

A STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE ON OVER-THE-COUNTER DRUGS AMONG MEDICAL AND PARAMEDICAL STUDENTS IN A TERTIARY CARE TEACHING HOSPITAL.

Pharma

Dr. Deepjyoti Bharali	Post Graduate Trainee, Department of Pharmacology, Gauhati Medical College and Hospital, Guwahati 32
Dr. Diptimayee Devi	Professor and Head, Dept of Pharmacology, Gauhati Medical College and Hospital, Guwahati 32.
Dr. Urmi Choudhury	Associate Professor, Department of Pharmacology, Gauhati Medical College and Hospital, Guwahati 32.
Dr. Siddhartha Krishna Deka	Post Graduate Trainee, Department of Pharmacology, Gauhati Medical College and Hospital, Guwahati 32.

ABSTRACT

Background: Over The Counter (OTC) drugs are those drugs which can be sold in the pharmacy without the prescription of registered medical practitioners. The use of OTC drugs is on rise in our society. But irrational use of OTC drugs may lead to adverse drug reaction, drug abuse and drug dependency. As medical and paramedical students will serve and council common people in the society in future, that is why this study was conducted to assess their knowledge, attitude and practice of OTC drugs. **Aims and Objectives:** The aim of this study was to assess knowledge, attitude, and practice of Over The Counter drugs use among medical and Paramedical students in a tertiary care teaching hospital. **Materials and methods:** This is a cross-sectional questionnaire based study. A questionnaire was designed and used to collect data on individual KAP on Over-the-Counter Drugs from 306 students. Only those students who gave prior written informed consent to participate were included in the study. The data of the completely filled up questionnaires were analyzed and presented as mean and percentage. **Results:** Out of 306 students 89.5% have used OTC drugs. Most common indication for using OTC drugs is fever and generalized weakness (69.3%). 81% of the students are aware of the harmful effects of OTC drugs. Majority of the students (54.9%) store the OTC drugs in their study table. Ease and convenience is the most common reason (78.4%) of using OTC drugs. **Conclusion:** Use of OTC drugs is very common among medical and paramedical students. They are the future medical practitioner in the society. So it is important to make them educated and aware of the proper use of OTC drugs and adverse effects associated with OTC drugs us

KEYWORDS

OTC drugs, knowledge, attitude, practice

INTRODUCTION

The ongoing trend of Over-the-Counter (OTC) Medicines' use has grown steadily in the last few years. "Over-the-counter (OTC) medicines are medicines that may be sold directly to a consumer without a prescription from pharmacy personnel, in comparison with prescription drugs, which are dispensed only to consumers having a valid prescription"¹. Lack of adequate knowledge about OTC medications may directly lead to adverse drug reactions and non-compliance to treatment programs. The evidence of self-medication practice of OTC drugs has been on rise.²⁻⁴

The Drug and Cosmetics Rules of 1945 categorized prescription drugs under two schedules: Schedule H and Schedule X. Drugs listed under these schedules can only be sold on prescription by an RMP. Purpose of this regulatory provision is to discourage self drug use. In India, patients self-order both OTC and prescription-only drugs, however the dispensing of the latter without a prescription is unlawful. Despite regulations, in many developing countries, most medications are available without prescriptions.⁵ According to World Health Organization (WHO) self-medication is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms. Self-medication involves acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using spare medicines stored at home.⁶

SM practice is observed in every age group, though its degree differs among individuals and regions. Self-medication holds a special significance among pharmacy and medical students as they are the future health care practitioners and have an important role in counseling their patients about the advantages and disadvantages of self-medication. They also are different from the general population as they are well-exposed to the knowledge about diseases and drugs.⁷ It is advisable to assess people's knowledge and understanding about OTC drugs to prevent the usage of OTC drugs that can cause unwanted drug interactions, ADRs, misuse/abuse of drugs.⁸ Significant variability has been reported in different studies regarding the knowledge, attitude, and practice of healthcare professional students towards self-medication use and associated ADRs.^{9,10,11} This study presents to assess

the medical and paramedical students' knowledge, attitude, and practice towards Over The Counter drug use.

AIMS AND OBJECTIVES

The aim of this study was to assess knowledge, attitude, and practice of Over The Counter drugs use among medical and Paramedical students in a tertiary care teaching hospital.

