RESEARCH ARTICLE

STUDY OF SELF-MEDICATION PRACTICES AND ITS DETERMINANTS AMONG COLLEGE STUDENTS OF DELHI UNIVERSITY NORTH CAMPUS, NEW DELHI, INDIA

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ABSTRACT

Background: Self-medication includes acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using leftover medicines stored at home. In developing countries like India, self-medication is a common practice as it provides a low cost alternative for people. Especially, the youth is exposed to media and the increased advertising of pharmaceuticals poses a larger threat to the younger population.

Aims & Objective: To determine the prevalence of self-medication among Delhi University students and to identify the sources and reasons for self-medication.

Materials and Methods: A cross sectional study was carried out using a 'semi structured' 'pretested' questionnaire among 350 students selected randomly from north campus of Delhi University during August and September 2012.

Results: The prevalence of self-medication was 85.4% among the study population. Principal morbidities for seeking self-medication were headache (86.2%) and common cold (57.8%). 79.3% of them got the medicine from chemist shop and 16.9% used home available medicines. 56.1% of the study subjects were aware about side effects of drugs they were using. Awareness about schedule H-drugs was also present in 39.5% of the study population. Regarding the major reasons for seeking self-medication, 31.0% did not find it necessary to consult a doctor followed by 25.0% who preferred to wait and watch, 21.3% had lack of time and 10.4% felt doctor's fee was too high.

Conclusion: Prevalence of self-medication was high in the study population despite majority being aware of its harmful effects. There is an urgent need to enforce the law to prevent over the counter drug sale and to educate the youth to ensure safe practices.

Key Words: Self-Medication; University Student; Determinants

Introduction

Desire to take medicine is perhaps the key factor for the practice of self-medication which can be defined as the use of non-prescription medicines by people on their own initiative.[1] Self-medication also encompasses the use of the medicines by the users for self-perceived health problems or the continuing use of medications formally prescribed earlier. Further broadening of the definition includes treatment of family members especially to minors and elderly.[2] Over the counter drugs are a form of self-medication. The buyer diagnoses his own illness and buys a specific drug to treat it.

Self-medication includes acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using leftover medicines stored at home.[3] The World Health Organization (WHO) stated that self-medication has the potential to do good as well as cause harm since it involves the use of drugs. It 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.[4]

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.[5] In developing countries like India, self-medication is a common practice as it provides a low cost alternative for people.[6] A large number of people, when they fall sick, do not consult the physician.[7] The youth is especially exposed to the media and the increased advertising of pharmaceuticals poses a larger threat to the young population.[8,9] The misuse of non-prescription drugs amongst students has become a serious problem.[10,11] Considering the biology and physiological profile of adolescents and assuming that young adult students have low perception of the risk; more knowledge about the drugs and their use and therefore usually avoid seeing the physicians for their medical problems; are likely to practice self-medication.[12-14] There is paucity of literature regarding self-medication in our local setting. This study presents the results over the North Indian youth's practice towards self-medication.

Objectives: This study was aimed to determine the prevalence of self-medication among Delhi University

students and to identify the sources and reasons for self-medication among them.

Materials and Methods

A Cross-sectional study was conducted between august and September 2012. North campus of Delhi University was selected as the study area. A sample of 350 participants were taken for the study. Students sitting in the common rooms were approached through non probability convenience sampling. A self-administered questionnaire was adapted from various similar studies conducted previously and prepared in English language for the data collection, which consists of 22 open and closed ended questions. The information on the questionnaire includes demographic variables and questions on self-medication practices. The questionnaire was pretested on a sample of 40 participants and was randomly distributed to the students for data collection after explaining the purpose of study and obtaining verbal consent. 36 questionnaires were improperly filled up. . Ethical approval was given by Dept. of Community Medicine, VMMC and Safdarjung Hospital, New Delhi before administering the questionnaire. All other ethical requirements including verbal consent and confidentiality were ensured. On completion of data collection, the data was reviewed, organized, tabulated and analyzed by appropriate statistical methods. Chi square test was used to test the statistical significance and the level of significance was p value <0.05.

