Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

Prevalence of Peptic Ulcer and its associated factors in admitted patients at Tertiary Care Hospital (SGTH) swat

Abdullah khan[*1], Abubakar Sadiq[2], Ikram ullah[3], Muhammad Abbas[4], Jawad Ahmed[5], Qarib ur Rahman[6], Mansoor Ahmad[7]

[1,2,3,4]*Eagle college of Health sciences and college of Nursing Swat*

[5]*Upper Swat college of Nursing and Health sciences Swat*

[6]*Vertex college of science and technology Abbottabad*

[7]*Medix college of Health science and Institute of Nursing Chakdara*

Author Details

Corresponding E-mails & Authors*:

Abdullah Khan

abdullahshahswat76@gmail.com

Keywords:

Prevalence, Peptic ulcer, H. pylori, Admitted, Patients, Tertiary care Hospital

Received on 02 March, 2026

Accepted on 09 April, 2026

Published on 25 April, 2026

Abstract

Peptic ulcer disease remains a significant gastrointestinal health problem worldwide and is commonly associated with Helicobacter pylori infection, nonsteroidal anti-inflammatory drug (NSAID) use, and unhealthy lifestyle factors. This cross-sectional study was conducted to assess the prevalence of peptic ulcer disease and its associated factors among admitted patients in the gastroenterology ward of Saidu Group of Teaching Hospital (SGTH), Swat. A total of 120 patients were included through convenient sampling. Data were collected using a structured questionnaire covering socio-demographic characteristics, medical history, lifestyle factors, and clinical symptoms. Descriptive statistics and chi-square tests were used for data analysis. The findings revealed a higher prevalence among males (65%) compared to females (35%), and among rural residents (76.66%). Common associated factors included NSAID use (88%), regular tea/coffee consumption (92.5%), smoking

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

(33.33%), stress (93.33%), and family history of peptic ulcer disease (38.33%). Frequently reported symptoms were acid reflux/heartburn (93.33%), nausea and vomiting (91.66%), fatigue and weakness (91.66%), abdominal discomfort (88.66%), and bloating (73.33%). Statistical analysis showed significant associations between peptic ulcer disease and caffeine intake, NSAID use, spicy food consumption, and acid reflux symptoms ($p < 0.05$). The study concludes that peptic ulcer disease is highly prevalent among hospitalized patients and is strongly linked with modifiable risk factors. Public awareness, lifestyle modification, rational NSAID use, and early screening for H. pylori infection are recommended to reduce disease burden.

INTRODUCTION

1.1 Background

Helicobacter pylori (H. pylori) are significant bacterial pathogen that was discovered in the early 1980s by an Australian scientist Barry Marshall and Warren. (FitzGerald, R., & Smith, S.M, 2021). It infects nearly 4.4 billion persons worldwide. It has distinctive properties to survive in a harsh acidic environment of gastric epithelium. (Crowe S.E, 2019).This bacterium can be passed basically by contaminated food, water saliva, vomiting, and fecal material. Its primary mode of transmission is fecal-oral or oral-oral routes (Hassan M.N et al., 2020). This infection remains asymptomatic; and can lead to the development of many gastrointestinal (GIT) problems, such as gastric cancer, peptic ulcers, gastritis and mucosa-associated lymphoid tissue (MALT) lymphomas. (De Brito et al., 2019). The person with this infection experience acute symptoms like, nausea, vomiting, abdominal pain, bloating, burning, and loss of appetite. If the bacteria get ahead to survive these symptoms become chronic infection. When the person contact with bacteria they get infected H.pylori infection can be diagnosed invasively and non-

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

invasively, through Stool culture, Breath test and by upper endoscopy. (Hassan M.N et al., 2020).

Different anti-secretory agents and antibiotics are used for its treatment. A triple therapy consisting a proton-pump inhibitor (PPIs) and antibiotics suggested as the first-line treatment.

Understanding the pathology, epidemiology and treatments options for h.pylori infection are essential for developing public health interventions, and patient management strategies.

This thesis aims to contribute to this knowledge by examining the prevalence and associated factors of H. pylori infection in admitted patients at a tertiary care hospital in Swat, Pakistan.

A peptic ulcer is a sore that develops on the inside lining of the stomach or the first part of the small intestine (duodenum). It occurs when the protective lining of the stomach or intestine is damaged, usually by stomach acid (Hcl), and creates an open sore.

The etiological cause of the Peptic Ulcer Disease (PUD) are Stress, Smoking, Use of Non-steroidal anti-inflammatory drugs (NSAID) (Aspirin, ibuprofen, diclofienac, mefenamic acid etc.) Heavy consumption of alcohol, coffee, eating too much spicy and fatty foods, and some studies reveal that genetic factor is also responsible for the development of PUD but the main causative agents responsible for PUD is Helicobector pylori.[4]

The infection is more common in poor socioeconomic groups with low level of living condition, and those who are illiteracy rate is high and those who are poor self-care. There has been increase flow of admission for ulcer related complication among adults people which is allocate to the widespread use of NSAIDS. Those individuals who have

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

PUD are at a high risk of GI bleed, stomach obstruction and perforation, and the mortality rate is high among this complicated patients.

The patient with PUD experienced heartburn, gastro esophageal reflux, blenching, bloating, abdominal pain or discomfort, nausea and vomiting, weight loss, stress, fatigue and tachycardia.

Diagnostic test for *H. pylori* could be both invasive and noninvasive methods. The noninvasive approach such as stool antigen test and blood antigen test. However, the most reliable methods to detect *H. pylori* are invasive approaches that involved histological examination after an endoscopic biopsy, along with a rapid urease test and microbial culture.

The prevalence of PUD has steadily been rising in different cities across Pakistan like Islamabad, Rawalpindi, and Karachi due to changes in lifestyle and diet over the last several decades. A study conducted in saidu group of teaching hospital swat (SGTH) reveals that Peptic ulcer were seen to be more predominant in the age of 21-30 years and 31-40 years who are the smokers, while the patients who are using NSAIDs for the treatment of rheumatoid joint pain, treatment of ischemic coronary illness, hypertension and general body aches reported PUD.[5] The estimated prevalence of peptic ulcer disease in the general population is 5–10% [6] New ulcers were found in around 87.4 million people worldwide during 2015.[7] Peptic ulcers resulted in 267,500 deaths in worldwide in 2015, down from 327,000 in 1990.[8][9]In a study, the overall exposure rate to H. pylori in adult dyspeptic patients undergoing upper gastrointestinal endoscopy, the prevalence of *H pylori* infection investigated by histology and rapid urease test revealed that *H pylori* was associated with 85% cases of duodenal ulcer.[10,11] In United States, peptic ulcer related

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

mortality rate is 7-10% in the admitted patients. [12] With respect to gender the prevalence rate of peptic ulcer is 11- 20% in males and 8-11% in females.[13]

1.2 Rational of the study:

In Pakistan particularly swat region, comprehensive data on H pylori in admitted patient is lacking. Despite the ongoing debates in H pylori eradication, efficacy there is critical need for prevalence data estimates in swat. Understanding associated risk factors is equally crucial undefined high risk groups in developing targeted public interventions limited report on H pylori prevalence in admitted patient in the area highlights the necessity of research to guide patient management, public health strategies and treatment approaches. This study aims to fill the gap by determining the prevalence of H pylori infection in admitted patient in tertiary care hospital.