MATERIALS AND METHODS

A cross-sectional analysis was conducted among medical and paramedical students of Gauhati Medical college and hospital, Guwahati over a period of 2 months with a self-structured and pre-validated questionnaire. Prior Ethical permission was taken from Institutional Ethics Committee. Study population included 306 medical and paramedical students. This study was a questionnaire based study. A self-developed questionnaire was prepared and was given to medical and paramedical students. Prior written informed consent was taken from participants. After collecting the questionnaire, the data were analyzed using Microsoft Excel and results were expressed as mean and percentage.

RESULTS AND OBSERVATION

In current study 306 medical and paramedical students participated. Average age of the participants is 20.9 years. In our present study 176 (57.5%) participants were male and 130 (42.5%) participants were female.

Among 306 participants 166 (54.2%) were MBBS students, 96 (31.4%) were pharmacy students, 30 (9.8%) were nursing students whereas 14 (4.6%) were students of other paramedical fields.

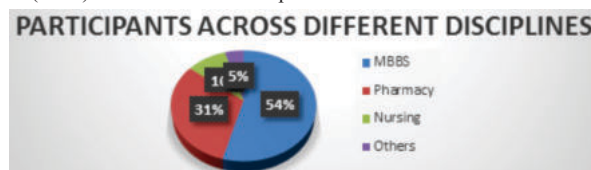


Figure1: Distribution of participants across different disciplines

Among all 306 students from different courses, 88(28.8%) were first year students, 172(56.2%) were second year students, 38(12.4%) were third year students and 8(2.6%) were fourth year students.

In our study 274(89.5%) respondents were found to have ever used OTC drugs. Among those who have used OTC drugs most of the respondents (47.4%) used OTC drugs Sometimes, followed by 29.9% respondents used occasionally, 9.48% used mostly, 9.48% used rarely and 3.6 % respondents used always.



Figure 2: distribution of participants on the basis of OTC drug use.

The most common indication for using OTC drugs among medical and paramedical students participating in our study was fever and generalized weakness (69.3%). 49% respondents have said they have used OTC drugs for gastrointestinal diseases followed by 30.7% for respiratory diseases, 20.3% for skin diseases, 1.3% for renal diseases, and 0.7% for other indications.

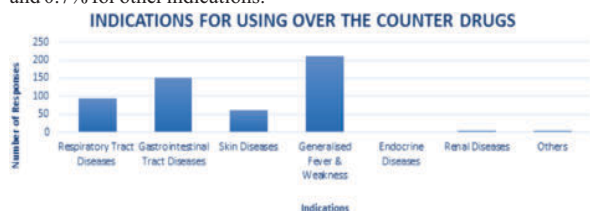


Figure 3: Indications for using OTC drugs.

As per our study the important things to be noted at the time of purchasing OTC drugs are expiry date(92.2%), instruction for taking drugs (69.9%), manufacturing date(36.6%), schedule H/Schedule K drugs(28.8%), batch number (19%)

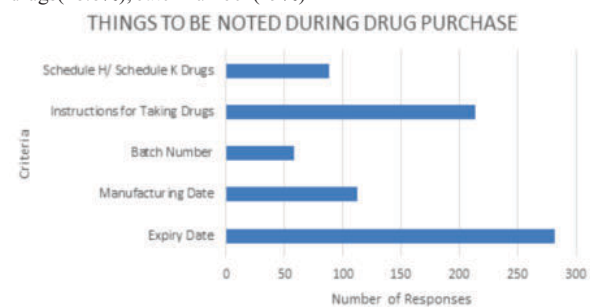


Figure4: things to be noted during drug purchase.

Only 34(11.1%) respondents thought that all OTC drugs are safe and effective, while 176(57.5%) respondents thought the opposite. 96(31.4%) respondents said they didn't know whether all OTC drugs are safe and effective or not.

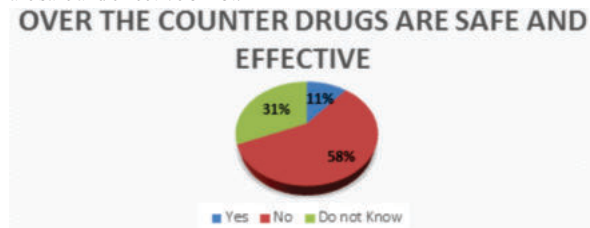


Figure 5: All OTC drugs are safe or not.

In our study it was found that 248(81%) respondents were aware of the harmful effects of OTC drugs and 58(19%) respondents were not aware of the same.

The reasons for using OTC drugs are ease and convenience (78.4%),

time saving (41.2%), less expenditure (25.5%) and hesitance to visit doctors(17.6%).



