https://doi.org/10.48047/AFJBS.6.15.2024.4113-4123

African Journal of Biological Sciences

Journal homepage: http://www.afjbs.com

Research Paper Open Access

The level of students' knowledge and use of self-medication practices of medical students vs. non-medical students with Gastritis in Lahore Universities

Muhammad Humayyun Jamil[1], Muhammad Asif[2], Zaka Ur Rehman[3], Asad Shahbaz[4], Ghulam Abbas Khan Sandilah[5], Mian Waqar Mustafa[6], Fahad Asim[7], Muhammad Naveed Mushtaq[8], Waqas Ahmad[9], Abdul Qader[10], Fatima Razzaq[11], Salman Ali[12], Muniba Iqbal[13], Rija Khan[14]

1. [1]Lecturer in Pharmacology & Therapeutics, Johar Institute of Professional Studies, Lahore, Pakistan (humayunjamil4@gmail.com)
2. [2]Assistant Professor, Faculty of Pharmacy, Hajvery University, Lahore, Pakistan (m.asif.aku@gmail.com)
3. [3]Professor of Pharmacology, Faculty of Pharmacy, The University of Lahore / Secretary, Punjab Pharmacy Council, Lahore, Pakistan (drzakaurrehman@gmail.com)
4. [4]Research Scholar, Faculty of Pharmacy, The University of Lahore, Lahore, Pakistan (asadshahbaz800@gmail.com)
5. [5]Drug Controller, Government of the Punjab, Health Department / Ph.D. Scholar (Pharmacology), The University of Lahore, Lahore, Pakistan (ghulamabbassandilah@gmail.com)
6. [6]Assistant Professor, Forman Christian College University, Lahore, Pakistan (waqarmustafa@fccollege.edu.pk)
7. [7]Lecturer in Pharmacology & Therapeutics, Faculty of Pharmacy, The University of Lahore, Lahore, Pakistan (fahadasim6@gmail.com, fahad.asim@pharm.uol.edu.pk)
8. [8]Associate Professor, Faculty of Pharmacy, The University of Lahore, Lahore, Pakistan (muhammad.mushtaq@pharm.uol.edu.pk)
9. [9]Assistant Professor, Faculty of Pharmacy, The University of Lahore, Lahore, Pakistan (waqas.ahmad@pharm.uol.edu.pk)
10. [10]Department of Pharmaceutical Chemistry, Government College University, Faisalabad, Pakistan / Clinical Pharmacist and Pharmacovigilance Officer, Primary and Secondary Health Care Department, Government of Punjab, Pakistan
11. [11]Research Scholar, Johar Institute of Professional Studies, Lahore, Pakistan (fatimarazzaq1003@gmail.com)
12. [12]Research Scholar, Johar Institute of Professional Studies, Lahore, Pakistan (salmanaliwbt@gmail.com)
13. [13]Research Scholar, Johar Institute of Professional Studies, Lahore, Pakistan (muneebaiqbal356@gmail.com)
14. [14]Research Scholar, Johar Institute of Professional Studies, Lahore, Pakistan (rijakhankhan@gmail.com)

*Corresponding Author: Dr. Fahad Asim (fahadasim6@gmail.com, fahad.asim@pharm.uol.edu.pk)

Volume 6, Issue 15, Sep 2024

Received: 15 July 2024

Accepted: 25 Aug 2024

Published: 05 Sep 2024

doi: 10.48047/AFJBS.6.15.2024.4113-4123

ABSTRACT

Gastritis is defined as inflammation of gastric mucosa. Gastritis can be classified as acute gastritis and chronic gastritis. According to various studies, there is an increasing trend of gastritis among students. Level of students knowledge and use of self-medication is still lacking, one of which is the adoption of unhealthy lifestyle. Factors responsible for this are H. pylori, anxiety, stress, food habits, self-medication and lack of knowledge among students eventually leads to local ischemia of gastric mucosa, elevation of gastric pH, hypergastrinemia and hyperplasia of antral gastrin producing G-cells which brings mucosal injury causing gastritis. This type of research is observational. The data collected is in the form of quantitative data using a survey method with a questionnaire as the main instrument. The results show that percentage prevalence of self-medication practices with gastritis was 35.3% in males and 64.7% in females. Total 456 students from which 192 are medical students and 264 are non-medical students out of these 309 students practiced self-medication that means most of non-medical students practiced self-medication these are 117 students of non-medical. So, the level of student's knowledge and use of self-medication practices of medical vs. non-medical students is 67.7% which is satisfactory.