1.3 Objective:

1. To assess the prevalence of peptic ulcer in admitted patient of gastroenterology wards of saidu group of teaching hospital swat.
2. To identify its associative factors that involves in peptic ulcer disease.

1.4 Significance of Peptic Ulcer:

1. Understanding the prevalence of H pylori will help us to modifies public efforts and better manage the disease burden
2. These study finding will help us and the management of H. pylori.

1.5 EXPACTED OUTCOME:

- The prevalence of H. Pylori infection and admitted patients at the tertiary care hospital will be determine.
- Risk factors and clinical characteristic associated with H. pylori infection will be identified

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

- The relationship between H. pylori infection and particular gastrointestinal disorders will be understand.

2. Literature review:

2.1 Introduction: This chapter presents a review of the relevant literature of what other scholars had researched about prevalence of peptic ulcers in admitted patients

H. pylori is a gram-negative spiral shaped bacterium discovered by Marshall and Warren in 1980, with flagella crucial for motility and mucosal adherence in the stomach.(Malfertheiner p et al,2023). This bacterium is the cause of other gastrointestinal problems. H.pylori infection effect around 50% of the global population (S ren, et al, 2023).Its colonization occur in deep gastric mucus layer. Motility, urease synthesis, adhesion mechanisms, are some factors that play a crucial the successful colonization of Helicobacter pylori (Malfertheiner p et al, 2023).

2.2 Risk factor: H pylori infection susceptibility is based on various factors such as genetic factors, ethnicity, socioeconomic status, hygiene condition, age, sex, and smoking, sharing of food and housing habits.

Global prevalence of H. pylori infection in adults has dropped from 55–50% to 43% during 2014–2020 (refs. 16, 17), mostly attributed to improvement of socioeconomic status, living standards and hygiene conditions. (Malfertheiner p et al, 2023).

2.3 Mode of transmission:

H pylori can be transmitted from person to person directly or indirectly. Person to person transmission being a predominant mechanism. It has various transmission routes such as oral-oral or fecal-oral routes, due to unsanitary water systems, inadequate dietary habits, and overcrowded living conditions. (Haq I et al, 2020). This bacterium is found in the vomitus, feces, and oral secretions of the infected person. (Malfertheiner p et al, 2023)

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

2.4 Symptoms:

Initially h pylori infection is 80% asymptomatic among individual. Sign and symptom will appear when there is damage of lining of stomach and duodenum. Study suggest that Abdominal pain was 86% regurgitation 63%, burning 91%, nausea 57%, vomiting 33%, and blood in vomiting is 5% respectively (Haq I et al,2020).

2.5 Prevalence:

Around 50% population is effected from h pylori infection globally. Prevalence of h pylori vary in age between developed and developing countries. According to age adults have (48.6%) higher h pylori infection as compared to children 32.6% respectively previous research suggest that h. pylori infection is higher in developing(50.8%) compared to developed (34.7%) .(Malfertheiner p et al, 2023). H. pylori prevalence among European populations is 20% to 40%.(zamani m et al,2018).unfortunately all developing countries Pakistan also has high h pylori prevalence reported of 50 to 90%.(Mehmood k et al,2014). Improvement in living condition socioeconomic status and hygiene condition significantly declined the prevalence of H. pylori infection in adults from 50–55% to 43% during 2014–2020. (Malfertheiner p et al, 2023).

2.6 Diagnosis:

H pylori infection can be diagnosed invasively and noninvasively. . Non-invasive testing include stool test, 13C-urea breath test diagnosis of a present infection. Serological testing detection have not enable to differentiate between previous and current H. pylori infection. Invasive tests have include biopsy samples from gastroscopy (Malfertheiner p et al, 2023).

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

2.7 Treatment:

H. pylori treatment require of a strong acid suppressant in combinations with antibiotics and/or bismuth. The first line regimen for the eradication of h pylori infection is PPI and antibiotic clarithromycin, amoxicillin and metronidazole. (Malfertheiner p et al, 2023). The goals to eradicate the H. pylori we use sometime dual therapy combination of PPIs and antibiotics (e.g. clarithromycin) for 7-14 days, triple therapy combinations of two antibiotics (e.g. clarithromycin and amoxicillin) and PPIs for 7-14 days sometimes sever conditions we use a quadruple therapy is combination of three antibiotics (e.g. clarithromycin, amoxicillin and metronidazole) and PPIs for 7-14 days.

3. METHODOLOGY:

3.1 Introduction: This chapter describes the method use in order to achieve the set objectives for study.

3.2 Study design:

The current study was a cross-sectional observational study conducted at selected tertiary care hospitals in Swat.

3.3 Study location:

The research was carried out in Swat, Khyber pakhtunkhwa, Pakistan. Sample collection took place at Saidu Group of Teaching Hospital Swat (SGTH), patients are admitted in gastro ward 120 samples had been gathered.

3.4 Sample size:

The sample size was estimated with the Raosoft® sample calculator online at a 95% confidence interval, a 5% margin of error. A total of 120 samples were collected to achieve the objectives of research according to the calculation.

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

3.5 Study population:

A cross-sectional study was conducted between August 2024 to December 2024 to investigate the prevalence of peptic ulcers and its associative factors in admitted patients at gastro ward in SGTH. A representative sample was drawn from hospital gastrointestinal wards and laboratories.

3.6 Data collection:

Data was collected through patient interviews, medical record reviews, and laboratory tests. A structured questionnaire was used to gather information about demographics, medical history, and symptoms of patients.

3.7 DATA ANALYSIS:

Descriptive statistics was used to report the prevalence of peptic ulcers and associated factors of infected patients. Chi-square test was done to analyze associations between peptic ulcers and related factors.

3.8 Inclusion criteria:

Those individuals who have the history of gastric disease like gastric pain, dyspepsia, abdominal pain, gastric surgery, and peptic ulcer were included in our study.

3.9 Exclusion criteria:

A patients who are admitted in gastroenterology ward but diagnose other type of diseases were excluded from the study.

3.10 Ethical considerations:

1. Informed consent was obtained from all participating patients.
2. The study was conducted in compliance with the ethical guidelines of the hospital and relevant regulatory bodies.

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

4. RESULTS:

Table 4.1: Socio-demographic Characteristics

S.No	Variables	Category	Peptic ulcer Number	percentage%
1.	Gender	Male	78	65%
		Female	42	35%
2.	Maternal status	Un-married	46	38.33%
		Married	74	61.67%
3.	Education level	Illiterate	18	15%
		High School level	50	41.67%
		College level	26	21.67%
		Post graduate	06	5%
4.	Residence	Urban	28	23.33%
		Rural	92	76.66%