Figure 6: Reasons for using OTC drugs.

Regarding storage of the OTC drugs, the places where respondents said they stored the drugs are bedroom (51%), study table(54.9%), kitchen (3.9%) and refrigerator (10.5%).

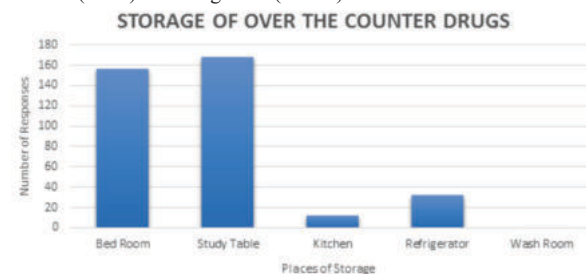


Figure 7: Places for storing OTC drugs.

Among the participants 158(51.6%) said OTC drugs are cheaper and convenient, while 88(28.8%) didn't agree to that. 60(19.6%) participants said they didn't know about that.

In current study, 282 participants (92.2%) said OTC drugs can't be used in all drugs. On being asked in which categories OTC drugs can't be used 246 participants (80.4%) said in pregnant mothers followed by infants (77.1%), lactating mothers(60.1%), old age(50.3%) and others(17.3%).

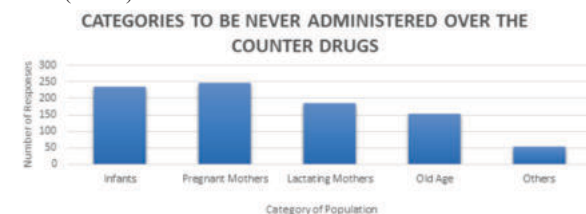


Figure 8: Categories where OTC drugs can't be used.

In the current study on being asked regarding what should be done if OTC drugs show change in texture, shape, smell, taste and colour 294(96.1%) respondents said the drug should be stopped and discarded immediately while 8(2.6%) participants said in favour of continuing the drug in low dose if it hasn't expired. 4(1.3%) participants favoured continuing the drugs even after expiry.

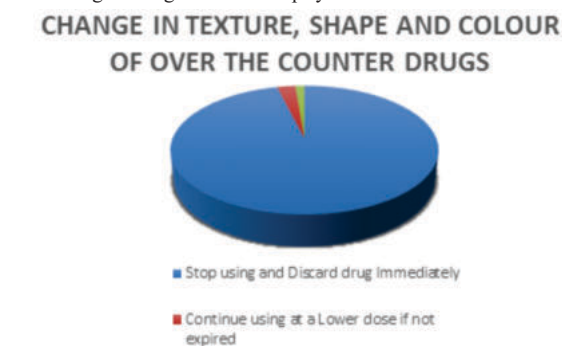


Figure 9: What to do if OTC drugs show change in texture, smell, shape, taste and colour.

DISCUSSION

OTC drugs are important means to treat common diseases in the society. With the cost of our health care system going up, the demand for treating mild diseases with OTC drugs has been growing over the time. In the current study it was found that 89.5% respondents have

used OTC drugs for self medication. In the study by Bekele *et al*¹² found that 79.7% respondents practiced self medication which is in coherence with our study. The current study found 'fever and generalized weakness' as the most common (69.3%) indication for use of OTC drugs followed by gastrointestinal diseases (49%) and respiratory tract diseases (30.7%). This finding is consistent with the study done by Bekele *et al*¹² where it was found that fever/headache (80.2%) was the most common reason for using OTC drugs. In our study 92.2% participants said that OTC drugs can't be used in all patients. Pregnant mothers (80.4%) and infants (77.1%) were the most common categories where respondents said all OTC drugs can't be used.

In a study by Tesfamariam *et al*¹³ it was found that 35% of the respondents read package insert(s) and 73.9% check expiry dates while purchasing OTC drugs. In contrast our current study found 92.2% respondents checked expiry date and 69.9% respondents checked instruction manuals inside the package. The low percentage found in the study by Tesfamariam *et al*¹³ could be because the study was done among common people while our study was done among medical and paramedical students.

The current study found that 'ease and convenience' (78.4%) and 'time saving' (41.2%) were the most common reasons for use of OTC drugs among the respondents where as in the study by Bekele *et al*¹² to save time (77.4%), Quick relief (62.4%) were found to be the most common reasons for using OTC drugs.

