International Journal of Research in Medical Sciences
Parikh D et al. Int J Res Med Sci. 2013 May;1(2):83-86
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: 10.5455/2320-6012.ijrms20130509

Research Article

A survey study on use of over the counter (OTC) drugs among medical students, nursing and clerical staff of a tertiary care teaching rural hospital

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Received: 24 March 2013
Accepted: 9 April 2013

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ABSTRACT

Aim: The study was conducted to evaluate use of over the counter (OTC) drugs among the medical students, nursing and clerical staff of tertiary care teaching rural hospital to determine the awareness and disadvantages on use of OTC. **Methods:** Responses to a feedback questionnaire covering various aspects on usage of OTC drugs were obtained from 100 medical students, 100 nursing and 100 clerical staff. **Results:** Among 300 respondents, 84% used OTC, commonly purchased by self. Majority of them started self medication within 2 days of their illness. The frequently reported illness that prompted self-medication included headache, cough and cold, fever, generalised weakness, acidity, dysmenorrhoea, and sleep disturbances. Majority of them obtained OTC by mentioning name of drug (81%), 35% by telling symptom and 15% by showing old prescription. We found that 87% people share OTC among relatives and friends. **Conclusions:** Usage of OTC was highest amongst medical students and nursing staff. Time consumption for consultation, the consultation fees and frequent visits were the commonly mentioned reasons for self medication. It was analysed that none of the clerical staff were aware of the drug, dose, frequency of administration and adverse reactions. While very little awareness of medication was found even among nursing staff and medical students. Therefore it is suggested that the public has to be educated on the type of illnesses to be self-diagnosed and medicated, dangers of OTC on misuse which would possibly lead to delay in detection of more serious underlying ailment and timely medication.

Keywords: Over the counter (OTC), Self medication, Awareness, Misuse

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] The list of OTC drugs in the modern society is over expanding with the inclusion of new formulations and prescription to OTC switches.[3,4] As the general rule OTC drugs have to be primarily used to treat a condition that does not require the direct supervision of a doctor and must be proven to be reasonably safe and well tolerated.

There is no regulation for the use of OTC drugs in India. Further in the absence of strategic consideration for the use of OTC drugs, chaos prevails and the reasons for these alarming situations are manifold. Perhaps, the poor economic status and busy lifestyle of an individual makes

him rely on the OTC drugs. In India (1995), it has been shown that literate people were 76% more likely to self-medicate than illiterate people.[5]

It is evident with research that self care improves the health care awareness and reduces the economy related to health care.[6,7] Although OTC drugs are believed to be safe and effective, indeed they are not. They mask the underlying disease and may cause several adverse effects.[8,9]

Therefore the study was taken up to analyze the population at risk, rate of self medication, extent of OTC use and awareness of the adverse effects among the participants.

METHODS

The survey study was conducted with an aim to evaluate use of OTC drugs among the medical students, nursing and clerical staff of tertiary care teaching rural hospital, with an objective to determine awareness and disadvantages on use of OTC drugs. The study was conducted on obtaining the permission from the Institutional Ethical Committee.

Objectives and procedure of the study were explained to the participants and those who were willing to fill the informed consent form were included for the study. A feedback questionnaire covering various aspects of OTC drugs were distributed among the participants. The filled questionnaire feedbacks were retrieved from 300 participants (that included 100 participants from each group).

Statistical analysis: All data obtained were analyzed using the Microsoft Excel software. Descriptive analysis was performed on all the variables to obtain the frequency and percentage followed by chi-square test.

RESULTS

In our study, we observed that of 300 respondents 84% (252) used OTC preparations, commonly purchased by self. Majority of them started self medication within 2 days of their illness.

Sharing of OTC preparations among friends and relatives was found in 87% (261) of total respondents. It was observed that 51% (153) obtained the medications by mentioning the name of the drug, 35% (105) by telling the symptoms to the pharmacist, while 15% (45) by showing the old prescriptions. Among the participants 52% (156) of them were aware about the contraindications of the drugs in pregnancy and children while 32% (96) were aware of their contraindication with alcohol.

There were several reasons for the use of OTC of which, the common reasons that were found for them to obtain OTC were, emergency conditions, while they felt that the disease was not serious to consult the doctor, in order to prevent occurrence of the known illness, based on their previous experiences with the medications and in order to avoid consultation fees **(**Figure 1).

