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Original Research Article

A study on knowledge and practices of over the counter medications among 1st year medical students

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ABSTRACT

Background: Self-medication is widely practiced worldwide and often considered as a component of self-care. Selfmedication assumes a special significance among the medical students as they are the future medical practitioners and have a potential role in counselling the patients about the advantages and disadvantages of self-medication. Self-medication assumes a special significance among the medical students as they are the future medical practitioners. Medical students also differ from the general population because they are well-exposed to the knowledge about diseases and drugs. Therefore the present study was taken up to assess the extent of knowledge and practices of over the counter (OTC) drugs among the first year medical students in a tertiary care teaching hospital.

Methods: A descriptive, cross sectional, non-interventional, observational study was conducted from November 2017 to January 2018 among 246 first year medical students. The data analyzed using descriptive statistics with percentages and averages using Statistical Package for Social Science (SPSS).

Results: In the present study, it was found that 86% students practiced self-medication. Most common conditions for taking self-medication with OTC was fever (89%) followed by cough and cold (75%). 15% of them experienced adverse reactions on OTC self-medicated drugs. The main source of information during self-medication was reading material (56.3%) followed by advice from seniors/pharmacist (43.7%).

Conclusions: Self-medication is widely practiced among undergraduate medical students. In this situation, we should educate the students about advantages and disadvantages of self-medication of over the counter drugs.

Keywords: Medical undergraduates, knowledge, Over the counter drug, Self-medication, Practice

INTRODUCTION

The non-prescriptive drugs or over-the-counter drugs (OTCs) are the drugs that are purchased without prescription. There are currently more than 300000 different OTC drugs available only in US.[1,2]

There is no regulation for the use of OTC drugs in India. The poor economic status and busy lifestyle of an individual makes him rely on the OTC drugs.

In India, it has been shown that literate people were 76% more likely to self- medicate than illiterate people.[3] Self-medication is widely practiced worldwide and often considered as a component of self-care.[4] The World Health Organization (WHO) has appropriately pointed out that responsible self-medication can help prevent and treat diseases that do not require medical consultation and provides a cheaper alternative for treating common illnesses.[5] The practice of self-medication must be based on authentic medical information otherwise irrational use of drugs can cause wastage of resources, increased

resistance of pathogens, and can lead to serious health hazards such as adverse drug reaction and prolonged morbidity.

Self-medication assumes a special significance among the medical students as they are the future medical practitioners and have a potential role in counselling the patients about the advantages and disadvantages of self-medication. Medical students also differ from the general population because they are well-exposed to the knowledge about diseases and drugs.[6]

Therefore, the present study was taken up to analyze the use of OTC drugs among medical students in a tertiary care teaching hospital.

The Present study is planned to provide baseline data regarding use and knowledge of over the counter drugs among 1st year MBBS medical students. Present study is done to find out pattern and extent of use of OTC drugs and other than OTC drugs among the medical students of a tertiary care teaching hospital.

Objective of the study was to analyze the use of over the counter drugs among medical students in a tertiary care teaching hospital.

METHODS

This was descriptive, observational and cross sectional and non-interventional study. Study was carried out at Rajarajeswari Medical College and Hospital. All the First year MBBS students of Rajarajeswari Medical College were chosen for conducting the study.

Duration of the study was two months (February-March 2018). It was Semi structured and self-administered questionnaire study.

Inclusion criteria

All 1st year MBBS students (246) of Rajarajeswari Medical College were included in this study.

Exclusion criteria

Those not willing or giving consent to participate in the study.

Sampling method

A total of 246 students were present in the first year and complete enumeration method was chosen since all of them were being included in the study.

Study protocol

The study was conducted after getting approval from the Institutional ethical committee.

All the students participating in the study were explained clearly about the purpose and nature of the study in the language they could understand. They were included in the study only after obtaining a written Informed Consent Form. This study was used to conduct the study and the questionnaire consisted of questions which included basic details of the student and questions regarding their knowledge and practice of OTC drugs. A total of 250 students were present in the first year but 246 students were included in the study as 4 were absent despite 3 consecutive attempts.

Data analysis

At the end of the study, all the data was collected and compiled in MS Excel Sheet and results were analyzed using Statistical Package for Social Science (SPSS) version 21.0. All qualitative variables were presented using descriptive statistics with frequency and percentages.

RESULTS

Table 1: Socio demographic characteristics of respondents.

Sample characteristics	Frequency	Percentage (%)
Gender		
Male	97	38.8
Female	153	61.2
Religion		
Hindu	192	76.8
Muslim	22	8.8
Christian	31	12.4
Others	5	2
Type of family		
Nuclear	169	67.6
Joint	81	32.4
Socio- economic status		
Upper class	12	4.8
Upper middle class	152	60.8
Lower middle class	55	22
Upper lower class	26	10.4
Lower class	5	2
Distance to reach the nearest pharmacy		
<15mins	170	68
15-30mins	68	27.2
30mins-1hour	12	4.8
The last time purchased medicine without prescription		
More than 6 months	156	64.2
Less than 6 months	94	37.6

Out of the 250 students, most of them were females 153 (61.2%), remaining were males. Majority of them were Hindus i.e.192 (76.8) followed by Christians i.e.31 (12.4%) Most of the study subjects i.e. 152 (60.8%) belonged to the Upper Middle Class and 55 (22%)

belonged to the Lower class. 196 (65.34%) of the patients were unemployed and the remaining 104 (34.66%) were employed.

