

Prevalence of Gastroesophageal Reflux Disease among Postgraduate Medical Students in North India: A Cross-sectional Study



Divyanshi Chauhan¹, Shweta Mangal^{2*}, Ashok Kumar³, Disha Mangal⁴

Received: 07 January 2026; Accepted: 27 July 2026

 Visual Abstract

ABSTRACT

Background and objectives: Gastroesophageal reflux disease (GERD) is a persistent state due to the retrograde flow of acidic gastric contents, leading to symptoms such as heartburn, regurgitation, chest pain, and dysphagia. Postgraduate medical students are exposed to high stress and lifestyle factors that predispose them to gastrointestinal symptoms. Limited Indian data exist on GERD prevalence in this cohort.

Materials and methods: A questionnaire-based cross-sectional study was conducted using the GERD-Q tool. Data were collected via an online Google Form and analyzed using Microsoft Excel. The Chi-square statistical test and univariate analysis were performed to identify associations between GERD and variables.

Results: Among 324 participants (mean age, 28.1 years), 77.4% were aged 25–30 years; 52.5% were male. Most were hostellers or paying guests. GERD prevalence was 25.3%. The prevalence was higher among males (27.6%) compared with females (22.7%) and among participants with higher BMI (27.6%) compared with those with normal BMI (23.5%). GERD prevalence was highest among postgraduates in medicine and allied specialties (31.3%), followed by surgical (23.3%) and preclinical/paraclinical departments (19.2%).

Conclusion: This study highlights a significant burden of GERD among postgraduate medical students. Identifying associated risk factors may help in designing targeted interventions to improve gastrointestinal health and overall well-being of healthcare providers.

Keywords: Gastroesophageal reflux disease, GERD-Q, Lifestyle factors, Postgraduate medical students.

Journal of The Association of Physicians of India (2026); 10.59556/japi.74.1701

INTRODUCTION

Gastroesophageal reflux disease (GERD) is a chronic digestive condition in which the retrograde flow of acidic stomach contents irritates the esophageal lining, leading to characteristic symptoms such as persistent heartburn, acid regurgitation, chest pain, and dysphagia (difficulty swallowing). Untreated GERD can lead to complications such as erosive esophagitis, strictures, and Barrett's esophagus, which increases the risk of esophageal cancer.^{1,2}

Globally, the pooled prevalence of GERD is an estimated 13.98% of the world's population,³ while in India, its prevalence is 15.6%,⁴ reflecting an increasing burden on the healthcare system.

Postgraduate medical students, who are at the forefront of healthcare delivery and medical advancements, are faced with significant academic and professional pressures beginning even before their admission, with highly competitive entrance exams such as NEET setting the stage for a challenging educational journey in medical colleges and beyond. These resident doctors

endure long working hours, intensive clinical case evaluations, and continuous academic assessments. This high-stress environment often leads to lifestyle-related risk factors such as irregular eating habits, skipping meals, excessive caffeine consumption, lack of sleep, and insufficient physical exercise, which contribute to the development and aggravation of common GI symptoms, including dyspepsia (indigestion), heartburn, acid reflux, bloating, and abdominal discomfort. Additionally, the frequent use of nonsteroidal anti-inflammatory drugs (NSAIDs) to manage various types of pain and inflammation can further worsen these symptoms.

There is a paucity of published studies specifically investigating the prevalence of GERD among postgraduate medical students in India. However, there are some studies examining GERD and other gastrointestinal symptoms among undergraduate medical students and healthcare workers. This study aims to fill this gap in the literature by investigating the prevalence of GERD in this demographic and examining the association of symptoms with lifestyle factors, which will

help in formulating targeted interventions to improve their overall well-being and clinical performance.

MATERIALS AND METHODS

This study was conducted and reported in accordance with the STROBE Guidelines. A questionnaire-based cross-sectional study was conducted on 324 postgraduate medical students from medical colleges in North India. A sample size of 320 participants was calculated using Cochran's formula, assuming a prevalence of 29%,⁵ an absolute error of 5%, and a 95% confidence interval.

Ethics clearance was obtained from the Institutional Ethics Committee before beginning the study. The approval number was MGMCH/IEC/JPR/2024/4221, dated 4th November 2024. Those who consented to participate and had completed 6 months of residency were included, and those who suffered from hiatus hernia or morbid obesity, as well as pregnant and lactating females, were excluded until the desired sample size was achieved.

