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Research article *Pharmacy Practice*

Assessment of knowledge, attitudes, and practices about anti biotics on kerala zone

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ABSTRACT

To reduce the magnitude of antimicrobial resistance, there is a need to strengthen the knowledge for future prescribers regarding use and prescription of antibiotics. Before that, it is required to have conclusive evidence about knowledge, attitude, and practices of that group. To assess the knowledge, attitudes, and the practices of pharmacy students in India with respect to antibiotic resistance and usage. It was a cross-sectional study which was done online through Google forms for a period of 4 months from July to October 2018. Materials and Methods: A structured questionnaire containing a five-point scale was sent to medical students across India by sharing link through contacts of pharmacy students association kerala colleges. Respondent-driven sampling technique was also adopted for the study. Descriptive statistics, parametric (Chi-square), and nonparametric (Kruskal--Wallis and Mann--Whitney U) tests. A total of 474 responses were received from kerala colleges. The mean score of knowledge was 4.36 ± 0.39. As compared to first year students, knowledge was significantly higher among students of all the years. As much as 83.3% students have consumed antibiotics in previous year of the survey. Around 45% of medical students accepted that they buy antibiotics without a medical prescription. Conclusion: The knowledge level of pharmacy students was quite satisfactory. As far as attitude and practices are concerned, there is a substantial need for improvements.

Keywords: Antibiotic resistance, knowledge, pharmacy students, practices

INTRODUCTION

Self-medication involves use of medicinal products by the individuals to treat self-recognized diseases or symptoms or the intermittent or continuous use of medication prescribed by a physician for chronic or recurrent disease or symptoms.1 Self-medication also involves acquiring medicines without a prescription or resubmitting old prescriptions to purchase medicines sharing medicines with relatives or members of one's social circle or using left over medication or failing to comply with the professional prescription, either by prolonging it or interrupting it too early or decreasing or increasing the originally prescribed dose. to the knowledge about medicines. Easy access to drugs, influence of advertisements and previous experience of treating similar illness have influenced the practice of self-medication.4 Though Self-medication reduces the burden of governments due to health expenditure linked to the treatment of minor health conditions, yet it is far from being a completely safe practice.5 Self-medication with antibiotics leads to increased risk of antibiotic resistance. Various studies suggest that there is a considerable use of antibiotics without consulting a physician obtained directly from pharmacy or from left over antibiotics.6

Self-medication is widely practiced in both the developed as well as developing countries.3 The advancement in information and communication has lead to easy access differ from the general population in that they are exposed to knowledge about diseases and drugs and hence are the most vulnerable individuals for self-medication.3 While responsible self-medication can be used to prevent and treat symptoms and ailments that do not need medical consultation, self-medication with antibiotics without sufficient knowledge may lead to antibiotic resistance which increases morbidity and mortality.

MATERIALS AND METHODS

The Study Design is descriptive cross-sectional questionnaire based study was conducted in a time span of six months from January 2017 to June 2017. The study population consisted of undergraduate medical students of a Government Medical College and the people from general population attending different pharmacies to purchase drugs without a valid prescription. A total of 180 Pharmacy students and the same number from general population were given a pre-validated questionnaire. 168 from general population and 173 Pharmacy students returned the completely filled questionnaire giving the response rate of 93.33% and 96.11% respectively.

The Study tools a structured questionnaire in Malayalam and English languages was created by reviewing relevant literature and questionnaires used previously in similar studies. The participants were informed about study objectives before data collection, and then their consents were sought and questionnaires were filled only by those who were willing to fill it.

Inclusion criteria

- Of sound mind
- Can communicate by at least one of the means viz. speaking or writing
- Consuming antibiotics without any valid prescription at time of study or having consumed within past one year

Exclusion Criteria

- Of insane mind
- Unable to communicate
- Drug consumers, taking antibiotics with a valid prescription

RESULTS AND DISCUSSION

The total respondents were 168 among general population and 173 among pharmacy students. In general population,60.11% (n=101) were males and 39.89 %(n=67) were females. Among pharmacy students 47.97% (n=83) were males and 52.02% (n=90) were females.

