RESEARCH
O&G Forum 2024; 34 – 3s: 2360-2364

KNOWLEDGE ASSESSMENT OF GASTRITIS-RELATED FACTORS AMONG UNIVERSITY STUDENTS OF BHUBANESWAR, ODISHA

Mrs. Puspanjali Mohapatro[1], Mrs. Ritarani Nayak[2], Mrs. Mamata Swain[3], Mrs.Kabita Puhan[4*], Mrs.Pratibha Khosla[5], Mrs. Itishree Pradhan[6]

[1] Assistant Professor, Dept. of Community Health Nursing, SUM Nursing College, SOA Deemed to be University, Email Id- puspanjalimohapatra@soa.ac.in

[2] Assistant Professor, Dept. of Mental Health Nursing, SUM Nursing College, SOA Deemed to be University, Email Id- ritaraninayak@soa.ac.in

[3] Assistant Professor, Dept. of Medical Surgical Nursing, SUM Nursing College, SOA Deemed to be University, Email Id- mamataswain@soa.ac.in

[4] M.sc Tutor, Dept. of Community Health Nursing, SUM Nursing College, SOA Deemed to be University, Email Id- kabitapuhan@soa.ac.in

[5] Associate Professor, Dept. of Obstetrics & Gynecology Nursing, SUM Nursing College, SOA Deemed to be University, Email Id- pratibhakhosla@soa.ac.in

[6] M.sc Tutor, Dept. of Medical Surgical Nursing, SUM Nursing College, SOA Deemed to be University, Email Id- itishreepradhan@soa.ac.in

Abstract

An inflammation of the stomach's lining that provides protection is called gastritis. More people with gastritis live in underdeveloped nations than in industrialized ones. The study aimed to assess the students' knowledge of associated factors, symptoms, and gastritis management at a certain university in Bhubaneswar. The study was carried out using a survey research methodology. The study employed a descriptive survey research design & sample was collected by a non-probability convenient sampling technique. The study included a self-structured questionnaire to collect data on socio-demographic variables & awareness of symptoms, signs, & gastritis treatment. 250 students between the ages of 16 to 35 took part in the study. An SPSS-22 was used to analyze the data. The study's analysis revealed a mean score of 43.7 for knowledge of gastritis management, signs, and associated factors. About gastritis, 96.8% of students are well-informed. It has been determined using inferential statistics that certain socio-demographic characteristics are not associated with knowledge of gastritis. It is necessary to implement a variety of activities to educate students about gastritis. Lastly, we discovered that nursing students had more information about gastritis than did upper secondary students.

Keyword: Knowledge, Gastritis, Associated factors, Students.

INTRODUCTION

Millions of people worldwide are affected by the common gastrointestinal ailment known as gastritis, an inflammation of the stomach lining [1, 2, 3, 4]. It's a complex etiology that includes anything from lifestyle factors like diet and alcohol use to infectious agents like Helicobacter pylori [5, 6, 7]. The prevalence of gastritis among college students seems to be high, and it may be impacted by certain stressors like pressure to perform well academically, erratic eating patterns, and the use of inappropriate coping strategies [8, 9, 10, 11]. Because they are at a transitional phase of life that frequently involves significant lifestyle changes and increased exposure to risk factors, university students are an important group for the research of gastritis [12, 13, 14, 15]. This population is more likely to have gastritis, which can cause several issues that affect their quality of life, general health, and academic performance [16, 17, 18]. There are few thorough studies evaluating university students' knowledge and awareness of gastritis-related issues, despite the condition's apparent importance [19, 20, 21, 22].

To create successful educational interventions and preventive measures, it is essential to comprehend students' understanding of gastritis [23, 24]. Increased knowledge can result in earlier diagnosis, more effective symptom management, and a decline in the frequency of problems related to chronic gastritis [25, 26, 27]. Additionally, it might encourage better coping strategies and lifestyle decisions that can lessen the risk factors connected to this illness [28, 29].

This study aims to assess university students' understanding of issues related to gastritis. We want to inform focused educational programs and public health activities that can improve student health outcomes by identifying knowledge and awareness gaps. The results of this study will add to the growing body of knowledge regarding the management of gastrointestinal illnesses in university settings, as well as the effectiveness of preventative health education.

To aim of the study was to evaluate the level of knowledge regarding factors associated with gastritis, signs, symptoms, & management and prevention of gastritis among students in selected colleges of University, Bhubaneswar, Odisha.

