

# Prevalence of *Helicobacter pylori* infection and its Associated Risk Factors among symptomatic Residents of Sulaimani city, Kurdistan region, Iraq, 2020

**Seerwan Hama Rashid Ali**

Community health Department  
Technical College of Health  
Sulaimani Polytechnic University  
Sulaimani City, Iraq  
[hseerwan@yahoo.com](mailto:hseerwan@yahoo.com)

**Sabiha Sharif Salih**

Laboratory Technic Department  
Technical College of Health  
Sulaimani Polytechnic University  
Sulaimani City, Iraq  
[Sabiha\\_sh@yahoo.com](mailto:Sabiha_sh@yahoo.com)

**Taib Ahmed Hama Sour**

Laboratory Technic Department  
Technical College of Health  
Sulaimani Polytechnic University  
Sulaimani City, Iraq  
[dr.taibahmed@gmail.com](mailto:dr.taibahmed@gmail.com)

**Goran Mohammad Raouf**

Pathology and Forensic Pathology Department  
College of Medicine  
Sulaimani University  
Sulaimani City, Iraq  
[goran.raouf@univsul.edu.iq](mailto:goran.raouf@univsul.edu.iq)

**Araz Latif Rahim**

Kurdistan Center for Gastroenterology and Hepatology  
Sulaimani Teaching Hospital  
Ministry of Health  
Sulaimani City, Iraq  
[araz197575@gmail.com](mailto:araz197575@gmail.com)

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## ABSTRACT

*Helicobacter pylori* (*H. pylori*) bacteria are a microaerobic Gram negative that colonizes in the gastric and duodenum of human. It can cause prolong infection in the human life if not treated. Many of the studies showed that infection by *H. pylori* can cause some important gastrointestinal illness, such as peptic ulcer, chronic gastritis, gastric adenocarcinoma and mucosa associated lymphoid tissue lymphoma. Recurrence is generally considered as *H. pylori* recrudescence infection after one year of eradicated treatment. There are many factors involved in the *H. pylori* reinfection, such as the epidemiology of *H. pylori* infection, development of economical state, and health conditions. The Objectives of this study were to estimate the prevalence and determine the risk factors of infection by *H. pylori* bacteria in dyspeptic patients in Sulaimani city. the Aims of the study are to estimate prevalence of the *H. pylori* and patients' characteristics in Sulaimani city. This is a cross-sectional study, using a Urea breath test or stained the gastric sample with Gimza stain, which is including all participants aged between (12-87) years during

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*the period starting from 1 January until 31 December 2020 on Iraqi male and female patients were visiting –Center for Gastroenterology and Hepatology in Sulaimani, city, Iraq. Three hundred and four patients were included, all of them underwent Urea breath test only but eighty-one of the participants underwent endoscopy and stained the gastric sample with Gimza stain. Results: the prevalence rate of *H. pylori* infection in our study is 54.9%, and mean age of the study participants was (40.49 ±16.39) one hundred and ninety-one cases 62.8% were female and one hundred and thirteen cases 37.2% were male. Infection by *H. pylori* bacteria is rife in dyspeptic patients; and is more common in the age group of 31-40 years. One of noninvasive test to diagnosis *H. pylori* is Urea breath test. In conclusions the rate of *H. pylori* infection in our study is 54.9% among the symptomatic patients, and the overall incidence of *H. pylori* UBT and Giemsa stain detection rate were 73.4 and 26.6% respectively.*

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## 1. INTRODUCTION

The *H. pylori* bacterium is a gram negative, microaerophilic, has urease-production effect and spiral-shaped [1]. For the human life, the infection by *H. pylori* is considered as the most common chronic bacterial infection. [2, 3] the infection by *H. pylori* in More than half of the world's population which are causes chronic gastritis, in advanced stages of infection, the bacteria are associated with peptic ulcer and increased the chance of developing risk to stomach cancer.[4] Barry Marshall and Robin Warren, they were isolated *H. pylori* in 1982 for the first time. The bacterium is a gram-negative type and microaerophilic, and can causes inflammation in the gastric mucosa; it is the main causative agent of upper gastrointestinal diseases in the countries which have poor socio-economic status and not developed [5] Gastric antrum and areas of gastric metaplasia in the duodenum are the main habitat place for *H. pylori* [6]. The epithelial lining of the stomach is place of choice to invade by *H. pylori*. Clinical signs of *H. pylori* infection are abdominal distention, epigastric burning sensation, and nausea, but in most of the patients the infection will be asymptomatic. [7]

In human the one of the main causes of peptic ulcer disease is infection by *H. pylori*, and it is one of the predisposing factors for gastric cancer.