Introduction

The World Health Organization (WHO) has defined SM as "the use of drugs to treat self-identified symptoms or use of prescribed drug continuously or intermittently for chronic or recurrent diseases without periodic consultation with health care provider" (Organization, 2000). 3/4 of the nation's population depends on government hospitals, however most of them lack the necessary resources to fully provide services to the general population. By using prescription drugs under paramedic consultation, this is considerably improving the practice of SM. People are becoming more aware of pharmaceuticals, particularly over-the-counter medications, as a result of the rise in the literacy rate. People now have simple access to smartphones and the internet due to the advancement of information technology. People may look up their health conditions on Google (Pradhan, 2004).

Gastritis is an inflammation or irritation of the stomach's lining. Acute gastritis is a quick, severe sickness, while chronic gastritis is a long-term ailment. Sometimes, a rare form of gastritis can be dangerous or even fatal because of persistent symptoms or internal bleeding. This condition is also known as peptic ulcer disease or acid peptic diseases. More than 90% of chronic gastritis/peptic ulcer disease cases have H. pylori as the etiological culprit. The majority of cases of chronic gastritis are caused by the H. pylori infection, which is present in an estimated 50% of the world's

population. Asia and developing nations experience a high prevalence of gastroenteritis, which is an etiological reason for autoimmune diseases, lifestyle modifications, stress, coffee consumption, and acidic beverages all contributed to gastritis.Biliary reflux, pernicious anemia, long-term consumption of spicy and fizzy foods, smoking, drunkenness, and long-term NSAID use (Silwal et al., 2021). The prevalence of gastritis globally consistently correlates with people's socioeconomic status, despite the lack of more conclusive epidemiological data (Rugge et al., 2011). There are two types of gastritis. Acute and chronic gastritis is a sudden inflammation of the stomach lining. Acute gastritis is often only temporary. The chronic gastritis is the presence of persistent mucosal inflammatory alterations that ultimately result in mucosal atrophy and epithelial metaplasia is known as chronic gastritis (Silwal et al., 2021).

METHODOLOGY

Study sample and recruitment

The study sample recruitment, the target population included all the medical and non-medical students belong to different departments of the universities in Lahore. To determine the knowledge and use of self-medication in both male and female students, we examined data from different universities in Lahore. According to the prepared Performa, we were taking the history from the students.

Sample size

The study included about 456 cases including both males and females after taking written informed consent from the students.

Study design

A retrospective study looks backward and examines the level of knowledge between medical and non-medical students about gastritis at the start of study.

In our case, as we study the level of self-medication between medical and non-medical students or exposure the potential risk or complication associated with self-medication and established outcome at start of study.

Age

Students are selected from age group 18-40 years, in which males and females from all age group from Lahore are included.

Gender

Males and females are selected from randomized study of gastritis disease from selected age group to determine knowledge and use of self-medication.

Methods of data collection

To gathered data, planned interviews were taken from students either related to medical or non-medical. A questionnaire was also made which contain some information i.e., information about practice of medicine and take previous history of self-medication and attitude, awareness and knowledge of medicine that leads to gastritis. To check knowledge and awareness of self-medication, questions were asked from students to get the detail of complications and adverse effect or side effects, they were faced during self-medication. Students were also requested to define their health conditions after self-medication.

Inclusion and Exclusion criteria

Inclusion criteria

Students who were willing to participate, students who survive with gastritis, students of age group 18-40 years and students belonging to both male and female were included.

Exclusion criteria

Students who were not willing to participate, students who were not survive with gastritis, students who were not falling in this age group 18-40 years and students belonging to both male and female were included.