MATERIAL & METHODS

Study Design

The study employed a descriptive survey research design and utilized a convenient sampling technique. This approach was chosen to efficiently gather data from a readily accessible population, allowing for a straightforward assessment of the knowledge levels regarding gastritis-related factors among university students. By using descriptive survey research, the study aimed to provide a detailed portrayal of the existing knowledge and awareness without attempting to establish causal relationships.

Setting

The research was conducted at multiple educational institutions within the SOA University in Bhubaneswar, Odisha. Specifically, the study was carried out at the Institute of Higher Secondary, the Sum Nursing College, and the Institute of Pharmaceutical Science. These settings were selected to encompass a diverse range of academic disciplines, thereby ensuring a varied and representative sample of the student population at SOA University.

Participants

The participants in this study were students enrolled in the Institute of Higher Secondary, the Sum Nursing College, and the Institute of Pharmaceutical Science at SOA University, Bhubaneswar, Odisha. These students were chosen based on their availability and willingness to participate in the study, reflecting the non-probability convenient sampling method. This approach facilitated the inclusion of a broad spectrum of students from different educational backgrounds and academic levels, contributing to the comprehensiveness of the knowledge assessment regarding gastritis-related factors.

Instruments: A self-structured questionnaire was used to gather information on socio-demographic characteristics, which included questions about age, gender, marital status, education, religion, family background, area of residence, health status, and history of gastritis. For the knowledge assessment, a structured questionnaire comprising 25 questions was used. These questions covered associated factors of gastritis, signs and symptoms, and management and prevention of gastritis. Each correct answer was assigned 2 points, while each wrong answer was assigned 1 point. The total score ranged from 1 to 50, which was categorized into three levels: Poor (1-17), Average (18-33), and Good (34-50).

Data collection procedure: Before beginning the real trial, the researcher obtained official written consent from the Principal of a different college under of University of Bhubaneswar between the periods of 2023 to July 2023. The researcher first introduced herself to the subject and gave a brief explanation of the study's objectives. The participant was asked to give their written informed consent. After obtaining consent, the researcher introduced a structured questionnaire to gather information on the participant's socio-demographic characteristics and level of knowledge regarding gastritis.

Sample size:

Sample size calculation was done by using Yamane's formula

$n=N/ (1+Ne^2)$

Where, n= corrected sample size, N = population size, and e = Margin of error

Total 250 samples were selected for the study.

Statistical analysis:

In the analysis of the data, both inferential and descriptive statistical methods were employed. Data were analyzed using IBM SPSS version 22 software. The frequency and percentage of socio-demographic variables were calculated. Additionally, the frequency and percentage distribution of students' knowledge levels regarding risk factors, signs and symptoms, and management of gastritis were determined. Mean scores for the level of knowledge on risk factors, signs and symptoms, and management of gastritis were computed. Furthermore, the association between selected socio-demographic variables and the level of knowledge on these aspects of gastritis was examined.

RESULT

Frequency & percentage distribution of subject according to socio-demographic variables of students.

The study included a diverse demographic profile of students. The largest age group consisted of those between 21 to 25 years old, comprising 47.1% of the sample, followed by 16 to 20-year-olds at 43.9%. A smaller proportion fell into older age brackets, with 5.9% aged 26 to 30 years and 3.1% between 31 to 35 years. In terms of gender distribution, the majority were male, accounting for 62.7% of participants, while females constituted 36.9%. Regarding marital status, a vast majority, 92.1%, were single, with only 7.9% being married. Educationally, undergraduates formed the largest group at 72.9%, followed by graduates (20%) and postgraduates (7.1%). Religious affiliations were predominantly Hindu (95.7%), with smaller proportions identifying as Muslim (1.27%) or Christian (3.5%). Economically, most students had monthly incomes below 50,000 (50.2%), while 34% earned between 50,000 to 100,000, and only 3.5% had incomes exceeding 100,000. Family structures were largely nuclear (68.8%) compared to joint families (31.2%). Dietary preferences leaned towards vegetarianism, with 77.6% identifying as such, while 22.4% were non-vegetarian. Additionally, the majority of students (58.7%) were day scholars, while 41.3% resided in hostels.

Table 1 presents the frequency and percentage distribution of students' knowledge levels regarding risk factors, signs & symptoms, and management of gastritis. N=250

		Frequency (f)	Percentage (%)
Level of knowledge on risk factor	Good	239	95.6
	Average	11	4.4
	Poor	0	0
Level of knowledge on sign symptoms	Good	244	97.6
	Average	6	2.4
	Bad	0	0
Level of knowledge on treatment	Good	245	98

	Average	5	2
	Bad	0	0

Table 1 showed that, when it came to risk factor knowledge, (95.6%) of respondents had strong knowledge, while (4.4%) had average knowledge. (2.4%) of respondents had a medium understanding of signs and symptoms, compared to (97.6%) who had good knowledge. 98% of respondents had a good degree of treatment knowledge, whereas (2%) had an average level of understanding.