In current study, it was noticed that most of the respondents stored the OTC drugs on study table (54.9%) followed by in bedroom (51%), where as in the by Bekele *et al*¹² it was found that a significant number of the respondents stored OTC drugs in medicine box (cabinet) (46.2%).

In current study, when asked about what they will do if OTC drugs show a change in shape, color and or odor, 2.6% respondents said they would continue using the drugs till it expired and 1.3% respondents said they would continue using the drugs even after expiry, which is concerning considering the medical and paramedical backgrounds of the respondents. In the study by Bekele *et al*¹² 14.9% respondents said that they would continue using the drugs till it expires whereas 3.3% said that they would continue using even after expiry.

CONCLUSION

Use of OTC drugs is on rise specially to treat mild diseases. It is more prevalent among medical and paramedical students. As the medical and paramedical students will go and serve the society in future it is important for them to have proper knowledge about OTC drugs. Our study concludes that medical and paramedical students have satisfactory knowledge and positive attitude towards OTC drugs and their uses. However more awareness is required regarding practices of OTC drugs.

REFERENCES

1. Meher BR, Balan S, Pugazhentni E. Knowledge, attitude and practice of over the counter drugs among dispensers working in the retail pharmacies of a south indian city-a crosssectional questionnaire based study. *J Clin Diagnostic Res*. 2018;12(1):17–20.
2. Eissa AT. Knowledge, attitudes and practices towards medication use among health care students in King Saud University. *Int J Med Students*. 2013;1(2):66–9. DOI: 10.5195/ijms.2013.205
3. Dilie A, Gualu T, Haile D, Zuleta FA. Knowledge, attitude and practice of self-medication among health science students at Debre Markos University, Northwest Ethiopia. *J. Public Health Epidemiol*. 2017;9(5):106–13. DOI: 10.5897/JPHE2017.0926.
4. Sharma D, Gurung D, Kaffle R, Singh S. Knowledge and practice on over-the-counter drugs among adults of age group 20 and above residing in Chapapani-12, Pokhara, Kaski, Nepal. *Int J Sci Rep*. 2017;3(3):79–86. DOI: 10.18203/issn.2454-2156.IntJSciRep20170887
5. Paes MR, De Sa S. Drug dispensing practices in private pharmacies in Goa. *Natl J Physiol Pharm Pharmacol* 2018;8(4):507–511.
6. Pevzner. HHS Public Access. *Physiol Behav*. 2017;176(3):139–48.
7. yene A, Getachew E, Doboch A, Poulos E, Abdurahman K. Knowledge, attitude and practice of self-medication among pharmacy students of rift Valley University, Abichu campus, Addis Ababa, Ethiopia. *J Health Med Informat*. 2017;8(269):2. doi:10.4172/2157-7420.1000269
8. Hughes CM, MC Elnay JC, Fleming GF. Benefits and risks of self-medication. *Drug safety* 2001;24:1027–37
9. Dawood OT, Hassali MA, Saleem F, Ibrahim IR, Abdulameer AH, Jasim HH. Assessment of health seeking behaviour and self-medication among general public in the state of Penang, Malaysia. *Pharm Pract (Granada)*. 2017;15(3).
10. Elbur A, Almalki NH, Alghamdi AA. Knowledge, attitudes and practices on medication use and safety among Saudi people: a public-based versus an internet-based survey in Taif, Kingdom of Saudi Arabia. *Saudi J Med Pharm Sci*. 2016;2:99–103. doi:10.21276/sjms.2016.2.6.3
11. James H, Handu SS, Al Khaja KA, Otoom S, Sequeira RP. Evaluation of the knowledge, attitude and practice of self-medication among first-year medical students. *Med Princ Pract*. 2006;15(4):270–275. doi:10.1159/000092989

12. Bekele KM, Abay AM, Mengistu KA, Atsbeha BW, Demeke CA, Belay WS, Yimenu DK. Knowledge, Attitude, and Practice on Over-the-Counter Drugs Among Pharmacy and Medical Students: A Facility-Based Cross-Sectional Study. *Integr Pharm Res Pract*. 2020;9:135–146 <https://doi.org/10.2147/IPRPS266786>
13. Tesfamariam S, Anand IS, Kaleab G, Berhane S, Woldai B, Habte E, Russom M. Self-medication with over the counter drugs, prevalence of risky practice and its associated factors in pharmacy outlets of Asmara, Eritrea. *BMC Public Health*. 2019 Feb 6;19(1):159. doi: 10.1186/s12889-019-6470-5. PMID: 30727984; PMCID: PMC6364400.