Data analysis

After collection of data from students was examined and explained by using SPSS software of version 29.02.0 (20). The process and procedure of data collecting were documented and represented graphically.

Results

Table 1: Socio-demographic characteristics of participants

Character		**N**	**Frequency**	**Standard deviation**
Gender	Male	456	147	0.46790
	Female		309	
Age	18-25	456	395	1.53690
	26-33		58	
	34-40		3	
Field of students	Medical	456	192	0.51227

	Non-medical		264	

Percentage in different group of ages

To evaluate the knowledge that leads self-medication with gastritis, student from different age groups were selected. Total 456 students were evaluated from which 395 are from 18-25 years' age group, 68 are from 26-33 years' age group, 3 are from 34-40 years' age group as shown in table 1.

Table 2: Frequency in different group of ages

Age group	Frequency of students	Percentage of students
18-25	395	86.6
26-33	58	12.7
34-40	3	0.7

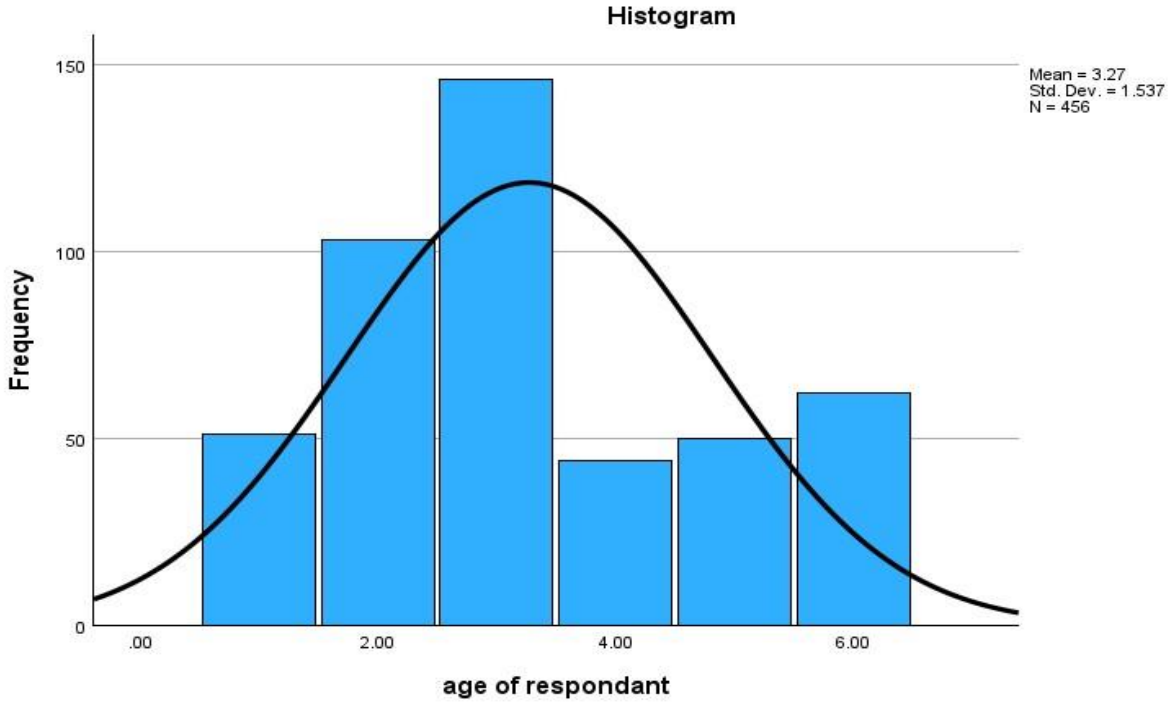

Fig 1.1 Percentage of gastritis among different age groups

Frequency of the students related to medical and non-medical

We took total 456 students from different universities of Lahore related to medical and nonmedical field in which 192 students are from medical field and 264 students are from nonmedical field.