Table 2: Descriptive Statistics Showing Mean Scores for the Level of Knowledge on Risk Factors, Signs & Symptoms, and Management of Gastritis N=250

Level of knowledge	Score	Mean± SD	Level of knowledge	
			Frequency (f)	Percentage (%)
Good	>34	39.36±5.07	242	96.8
Average	18-33	24.35±5.06		3.2
Bad	<17	0		0
Minimum score			26	
Maximum score			52	
Mean			43.7	

Table 2, showed that (96.8%) of students had a solid understanding of gastritis. The study's minimum score was 26, and its maximum score was 52. The average score for knowledge about gastritis was 43.7.

Table 3 shows an association between selected socio-demographic variables and level of knowledge on risk factors, signs and symptoms and management of gastritis. N=250

Demographic variables	Good	Average	Poor	Chi-square test	Df	P value	Inference
Education Under Graduate Graduate Post Graduate	132 25 6	26 16 3	28 11 3	0.94	4	0.9187	NS
Gender Male Female Other	89 44 0	28 21 0	44 24 0	0.99	4	0.9113	NS
Age 16-20 years 21-25 years 26-30 years 31-35years	48 56 8 8	33 48 3 3	31 17 4 1	0.1	6	0.99	NS
Income <50000 50000-1000000 >100000	56 43 21	28 27 15	41 14 5	0.82	4	0.935	NS
Place-of resident Day scholar Hostel	84 48	21 33	43 21	0.95	2	0.621	NS

p≥0.05= significant

Table 3 shows that the chi-square value for education is 0.94 at the 0.05 level of significance and degree of freedom 4, meaning it is not statistically significant. The chi-square value for gender is 0.99 at the 0.05 level of significance and degree of freedom 4, indicating that it is not statistically significant. The chi-square value for age is 0.1 at the 0.05 level of significance and degree of freedom 6, meaning it is not statistically significant. The chi-square value for income is 0.82 at the 0.05 level of significance and degree of freedom 4, indicating that it is not statistically significant. The chi-square value for the resident's place of residence is 0.95 (at degree of freedom 2), which is not statistically significant at the 0.05 level of significance. Therefore, for education, gender, age, income, and location of residence, the null hypothesis is accepted.

DISCUSSION

The largest age group consisted of those between 21 to 25 years old, comprising 47.1% of the sample, followed by 16 to 20-year-olds at 43.9%. A smaller proportion fell into older age brackets, with 5.9% aged 26 to 30 years and 3.1% between 31 to 35 years.

In terms of gender distribution, the majority were male, accounting for 62.7% of participants, while females constituted 36.9%.

This study supported by Fating ss and Sharma R (2019), found that 100% of the sample were in the age group of 18-25 years and majority of the samples 54% were males and 46% were female. [1]

The study showed that (96.8%) of students had a solid understanding of gastritis. The study's minimum score was 26, and its maximum score was 52. The average score for knowledge about gastritis was 43.7.

The study supported by Sashi Silwal et al (2021) the majority (68%) respondents had average knowledge and a few respondents 2 (4%) had excellent knowledge. [4]

Another study Julie Parsonnet et.al (1993), to identify the signs of Helicobacter pylori infection and its risk factors, a cohort of 341 epidemiologists was studied. In the interim between serum sample collections, eleven participants (3 %) seroconverted, resulting in a crude conversion rate of 0.49% per person-year (95% confidence interval, 0.3-0.9). Similar symptoms were described by the 1988 serum sample's reactors & nonreactors. [31]

Other study Mathur Akshita et.al; (2024), in patients from Northeast India, the prevalence of H. pylori was 31.6%, while in patients from North India, it was 3%. Compared to patients from North India (53.40%), those from Northeast India (92.64%) had a higher frequency of the cag A gene. In North East Indian patients, the prevalence of other pathogenic genes was vac A (92.64%), ice A1 (37.5%), and ice A2 (32.11%), while in North Indian patients, it was vac A (32.72%), ice A1 (37.14%), and ice A2 (48.57%). [29]

LIMITATION

The study's limitations include a limited sample size confined to university students in Bhubaneswar, Odisha, potentially limiting the generalizability of the findings. Additionally, self-reported data may introduce response bias, and the cross-sectional design precludes establishing causality between knowledge levels and gastritis-related factors.