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

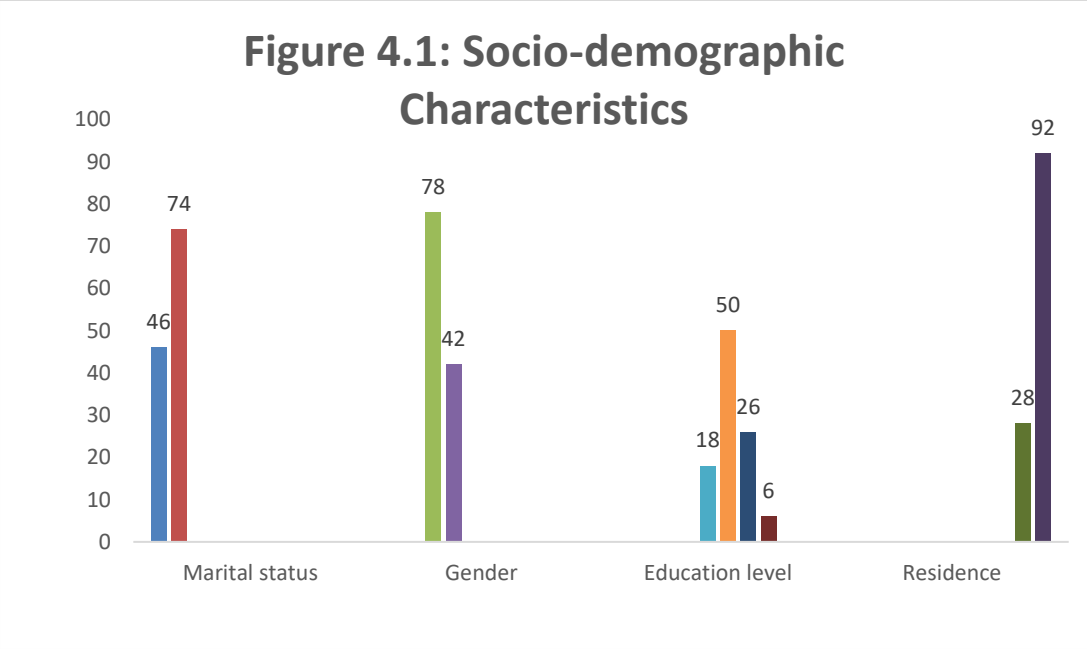


Table 4.2 Gender participants

S.No	Variables	Category	Peptic ulcer Number	percentage%
2.	Gender	Male	78	65%
		Female	42	35%

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

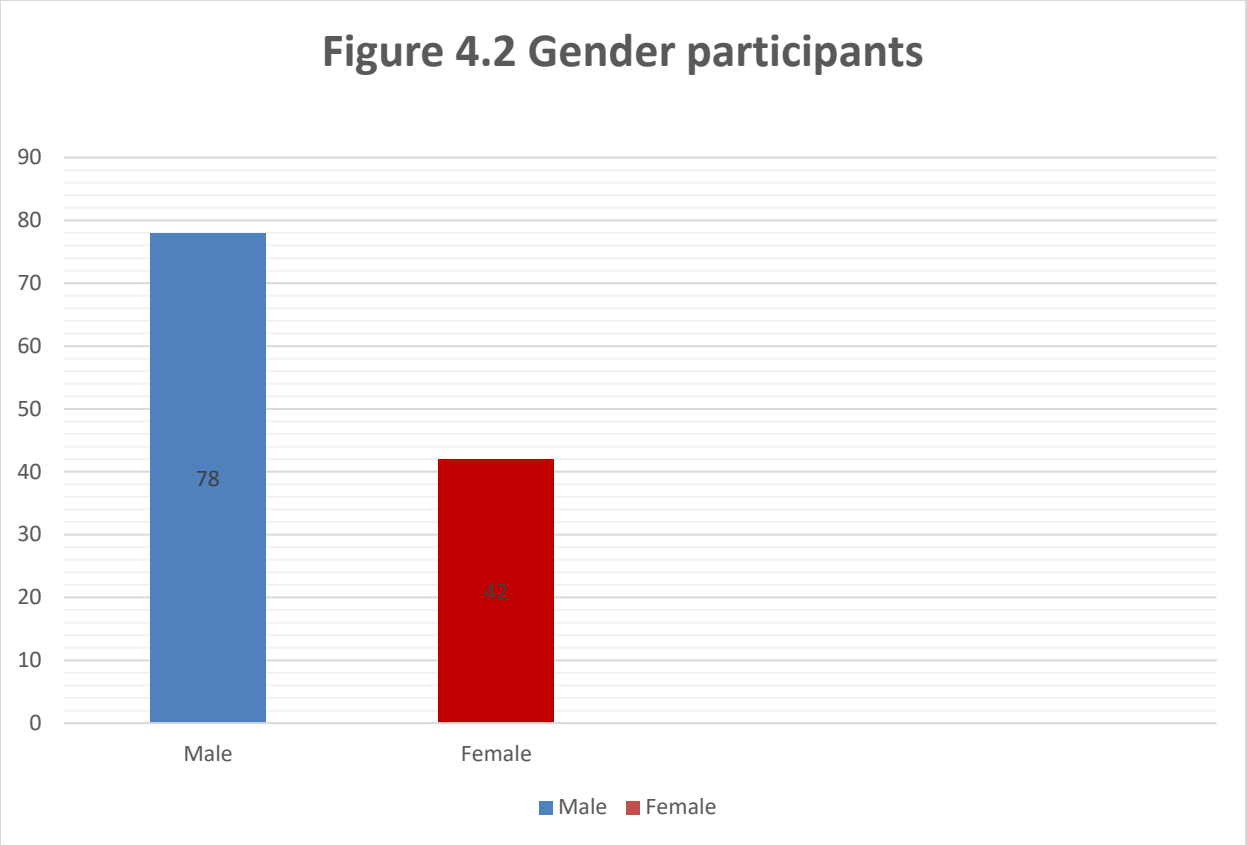


Table 4.3 Marital status

S.No	Variables	Category	Peptic ulcer Number	percentage%
1.	Marital status	Un-married	46	38.33%
		Married	74	61.67%