Table 3: Frequency of the students medical vs. non-medical

Students	**Frequency of students**	**Percentage of students**
Medical	192	42.1
Non-medical	264	57.9

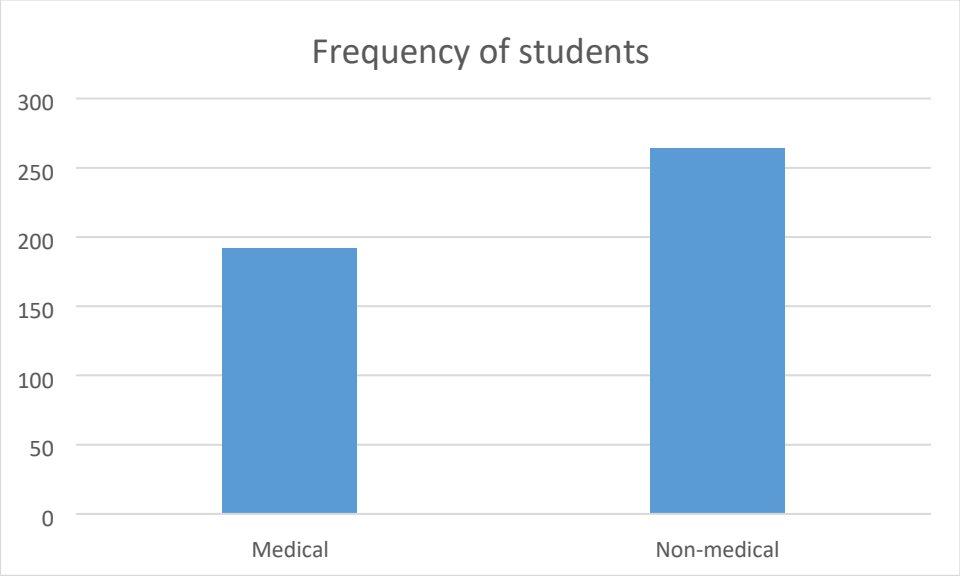

Fig 1.2: Frequency of the students medical vs. non-medical

Comparison of reasons of practice in self-medication with gastritis

Among 456 students 51 students have convenience way of practiced self-medication, 103 students are familiar with medication, 146 students have previous successful experience, 44 students have lack of time to visit doctor, 50 students are going cost saving in self-medication with gastritis. These students having self-medication practice with gastritis. Others 62 students may be not familiar with medicines or may not be have successful experience or may not related to the medical field.

Table 4: frequency in comparison of reasons of practice in self-medication

Reasons	**Frequency of students**	**Percentage of students**
Convenience	51	11.2
Familiarity with medication	103	22.6
Previous successful experience	146	32
Lack of time to visit doctor	44	9.6
Cost saving	50	11
Others	62	13.6

