A STUDY OF SELF-MEDICATION AND ASSOCIATED ADVERSE CONSEQUENCES AMONG COLLEGE STUDENTS IN NORTHERN INDIA

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Summary

Usage of medicines without a doctor's prescription is common in developing countries. The adverse consequences of such practices should always be emphasized to the community and steps to curb it considered. The present study is based on a questionnaire and was done amongst the college students in Northern India. About 180 students responded to the questionnaires, which were collected with the help of medical students. The information on drugs used for self-medication, reasons for self-medication, source of medication, and the adverse effects associated in the one year period preceding the study were collected. The respondents were aged between 18 to 35 years. 135 (75%) of the respondents had taken some form of self-medication in the one year period preceding the study. The common reasons given for self-medication were mild illness, previous experience of treating similar illness, and unable to pay doctor's fees and bear the expenses on treatment, busy schedule, non availability of doctors in the villages. Advertisements in the newspaper, television, radio and magazines were the sources of information for 34.81%, followed by chemist shops (29.63%), but the main source of information about drugs used in self-medication was the prior illness experience in 48% respondents. The commonest drug used was paracetamol in 85 respondents (62.96%) followed by analgesics in 56 (41.48%). Fever was the most common indication for self-medication accounting for 50% of the illnesses requiring self-medication. Self-medication was found to be more in > 25 years age respondents. The adverse consequences of such practices were seen in 28.15% respondents. The most common adverse consequence was aggravation of the previous illness in 39.5%, skin allergies in 28.95% and gastrointestinal trouble in 18.42%.

Key Words: Adverse consequence, Prescription, Questionnaire, Self-medication

Introduction

Self-medication can be defined as obtaining and consuming drugs without the advice of a physician either for diagnosis, prescription or surveillance of treatment[1]. The studies of pharmaceutical practice have called attention to the role played by pharmacists and pharmacy attendants in fostering self-medication and medicine experimentation among the public. Left undocumented is the extent to which clients passively follow the advice of pharmacy personnel or question their motive or expertise[2]. In one Spanish study by Dr. Pilar Carrasco 1 in 5 people engage in self-medication, using an over-the-counter drug, alcohol, street drugs, or drugs prescribed for a different purpose, to alleviate an illness or condition, without professional supervision. 16 to 44 years olds were the most inclined to self medicate, with differences based on gender, level of education, nationality and health habits.

Study on self-medication shows that it is influenced by many factors such as education, family, society, law, availability of drugs and exposure to advertisements[1]. Major problems related to self medication is wastage of resources, increased antimicrobial drug resistance particularly in developing countries[5] and generally entails serious health hazards such as adverse reaction and prolonged suffering. Unfortunately, especially in developing countries, professional health care is relatively expensive making self-medication an obvious choice of healthcare service[6]. Furthermore it has been noted that purchase of drugs and many drugs that can only be purchased with prescription in developed countries are OTC in developing countries. Also, lax medical regulation has resulted in the proliferation of counterfeit drugs that are in high demand for the treatment of highly prevalent diseases[7]. A high level of education and professional status has also been mentioned as predictive factor for self-medication[8].

Material & Method

After prior approval of ethical committee the study was carried out in the month of March 2011 amongst college students of Uttar Pradesh, Northern India with the help of medical students. The responses of 180 respondents were collected, using a questionnaire related to self-medication. The name, age, sex, address were noted. The respondents were classified as urban or rural. Information regarding self-medication, the type of medication, illness for which the medication was used and reason for not consulting a doctor along with the sources of medication and information about them was collected. Any adverse drug effects associated with self-medication was noted. The pattern of drug use over one year period preceding the study was noted. The following questionnaire based information was collected:

Self-medication questionnaire
Name:
Age:
Sex:
Address:

1. Have you used medicines of your own without consulting a doctor in the preceding one year?
2. How many episodes of illness have you had in the preceding one year period?
3. What was the main symptom of your illness?
4. What were the associated symptoms?
5. Which type of medicine did you use?
6. Can you recall the name of medicine taken?
7. What was the main reason for not consulting a doctor?
8. Have you consulted any person associated to medical field in the preceding one year?
9. What were your sufferings, when you consulted any medicine provider?
10. What medicines he / she gave you?
11. What were the information source regarding the use of medications?
12. Did you face any adverse consequences of self-medication?
13. If addicted to any drug, alcohol or smoking?
14. Are you suffering from any chronic illness for which receiving any treatment?
15. Are you aware of drug-drug/drug-alcohol/drug-smoking interaction?