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

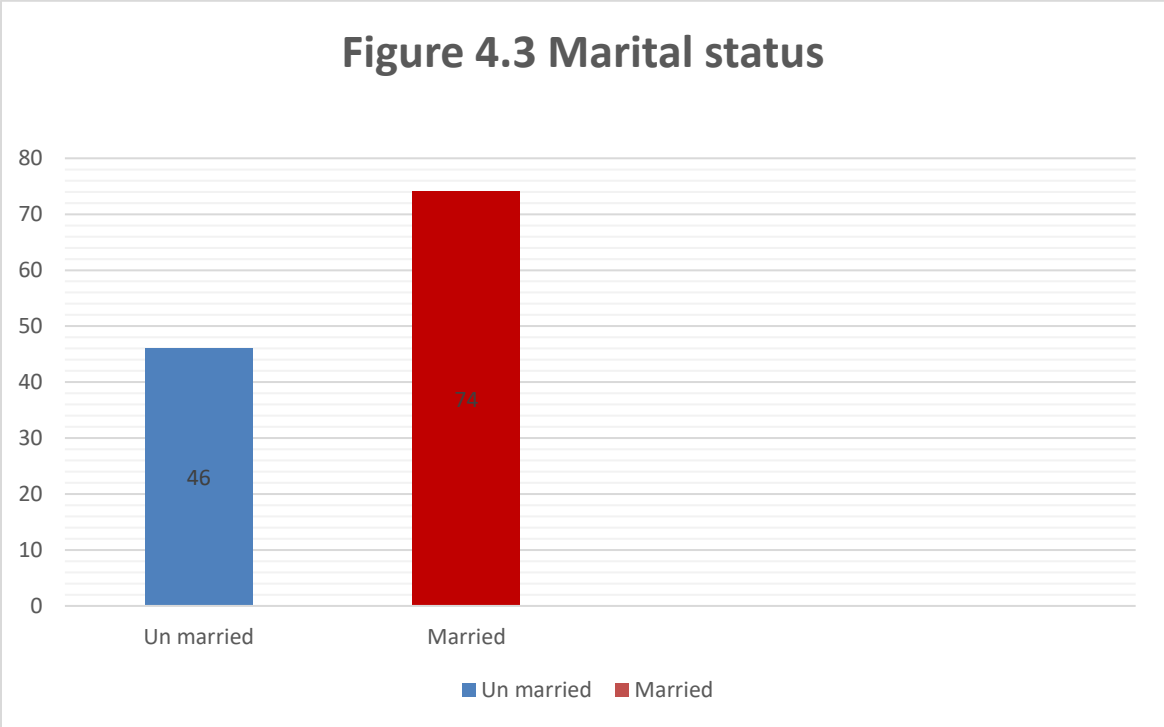


Table 4.4 Education level

S.No	Variables	Category	Peptic ulcer Number	percentage%
3.	Education	Illiterate	18	15%
		High School level	50	41.67%
		College level	26	21.67%
		Post graduate	06	5%

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

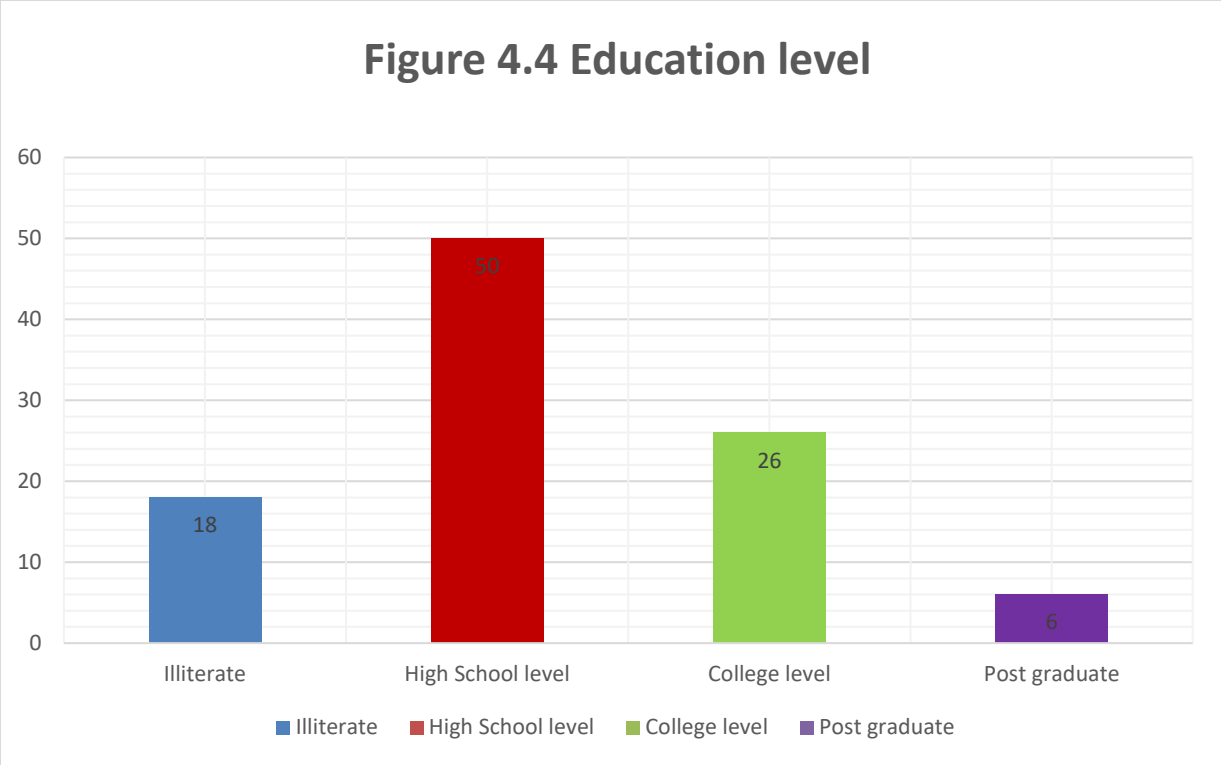


Table 4.5 Residence

S.No	Variables	Category	Peptic ulcer Number	percentage%
4	Residence	Urban	28	23.33%
		Rural	92	76.66%

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

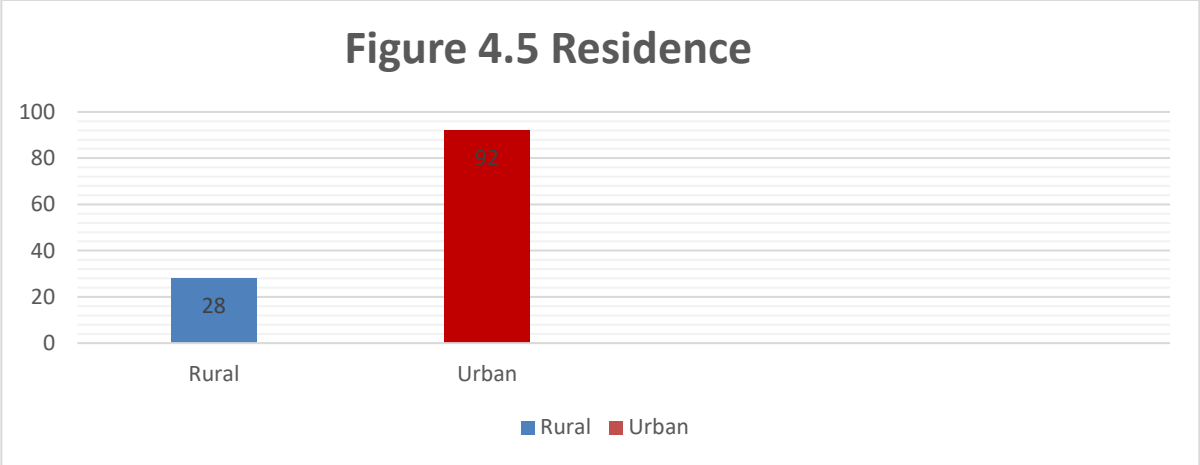


Table 4.5 Peptic ulcer Patient history

	Patient History	Category	"Yes" Frequency	"No" Frequency	Yes Percentage %	No Percentage %
1.	Previous history of PUD	Yes No	6	114	5%	95%
2.	Family history of PUD	Yes No	46	74	38.33%	61.66%
3.	Experienced stress	Yes No	112	8	93.33%	6.66%
4.	Other comorbidities	Yes No	46	74	38.33%	61.66%
5.	Alcohol use	Yes	5	115	4.16%	95.84%