Results

Mean age of the participants was 18.98 ± 1.35 (16 – 28) years. Male students constitute 45.9% and female students constitute 54.1% of the study sample. Majority (58.0%) of them were in 19 to 21 years of age group. Basic profile of the study population is given in Table 1. The prevalence of self-medication was 85.4% (268/314). The principal morbidities for seeking self-medication were headache 86.2% (231/268) and common cold 57.8% (155/268) (Table 2). Drugs commonly used for self-medication included antipyretics 76.5% (205) followed by analgesics 75.0% (201), cough suppressants 38.5% (102), antacids 29.1% (78) and antibiotics 23.5% (63). About the sources of medicines for self-medication, 79.3% got them from chemist shop and 16.9% used home available medicines (Table 3). The awareness about side effects and expiry date of the drugs used were 56.1% and 93.6% respectively. 39.5% of them was also aware of schedule H drugs. Among the major reasons for seeking self-medication, 31.0% did not find it necessary to consult a doctor followed by 25.0% who preferred to wait and watch, 21.3% had lack of time and 10.4% felt doctor's fee was too high (Table 4).

Table-1: Distribution of the study subjects according to socio demographic profile (N=314)

Variable		N	%
Age group (in completed years)	16 - 18	119	37.9
	19 - 21	182	58.0
	22 - 24	12	3.8
	25 and above	1	0.3
Sex	Male	144	45.9
	Female	170	54.1
Stream	Science	138	43.9
	Non Science	176	56.1
Accommodation	Day Scholar	266	84.7
	Hostelites	48	15.3
Awareness of side effects of drugs	Aware	176	56.1
	Not aware	138	43.9
Awareness of expiry dates of drugs	Aware	294	93.6
	Not aware	20	6.4
Awareness of schedule H drugs	Aware	124	39.5
	Not aware	190	60.5

Table-2: Principal morbidities for seeking self-medication (n = 268)

Morbidity	Frequency	Percentage
Head ache	231	86.2
Common cold	155	57.8
Fever	147	54.9
Pain in abdomen	102	38.1
Diarrhoea	50	18.7
Sore throat	40	14.2
Pimples	22	8.2
Vomiting	19	7.1
Hairfall	17	6.3
Constipation	13	4.9
Insomnia	4	1.5

Multiple responses

Table-3: Sources of medicine for self-medication (n = 268)

Source of medicine	Frequency	Percentage
Chemist shop	213	79.5
Available at home	45	16.8
Relatives/Friends	6	2.2
Others	4	1.5

Table-4 Reasons for self-medication (n = 268)

Reasons	Frequency	Percentage
Not necessary	83	31.0
Wait and watch	67	25.0
Lack of time	57	21.3
Doctors fee is too high	28	10.4
Long queue at Doctors clinic	19	7.1
Medical centre is too far	14	5.2

Discussion

Present study reported prevalence of self-medication among university students is about 85.4%. This study endorses earlier reported local estimates of self-medication among university students. Frequency of self-reported medication is highly variable in different parts of the world; as low as 45% in Turkey to as high as 94% in Hong Kong.[15] This variation to report self-medication may be due to the differences in study subjects, working definition of self-medication and tool used to collect the response of the participants. Yet the consistent findings of

self-medication among educated people in different reported series[16-18] worth further investigation.

World Health Organization considers self-medication as part of the self-care that helps efficient use of the burdened health care system[2] with guidelines for the regulatory assessment of medicinal products for use in self-medication. However this is of questionable benefit especially in less educated society with weak health systems where most of the medical care cost is out of the pocket of the patients. The case for advocating the self-medication in our local society is quite weak, where drug resistance is emerging and even prescription medicines are readily available and can be dispensed through inexpert hands. To us self-medication may be justified only in safe hands that are aware of the nature of the drug and able to perceive the drug related side effects. However it is necessary to educate people for circumstances where they may self-medicate and when they must see a doctor even for apparently trivial complaint.

In this study headache, common cold and fever were the most reported complaints for which drugs were taken. Other complaints include stomach ache, diarrhoea, sore throat, pimples, insomnia, vomiting, and constipation. To us the latter problems are by nature needs expert help and needed not to be self-medicated. The self-medication for similar pattern of ailments was experienced by the pupils in earlier reported published literature.[19] Drug groups commonly used for self-medication included antipyretics (76.5%) followed by analgesics (75.0%), cough suppressants (38.5%), antacids (29.1%) and antibiotics (23.5%) while in the study conducted in Karachi[20], analgesics were the most common (88.3%) followed by antipyretics and antibiotics;. Among the source of medicine for self-medication, 79.3% get the medicines form chemist shop followed by 16.9% who used the medicines available at home, 2.2% get the medicines from relatives and friends which is in congruence to the study conducted in Malaysia[21] where the major sources of the medicines are pharmacy, home medicine cabinet.