The questionnaire was structured into three distinct parts related to demographic and socioeconomic characteristics, clinical history, preexisting medical conditions, particularly gastrointestinal disorders, and lifestyle factors. The last part had questions related to the GERD-Q tool.⁶ The GERD-Q tool is a validated Likert scale specifically designed to assess the frequency and severity of GERD and has been found effective in management and diagnosis without the need for a specialist doctor or invasive procedures

¹Intern, Mahatma Gandhi Medical College and Hospital; ²Professor; ³Statistician Cum Assistant Professor, Department of Community Medicine, Mahatma Gandhi Medical College and Hospital; ⁴Intern, Department of Community Medicine, RUHS College of Medical Sciences, Jaipur, Rajasthan, India; *Corresponding Author

How to cite this article: Chauhan D, Mangal S, Kumar A, et al. Prevalence of Gastroesophageal Reflux Disease among Postgraduate Medical Students in North India: A Cross-sectional Study. *J Assoc Physicians India* 2026;74(9):48–52.

such as endoscopy. The total score ranges from 0 to 18. A higher score, with a score of ≥ 8 , is suggested for diagnosis, allowing for assessment of GERD prevalence and severity within the study population.

The study was conducted using an online questionnaire on Google Forms among postgraduate students of various medical colleges in North India.

The data were analyzed using appropriate statistical methods in Microsoft Excel. The test of significance (Chi-squared test) and generalized linear regression analysis were used to explore the connection between GERD and possible risk factors. A value of $p \leq 0.05$ was considered statistically significant.

RESULTS

A total of 331 postgraduate medical students from multiple specialties across various medical colleges and hospitals in North India were contacted for participation in the study, out of which data from 324 participants met the inclusion criteria and were analyzed. The majority of participants (77.4%) were in the 25–30-year age-group. Among the participants, 52.5% were male, and the rest were female. Nearly two-thirds of participants were living in hostels or as paying guests. With respect to BMI, 56.5% of the participants had BMI within the normal range, while the rest had high BMI. Most participants belonged to medicine and allied specialties. These demographic variables are mentioned in Table 1. Common comorbidities

reported among participants included asthma, hypothyroidism, diabetes, PCOS, and migraine.

The prevalence of GERD, as determined by the GERD-Q score, wherein a score of 8–18 implies GERD-positive status, was 25.3% (82) as shown in Figure 1.

The mean GERD-Q score was 9.34 ± 1.40 among GERD-positive participants and 5.96 ± 0.83 among GERD-negative participants.

GERD was relatively higher among males, individuals aged 25–30 years, those residing as paying guests or hostellers, those with higher BMI, and participants from medicine and allied specialties. However, the difference observed was not statistically significant, as shown in Table 1.

The association of lifestyle factors with GERD status was obtained as mentioned in Table 2. The difference observed among variables such as frequent carbonated beverage consumption, smoking, alcohol, and NSAID use was statistically significant. A statistically significant difference was also observed among those with stress and anxiety and self-reported gastrointestinal symptoms with GERD status.

Sixty percent of GERD-positive participants reported experiencing symptoms prior to entering residency, while 34.1% had a family history of GERD. A large proportion experienced worsening of symptoms upon lying down, with more than half reporting symptoms peaking at night. Notably, 88% of GERD-positive participants reported symptomatic relief with antacid use.

Table 3 presents the results of the generalized linear regression analysis evaluating factors associated with GERD, considering the dependent variable as GERD score (positive for ≥ 8 and negative for < 8).

In the crude analysis, smoking, alcohol intake, carbonated beverage consumption, fast food consumption, painkiller consumption, and stress and anxiety worsening symptoms were significantly associated with GERD.

After adjusting for potential confounding variables, including age, gender, BMI, residence, department, family history of GERD, type of diet, tea/coffee consumption, physical exercise, and sleeping hours, only smoking and stress and anxiety worsening symptoms remained independently associated with GERD.