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

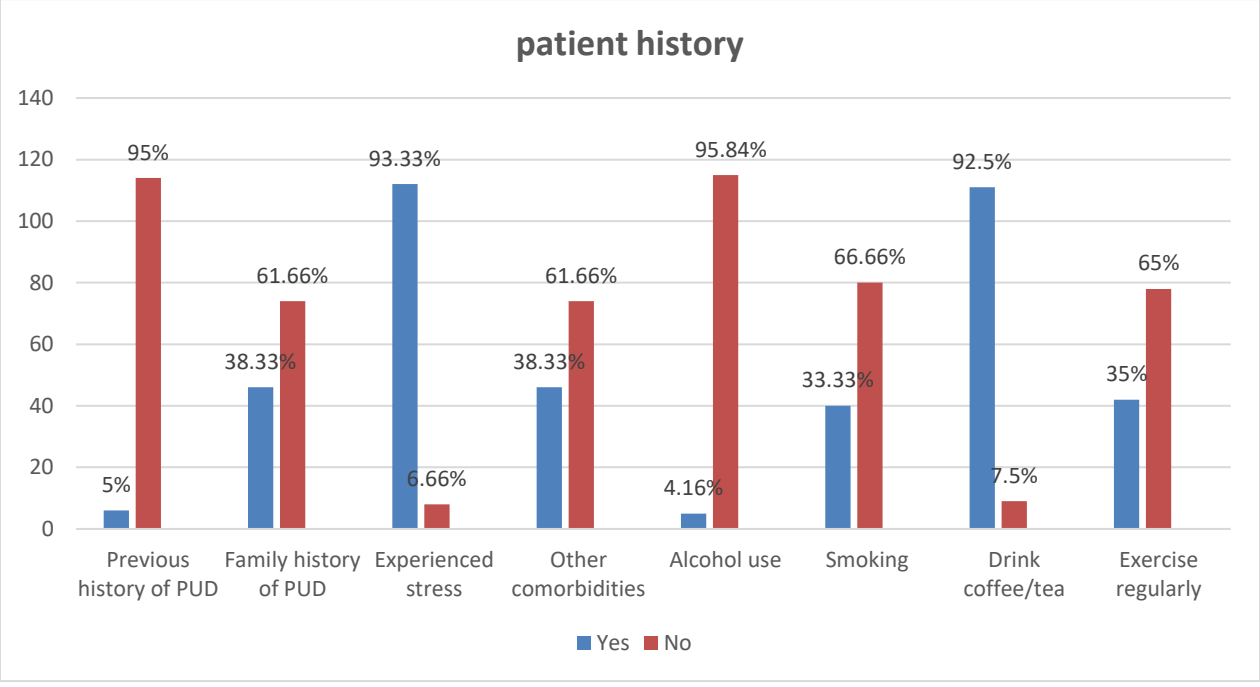
Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

		No				
6.	Smoking	Yes NO	40	80	33.33%	66.66%
7.	Drink coffee/tea	Yes No	111	9	92.5%	7.5%
8.	Exercise regularly	Yes No	42	78	35%	65%

Figure 4.5 Peptic ulcer Patient history



Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

Table 4.5 Relationship between the consumptions of coffee\tea and prevalence of peptic ulcer and associated factors in admitted patients at tertiary care hospital swat.

Relation between peptic ulcer and tea consumption				
Chi-square (x^2) Formula=		Do you drink coffee/tea regularly?		X^2(Cal) 16.122
				X^2(tab) 3.841
Degree of freedom =1		No	Yes	Total
Peptic ulcer	positive	21	90	111
	Negative	7	2	9
Total		28	92	120

Chi-square test = 16.122

H_0= There is no relation between caffeine consumption and peptic ulcer

$H_{a=}$ = There is a relation between caffeine consumption and peptic ulcer

Chi- square test calculated value= 16.122

Chi- square test tabulated value= 3.841

Conclusion: As x^2 (Cal) 116.122 is greater than x^2 (tab) 3.841, so we reject H_0 and conclude that there is a relation between caffeine consumption and peptic ulcer.

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

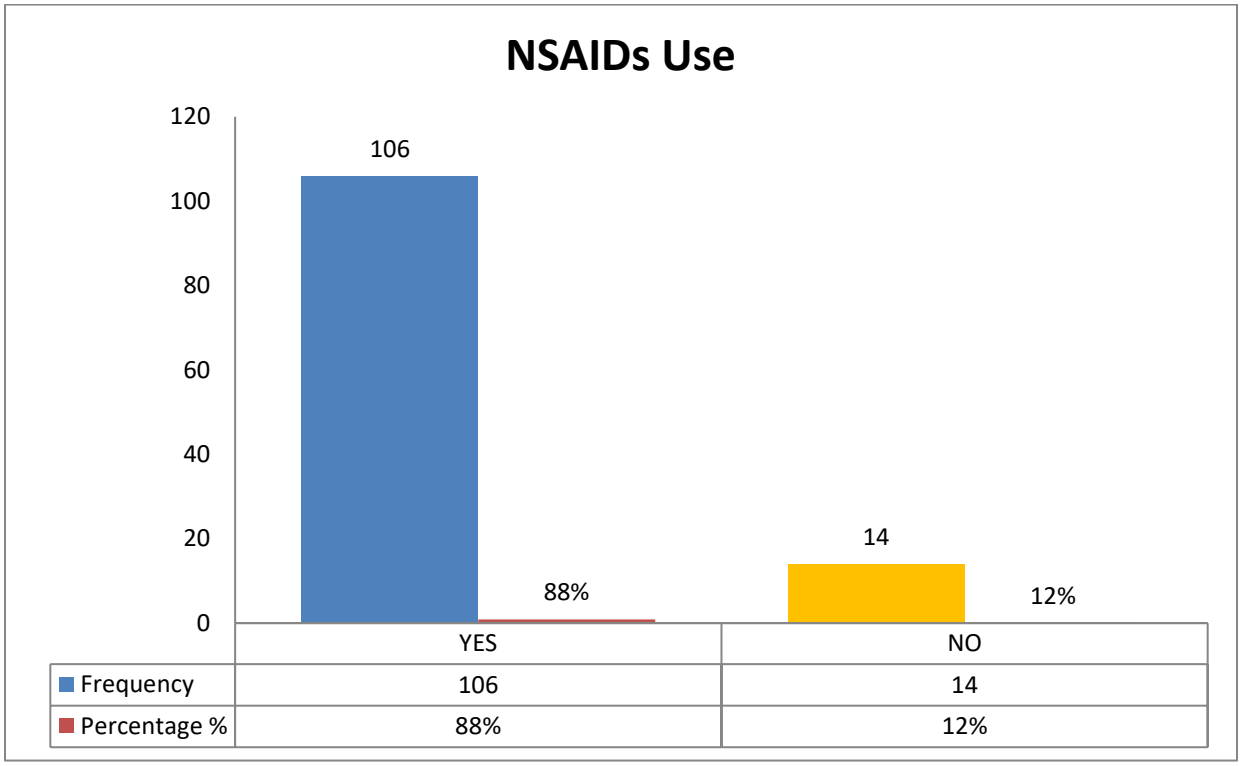
Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

Table 4.6 NSAIDs Users

NSAIDs Use	Frequency	Percentage %
Yes	106	88%
No	14	12%
Total	120	100%

Figure 4.6 NSAIDs Users



Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

Table 4.6 Relationship between the NSAIDs users and prevalence of peptic ulcer and associated factors in admitted patients at tertiary care hospital swat

Relation between peptic ulcer and NSAIDs users				
Chi-square (x^2) Formula=		Do you use NSAIDs yes \no		X^2(Cal) 6.0737
				X^2(tab) *3.841*
Degree of freedom =1		No	Yes	Total
Peptic ulcer	positive	8	98	106
	Negative	4	10	14
Total		12	108	120

Chi-square test = 6.0737

H_0= There is no relation between peptic ulcer and NSAIDs users.