For treatment of the disease, the risk of recurrence reduction with avoidance of its complication results in ulcer healing. Best treatment needs using multi drugs including antibiotics and anti-acid for 10-14 days.[8] in 1983 the scientists' discovery of *H. pylori* as a main cause of gastric and duodenal ulcer illness. [1] *H. pylori* is not like as majority of pathogenic bacteria, it is typically colonizing the host for life unless specific treatment is given human migration pattern correlates with strain types that predominate within certain regions of the world [9]. Disease evident is not common in most infected individuals, this conduct us to make the hypothesis that some type of *H. pylori* strains which are harmless or even have benefit effect; although, in the recent years show that the list of diseases caused by *H. pylori* infection has been increased will conclude that any strain is commensal [10]. Almost 50% of world population exposed to infection by *Helicobacter pylori* bacteria.

There is clear distinction among developing and developed countries. The prevalence in

developing countries as Middle East, sub-Saharan Africa and Latin America was 90% or more, while it is 40% or less in developed countries like Swaziland, western Europe, north America and Australia [11]. Commonly infection of stomach is present patients infected by *H. pylori* and appear as acute or chronic. Gastritis may be, corpus or antral-predominant or spread.[12] the loss of acid secretion is accompanied the entire gastric which effected by acute gastritis [10]. Sometimes metaplasia and adenocarcinoma progressed [13]. Proton pump inhibitors mediates chronic acid suppression and it can lead to alter the antral predominant to pangastritis, the risk of cancer development does not increase by duodenal ulcers and antrum-predominant gastritis [14].

Gastric adenocarcinoma is mainly caused by *Helicobacter pylori* [15]. Some complications followed *H. pylori* infections which include ulceration that making by the part of the body that can damage the cell lining epithelium of the gastric and then acidity of the stomach help the progression and formation this type of ulcer, so *H. pylori* should be treated to avoid ulcer formation. In case of Stomach cancer: *H. pylori* considered as one of the risk factors for gastric carcinoma. Treatment for ten days by using Omeprazole, clarithromycin and amoxicillin or treating for fourteen days via using bismuth subsalicylate, tetracycline and metronidazole; or treating for ten to fourteen days by using lansoprazole, clarithromycin and amoxicillin, are the regimens that recommended for *H. pylori* eradication by the National Institute of Clinical Excellence. [16] the evidence illustrates that the Vaccination or treatment and eradication of *h. pylori* infection [17] may decrease the risk of stomach cancer and gastric ulcer. Because in Kurdistan region a few studies about prevalence of *helicobacter pylori* especially investigation via both Urea Breath Test and endoscopy finding and re-infection of stomach mucosa by *helicobacter pylori* bacteria. The aim of the current study is to discover the prevalence of *helicobacter pylori* and risk factors among dyspeptic patients visited Kurdistan Center for Gastroenterology and Hepatology in Sulaimani city in 2020.

## 2. Materials and Methods

### The Study population are included

Iraqi male and female patients aged 12-87 years which are living in Sulaimani city and visiting Center for Gastroenterology and Hepatology in Sulaimani, city, Iraq.

### Sample size and technique

We select 304 cases of dyspeptic patients referred to Kurdistan Center for Gastroenterology and Hepatology in 2020.

### Study area

The selected study area was including center municipality of Sulaimani city and rural of it, the cases was visited the Kurdistan Center for Gastroenterology and Hepatology in Sulaimani city.

### Duration of the study

The data collection time was started from 1 January 2020 to 31 December 2020.

### Study design

A cross sectional design of the study, by using urea breathes test and staining of gastric biopsy histology (by applying it's in Giemsa stain for 24 hours) was used as a diagnostic test. The study included dyspeptic cases aged (12-87 years) in 2020 and were subjected to routine upper gastro-intestinal endoscopy for suspected gastric infection, peptic ulcer disease and stomach cancer.