CONCLUSION

According to the study's findings, students appear to be well-informed about gastritis based on their high degree of awareness. It is advised that comparable research be carried out in other areas to confirm these conclusions and fill in any knowledge gaps. To guarantee continued awareness, it is important to keep up ongoing educational initiatives. It emphasizes how critical health education is to raising public health outcomes by increasing understanding of gastritis, facilitating better management and prevention, and so on.

ETHICAL CONSIDERATION

This study was approved by the Institutional Research Board of SUM Nursing College, SOA University. The Principal of Institute of Higher Secondary, the Sum Nursing College, and the Institute of Pharmaceutical Science. All gave their consent for conducting the study. Also written consent were taken from all participants for participating in the study.

AUTHOR CONTRIBUTIONS

Study conceptualization by P.M, R.N; Analysis and interpretation of data by P.M,K.P,M.S; Drafting and manuscript by I.P, P.K; Statistical analysis by PM, M.S; Study supervision by P.K.All author have read and agree to published the final manuscript.

Conflict of Interest: There are no conflicts.

Source of funding: None

References

1. *Fating SS, Sharma R. Assess the knowledge regarding risk factors of Gastritis among second-year engineering students. Adv Practice Nurs. 2019;4(162):2.*
2. *Albie G, Kaba D. Prevalence of Helicobacter pylori infection and associated factors among gastritis students in Jigjiga University, Jigjiga, Somali regional state of Ethiopia. J Bacteriol Mycol. 2016 Dec;3(3):00060.*
3. *Gebru D. Factors associated with the gastric disease among students of Hawassa University: The case of college of agriculture students. American Journal of Theoretical and Applied Statistics. 2018 Oct;7(1):207-14.*
4. *Silwal S, Acharya A, Baral B, Devkota A, Subedee A, Paudel U. Knowledge Regarding Gastritis among Late Adolescence in Central Nepal. Marsyangdi Journal. 2021 Sep 26:81-93.*
5. *Firdous J, Hidayah N, Latif N, Muhamad N, Nurhidayah N, Syaz D. A descriptive study on lifestyle factors influencing gastritis among university students of UniKL RCMP in Malaysia. Indian, J. Nat. Sci. 2016;6:10753-6.*
6. *Padmavathi GV. Research Article Knowledge and Factors Influencing on Gastritis among Distant Mode Learners of Various Universities at Selected Study Centers Around Bangalore City with a View of Providing a Pamphlet.*
7. *Hailu A, Sileshi B, Panari H. Prevalence of helicobacter pylori infection and associated factors among gastritis patents in yekatit 12 teaching hospital Addis Ababa Ethiopia.*
8. *Hafiz TA, D'Sa JL, Zamzam S, Dionaldo ML, Mubaraki MA, Tumala RB. Helicobacter pylori infection: comparison of knowledge between health science and non-health science university students. International Journal of Environmental Research and Public Health. 2021 Aug 2;18(15):8173.*
9. *Hemavathy V, Girijabhaskaran VD. A study to assess the knowledge on gastritis among 2nd year B. Sc. nursing students in Sree Balaji College of Nursing, Chennai. Int J Appl Res. 2016;2:254-56.*
10. *Umasugi MT, Soulissa FF, Susanti I, Latuperissa GR. The effect of health education on gastritis prevention behavior among high school students. Jurnal Ners. 2020 Nov 26;15(2).*
11. *Nakayama Y, Lin Y, Hongo M, Hidaka H, Kikuchi S. Helicobacter pylori infection and its related factors in junior high school students in Nagano Prefecture, Japan. Helicobacter. 2017 Apr;22(2):e12363.*
12. *Malek AI, Abdelbagi M, Odeh L, Alotaibi AT, Alfardan MH, Barqawi HJ. Knowledge, attitudes and practices of adults in the United Arab Emirates regarding Helicobacter pylori induced gastric ulcers and cancers. Asian Pacific Journal of Cancer Prevention: APJCP. 2021 May;22(5):1645.*
13. *Samson ES, Okeleke OJ, Richard AY, Gideon FT, Olutoyosi AL, Damilola O. Screening for Helicobacter pylori infection among undergraduate students of a tertiary institution using serum antibody and stool antigen*