Participants who smoked had an 11% higher prevalence of GERD than nonsmokers after adjustment (aPR = 1.11; 95% CI: 1.00–1.23;

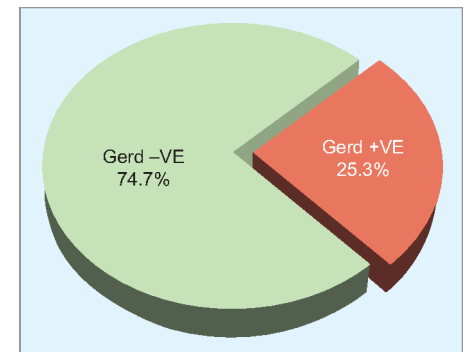


Fig. 1: Prevalence of GERD among postgraduate medical students

Table 1: Association of demographic variables with GERD status

Demographic variables	GERD +ve N = 82 n (%)	GERD -ve N = 242 n (%)	Total N = 324 n (%)	p-value
Age (in years)				
<25	3 (16.7)	15 (83.3)	18 (5.6)	$p > 0.05$
25–30	63 (25.1)	188 (74.9)	251 (77.4)	
>30	16 (29.1)	39 (70.9)	55 (17.0)	
Gender				
Male	47 (27.6)	123 (72.4)	170 (52.5)	$p > 0.05$
Female	35 (22.7)	119 (77.2)	154 (47.5)	
Residence				
Hostel	37 (25.0)	111 (75.0)	148 (45.7)	$p > 0.05$
Paying guest	16 (30.2)	37 (69.8)	53 (16.3)	
Home	29 (23.6)	94 (76.4)	123 (38.0)	
BMI				
Normal BMI	43 (23.5)	140 (76.5)	183 (56.5)	$p > 0.05$
High BMI	39 (27.7)	102 (72.3)	141 (43.5)	
Department				
Pre- and paraclinical	20 (19.2)	84 (80.8)	104 (32.1)	$p > 0.05$
Surgery and allied	20 (23.3)	66 (76.7)	86 (26.5)	
Medicine and allied	42 (31.3)	92 (68.7)	134 (41.4)	

Table 2: Association of lifestyle factors with GERD status

Lifestyle factors	GERD +ve (N = 82)	GERD -ve (N = 242)	Total (N = 324)	p-value
	n (%)	n (%)	n (%)	
Type of diet				
Vegetarian	51 (23.6)	165 (76.4)	216 (66.7)	$p > 0.05$
Nonvegetarian	29 (26.9)	77 (73.1)	108 (33.3)	
Skip breakfast				
Everyday and often	46 (27.2)	123 (72.8)	169 (52.1)	$p > 0.05$
Occasionally, rare	31 (25.4)	91 (74.6)	122 (37.7)	
Never	5 (15.2)	28 (84.8)	33 (10.2)	
No. of tea/coffee per day				
0 cups	10 (27.8)	26 (72.2)	36 (11.1)	$p > 0.05$
1–3 cups	65 (24.3)	203 (75.7)	268 (82.7)	
≥4	7 (35.0)	13 (65.0)	20 (6.2)	
Carbonated beverage consumption				
Everyday and often	23 (30.3)	53 (69.7)	76 (23.5)	$p < 0.05^*$
Occasionally and rare	54 (27.1)	145 (72.9)	199 (61.4)	
Never	5 (10.2)	44 (89.8)	49 (15.1)	
Fast food consumption				
Everyday and often	37 (31.4)	81 (68.6)	118 (36.4)	$p > 0.05$
Occasionally and rarely	44 (22.2)	154 (77.8)	198 (61.1)	
Never	1 (12.5)	7 (87.5)	8 (2.5)	
Smoking				
Yes	18 (46.2)	21 (53.8)	39 (12.0)	$p < 0.05^*$
Former smoker	6 (42.9)	8 (57.1)	14 (4.3)	
No	58 (21.4)	213 (78.6)	271 (83.7)	
Alcohol consumption				
Yes	42 (39.3)	65 (60.7)	107 (33.0)	$p < 0.05^*$
Former drinker	5 (21.7)	18 (78.3)	23 (7.1)	
No	35 (18.0)	159 (82.0)	194 (59.9)	
Pain killer—NSAIDS consumption				
Often	9 (37.5)	15 (62.5)	24 (7.4)	$p < 0.05^*$
Occasionally	31 (33.0)	63 (67.0)	94 (29.0)	
Rarely	42 (20.4)	164 (79.6)	206 (63.6)	
Physical exercise				
Frequent exercise (≥3 times weekly)	16 (18.6)	70 (81.4)	86 (26.5)	$p > 0.05$
Infrequent exercise (≤2 times weekly)	66 (27.7)	172 (72.3)	238 (73.5)	
Sleeping hours				
<6 hours	28 (28.0)	72 (72.0)	100 (30.9)	$p > 0.05$
6 or more hours	54 (24.1)	170 (75.9)	224 (69.1)	
Stress and anxiety worsen symptoms				
Yes	71 (35.1)	131 (64.9)	202 (62.3)	$p < 0.05^*$
No	11 (9.0)	111 (91.0)	122 (37.7)	
Self-reported GI symptoms				
Yes	68 (50.0)	68 (50.0)	136 (42.0)	$p < 0.05^*$
No	14 (7.4)	174 (92.6)	188 (58.0)	

