etiopathogenic factors is relatively similar in both sexes.

Regarding the distribution of patients by residence area, the greater share of urban patients can be explained both by the presence of a more stressful lifestyle and by the increased accessibility of urban patients to services medical, but also a better medical education, which causes them to present themselves to the doctor when the symptoms appear.

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All authors equally contributed in the research and drafting of this paper.
All authors report no pottential conflict of interest.

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1. **Boerhaave.** Ventrikuli Inflammatio. In: Van Sweiten, ed Commentaria, 1771 (cited by Vilardell);
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3. **Bruce MG, Maaroos HI**. Epidemiology of Helicobacter pylori infection. Helicobacter. 2008 Oct; 13 Suppl 1:1-6.