Among 54.76%(n=92) respondents from general population were unmarried. 100.00% students (n=173) were unmarried. 21.42 % (n=36) respondents from general population admitted practicing self-medication with antibiotics where as 82.08% (n=142) medical students practiced antibiotic self-medication. (Table 1) 36.11% (n=13) respondents from general population and 21.83% (n=31) medical students practiced self-medication to save time. 30.55% (n=11) respondents from general population practiced it to save money. 27.77% (n=10) respondents from general population and 57.04% (n=81) pharmacy students had previous experience of treating similar symptoms or re-submitted a previous prescription to get antibiotics. 2.77% (n=1) respondents from general population and 21.12% (n=30) students thought that the illness was minor.2.77%(n=1) respondents from general population used antibiotics to avoid hassles of going to the doctor. (Table 2) 83.33% (n=30) respondents from general population and 89.43% (n=127) pharmacy students used antibiotics to treat fever, cough, cold, sore throat and similar symptoms. 25.00% (n=9) respondents from general population and 5.63% (n=8) students used to treat diarrhea and similar other GI symptoms. 8.44% (n=12) students used antibiotics to treat acne and other skin and soft tissue infections. 2.77% (n=1) respondents from general population and 7.04% (n=10) students used antibiotics to treat urinary symptoms. 5.55% (n=2) respondents from general population and 5.63% (n=8) students used antibiotics for orodental problems (Table 3). Among 13.88% (n=5) respondents from general population and 11.97%(n=17) students searched the internet to find out related drug information. 50.00% (n=18) respondents from general population consulted the chemist/pharmacist before using the antibiotic. 22.22% (n=8) respondents from general population and 23.23% (n=33) students made a guess about the antibiotic to be used.16.66% (n=6) respondents from general population and 12.67% (n=18) students consulted their friends or family. 2.77% (n=1) respondents from general population and 11.26% (n=16) students read the package insert for directions. 2.77% (n=1) respondents from general population and 7.04% (n=10) students used the drug under the influence electronic media advertisement.

Among 38.02% (n`=54) students consulted their textbooks for drug and its dosage. (Table 4) 52.77% (n=19) respondents from general population and 55.63% (n=79) students stopped the antibiotic after disappearance of symptoms. 27.77% (n=10) respondents from general population and 11.26% (n=16) students stopped the antibiotic irrespective of outcome. 16.66% (n=6) respondents from general population and 24.64% (n=35) students continued the antibiotic till full recovery (Table 5). The present study found higher prevalence of antibiotic self-medication among medical students (82.08%). They have easy access to the antibiotics through physiciansamples and “The White Coat” guarantees trouble free access to drugs available in pharmacies. In Kerala, antibiotic self- medication prevalence among medical students observed in different studies is 57% in north and 15.33% in South.7.8 Prevalence observed among pharmacy students

In this study the common reasons for self-medication in general population were that it saves time (36.11%) and money (30.55%). But in pharmacy students the common reasons where they had previous experience of treating similar ailment (57.04%) and the disease was minor (21.12%). It shows that medical students self-medicate with antibiotics mostly because they have easy access to information from drug indices, literature, and other medical students to self-diagnose and self-medicate. Sonia et al, in a study conducted in In a study conducted in urban areas of Peshawar Pakistan, high cost of health care was mentioned the main reason for self-medication by majority (88%)

The present study reveals that in general population 83.33% used antibiotics to treat fever, cough, cold, sore throat and similar other symptoms. 89.43% students used the antibiotics for similar symptoms. The second common illness treated by antibiotic self- medication was diarrhea in general population (25.00%) and UTI by students (7.04%). In a comparative study conducted in Mumbai India among students, the common ailments for which self-medication was used were fever (89%), common cold (84%) and headache (83%).16

In the present study the major source of information about the drugs was pharmacist for the general population (50.00%) and textbooks for the students (38.02%).