$H_{a=}$ = There is a relation between peptic ulcer and NSAIDs users.

Chi- square test calculated value= 6.0737

Chi- square test tabulated value= 3.841

Conclusion: As x^2 (Cal) 6.0737 is greater than x^2 (Tab) 3.841, so we reject H_0 and conclude that there is a relation between peptic ulcer and NSAIDs users

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

Table 4.7 Sign and symptoms

S.No	Sign and symptoms	category	Yes Frequency	No Frequency	"Yes" %	"No" %
1.	Abdominal discomfort	Yes No	104	16	88.66 %	13.33%
2.	Nausea \ Vomiting	Yes No	110	10	91.66 %	8.33%
3.	Pain radiating to back	Yes No	48	68	40%	56.66%
4.	Acid reflux\heart burn	Yes No	112	8	93.33 %	6.66%
5.	Bloating and gas	Yes No	88	32	73.33 %	26.66%
6.	Fatigue and weakness	Yes No	110	10	91.66 %	8.33%

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

7.	Dysphagia	Yes No	12	108	10%	90%

Figure 4.7 sign and symptoms

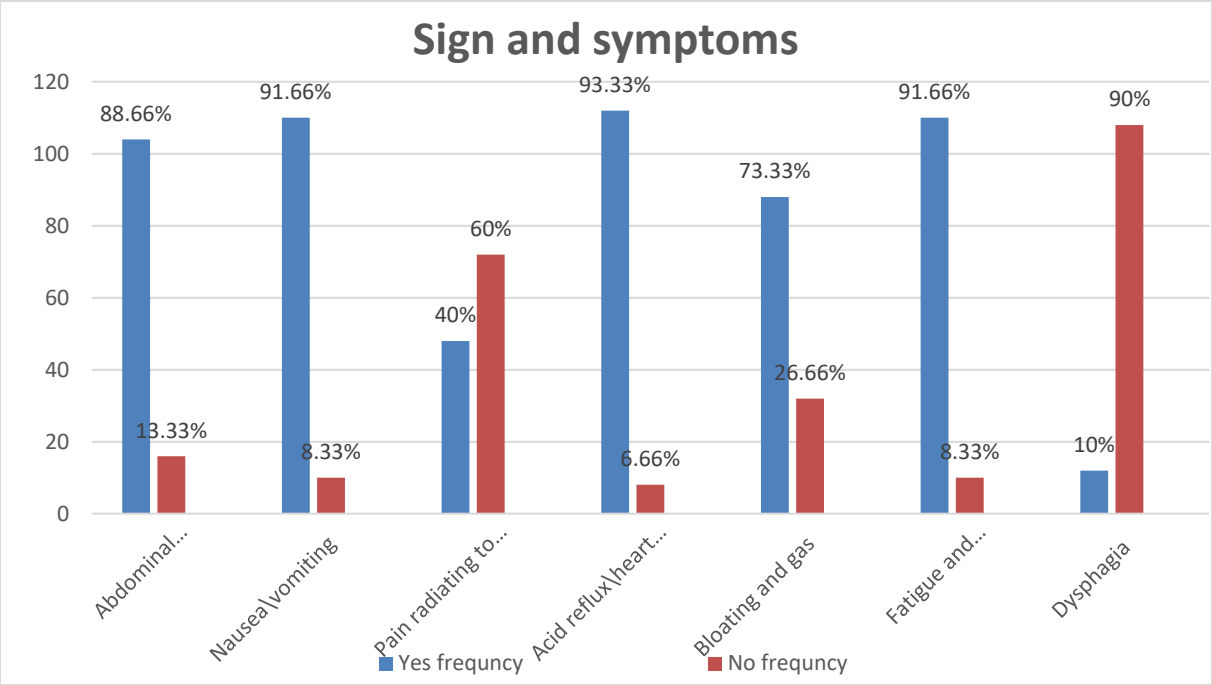


Table 4.7 Relationship between the acid reflux\heart burn and prevalence of peptic ulcer and associated factors in admitted patients at tertiary care hospital swat

Relation between peptic ulcer and acid reflux\heart burn		
Chi-square (x^2) Formula=	Do you have acid reflux \ heart burn or not?	x^2 (Cal) 25.8673
		X^2 (tab)

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

				3.841
Degree of freedom =1		no	yes	Total
Peptic ulcer	positive	4	108	112
	Negative	4	4	8
Total		8	112	120

Chi-square test = 25.8673

H_0= There is no relation between acid reflux \ heart burn and peptic ulcer

$H_{a=}$ = There is a relation between acid reflux \ heart burn and peptic ulcer

Chi- square test calculated value= 25.8673

Chi- square test tabulated value= 3.841

Conclusion: As x^2 (Cal) 25.8673 is greater than x^2 (tab) 3.841, so we reject H_0 and conclude that there is a relation between spicy food consumption and peptic ulcer.

Table 4.8: Characteristics\factors

S.No	Variables	Category	Peptic ulcer Number	Percentage %
	Use of spicy food	Rarely	**54**	**45%**
		Sometime	54	45%
		Often	12	10%
2.	Diet	Highly fat food	**72**	**60%**
		Spicy food	**42**	**35%**
		Acidic food	**06**	**5%**

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

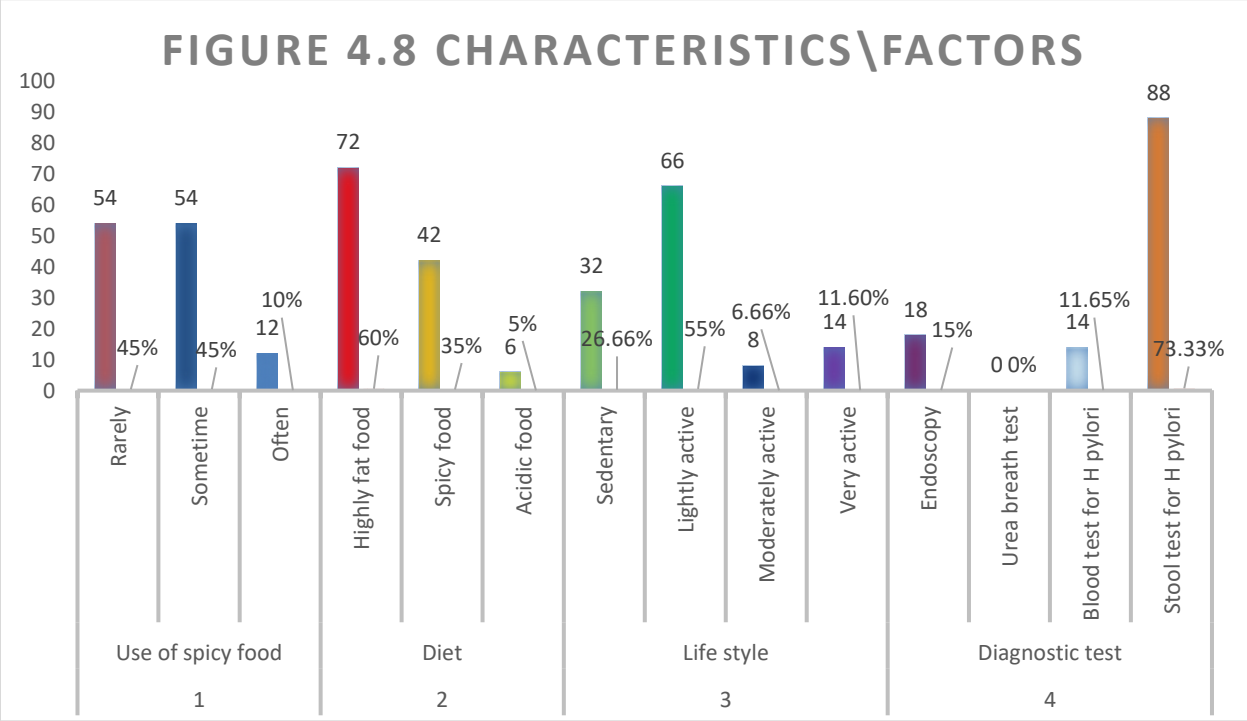
Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