Present study reported not feel it necessary to consult doctor and wait and watch as main cause while in the study conducted in West Bengal[22], Malaysia[21] and Karachi[20] mild nature of the illness and previous experience were the major reasons. It would be interesting to know further about the risk and hazard perception of young adults especially regarding self-care. Future studies should be directed to describe the perceived hazard.

Conclusion

Prevalence of self-medication is high in the educated youth, despite majority being aware of its harmful effects strict policies need to be implemented on the advertising and selling of medications without prescription to prevent this problem. Education to help students to decide on the appropriateness of self-medication is required as responsible self-medication can help prevent and treat diseases that do not require medical consultation and provides a cheaper alternative for treating common illnesses. Self-medication by authentic medical information can prevent burden on the health care system in a country like India, where is scarcity of health professionals.

References

1. Responsible Self- Medication. Joint Statement by The International Pharmaceutical Federation and The World Self- Medication Industry [online]. (accessed on 5 July 2011). Available from: URL: http://www.wsmi.org/pdf/fip.pdf
2. World health organization. Guidelines for the regulatory assessment of medicinal products for use in self-medication. 2000. (accessed on 5 July 2011) Available from: URL:http://apps.who.int/medicinedocs/pdf/s2218e/s2218e.pdf
3. Montastruc JL, Bagheri H, Geraud T, Lapeyre-Mestre M. Pharmacovigilance of self .medication. Therapie 1997;52(2):105-10.
4. World Health Organization. The role of the pharmacist in self-care and self-medication. Available from: URL: http://apps.who.int/medicinedocs/pdf/whozip32e/whozip32e.pdf
5. Hughes CM, McElnay JC, Fleming GF. Benefits and risks of self medication. Drug Saf 2001;24(14):1027 37.
6. Barar, FSK. Dangers of Self-Medication. Health Blog. 2005. Available from: URL: http://www.boloji.com/index.cfm?md=Content&sd=Articles&ArticleID=2117
7. Hussain S, Malik F, Hameed A, Riaz H. Exploring health seeking behaviour, medicine use and self medication in rural and urban Pakistan. Southern Med Review 2010;2:32-34.
8. Sclafer J, Slamet LS, de Visscher G. Appropriateness of self-medication: method development and testing in urban Indonesia. J Clin Pharm Ther 1997;22:261–72.
9. Geissler PW, Nokes K, Prince RJ, Achieng RO, Aagaard-Hansen J, Ouma JH. Children and medicines: self-treatment of common illnesses among Luo school children in western Kenya. Soc Sci Med 2000;50:1771–83.
10. Kamat VR, Nichter M. Pharmacies, self-medication and pharmaceutical marketing in Bombay, India. Soc Sci Med 1998;47:779–94.
11. Kafle KK, Madden JM, Shrestha AD, Karkee SB, Das PL, Pradhan YM, et al. Can licensed drug sellers contribute to safe motherhood? A survey of the treatment of pregnancy related anemia in Nepal. Soc Sci Med. 1996;42:1577–1588.
12. Klemenc-Ketis Z, Hladnik Z, Kersnik J. Self- Medication among Healthcare and Non- Healthcare Students at University of Ljubljana, Slovenia. Med Princ Pract 2010;19(5):395-401.
13. Shankar PR, Partha P, Shenoy N. Self medication and non doctor prescription practices in Pokhara valley, BMC fam pract 2002;3;17.
14. Figueiras A, Caamano F, Gestal-Otero JJ. Sociodemographic factors related to self-medication in Spain. Eur J Epidemiol 2000;16:19-26.
15. Aljinović-Vucić V, Trkulja V, Lacković Z. Content of home pharmacies and self-medication practices in households of pharmacy and medical students in Zagreb, Croatia: findings in 2001 with a reference to 1977. Croat Med J 2005;46(1):74-80.
16. Zafar SN, Syed R, Waqar S, Zubairi AJ, Vaqar T, Shaikh M et al. Self medication amongst university students of Karachi. Prevalence, knowledge and attitudes. J Pak Med Assoc. 2008;58(4):214-7
17. Shankar PR, Partha P, Shenoy N. Self medication and non doctor

prescription practices in Pokhara valley, BMC fam pract 2002;3;17.
18. Buke C, Limoncu M, Ermevtcan S, Cicekliogly M, Tuncel M, Kose T, et al, Irrational use of antibiotics among university students. J Infect 2005;51:135-9.
19. 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):270-5.
20. Mumtaz Y, Jahangeer SMA, Mujtaba T, Zafar S, Adnan S. Self Medication among University Students of Karachi. JLUMHS 2011;10(3):102-5.

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