Results

One hundred and eighty respondents were covered during the study period. One hundred and twenty were male and rest female. The respondents were aged between 18 to 35 years. One hundred and thirty five (75%) of these respondents had taken some form off self-medication with M: F = 105:30, in the one year period preceding the study. Eighty-five of the 180 respondents resided in an urban area while the rest were residing in villages. Table 1 shows the drugs/drug groups commonly used for self-medication. The commonest drug used was paracetamol in 85 respondents (62.96%) followed by analgesics in 56 (41.48%). The use of antacids as self-medication was in 24 (17.78%) and that of iron-vitamins in 22 (16.1%). 18 (13.33%) respondents used cough suppressants. Antibiotics were used as self-medication in 13 (9.6%).

Table 1. Drugs/drug groups commonly used for self-medication

Drugs/drug groups	Respondents (%)
Paracetamol	85 (62.96%)
Analgesics	56 (41.48%)
Antacids	24 (17.78%)
Iron-vitamin	22 (16.1%)
cough suppressants	18 (13.33%)
Antibiotics	13 (9.6%)

Fever associated with headache, body ache and upper respiratory symptoms was the most common indications for self-medication accounting for 50% of the illnesses requiring self-medication. Next common reason told was acidity, indigestion, GI infections (27%) and cough (13%). The reasons given for self-medication were analyzed and it was found that 31.11% (42) respondents were not able to bear the cost of treatment because of economical constraints, 36 respondents (26.67%) felt that the illness was too mild to consult a doctor. 20% (27) respondents felt that they had previous experience of treating a similar illness and even if they go to a doctor similar medicines will be prescribed. Unavailability of doctors was also cited as a reason for self-medication in 13.33% (18). Advertisement in newspaper, television, radio and magazines were the sources of information in 34.81% (47) followed by chemist shops in 29.63% (40), but the main source of information about drugs used in self-medication was the prior illness experience in 48% respondents, as shown in Table 2.

Table 2. Source of information about drugs used in self-medication

Drug informer	Respondents (%)
Doctor's	65 (48.15%)
Friends	48 (35.55%)
Advertisements	47 (34.81%)
Chemist Shop	40 (29.63%)
Books	27 (20.0%)

Self-medication was found to have a higher potential for damage in 55 respondents, as shown in Table 3 because of alcohol intake, smoking and the chronic diseases. Adverse drug effects because of self-medication were seen in 28.15% (38). The most common adverse consequence was aggravation of the illness in 39.5% (15), skin allergies in 28.95% (11) and gastrointestinal trouble in 18.42% (7).

Table 3. Findings which might be dangerous in self-medication

Findings	Respondents (%)
Alcoholics	18 (13.33%)
Smokers	22 (19.26%)
Chronic diseases	15 (11.11%)
Awareness about drug -alcohol interaction	54 (40%)
Awareness about drug -drug interaction	15 (11.11%)

Discussion

WHO is promoting practice of self-medication for effective and quick relief of symptoms without medical consultations and reduce burden on health care services, which are often understaffed and inaccessible in rural and remote areas[9]. Self-medication can be defined as obtaining and   consuming drugs without the advice of a physician either for diagnosis, prescription or surveillance of treatment[8]. Various studies carried out show a wide range of self-medication practices from between 15% to 65%[10,11]. In this contrast our study revealed a prevalence of 75% which is much higher but similar type of results was seen in a study by Phalke et al[12]. Reasons for wide variations may be due to differences in education, socioeconomic status, unavailability of medical facilities and easy availability of drugs. Of these respondents, 75% had taken some form of self-medication during the preceding years and paracetamol and analgesics were the most commonly used class of drugs, which is similar to findings in the literature[13,14]. Antibiotics were reported to be commonly used drug as self-medication in some previous studies[15], but our study reports that it is less commonly used, only in 9.6%. The reason most commonly pointed out in previous studies for self-medication was due to economical problems ranging from 60% to 86%[10,11]. We also found it to be the commonest reason in 31% of the respondents. 26.67% of the respondents felt that the illness was too mild to consult a doctor and 20% (27) of the respondents had previous experience of treating a similar illness and even if they go to a doctor they will be prescribed similar medication.

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The information regarding the drug taken for self-medication was rare among the respondents, there was little information regarding the side-effects and drug interactions which was in accordance with the previous studies[16,17]. Self-medication was found to have a higher potential for damage in 55 respondents, as shown in Table 3 because of alcohol intake, smoking and the chronic diseases. Adverse drug effects because of self-medication were seen in 28.15% (38). The most common adverse consequence was aggravation of the illness in 39.5% (15), skin allergies in 28.95% (11) and gastrointestinal trouble in 18.42% (7).

Conclusion

Self-medication should be considered as a serious problem, especially among young population and measures to reduce it or to improve it, by better drug information & provision of adequate health facilities should be considered.

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