3.	Life style	Sedentary Lightly active Moderately active Very active	32 66 08 14	26.66% 55% 6.66% 11.6%
4.	Diagnostic test	Endoscopy Urea breath test Blood test for H pylori Stool test for H pylori	18 00 14 88	15% 00% 11.65% 73.33%



Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

Table 4.8 Relationship between the spicy food consumptions and prevalence of peptic ulcer and associated factors in admitted patients at tertiary care hospital swat

Relation between peptic ulcer and spicy food consumption				
Chi-square (x^2) Formula=		Do you consume spicy food regularly or not?		x^2 (Cal) 37.7842 X^2 (tab) 3.841
Degree of freedom =1		No	Yes	Total
Peptic ulcer	positive	12	54	66
	Negative	40	14	54
Total		52	68	120

Chi-square test = 37.7842

H_0= There is no relation between spicy food consumption and peptic ulcer

$H_{a=}$ = There is a relation between spicy food consumption and peptic ulcer

Chi- square test calculated value= 37.7842

Chi- square test tabulated value= 3.841

Conclusion: As x^2 (Cal) 37.7842 is greater than tabulated, so we reject H_0 and conclude that there is a relation between spicy food consumption and peptic ulcer.

5.1 DISCUSSION:

Peptic ulcers is mucosal ulceration near the acid base region that develop on the lining of the stomach and the upper portion of the small intestine. The most common symptoms associated with peptic ulcer are burning stomach, abdominal pain, epigastric pain,

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

Nighttime pain, Nausea and vomiting, Loss of appetite, Weight loss, Bloating and gas. Peptic ulcer complications can include bleeding, perforation, and narrowing of the stomach or duodenum.

Some are common modifiable risks factors which are Helicobacter pylori (H. pylori) infection a bacterial infection that damages the stomach lining, Nonsteroidal anti-inflammatory drugs (NSAIDs) medications like aspirin, ibuprofen, Smoking, Alcohol consumption, and some patient have Stress. Some are Non modifiable risk factors are age, family history, and genetic predispositions,

The diagnostic procedures of peptic ulcers are some invasive and noninvasive procedures. The noninvasive procedures are the first priority is helicobacter pylori (H pylori) a urea breath test, stool test to detect H. pylori infection, imaging diagnostic procedures are computed tomography (CT) scan and magnetic resonance imaging (MRI) to visualize the stomach and duodenum. The invasive diagnostic procedures endoscopic findings use in gastric bleeding to rule out further complication of peptic ulcers and sometime we use biopsy a tissue sample taken from stomach lining for histological examinations

Once the diagnosis is established, the patient is informed that the condition can be managed. Recurrence may develop; however, peptic ulcer treated with antibiotics to eradicate H. pylori have a lower recurrence rate than those who not treated with antibiotics.

The goals to eradicate the H. pylori we use sometime dual therapy combination of PPIs and antibiotics (e.g. clarithromycin) for 7-14 days, triple therapy combinations of two antibiotics (e.g. clarithromycin and amoxicillin) and PPIs for 7-14 days sometimes sever conditions we use a quadruple therapy is combination of three antibiotics (e.g. clarithromycin, amoxicillin and metronidazole) and PPIs for 7-14 days.

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

The data from patient history and symptoms provide a comprehensive overview of the health conditions observed in the admitted patients. Peptic ulcers were prevalent conditions are high in male 78(65%) as compare to female 42(35%) patients, respectively diabetes mellitus and hypertension were also notable. Symptoms such as abdominal pain, nausea vomiting, radiating pain to back, acid reflex, heartburn, bloating and gas were prevalent among the majority of the peptic ulcers patients. These findings align with the well understand association between H. pylori and gastrointestinal disorders, including gastritis and GERD. The presence of diabetes and hypertension and other conditions are also important further need for the patient care.

The comprehensive data show that the prevalence of peptic ulcers is high in married people 74(61.67%) as compare to unmarried 46(38.33%) which live in rural area 92(76.66%) to urban area 28(23.33%). The educational wise distributions the prevalence of peptic ulcers are distribute in four groups which as illiterates people 18(15%), high school level 50(41.67%), college\university level 26(21.67%) and postgraduate level 6(5%) in out of 120 sample size. The prevalence of peptic ulcers as depicted in above indicates varying rates across different educational groups. The highest prevalence of peptic ulcers was observed in the group of high school level people 50(41.67%) followed by the group of college\university level 26 (21.67%).

We already discuss it the peptic ulcers have some genetic predisposition so the study show that the 46(38.33%) patient have family history of peptic ulcers are positive and use of NSAID medications 106(88%) is prevalent of peptic ulcers.

The results of the present study indicates that a strong association between caffeine\tea consumption and peptic ulcers disease patient consuming 3 or more than caffeinated \tea

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

drinks per day show that the higher prevalence of peptic ulcer compare to those consuming not caffeinated drinks.

The results of the present study indicates that the potential association of the use of the NSAIDs 106(88%) and peptic ulcer show that the higher prevalence of peptic ulcer of those people who use NSAIDs.

In conclusion the results provide valuable insights into the prevalence of peptic ulcer and its associated factors, health system policy makers need to take measures in order to prevent and treat this disease through investigating the factors affecting peptic ulcer.

5.2 RECOMMENTAIONS:

1. Public Health Awareness:

Launch public health campaigns to raise awareness about the importance of hygiene practice, especially hand washing before eating, as a preventive measure against H.pylori transmission.

2. Dietary counseling:

Provide dietary counseling to individuals with higher caffeine consumption and frequent fast food intake to address potential risk factors associated with h.pylori infections.

3. Targeted screening programs:

Implement targeted screening programs, considering gender and age specific variations in h.pylori prevalence. This will enable early detection and intervention, particularly among high risk groups.

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

4. Further Research:

Conduct further research to elucidate the mechanism linking caffeine consumption and fast food intake with h.pylori prevalence. This will contribute to a deeper understanding of preventive measures and potential interventions

5. Clinical Guidelines:

Develop and disseminate clinical guidelines for health care professionals to integrate H.pylori screening into routine care, particularly for patients presenting with peptic ulcers GERD and gastritis related symptoms.

6. Community Hygiene Programs:

Support community based hygiene programs to promote and restore consistence hand washing practices reduce the risk of H.pylori infections .