### Data Collection Method

- Data was collected by applying the Questionnaire which include socio demographic characteristics, hygiene, lifestyle factor and behavioral of symptomatic patients.

- The urea breath test was done by using machine (Heliprobe® system, manufacture in Sweden) to detect *H. pylori* infection.

#### **Biopsy taking and laboratory diagnosis**

The endoscopic mucosal biopsy from gastric antrum mucosa and endoscopic mucosal biopsy from gastric erosion for histological diagnosis and staining by Giemsa stain.

#### **Statistical Analysis of Data**

All dyspeptic patients' data are analyzed via application of the SPSS version 26. The descriptive of statistics put forward as (mean±SD) and frequencies as percentages, and Chi-square used for test group differences or categorical variables. In all statistical analysis, level of significant (p.value) set as  $\leq 0.05$  and the study results showed as figures and tables.

#### **The inclusion Criteria:**

All Patients presented by dyspeptic symptoms as (epigastric pain, heartburn, nausea, vomiting, early satiety, bloating) aged between 12-87 years were referred to KCGH; they were not previously screened or treated for *H. pylori* infection.

#### **Exclusion Criteria:**

Patients below 12 years, who had a history of PPI, H2 receptor antagonist, bismuth, warfarin, and steroid use within 2 weeks before, or antibiotic use within 4 weeks, active gastrointestinal bleeding, and history of gastric surgery and *H. pylori* eradication Pregnant women, and non-Iraqi participant.

#### **The human ethics:**

Ethical approval was taking from the community health department / Technical College of Health / Sulaimani Polytechnic University for doing this study. In addition, the permission was taken from KCGH center to conduct our study on *H. pylori* infection. Before the data collection an informed consent for each patient or from their parents in adolescent patient under 18 years are taking with signature of it and confidentially keeping our results.

### **3.RESULTS**

#### **The response rate of the participants;**

To determine the rate of responses by participants, the following equation was used.

$$\begin{aligned} \text{The response rate} &= \text{No of patient responded to questionnaire} / \text{N0 of sample size} * 100 = \\ 304/323 * 100 &= 94.1\% \end{aligned}$$

#### **Prevalence of *H. pylori* infection and demographic characteristics**

The current study includes 304 adult and adolescent's dyspeptic patients who are living in Sulaimani city-and rural areas of Sulaimani, they were visiting Center for Gastroenterology and Hepatology during the period of 1 January until 31 December 2020. The total of 304 dyspeptic patients 167 of the patients were have a positive result for *H. pylori* infection, which are giving an overall incidence of 54.9%. Sixty-three (37.7%) male and one hundred and four (62.3%) of female participants were positive result for *H. pylori* but there was not statistically significant different in with the age, mean  $\pm$  standard deviation (SD) (40.49  $\pm$ 16.39) and the majority of participants age were in between (31-40) years old group, 75 (24.7%). The table.1 is summarized the socio-demographic characteristic of the studies participant.

### Presence of gastric ulcer

To investigate the presence of ulcer in dyspeptic participants have a role on their result of UBT for patients affected by *H. pylori* bacteria, the result showed that majority of dyspeptic patients who have positive result for *H. pylori* test were have ulcer in their stomach 92 (55.1%) and only 75 (44.9%) who not had ulcer in their stomach from dyspeptic patients and score result of *H. pylori*-infection, Statistically there was a significant relationship between presence of gastric ulcer of dyspeptic patients and their score of result of *H. pylori*-infection (p-value 0.0001). (Figure 1)