detection methods. Science and Technology Research. 2018;3(2):10.
14. *Monique NS, Consilie NY. ASSESSMENT OF PREVELENCE AND FACTORS ASSOCIATED WITH GASTRITIS AMONG PATIENTS ATTENDING KIBOGORA DISTRICT HOSPITAL IN RWANDA (Doctoral dissertation).*
15. *Alzahrani MA, Alfageeh K, Thabet T, Ali N, Alnahdi N, Mohammed M, Nabrawi KY, Alsamghan AS. Assessment of health-related knowledge and practices among patients with peptic ulcer. Middle East Journal of Family Medicine. 2020;7(10):33.*
16. *LEMBONG E, KURNIATI D, UTAMA GL. Correlation between students' diet towards gastritis in Faculty of Agricultural Industrial Technology of Padjadjaran University. Scientific Papers Series Management, Economic Engineering in Agriculture & Rural Development. 2019 Jul 1;19(3).*
17. *Ikpenwa JN, Aneke CC, Chukwueze CM, Chukwu LC, Obeagu EI. Evaluation of Knowledge, Perception and Prevalence of Helicobacter pylori Infection among Students of Enugu State University of Science and Technology: A Multi-Disciplinary Approach. Sch J App Med Sci. 2022 Oct; 10:1620-7.*
18. *Gao S, Tang ZC, Miao H, Li J, Tang ZB, Liu JH, Zhou YQ. Awareness and attitudes regarding Helicobacter pylori infection among university students.*
19. *Melese A, Genet C, Zeleke B, Andualem T. Helicobacter pylori infections in Ethiopia; prevalence and associated factors: a systematic review and meta-analysis. BMC gastroenterology. 2019 Dec; 19:1-5.*
20. *Hussen BM, Qader SS, Ahmed HF, Ahmed SH. The prevalence of Helicobacter pylori among university students in Iraq. Indian Journal of Science and Technology. 2013 Aug 1:5019-23.*
21. *DI-A, EU O. Prevalence, Symptoms and Lifestyle Aspect of Peptic Ulcer Disease among Undergraduate Students of a Nigerian University. African Journal of Biomedical Research. 2022 May 1;25(2).*
22. *Wen Z, Li X, Lu Q, Brunson J, Zhao M, Tan J, Wan C, Lei P. Health-related quality of life in patients with chronic gastritis and peptic ulcer and factors with impact: a longitudinal study. BMC gastroenterology. 2014 Dec; 14:1-0.*
23. *Alajmi SM, Alsulami TM, Mudayhish MA, Alhawas MA, Alangari MS, Alfarhan A, Omair A. Knowledge and Attitude of Medical Students Towards Helicobacter pylori Infection and Its Prevention and Management: A Study From Riyadh, Saudi Arabia. Cureus. 2023 Dec;15(12).*
24. *Amein ZM, Eltomy EM, Hasan EE. Common Health Related Factors affecting Academic Achievement among Minia University Students. Minia Scientific Nursing Journal. 2023 Dec 30;14(2):92-102.*
25. *Mohamoud BM. HEALTH SCIENCE DEGREE OF LABORATORY (Doctoral dissertation, Alpha University).*
26. *Al-Badaii F, Bajah K, Ahmed S, Al-Ameri H, Shumaila H, Abbas Z, Saad FA. Prevalence of Helicobacter pylori infection and associated risk factors among schoolchildren at Dhamar City, Yemen. Int J Sci Res Biol Sci. 2021 Dec;8(6):16-22.*
27. *Susheela F, Goruntla N, Bhupalam PK, Veerabhadrappa KV, Sahithi B, Ishrar SM. Assessment of knowledge, attitude, and practice toward responsible self-medication among students of pharmacy colleges located in Anantapur district, Andhra Pradesh, India. Journal of education and health promotion. 2018 Jan 1;7(1):96.*
28. *Drumm B, Sherman P, Cutz E, Karmali M. Association of Campylobacter pylori on the gastric mucosa with antral gastritis in children. New England Journal of Medicine. 1987 Jun 18;316(25):1557-61.*
29. *Mathur A, Gehlot V, Mahant S, Dutta S, Mukhopadhyay AK, Das K, Das R. Gastritis in Northeast India and North India: A Regional Comparison of Prevalence and Associated Risk Factors. Biomedical and Biotechnology Research Journal (BBRJ). 2024 Jan 1;8(1):72-9.*
30. *Haruma K, Komoto K, Kamada T, Ito M, Kitadai Y, Yoshihara M, Sumii K, Kajiyama G. Helicobacter pylori infection is a major risk factor for gastric carcinoma in young patients. Scandinavian journal of gastroenterology. 2000 Jan 1;35(3):255-9.*
31. *Parsonnet J, Blaser MJ, Perez-Perez GI, Hargrett-Bean N, Tauxe RV. Symptoms and risk factors of Helicobacter pylori infection in a cohort of epidemiologists. Gastroenterology. 1992 Jan 1;102(1):41-6.*