*Statistically significant at $p < 0.05$ **Table 3:** Generalized linear regression analysis for factors associated with GERD

Variable	cPR (95% CI)	p-value	aPR (95% CI)	p-value
Smoking	1.61 (1.25–2.07)	<0.001	1.11 (1.00–1.23)	0.044
Alcohol intake	1.45 (1.13–1.86)	0.003	1.09 (0.98–1.20)	0.100
Carbonated beverage consumption	0.70 (0.53–0.92)	0.011	1.01 (0.92–1.10)	0.883
Fast food consumption	0.70 (0.49–0.99)	0.044	0.96 (0.86–1.08)	0.501
Painkiller consumption	0.70 (0.54–0.90)	0.005	0.94 (0.86–1.02)	0.160
Stress and anxiety worsen symptoms	3.90 (2.15–7.06)	<0.001	1.17 (1.00–1.37)	0.046

Adjusted for: Age, gender, BMI, residence, department, family history of GERD, type of diet, tea/coffee consumption, physical exercise, and sleeping hours; cPR, crude prevalence ratio; aPR, adjusted prevalence ratio; CI, confidence interval

$p=0.044$). Likewise, participants who reported that stress and anxiety worsened their symptoms had a 17% higher prevalence of GERD compared with those who did not ($aPR = 1.17$; 95% CI: 1.00–1.37; $p = 0.046$).

Although alcohol intake, carbonated beverage consumption, fast food consumption, and painkiller consumption were significantly associated with GERD in the crude analysis, these associations were no longer statistically significant after adjustment for confounding variables, indicating that their observed crude associations were likely explained by differences in demographic and lifestyle characteristics.

DISCUSSION

With lifestyle-related illnesses on the rise, GERD has become a significant concern among young medical professionals, whose routines often predispose them to gastrointestinal distress. While several Indian studies have explored GERD in undergraduate medical students, limited studies are present among postgraduate medical students—an underinvestigated cohort despite high exposure to risk factors.

In this study, the prevalence of GERD among postgraduate medical students was found to be 25.3%, based on the GERD-Q scale. This exceeds the GERD prevalence in the general Indian population⁴ as well as the global pooled prevalence.³ This could be attributed to the unique stressors of postgraduate medical training, including long working hours, irregular meals, sleep deprivation, and academic pressure—all known to contribute to reflux symptoms.⁷

The results of the present study are comparable with several recent Indian and international findings among undergraduate and postgraduate medical students.^{5,8,9}

The majority of GERD-positive participants in the 25–30-year age-group adds to the growing evidence suggesting that GERD is becoming increasingly common in younger populations, particularly in South Asia, where changing dietary patterns and increasing workload are major risk factors.¹⁰

In the current study, GERD was slightly more prevalent among males (27.6%) compared with females (22.7%), although the mean age among females was lower than that among males. This finding is consistent with earlier studies conducted on undergraduate students in North India.¹¹

Elevated BMI was a particularly important factor in this study, with more GERD-positive individuals falling into the high BMI category compared with those with normal BMI. This mirrors findings from studies conducted

in Iran and North India.^{12,13} While some community-based Indian studies have reported mixed associations with obesity, a consistent finding shows that even modest weight gain affects lower esophageal sphincter tone and increases intra-abdominal pressure, contributing to reflux.^{13–15}

Among various specialties in the present study, GERD was found to be most prevalent among postgraduates in medicine and allied specialties, followed by surgical branches, and least prevalent among preclinical and paraclinical departments. It could be due to the high-stress environment faced by medicine residents being posted in emergency departments or intensive care units, where patients require round-the-clock attention from postgraduate doctors. A study from Pakistan reported surgical specialties having the highest prevalence of GERD, followed by medicine and diagnostic specialties.⁵

Dietary and lifestyle patterns further supported these associations. A considerable proportion of GERD-positive individuals reported higher intake of fast food, carbonated beverages, midnight snacking, and a nonvegetarian diet. These findings parallel those of other studies.^{12,16}