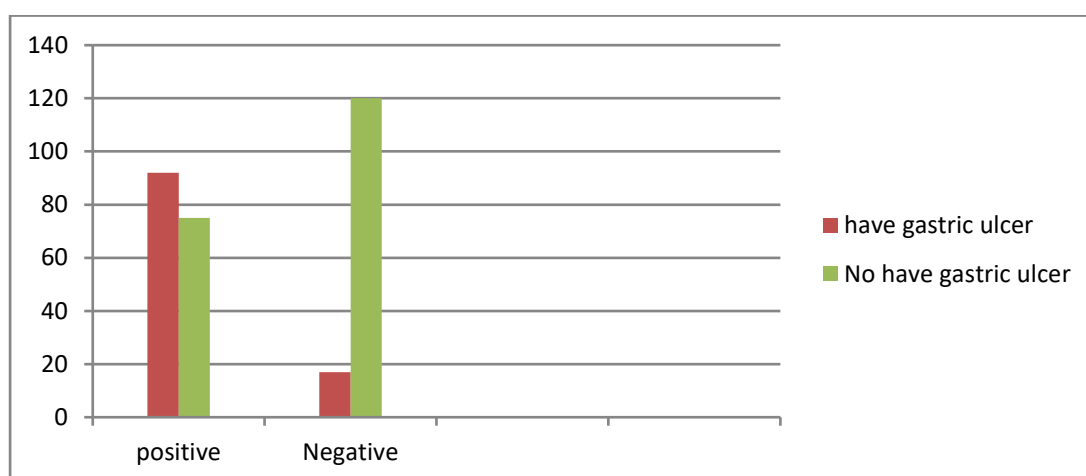


Figure 1. Distribution of dyspeptic patient's result regarding to present of gastric ulcer

Table 1. prevalence of *H. pylori*-infection according to UBT result for dyspeptic participants which respect to socio demographic variables (N=304)

Variables		+ve UBT frequency	-ve UBT frequency	Total	Percentage %	p-value
Sex	Male	63	50	113	37.2	0.507*
	Female	104	87	191	62.8	
Age	≤ 20	14	23	37	12.2	0.138
	21-30	32	20	52	17.1	
	31-40	50	25	75	24.7	
	41-50	36	28	64	21.0	
	51-60	18	22	40	13.2	
> 60	17	19	36	11.8		
Residence	Rural	39	50	89	29.3	0.044*
	Urban	128	87	215	70.7	
Occupation	1)Student	19	30	49	16.1	0.009*
	2)Government/ Employee	43	29	72	23.7	
	3)Medical Staff	23	12	35	11.5	
	4) Worker	25	14	39	12.8	

	5)Housewife	54	41	95	31.3	
	6)Others/ unemployed	3	11	14	4.6	
Education	No legal education	16	25	41	13.5	0.326
	Grade 1–6	33	28	61	20.1	
	Grade 7–12	56	35	91	29.9	
	Institute / University	62	49	111	36.5	
Family size	1–3 / < 4	49	30	79	26	0.160
	> 3 / ≥4	118	107	225	74	
<i>H. pylori</i> test result	Negative (0)	49	88	137	45.1	0.00001*
	Mild (1)	24	39	63	20.7	
	Moderate (2)	31	41	72	23.7	
	Sever (3)	9	23	32	10.5	
Economic state	1)Poor	80	69	149	49	0.253
	2)Moderate	68	55	123	40.5	
	3)Rich/opulent	19	13	32	10.5	
Blood Groups	1)Type A	47	35	82	27	0.488
	2)Type B	22	22	44	14.5	
	3)Type O	91	73	164	53.9	
	4)Type AB	7	7	14	4.6	
Rhesus (Rh)	Rh + ve	161	128	289	95.1	0.566
	Rh-ve	6	9	15	4.9	
Nutritional State	Under weight	13	13	26	8.6	0.446
	Normal	67	50	117	38.5	
	Over weight	59	57	116	38.1	
	Obese	28	17	45	14.8	
Present of gastric ulcer	Yes	92	17	109	35.9	0.0001*
	No	75	120	195	64.1	

\*UBT: Urea Breath Test

Table 2 Association of *H. pylori* prevalence detection with respect to hygiene, lifestyle factor and behavioral of symptomatic patients in KCGS in Sulimani City in 2020 (N=304).