5.3 SUMMARY:

Symptoms like abdominal discomfort, acid reflux, and abdominal gas were widespread in study population. The findings underscore the association between H.pylori and gastrointestinal disorders, emphasizing the need for comprehensive patient care. A potential link was observed between higher caffeine consumption and increased H.pylori prevalence. Patients with more than 3 caffeinated drinks per day exhibited higher likelihood of H.pylori infection. Further exploration of this relationship is warranted for preventive insights .Lack of regular hand-washing before eating correlated with higher risk of H.pylori infection emphasizes the importance of basic hygiene practices in preventing H.pylori transmission. Fast food consumption often showed a potential correlation with higher H.pylori risk. Highlights the role of dietary habits in H.pylori prevention. Female exhibited is higher prevalence (35.5%) compared to males

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Khan et al - 2026

DOI: http://doi.org/10.5281/zenodo.19879400

(23.5%).Indicates gender wise difference that investigates further study. Varying prevalence rates across age groups, with the highest in the 21-30 years group (34.5%). Underlines the importance of age specific intervention and screening for effective H.pylori management

In summary, the results illuminate the intricate associations between H.pylori and diverse factors, ranging from dietary habits to hygiene practices, gender, and age. These findings contribute to a holistic understanding of H.pylori prevalence and offer avenues for targeted interventions and preventive strategies.

5.4 Conclusion:

The comprehensive analysis of prevalence of peptic ulcers and associated factors in admitted patients at tertiary care hospital. Studies have consistently shown that Helicobacter pylori (H. pylori) infection, nonsteroidal anti-inflammatory drug (NSAID) use, smoking, and alcohol consumption are significant risk factors for peptic ulcers. The prevalence of peptic ulcers varies globally, with a higher incidence in developing countries. Additionally, demographic factors such as age, sex, and socioeconomic status also play a role in the development of peptic ulcers.

Understanding the prevalence and associated factors of peptic ulcers is crucial for developing effective prevention and treatment strategies. Furthermore, public health initiatives should focus on promoting healthy lifestyles, improving socioeconomic conditions, and increasing access to healthcare services to reduce the burden of peptic ulcers.

Healthcare providers should emphasize the importance of H. pylori eradication, NSAID avoidance, smoking cessation, and moderate alcohol consumption to reduce the risk of peptic ulcers. .The association of peptic ulcer with symptoms such as acid reflux

Pakistan Journal of Medical & Cardiological Review
https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387
Print ISSN 3007-2379

DOI: http://doi.org/10.5281/zenodo.19879400

and abdominal discomfort underscores the need for a thorough understanding of the impact of this H. polyri bacterium on patient health. Noteworthy findings include the potential links between higher caffeine consumption and increased prevalence of peptic ulcer, emphasizing the importance of dietary habits in peptic ulcer prevention.

The observed correlation between the peptic ulcer and use of NSAIDs were high, emphasizing to stop the use of NSAIDs to prevent the occurrence of peptic ulcers. Furthermore, the gender-wise and age-wise variations in prevalence of peptic ulcer provides valuable insights for tailored interventions and targeted screening efforts. In the end, peptic ulcers are a significant public health concern, and addressing the associated factors is essential for preventing and managing this condition.

REFRENCES:

Milosavljevic T, Kostić-Milosavljević M, Jovanović I, Krstić M (2011). "Complications of peptic ulcer disease". Digestive Diseases. 29 (5): 491–3. doi:10.1159/000331517. PMID 22095016. S2CID 25464311.

Warren JR, Marshall B (June 1983). "Unidentified curved bacilli on gastric epithelium in active chronic gastritis". Lancet. 1 (8336): 1273–5. doi:10.1016/S0140-6736(83)92719-8. PMID 6134060. S2CID 1641856.

"The Nobel Prize in Physiology or Medicine 2005". nobelprize.org. Nobel Media AB. Archived from the original on 12 May 2015. Retrieved 3 June 2015

Nawaz M, Jehanzaib M, Khan K, Zari M: Role of barium meal examination in diagnosis of peptic ulcer. J Ayub Med Coll Abbotabad 2008; 20(4): 59-61.

Pakistan Journal of Medical & Cardiological Review
https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387
Print ISSN 3007-2379

DOI: http://doi.org/10.5281/zenodo.19879400

Ali N, Ullah A, Akhtar S, Shah SWA, Junaid M. Factors associated with peptic ulcer: A single centre experience at tertiary care hospital of Khyber Pakhtunkhwa. Khyber Med Univ J 2013; 5(1): 18-21

Lanas A., Chan F.K.L. Peptic ulcer disease. *Lancet.* 2017;390:613–624. doi: 10.1016/S0140-6736(16)32404-7. [PubMed] [CrossRef] [Google Scholar]

GBD 2015 Disease and Injury Incidence and Prevalence Collaborators (October 2016). "Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015". Lancet. 388 (10053): 1545–1602. doi:10.1016/S0140-6736(16)31678-6. PMC 5055577. PMID 27733282. {{cite journal}}: |author= has generic name (help)

Wang H, Naghavi M, Allen C, Barber RM, Bhutta ZA, Carter A, Casey DC, Charlson FJ, Chen AZ, Coates MM, Coggeshall M, Dandona L, Dicker DJ, Erskine HE, Ferrari AJ, Fitzmaurice C, Foreman K, Forouzanfar MH, Fraser MS, Fullman N, Gething PW, Goldberg EM, Graetz N, Haagsma JA, Hay SI, Huynh C, Johnson CO, Kassebaum NJ, Kinfu Y, Kulikoff XR (October 2016). "Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015". Lancet. 388 (10053): 1459–1544. doi:10.1016/s0140-6736(16)31012-1. PMC 5388903. PMID 27733281

GBD 2013 Mortality Causes of Death Collaborators (January 2015). "Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the Global Burden of Disease Study

Pakistan Journal of Medical & Cardiological Review
https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387
Print ISSN 3007-2379

DOI: http://doi.org/10.5281/zenodo.19879400

2013". Lancet. 385 (9963): 117–71. doi:10.1016/S0140-6736(14)61682-2. PMC 4340604. PMID 25530442. {{cite journal}}: |author1= has generic name (help)

Qureshi H, Hafiz S, Medhi I. H. pylori IgG antibodies in children. J Pak Med Assoc. 1999;49:143–144. [PubMed] [Google Scholar]

Kazi JI, Jafarey NA, Alam SM, Zuberi SJ, Kazi AM, Qureshi H, Ahmed W. Association of Helicobacter pylori with acid peptic disease in Karachi. J Pak Med Assoc. 1990;40:240–241. [PubMed] [Google Scholar]

Holman G. Hoyden C W: Management of peptic ulcer bleeding – the roles of proton pump inhibitors pylori eradication. Aliment Pharmacol Ther 2004; 19 (1): 66-70.

Newton EB, Versants MR, Sepe TE: Giant duodenal ulcer. World J Gastroenterol 2008; 14(32): 4995-99.

Peptic ulcer disease. American College of Gastroenterology. https://gi.org/topics/peptic-ulcer-disease/. Accessed May 16, 2024.

Laine L, et al. (2018). Peptic ulcer disease. Lancet, 392(10159), 1487-1498.

Malfertheiner, P., Camargo, M. C., El-Omar, E., Liou, J. M., Peek, R., Schulz, C., ... & Suerbaum, S. (2023). Helicobacter pylori infection. *Nature reviews Disease primers*, *9*(1), 19.

Chey WD, et al. (2017). ACG Clinical Guideline: Treatment of Helicobacter pylori Infection. American Journal of Gastroenterology, 112(2), 212-239.