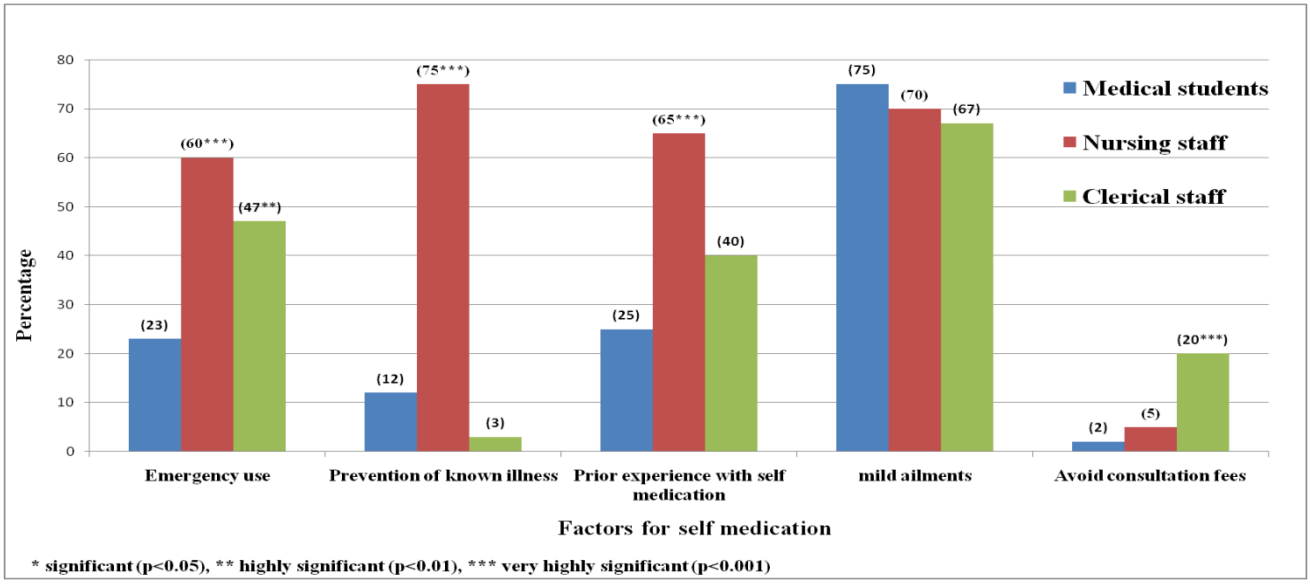

Figure 1: Factors for self medication among the participants belonging to each group (n=100).

We observed that it was highly significant among all the three groups that OTC preparations were used for emergency management, while comparing within the groups we found it very highly significant in nursing

students ($p<0.001$) and highly significant in clerical staff ($p<0.01$) than the medical students.

Later it was also evident that participants of all three groups significantly used OTC drugs for preventing the known illness. However there was highly significant difference observed with usage among nursing staff ($p<0.001$) as compared to medical students and clerical staff.

Participants found that OTC preparations were useful, based on their previous experiences hence significant usage was found for this reason. However it was observed that for this purpose highly significant use was among the nursing staff ($p<0.001$), as compared to clerical staff and medical students.

The percentage of OTC preparations usage was high in all the three groups for mild ailments however no statistically significant difference was seen when compared the usage in between the groups for this purpose.

In our study, we also observed that consultation fees was another reason for the use of OTC preparations among the respondents, that was highly significant ($p<0.001$). However the use of OTC for this purpose was highly significant among clerical staff ($p<0.001$) as compared to medical students and nursing staff.

The common conditions for the use of OTC medications among 300 respondents were headache ($p<0.001$), fever ($p<0.001$), cough and cold ($p<0.01$), acidity ($p<0.001$), dysmenorrhea ($p<0.001$) and injuries ($p<0.001$) (Figure 2). When compared within the groups we found that headache and fever were the significant causes with the clerical staff for the use of OTC medications as compared to medical students and nursing staff.