Variables		+ve UBT frequency	-ve UBT frequency	total	p-value
Did you have Psychological disorder	1)Yes	133	89	222	0.005*
	2)No	34	48	82	
Family hx. of gastric ulcer	1)Yes	89	56	145	0.053
	2)No	78	81	159	
Eating meals at	1)home only	68	75	143	0.019*
	2)Restaurant &home	99	62	161	
Drinking water source	1)Tap water	95	74	169	0.647
	2)well water	17	20	37	
	3)Filtered water	55	43	98	
Hand washing practice	Yes	93	120	213	0.00001*
	No	74	17	91	
Clinical symptoms	Yes	163	116	279	0.001*
	No	4	21	25	
Cigarette smoking/ Smoker	Yes	16	18	34	0.718
	Never	151	119	270	
Alcohol drinking	Yes	12	4	16	0.215
	No	155	133	288	
Diabetes mallets	Yes	18	13	31	0.375

	No	149	124	273	
Method of diagnosis	1)Endoscopy&UBT	37	44	81	0.002*
	2)UBT	130	93	223	

\*UBT: Urea Breath Test \*KCGH: Kurdistan Center for Gastroenterology and Hepatology

#### 4. DISCUSSION

##### **Dyspeptic patient's and Prevalence of *H. pylori***

Dyspepsia is a frequent issue in those seeking medical help and also the general public. It is diagnosed when signs are present that are considered to come from the gastro-duodenal zone (early satiety, Halitosis, Nausea, Distension of abdomen, Excessive burping, epigastric pain or burning) [19].

The occurrence of *H. pylori* infection within dyspeptic participants sent to KCGH in Sulaimani, city was 54.9 percent, which is consistent with a local analysis done by Bashdar Mohammed Hussein et al, in Hawler city, Kurdistan region [21] was (55.8 percent) also is approximately lower than the average Sheikhani, et al [20] in Sulaimani (62.7 percent), the outcome is smaller than those in nearby countries, such as Turkey 63% [22]. and indicated the same occurrence of *H. pylori* as other studies which done in Asia and the Middle East, by researcher Alazmi et al [24]. But study in Kuwait [23] was (49.7%) of the prevalence of *H. pylori*. This variance may be related to the nature of our research, which surveyed only dyspeptic patients admitted to Kurdistan Center for Gastroenterology and Hepatology in Sulaimani district, and due to their history, they could have a different life style in comparison of the rest of the community. In another study done by R.P. Jackman, et al in America, et al. [25] prevalence was only (10.4%). The explanation for this variance in *H. pylori* positivity frequency is most likely related to the size of sample differences; age ranges, geographic areas, socioeconomically aspects and time frames the studies were conducted.

##### **Relationship between demographic factors of dyspeptic patient's and prevalence of *H. pylori*-infection**

Female dyspeptic participants were appeared to be more diagnosed with *H. pylori* than male dyspeptic patients in the present research (P value: 0.504). This was in contrast to what others have said [22]. It's possible that women stay more time in the kitchen and take more time in preparing food than men for cultural reasons; some time it could be due to menstrual or sex hormones. There is a different study on the association regarding infection with *H. pylori* occurrence and patient ages. Extremely similar incidence was found by researcher (Dorji et al., 2013) in Bhutan city [26] and by (Zhang et al., 2013) in China [27], with non-significant differences between age groups. Likewise, previous research undertaken in other countries found no substantial connection between infection by helicobacter pylori and patient ages [28, 29]. This is in line with our results, which found that there was not statistically significant link regarding age and infection with *H. pylori* bacteria (p.value 0.138). Wubejig Abebaw et al. (2014) [30] stated a relationship between age with occurrence of Helicobacter pylori infection.

The frequency of infection with *H. pylori* was shown larger in dyspeptic patients from city environments than in those from rural regions in this research. Living conditions are becoming denser, with a large number of families residing in a small region of Sulaimani, increasing the possibility of water and air pollution. And our results demonstrate this case by statistically significant (p.value 0.044). According to the findings of AL-Mashhadany et al RJBPCS 2018 [31], males in rural and urban regions have a higher occurrence of *Helicobacter pylori* antibodies, with 41.3 % and 38.2 %, respectively. Ndipetal. (2004) [32] Found that the *H. pylori*-infection prevalence it differs between rural and urban populations.