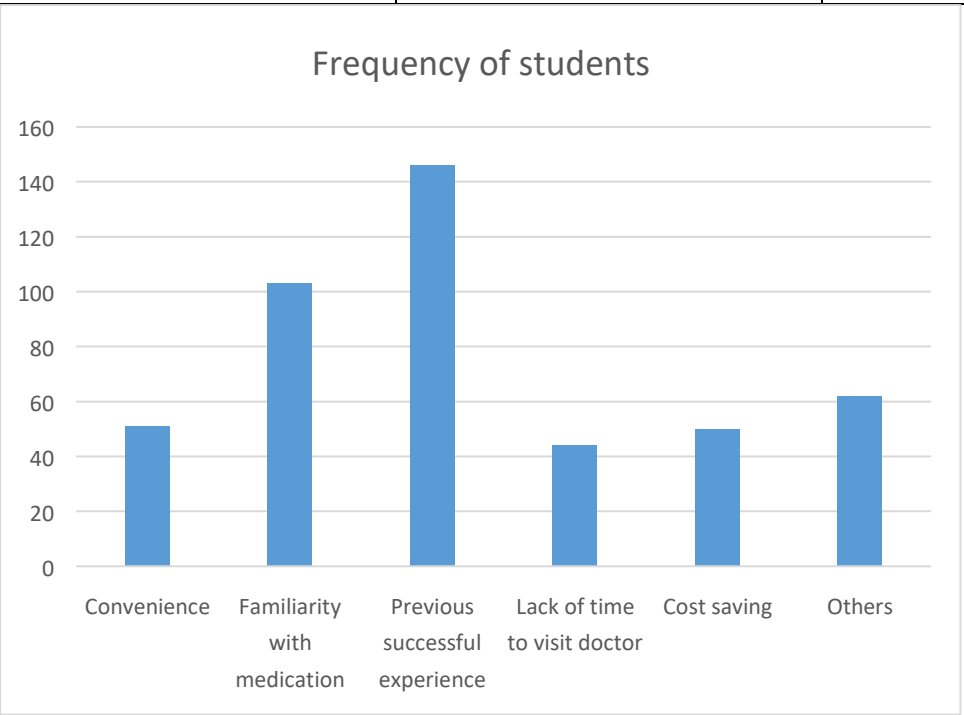

Fig 1.3: Comparison of reasons of practice in self-medication

Comparisons of use of medicines during gastritis

There are many medicines used in gastritis condition like risek, gaviscon syrup, mucaine, rulling, tagamate and zantac etc. different students use different medicines for gastritis. Among 456 students 148 students use proton pump inhibitors (PPIs),162 students use antacids, 16 students use H2 blockers for the treatment of gastritis. Others 130 students are not familiar with these medicines or may related to non-medical field.

Table 5: Frequency of comparisons of use of medicines during gastritis

Medications	**Frequency of students**	**Percentage of students**
PPIs	148	32.5
Antacids	162	35.5
H2 blockers	16	3.5
Not familiar with any of these	130	28.5

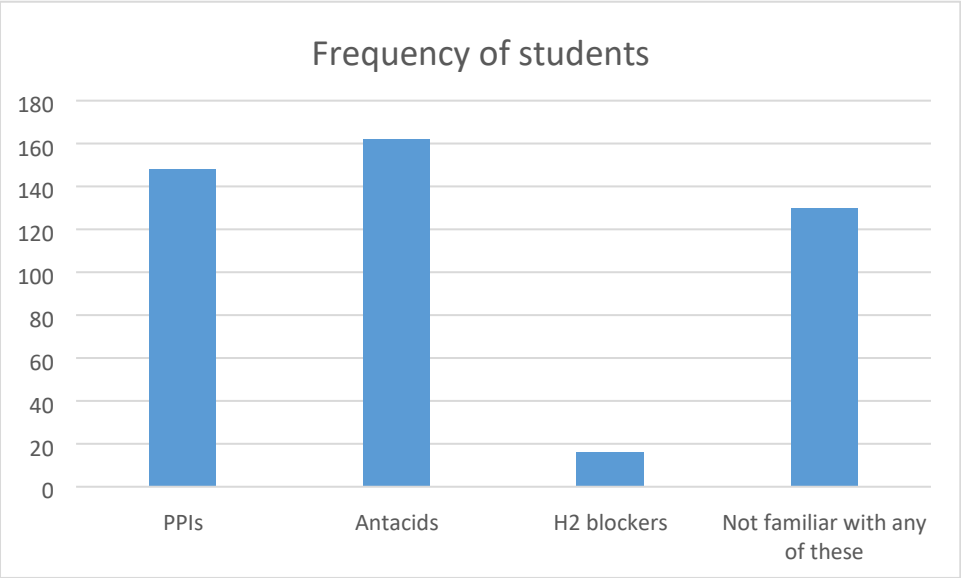

Fig 1.4: Comparison of use of medicines

Sources gathered by students about self-medication in gastritis

Students gather information of medication by different ways. This graph shows the sources by which students gets information about medication for gastritis. Out of 456 students 66 students use internet, 143 students get information about medicine from family and friends, 152 students have health care professionals to get medication, 53 students use pharmacy staff, 24 students use social media while 18 students use printed materials for self-medication with gastritis.