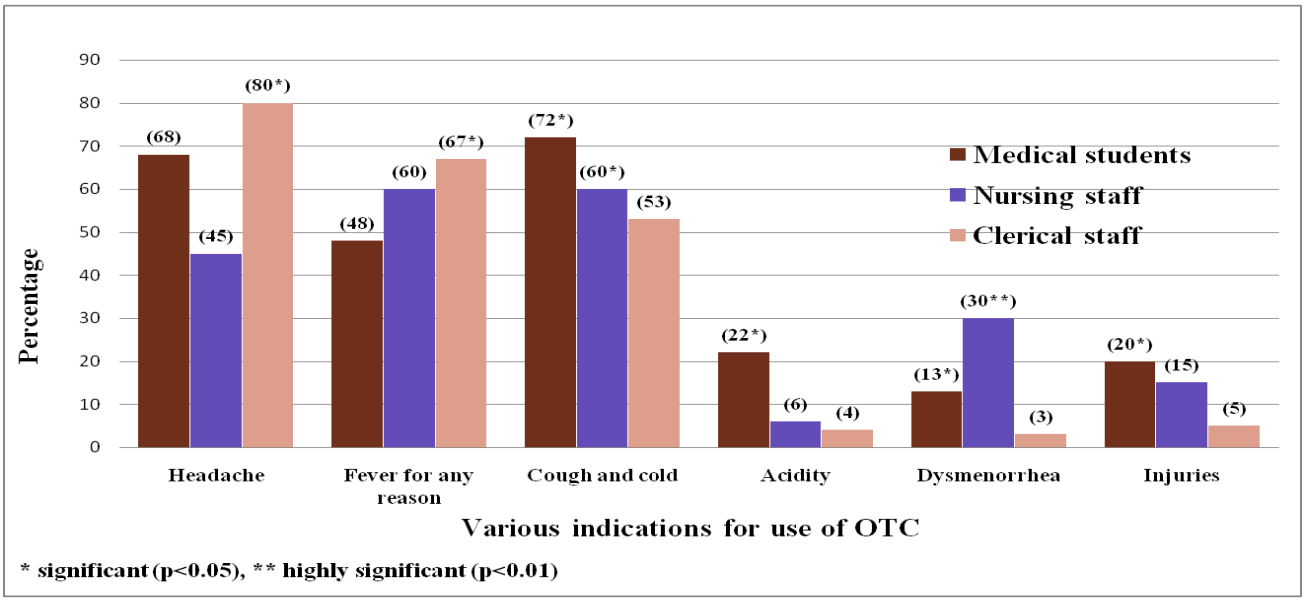

Figure 2: Various indications for use of OTC in each group (n=100).

Use of OTC was significant among medical students and nursing staff for cough and cold as compared to clerical staff. However, injury and acidity were significant causes among medical students for obtaining OTC preparations while dysmenorrhea was highly significant cause among nursing staff.

We observed that among the respondents 89% of nursing staff and 93% of medical students were aware of the medication use while none of the clerical staff were aware of the medication they used.

However it was analyzed from the collected information that use of OTC preparations resulted in either reduction or cure of symptoms while none of them suffered with any adverse events.

DISCUSSION

Usage of OTC was highest amongst medical students and nursing staff. Time consumption for consultation, the consultation fees and frequent visits were the commonly mentioned reasons for self medication. Among the users many were aware of the OTCs they used while some were totally unaware of the medications used by them.

Use of OTC preparations in the developing countries like ours has been into practice for several reasons such as; there are no regulations on selling and purchasing of medications, individuals feel familiar to self medicate the conditions based on their prior experiences, negligence and poverty to some extent.[10,11] However it has been evident with similar such studies that gender, age, ethnicity, level of education, occupation etc. are not influencing the use of OTC preparations.[12,13]

Doctors and pharmacists play a very important role in creating awareness about self-medication by educating the patients.[8,14] Prior to suggesting any OTC medications, pharmacists should thoroughly assess the nature and extent of the patient's condition and recommend that they seek expert care when needed.

The motivating factors for self medication could be; easy availability of prescription drugs across the counter without a valid prescription, lack of stringent controls over medical advertising, low medical literacy among the population and the compulsion to reduce health-care costs.

Hence it is suggested that the public education is mandatory on the type of illnesses for self-diagnosis and its medication, along with implementation of stringent rules and regulations on their use. It is also essential to highlight the dangers of OTCs on their misuse.

As it was the survey study conducted among medical students, nursing and clerical staff it may not represent the behaviour of the general public. A prospective direct interview would be better to obtain informative data. Future studies can be carried out in different parts of India, including urban and rural areas. Some of the respondents have difficulty in recalling the last time they used a NPM and/or the name of the medication used. This resulted in inaccurate or incomplete information. We could have missed much information because of participant's fear to reveal the truth of having used OTC without consulting a specialist.

ACKNOWLEDGEMENTS

We would like to express our gratitude to all the respondents for spending their valuable time to answer our questionnaire that helped us to successfully complete our study. Authors are also thankful to the institutional ethical committee of Sumandeep Vidyapeeth that permitted to conduct such a survey study

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DOI: 10.5455/2320-6012.ijrms20130509
Cite this article as: Parikh D, Sattigeri BM, Kumar A, Brahmbhatt S. A survey study on use of over the counter (OTC) drugs among medical students, nursing and clerical staff of a tertiary care teaching rural hospital**.** Int J Res Med Sci 2013;1:83-6.