Dyspeptic patients who work different occupations in their life, the outcome demonstrates that more statistically significant (P < 0.009). Abdurahaman Seid et al (2018) [33] found a

substantial relationship between kind of career and occurrence of *H. pylori*-infection. This finding is in line with the results of a report from Northwest Ethiopia in (2018) [30], but not with those of Dorji et al. (2013) [26], According to the findings of our research, patients who work as housewives are more probable to have infection by *H. pylori* than those who have other profession.

There was no statistically relevant correlation regarding socioeconomic status and *H. pylori* occurrence in this research ( $p=0.253$ ). This contradicts a report conducted in Erbil (Bashdar Hussen et al., 2013) [21]. As to the educational achievement of the dyspeptic patients, our research demonstrates that the highest rate of infection with *H. pylori* was noted in the patients who finished Institute/university degree ( $p$ .value 0.021), numerically a strong relation was observed between *H. pylori* occurrence and academic achievement, which due to going to check their gastric and test in order to detect them self about bacterial infection as *H. pylori*. This result is similar to other findings of the study which done in developed countries; similarly, no statistically relevant correlation was identified regarding *H. pylori* occurrence and degree of school achievement, which are consistent with other study done in Ethiopian [28].

While high number of family size is recognized as a potential cause for infection by *H. pylori* pathogenic bacteria [35], the family size in a house do not show any significant cause occurrence of *H. pylori* infection in our research ( $p$ .value 0.160). This conclusion is in line with the finding of an Iranian explorer (Mansouri-Ghanaei et al., 2009) [36]. This research also observed a non-significant interaction among ABO blood groups and UBT findings ( $p$ .value 0.488), which is compatible with other researches that found no significant relationship [37, 28]. But in our research, there was no statistically relevant relationship between Rhesus (Rh) blood group and *H. pylori* occurrence ( $p=0.566$ ).

Large percentage of dyspeptic patients in our study revealed that they are overweight in nutritional state (38.5%), accompanied by normal according to body mass index (BMI) (38.5%), then obese and underweight (14.8%), (8.6%) respectively. Despite the fact that there is no association between dyspeptic patients and body mass index in our research ( $p$ .value 0.446), this is compatible with the results of Solhpour A. et al [38].

In terms of gastrointestinal ulcers, it was discovered that individuals with peptic ulcers are more probability to infected by *H. pylori* pathogen (55.1 %) than others who did not have any ulcers. Majority of peptic ulcer events are triggered by bacteria of *H. pylori*, because it is transmission between the familial member; statistically, there was a significant correlation regarding gastric ulcer of patients and their score of outcomes of *H. pylori*-infection ( $p$ .value 0.0001). the result of our study is in line with the outcomes of Ghalia Khoder et al. in the United Arab Emirates in 2019 [39].

### **Relationship between *H. pylori* prevalence and it's respected to behavioral, lifestyle factors and hygienic issue for dyspeptic participants**

The current research reveals that the majority of dyspeptic patients had a psychological disorder, considering the fact that 73% of all participants in this study had a psychological disorder, and 79.6% of positive *H. pylori*-infection patients in our research had this concern. The current research found a statistically significant negative relationship between frequency and psychiatric illness ( $p$ .value 0.05), which is compatible with many another research (takeoka et al., 2017; Seid et al., 2015). [41, 33]

And about gastrointestinal features, it found that people who have family background of peptic ulcer disease were more 53.3% susceptible to infection by *Helicobacter pylori*. In addition, the present analysis reported that is a relatively irrelevant correlation between the occurrence of *Helicobacter pylori*-infection and a family background of gastric ulcer disease ( $p$ .value 0.053). These results are in compatible with a finding of Muhammad O. et al. and Ramin Nikman et al. [42, 43]



In this research, the dyspeptic positive patients who ate and ingested food in a restaurant or from a street vendor made up 59.3 percent of all dyspeptic participants, contrary to other patients who only ate and ingested food at home, with a significant relationship (p.value 0.019). Our findings are consistent with findings from other countries, such as Taweesak Tongtawee et al [40] in Thailand, who reported a significant connection regarding dyspeptic patients who ate and ingested food from a restaurant or a street vendor and occurrence of *H. pylori*-infection (p.value 0.01); That can be attributed to the fact that many pathogenic bacteria such as *H. pylori*, *Escherichia coli* and another pathogenic microbe can sometime contaminate the street vendor and restaurant.