The present study shows 52.77% respondents from general population and 55.63% pharmacy students discontinued the antibiotics on the disappearance of the symptoms and only 16.66% respondents from general population and 24.64% pharmacy students continued the antibiotic till full recovery.

Summarizing the observations of the present study it was found that antibiotic self-medication is more common in students as compared to general population. But the majority in both the groups stop the antibiotics as soon as the symptoms disappear. Pharmacists in general population and textbooks in pharmacy students are the major source of drug information. Fever and respiratory symptoms are the major diseases for which antibiotics were used in both the groups almost equally. Though the antibiotic self-medication is more prevalent in pharmacy students, but the pattern of usage in medical students was found almost similar to general population which is contrary to the expectations as pharmacy students have a better knowledge of consequences of antibiotic misuse and are expected to use the drugs more rationally.

One limitation of this study is recall bias. We tried to minimize it by using a well-structured pre-validated questionnaire. Another limitation is the limited sample size, which we tried to overcome by use of a random sampling method so as to generalize the findings. The present study is a single institution study, and exploratory in nature. It adds to our understating of antibiotic self-medication patterns in different population groups. It provides a basis for future multi-center confirmatory studies with large sample.

Table 1: Demographics of study population.

Particulars	Population	Pharmacy students
Total Defendants	168	173
Males	101 (60.11)	83 (47.97)
Females	67 (39.89)	90 (52.02)
Age	34 (20.23)	173 (100.00)
Un Educate	134 (79.76)	173 (100.00)
Married	76 (45.23)	-
Un married	92 (54.76)	173 (100.00)
Use of self-medication	36 (21.42)	142 (82.08)
Non-self	132 (78.57)	31 (17.91)

Table 2: Reasons for antibiotic self -medication.

Reason	Population	Pharmacy students
Saves time	13(36.11)	31(21.83)
Saves money	11(30.55)	-
Previous experience	10(27.77)	81(57.04)
Minor illness	1(2.77)	30(21.12)
Avoids hassles	1(2.77)	-

Table 3: Diseases /symptoms treated by antibiotic self –medication

Diseases	Population	Pharmacy students
Fever, cough, cold, sore throat	30 (83.33)	127 (89.43)
Diarrhea	9 (25.00)	8 (5.63)
Skin infections	-	7 (4.92)
Acne	-	05 (3.52)
UTI	1 (2.77)	10 (7.04)
Orodental	2 (5.55)	8 (5.63)

Table 4: source of information

Source	Population	Pharmacy students
Internet	5(13.88)	17(11.97)
Chemist/pharmacist	18 (50.00)	-
Self-guess	8(22.22)	33(23.23)
Family/friends	6(16.66)	18(12.67)
Package insert	1(2.77)	16(11.26)
Radio/tv ad	1(2.77)	10(7.04)
Textbooks	5(13.88)	54(38.02

Table 5: Mode of terminating antibiotic self- medication course.

Diseases	Population	Pharmacy students
After symptomsdisappear	19 (52.77)	79 (55.63)
After few days (despitenature of outcome)	10 (27.77)	16 (11.26)
After complete recovery	6 (16.66)	35 (24.64)
Prolonged use	1 (2.77)	12 (8.45)
After symptomsdisappear	19 (52.77)	79 (55.63)

CONCLUSION

Antibiotic self-medication is a global public health problem and enhances the development of antibiotic resistance. The high prevalence of antibiotic self- medication among pharmacy students compared to general population is a matter of great concern. They will be this future drug prescribers and health care educators. They need to be targeted repeatedly during their education and be taught the value of using antibiotics with caution. Community pharmacists could play a crucial role in controlling the irrational antibiotic use by general population. Public awareness and strict enforcement of law to control the sale of antibiotics without a valid prescription are needed to minimize antibiotic self-medication and associated risks.