Table 6: Sources used by students for practicing self-medication

Sources	**Frequency of students**	**Percentage of students**
Internet searches	66	14.5
Family and friends	143	31.4

Health care professionals	152	33.3
Pharmacy staff	53	11.6
Social media	24	5.3
Printed materials	18	3.9

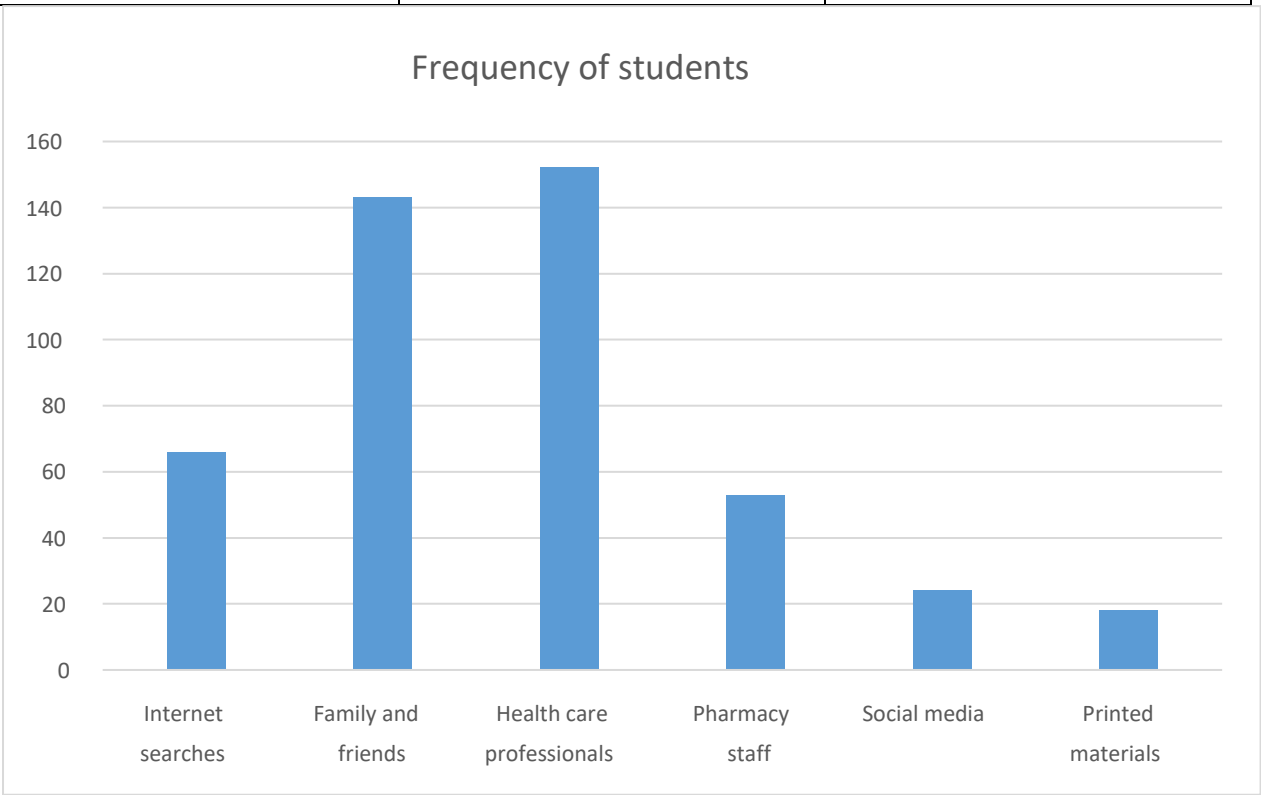

Fig. 1.5: Sources gathered by students

DISCUSSIONS

Now a days locally and globally self-medication becomes a popular trend (Bennadi 2013). Various studies were conducted in Pakistan which shows that self-diagnosing and treatment increasing day by day. This has serious implications regarding false diagnoses, misuse of drugs and occurrence of adverse effects (Haseeb and Bilal 2016). Woefully, gastritis is not managed seriously until worse symptoms appears such as gastric perforation (Khan, Zeb et al. 2017). People treat mild dyspepsia and heart burn with home remedies. In worst conditions, when allopathic treatment becomes unavoidable, people OTC medicines upon recommendation of friends or relatives but does not visit doctor. Such practices lead to worsening the disease and causing life threatening adverse effect. This study was conducted to observe the level of students' knowledge and use of self-medication practices of medical students vs non-medical