Is also thought that the occurrence of *H. pylori* various depending on the water source for consumption. In our study, show that *H. pylori* and water forms were not correlated with a drinking source (P vale: 0.647). This is related to a study in Erbil that found no connection between sources of drinking water and *H. pylori* (P vale: 0.738). (Bashdar Hussen et al., 2013) [21]. this is may be attributed to brand new developments in drinking water supply and essential utilities. Our analysis found that washing hands has a greater probability of preventing infection by *H. pylori* and has highly significant impact on *H. pylori* occurrence (p.value 0.00001), which contradicts the findings of Abdurahaman Seid et al (2018) [33]. Although bad hygiene is thought to be a significant risk factor for *H. pylori* illness, such as lack of home sanitation facilities (Dube et al., 2009) [34]. Other investigators have found anomalies which demonstrate that hygienic activity is not important in terms of *H. pylori* occurrence (Alizadeh et al., 2009) [45].

In term of clinical gastrointestinal symptoms, in those with gastrointestinal symptoms such as (Heartburn, Halitosis, Vomiting, Dyspepsia and Epigastric pain) the overall frequency of 97.6% positive *H. pylori* was recorded (p.value 0.001) However, our results show that the incidence of *Helicobacter pylori* was correlated substantially with dyspeptic patient clinical gastrointestinal symptoms. This is equivalent to other discoveries made in Jordan by Hamed Alzoubi et al. (2020) [44], and it is also similar to the findings of Sheikhani et al [20]. We also investigated the relationship in dyspeptic patients between cigarette smoking and positivity of *H. pylori* infection, we find anomalies that in our study there was no statistically significant difference between cigarette smoking and positive rate of *Helicobacter pylori*-infection (p.value 0.718), and this consistent with the finding of Mohie Khalifa in Saudi Arabia [18].

Regarding to relation between alcohol intake and the occurrence of infection with *H. pylori* is widely conflicted. In our research, there was no significantly important relation between alcohol intake and positivity occurrence of *H. pylori* infection (p=0.215). This is agreed with the finding performed in Sulaimani done by (Muhammad. O et al., 2018) [42]. A large percentage of dyspeptic patients in our sample indicated that they did not have Diabetes Miletus (89.2 % of all members with positive *H. pylori* bacteria results), with insignificant relationship between Diabetes Miletus and *H. pylori* occurrence in our research (p.value 0.375). This conclusion is line with the observations of Jafarzadeh's 2011 research in Iran's south-east [45].

Finally, in accordance with the methods of testing, the findings of our study revealed that an individual was 73.4 % more detected the infection by *H. pylori* by UBT route. And, based on this ratio of individuals, the present analysis shows that over half (58.3 %) of dyspeptic patients was positive for *H. pylori* by UBT screening; clinically, statistically there was non-significant relation between occurrence of *helicobacter pylori* and techniques of diagnosis (p.value 0.350). This result is compatible with the conclusions of research made in Jordan by Hamed Alzoubi et al in 2020 [44].

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## 6. CONCLUSION

In conclusions: our study showed that prevalence of *H. pylori* was 54.9% among dyspeptic patients in Sulaimani City, Most of *H. pylori* patients in Sulaimani city are females. The Patients who had positive for *H. pylori* infection via UBT have more endoscopic findings than others with negative *H. pylori* via UBT it is endemic in Kurdistan region and Iraq but the continuously is higher in incidence across (31-40) age groups despite significant community frequent antibiotic use or abuse of it, UBT is non-invasive and plain test to diagnosis gastric infection by *H. pylori*.

The overall *H. pylori* UBT and Gimza stain identify rate were 73.4 and 26.6% respectively. Even also statistically significant and agreement between results of UBT and Giemsa stain was not strongly convincing. *H. pylori*-prevalence was statistically significant associated with Residence, occupation, Psychological disorder, place of eating meals, Hand washing practice, present of clinical symptoms and present of gastric ulcer. But no significant association observed between other lifestyle factors and sociodemographic variables as Family history of gastric ulcer, source of drinking water, Cigarette smoking, Alcohol drinking and Diabetes mellitus of dyspeptic patients and *H. pylori* UBT detection.

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