Table 2: Knowledge regarding over the counter drugs.

Sample characteristics	Frequency	Percentage (%)
OTC drugs are		
Sold directly without Prescription	210	84
Sold with prescription	25	10
Expensive	15	6
The decision for using OTC drug is made by		
Consumer	121	48.4
Doctors	46	18.4
Pharmacist	83	33.2
OTC drugs are primarily used to treat conditions that		
Do not require doctor's direct supervision	193	77.2
Permanent and life long	23	9.2
No absolute care	34	13.6
OTC drugs are used for treating disease like:		
Hereditary Diseases	31	12.4
Minor and Major illnesses	219	87.6
Are You aware of the Drugs that fall under OTC?		
Yes	178	71.2
No	72	28.8
Over the counter drugs can		
Sometimes can cause side effects	205	82
Mostly cause side effects	36	14.4
Never cause side effects	9	3.6
Most common side effects of OTC are		
Allergic Rashes	148	59.2
Eye irritation	29	11.6
Difficulty breathing	13	5.2
Swelling of face and limbs	60	24
If side-effects are seen, then		
Should Immediately stop the use of drug	230	92
Take low dose/use until side effects subside	20	8
Take low dose/use until side effects subside:		
Yes	125	49.2
No	127	50.8

Regarding knowledge about OTC drugs, majority of the students i.e. 210 (84%) were aware that OTC drugs are dugs sold without prescription. Majority of the study subjects i.e. 219 (87.6%) felt that OTC drugs are used to treat minor or major illnesses when compared to 31 (12.4%) who felt that they are used for hereditary diseases. Most of them 148 (59.2%) had a knowledge that the most common side effect is Allergic rashes and majority of them 230 (92%) felt that the drug should be stopped on observing the side effects.

Table 3: Practice regarding over the counter drugs.

Sample characteristics	Frequency	Percentage (%)
Before using OTC drugs		
Consult with Pharmacist	120	48
Doctors	78	31.2
Friends/seniors/relatives	52	20.8
Place of receiving OTC drugs		
Hospital	73	29.2
Pharmacy	158	63.2
Friends/Relatives/Seniors	14	5.6
When do they consume over-the-counter drugs?		
When symptoms are minor/manageable	110	44
Whenever I feel sick	50	20
When I can't visit the doctor	90	36
Common reason for using OTC drugs is		
Time saving	114	45.6
Low cost	23	9.2
Safe and well tolerable	46	18.4
Easy accessibility	67	26.8
More commonly used OTC drug is		
For Fever	182	72.8
For Cough and Cold	29	11.6
Pain killers	39	15.6
Ever taken OTC drug more than the recommended dose		
Yes	216	86.4
No	34	13.6
Ever experienced adverse effect from OTC drugs		
Yes	38	15.2
No	212	84.8
How often do you read the instructions on drugs label before use?		
Always	68	27.2
Occasionally	145	58
Never	37	14.8
How often do you check the expiry date?		
Always	25	9.2
Occasionally	205	82
Never	22	8.8
If OTC drugs shows change in shape, color, odour, then		
Immediately discard the drugs	115	46
Continue use till it expires	91	36.4
Does not matter	44	17.6

Regarding practice of OTC drugs, most of the students i.e. 120 (48%) consulted the pharmacist for taking OTC drugs. Fourty four percent of the students took self-medication for minor illnesses. Majority of the study subjects i.e. 182 (72.8%) used OTC drugs for treating fever followed by 29 (11.6%) who used them for cough and cold. Majority of them 212 (84.8%) never experienced side effected from

OTC drugs 230 (92%) and around half of them i.e.115 (46%) felt that the drug should be discarded if there is any change in shape, colour or odour.

DISCUSSION

There were 45.6% using OTC as it is time saving which is in accordance with the findings of a study from Boudha, Kathmandu where 48% of respondents used OTC medicines due to ease to get the medicine.[7]

Only 9% of the respondents always check the expiry date before using any OTC drugs which differs to the result obtained from a study done in Malaysia.[7]

In the present study, 84% were aware about the OTC drugs similar to the study conducted in Lagos State, Ikeja, and West Bengal.[8,9] Around half of the respondents (44%) use OTC when symptoms are minor and manageable comparable to study by Ghosh et al.[10] Many of the respondents (72.8%) used OTC drugs for fever (antipyretics) i.e., paracetamol which is in line with the study from Pune, West bengal, and Lagos Residents.[8,9]

The current study showed that more than half of the respondents (54%) had good knowledge on over-thecounter drugs which is similar to a study from Nigeria and Taiwan.[10]

The present study showed that nearly half of the respondents (46%) had level of knowledge regarding over-the-counter drugs from average to poor. However, study by Kasabe et al, found that majority of the respondents stated that their level of knowledge was moderate to low.[11]

The study showed that about half (47%) of the respondents had good practice on over-the-counter drugs and similar results were obtained in a study from Nigeria and Taiwan which is also in line with study conducted by Bhambhani et al.[12]

CONCLUSION

The results show that students are lacking in the concept of over-the counter drugs, consultation of doctor before using the OTC drugs, its adverse effects, caution to be taken, reading the instruction before use, checking the expiry date etc.

In order to control this problem, appropriate measures have to be taken and the prescription system has to standardized and implemented. Conducting awareness programs and restricting drug advertisements for public can be recommended.

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