REFERENCES

1. WHO. The role of pharmacist in self-care and self-medication. Report of the fourth WHO consultative group on the role of pharmacist. Available from: https://apps.who.int/medicinedocs/pdf/whozip32e/whozip32e.pdf.
2. Loyola Filho AI, Lima-Costa MF, Uchôa E. Bambuí Project: a qualitative approach to self-medication. Cad Saude Publica. 2004;20(6):1661-9. doi: 10.1590/s0102-311x2004000600025, PMID 15608869.
3. Gupta M. kasulkar AA. Pattern of self-medication among dental students in private institute. Int J Recent Tren Sci Technol. 2015;16(3):603-5.
4. Girish HO, Divya HM, Prabhakaran S, Venugopalan PP, Koppad R, Acharya A. A cross-sectional study on self-medication pattern among medical students at Kannur, North Kerala. J Evol Med Dent Sci. 2013;2(45):8693-700. doi: 10.14260/jemds/1509.
5. Shakeel AM, Shakil UR. Prevalence and pattern of self-medication practices in rural areas of Central Kashmir. Int J Pharm. 2015;5(4):1255-60.
6. Tesaf T, Foltan V, Langsadl L, Binder R. Consumption of antibiotics and self-medication within the Slovak Republic. Acta Fac Pharm Univ Comen. 2005;52:210-7.
7. Sankdia RK, Agrawal M, Rekha PB, Kothari N. A questionnaire based study regarding the knowledge, attitude and practice of self-medication among second year undergraduate medical students. Int J Pharmacol. 2017;6(1):1-5. doi: 10.5530/ijpcs.6.1.1.
8. Stephen S, Sukanya M, Thanu S, Treessa TS, Shettigar D. Self-medication practices among undergraduate nursing students in south India: a cross sectional study. Am Int J Res Sci Tech Eng Mathemat. 2013;3(2):159-62.
9. Aljaouni ME, Hafiz AA, Alalawi HH, Alahmadi GA, AlKhawaja I. Self-medication practice among medical and non-medical students at Taibah University, Madinah, Saudi Arabia. Int J Acad Sci Res. 2015;3(4):54-65.
10. Lukovic JA, Miletic V, Pekmezovic T, Trajkovic G, Ratkovic N, Aleksic D et al. Self-medication practices and risk factors for self-medication among medical students in Belgrade, Serbia. PLOS ONE. 2014;9(12):e114644. doi: 10.1371/journal.pone.0114644, PMID 25503967.
11. Assad T, Karim N, Younus I, Feroz Z. Self-medication patterns among undergraduate medical students: A cross sectional institution based study. PTB Reports Biomed rep. 2017;3(2):43-6. doi: 10.5530/PTB.2017.3.8.
12. Heidarifar R, Koohbor M, Kazemian MM, Mikaili P, Sarahroodi S. Self medication with antibiotics among Iranian Population in Qom State. J Scienti Innovat Res. 2013;2(4):785-9.
13. Imtiaz S, Salam NA, Kamran. Conditions, frequencies, and sociodemographic factors leading self medication practice in Sargodha area of Punjab Pakistan. J Appl Pharm. 2013;5(4):819-26.
14. Khan SJ, Amanullah KS, Shah N. Self-medication with antibiotics in urban areas of Peshawar. Gomal J Med Sci. 2011;9(1):1-4.
15. Keshari SS, Kesarwani P, Mishra M. Prevalence and pattern of self-medication practices in rural area of Barabanki. Ind J Clin Pract. 2014;25(7):636-9.
16. Divya S, Katlam S, Mohanty IR, Jindal JD, Deshmukh YA. Comparative assessment of self-medication practices among under-graduate medical and engineering students. J Commun Healt Managem. 2014;1(1):23-9.
17. Kasulkar AA, Gupta M. Self-medication practices among medical students of a private institute. Ind J Pharm Sci. 2015;77(2):178-82. doi: 10.4103/0250-474x.156569, PMID 26009650.
18. Donkor ES, Tetteh-Quarcoo PB, Nartey P, Agyeman IO. Self-medication practices with antibiotics among tertiary level students in Accra, Ghana: a cross-sectional study. Int J Environ Res Public Health. 2012;9(10):3519-29. doi: 10.3390/ijerph9103519, PMID 23202760.