The present research also highlighted the impact of eating quickly and skipping breakfast, as suggested by previous studies.^{17,18} GERD was also more prevalent among students who ate late at night and did not have a gap of >3 hours between dinner and sleep, which is supported by previous literature.^{18–20}

The role of stress was notable in our study, with 35.1% of GERD-positive students reporting symptom exacerbation, which can be linked to anxiety or psychological pressure and supports similar studies in the past.^{21–23} Disrupted sleep and demanding work hours might worsen this issue. These observations are consistent with another study showing the impact of circadian misalignment and night shifts on gastrointestinal health.²⁴

In this study, a statistically significant number of current smokers and alcohol and frequent NSAID consumers were GERD-positive, similar to findings from past studies.^{8,25–28}

CONCLUSION

This study highlights a higher prevalence of GERD among postgraduate medical students compared with the general population, indicating an increased occupational risk. Residency-related stressors and lifestyle factors appear to play a contributory role, with variations observed across specialties.

Early recognition of at-risk groups may enable timely, targeted interventions. Addressing modifiable factors during postgraduate training may enhance digestive health and general well-being and emphasize the need for institutional policies that encourage a healthier work–life balance for medical trainees.

This study has several strengths but limitations as well. Being a cross-sectional study, it relies on self-reported data, which can be prone to recall bias, reporting bias, and individual variation in symptom perception. The use of the GERD-Q scale, where results are calculated based on symptom frequency experienced over the preceding week, helped minimize recall bias. However, symptom assessment relied on participants' individual interpretation and reporting of their symptoms, which may have affected the accuracy and consistency of the responses. The absence of objective diagnostic tools such as endoscopy or 24-hour esophageal pH monitoring limits the ability to confirm GERD physiologically, but the GERD-Q scale is an accurate noninvasive diagnostic marker to clinically diagnose this condition. Future longitudinal studies using objective diagnostic investigations would allow a more comprehensive evaluation of disease burden and associated risk factors in this population. Medical institutions and regulatory bodies should consider implementing resident wellness initiatives, which include periodic health screening for the early identification of at-risk residents, increasing awareness about GERD symptoms so residents seek professional medical attention early rather than self-medicating, reasonable duty hours with adequate meal breaks, easy availability of healthier food options even during overnight shifts, and confidential mental health and stress-management services to facilitate timely preventive measures rather than delayed treatment after symptom progression.

As resident doctors form the backbone of healthcare delivery, the present findings reinforce the importance of prioritizing their health through preventive strategies and comprehensive resident wellness initiatives, thus encouraging a healthier work–life balance.