students with gastritis in Lahore universities. According to this study, 67.8% of the participant opted for self-medication for the relief of gastritis. The self-medication prevalence is very much higher in Pakistan according to the studies which are conducted by (Zafar, Syed et al. 2008) and (Afridi, Rasool et al. 2015).

Amongst the different drugs available, antacids were the most consumed medication (35.52%), which is comparable to another study conducted in Pakistan, by (Chattha, Zaffar et al. 2020). In our study 46.49% of students mention that self-medication is a safe practice while rest of the students mention self-medication is not a safe practice.

Most of the participants were female students (67.8%) and belong to the age group 18-40 years. Majority of the students related to the field of medical science and have knowledge about medicine so practicing self-medication. In this study, 53.51% students admitted that self-medication is not a safe practice and have not much knowledge about potential risk of medicine that's why they concern with health care professionals, family and friends, internet searches, pharmacy staff, social media and other printed materials.

This study had a limitation that only for the universities of Lahore, was included because of an easy access. Multiple areas could not be included because of deficiency of fund and resources.

CONCLUSIONS

A durable aim of self-medication for gastritis was observed amongst the university students of Lahore. This was generally observed that most of students have knowledge of medicines due to relate with medical field and have an easy access to the health care provider while non-medical students have no knowledge about medicines because of lack of awareness of drug complication and difficult access to the doctors. For encouragement of knowledge efforts needed to be done at individual and state level. Giving the knowledge about drug adverse effects and self-medication to the students of universities in Lahore should be spread by different means like social media, printed materials, conferences and by free medical camp. Most importantly, self-medication should be discouraged by making strong legislation regarding the sale of drugs without prescription.

References

[1] Organization, W. H. (2000). *Guidelines for the regulatory assessment of medicinal products for use in self-medication*. Retrieved from

[2] Pradhan, M. R. (2004). ICTs application for better health in Nepal. *Kathmandu University Medical Journal, 2*(2), 157-163.

[3] Silwal, S., Acharya, A., Baral, B., Devkota, A., Subedee, A., & Paudel, U. (2021). Knowledge Regarding Gastritis among Late Adolescence in Central Nepal. *Marsyangdi Journal*, 81-93.

[4] Rugge, M., Pennelli, G., Pilozzi, E., Fassan, M., Ingravallo, G., Russo, V. M., & Di Mario, F. (2011). Gastritis: the histology report. *Digestive and Liver Disease, 43*, S373-S384.

[5] Koskenpato, J., Färkkilä, M., & Sipponen, P. (2002). Helicobacter pylori and different topographic types of gastritis. *Scandinavian Journal of Gastroenterology, 37*(7), 778-784.

[6] Bennadi, D. (2013). "Self-medication: A current challenge." Journal of basic and clinical pharmacy 5(1): 19

[7] Haseeb, A. and M. Bilal (2016). "Prevalence of using non prescribed medications in economically deprived rural population of Pakistan." Archives of Public Health 74: 1-7.

[8] Khan, M. S., et al. (2017). "Aetiological factors of non-traumatic duodenal perforation." Pakistan Journal of Physiology 13(1): 19-21.

[9] Zafar, S. N., et al. (2008). "Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes." Journal of the Pakistan Medical Association 58(4): 214.

[10] Afridi, M. I., et al. (2015). "Prevalence and pattern of self-medication in Karachi: A community survey." Pakistan journal of medical sciences 31(5): 1241.

[11] Chattha, I. R., et al. (2020). "Prevalence of self-medication for acid peptic disease amongst people of Manawa, Lahore." Cureus 12(1).

[12]