ORCID

Divyanshi Chauhan  <https://orcid.org/0009-0007-0132-9624>

Shweta Mangal  <https://orcid.org/0000-0001-9658-2006>

Disha Mangal  <https://orcid.org/0009-0008-3685-7993>

REFERENCES

- Katz PO, Gerson LB, Vela MF. Guidelines for the diagnosis and management of gastroesophageal reflux disease. *Am J Gastroenterol* 2013;108(3):308–328.
- Azer SA, Reddivari AKR. Gastroesophageal reflux disease (GERD) [Internet]. PubMed. Treasure Island (FL): StatPearls Publishing; 2025. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK554462/>
- Nirwan JS, Hasan SS, Babar ZUD, et al. Global prevalence and risk factors of gastro-oesophageal reflux disease (GORD): systematic review with meta-analysis. *Sci Rep* 2020;10(1).
- Rai S, Kulkarni A, Ghoshal UC. Prevalence and risk factors for gastroesophageal reflux disease in the Indian population: a meta-analysis and meta-regression study. *Indian J Gastroenterol* 2021;40(2):209–219.
- Nisar A, Rehman A, Siddiqui AS. Frequency and associated factors of gastroesophageal reflux disease using GERD-Q tool in the high-risk group of postgraduate trainees physicians. *Ann Abbasi Shaheed Hosp Karachi Med Dent Coll* 2023;28(4):201–208.
- Jones R, Junghard O, Dent J, et al. Development of the GerdQ, a tool for the diagnosis and management of gastro-oesophageal reflux disease in primary care. *Aliment Pharmacol Ther* 2009;30(10):1030–1038.
- Cholongitas E, Pipili C. Impact of burnout syndrome on gastroesophageal reflux disease and irritable bowel syndrome in health care workers. *J Clin Psychiatry* 2010;71(2):209–210.
- Sharma A, Sharma PK, Puri P. Prevalence and the risk factors of gastro-esophageal reflux disease in medical students. *Med J Armed Forces India* 2018;74(3):250–254.
- Baklola M, Terra M, Badr A, et al. Prevalence of gastro-oesophageal reflux disease, and its associated risk factors among medical students: a nation-based cross-sectional study. *BMC Gastroenterology* 2023;23(1).
- Yamasaki T, Hemond C, Eisa M, et al. The changing epidemiology of gastroesophageal reflux disease: are patients getting younger? *J Neurogastroenterol Motil* 2018;24(4):559–569.
- Challa N, Goel NK, Ravi Rohilla, et al. Prevalence and correlates of gastroesophageal reflux disease (GERD) amongst undergraduate students in a city of North India: GERD among undergraduate Students in North India. *Int J Health Syst Implement Res* 2024;8(1):48–54.
- Somi MH, Farhang S, Mirinezhad K, et al. Prevalence and precipitating factors of gastroesophageal reflux disease in a young population of Tabriz, Northwest of Iran. *Saudi Med Journal* 2006;27(12):1878–1881.
- Sharma PK, Ahuja V, Madan K, et al. Prevalence, severity, and risk factors of symptomatic gastroesophageal reflux disease among employees of a large hospital in Northern India. *Indian J Gastroenterol* 2010;30(3):128–134.
- Wang HY, Leena KB, Plymoth A, et al. Prevalence of gastro-esophageal reflux disease and its risk factors in a community-based population in southern India. *BMC Gastroenterol* 2016;16(1).
- Locke GR 3rd, Talley NJ, Fett SL, et al. Risk factors associated with symptoms of gastroesophageal reflux. *Am J Med* 1999;106(6):642–649.
- Arivan R, Deepanjali S. Prevalence and risk factors of gastro-esophageal reflux disease among undergraduate medical students from a southern Indian medical school: a cross-sectional study. *BMC Res Notes* 2018;11(1):448.
- Wildi SM, Tutuian R, Castell DO. The influence of rapid food intake on postprandial reflux: studies in healthy volunteers. *Am J Gastroenterol* 2004;99(9):1645–1651.
- Song JH, Chung SJ, Lee J, et al. Relationship between gastroesophageal reflux symptoms and dietary factors in Korea. *J Neurogastroenterol Motil* 2011;17(1):54–60.
- Abad MT, Sayyed E, Yamak O, et al. The association between night eating syndrome and GERD symptoms among university students at An-Najah National University in Palestine: a cross-sectional study. *BMC Gastroenterol* 2024;24(1):169.
- Fujiwara Y, Machida A, Watanabe Y, et al. Association between dinner-to-bed time and gastro-esophageal reflux disease. *Am J Gastroenterol* 2005;100(12):2633–2636.
- Bai P, Bano S, Kumar S, et al. Gastroesophageal reflux disease in the young population and its correlation with anxiety and depression. *Cureus* 2021;13(5).
- Sarkar S, Gupta R, Menon V. A systematic review of depression, anxiety, and stress among medical students in India. *J Ment Health Hum Behav* 2017;22(2):88–96.
- Bandodkar Keyur D, Vernekar Preksha P, Ferreira Agnelo M. An analytical study on gastro-esophageal reflux disease among postgraduate medical students in India. *Indian J Public Health Res Dev* 2025;16(3):49–56.
- Gunasinghe D, Gunawardhana C, Halahakoon S, et al. Prevalence, associated factors and medication for symptoms related to gastroesophageal reflux disease among 1114 private-tuition students of Anuradhapura, Sri Lanka. *BMC Gastroenterol* 2020;20(1):45.
- Ness-Jensen E, Lagergren J. Tobacco smoking, alcohol consumption and gastro-oesophageal reflux disease. *Best Pract Res Clin Gastroenterol* 2017;31(5):501–508.
- Chen S, Wang J, Li Y. Is alcohol consumption associated with gastroesophageal reflux disease? *J Zhejiang Univ Sci B* 2010;11(6):423–428.
- Karthik RC, Balaji SM, Arumugam B, et al. Prevalence of gastro esophageal reflux disease among medical students in Chennai, South India. *Indian J Forensic Community Med* 2025;4(3):199–203.
- Kotzan J, Wade W, Yu HH. Assessing NSAID prescription use as a predisposing factor for gastroesophageal reflux disease in a Medicaid population. *Pharm Res* 2001;18(9):1367–1372.