

ORIGINAL ARTICLE

Evaluation of Self-Medication Practice among Tribal District Students of South India

Tanveer A Khan¹, Mohammed Tajuddin², Shiva Krishna Rao Tavrekar³, Srinivas Kondal⁴, Sravan Kumar⁵

¹Professor & Head of Pharmacology, Government Medical College Rajnandgaon

²⁻⁵MBBS Student, Rajiv Gandhi Institute of Medical Sciences (RIMS) Adilabad

<http://dx.doi.org/10.18049/jcmad/239a13>

Abstract

Introduction: Self-medication practice among students and that of tribal regions are an important issue with serious implications. Even though self medication is useful to treat minor ailments, improper self medication practice may lead to the severe adverse effects and fatal consequences. In the present study the self-medication practice was evaluated among tribal district students of south India. **Materials and Methods:** Degree, diploma and intermediate students belonging to tribal district of Telangana who took self-medication were included in the study. They were given a questionnaire about self-medication. A total of 193 students participated in the study. **Results:** 106 (54.9%) students were involved in self-medication. Fever, cold, headache, bodyache, diarrhea were the common reasons for self-medication. Most common drug was Paracetamol with generic name followed by pain balm with brand name. Main source of information was parents and medical stores. Main advantage mentioned was quick relief and no disadvantage. **Conclusion:** Many students from tribal background are involved in self-medication although restricted to use of one or two drugs. They are searching for quick relief, time and money benefits but unaware of its serious consequences. There is urgent need to change such attitude.

Key words: Adverse effects, Drugs, Self-medication, Medication

Address for correspondence: Dr. Tanveer Khan. Professor and Head, Department of Pharmacology, Government Medical College, Rajnandgaon (C.G.). Email: drtanveerkhan@yahoo.co.in Mob: 09423403782

Introduction

Self-medication practice is common and widely prevalent globally since years, specifically in developing countries. But its ratio is also high in developed countries although strict regulations prevent it in those countries. The scenario in India is no different as significant number of Indian population is also involved in self-medication.¹⁻⁴ Even though self-medication is useful to treat minor ailments, improper self medication practice may lead to the severe adverse effects and fatal consequences. Vulnerable populations like students are at more danger as they are at high risk. Self-medication practice among students and that of tribal regions are an important issue with serious implications. In view of increasing self

medication, WHO advised to create awareness about self medication and control it.⁵

WHO (World Health Organization) defined self-medication as “the use of medication by a patient on his own initiative or on the advice of a pharmacist or a lay person or on the recommendation of a non professional instead of seeking advice from a medical practitioner”.⁶ In developed nations mostly prescription drugs are used as self-medication medicine instead of seeking advice from a registered medical practitioner while in developing countries use of non prescription medicines or OTC (Over the Counter), prescription drugs, herbal drugs and traditional medicines are commonly used as product of self-medication.⁷⁻⁹

Among the adverse consequences of self-medication drug resistance, adverse drug reactions, drug interactions, increased

polypharmacy, delay in treatment of serious conditions and masking of symptoms are common problems. But for lower socioeconomic regions of developing countries, it will be very useful for treatment of minor diseases and hence decreases the cost of disease management leading to reduction of pressure on health care system of already over burdened systems of developing nations.⁸⁻¹¹

Adilabad is a tribal district of Telangana region of Andhra Pradesh with substantial tribal population. It has some urban towns but 73.52% population lives in tribal and rural regions and 68.97% population is engaged in agriculture.¹² In the present study the self-medication practice was evaluated among students of this tribal district of south India, as it is important to know the magnitude of it so as to initiate suitable policies for initiation of safe self-medication practice for this vulnerable population.

Materials and Methods

In the present study, degree, diploma and intermediate students from various colleges were enrolled. All the students were from the Adilabad district- a tribal district of Telangana State of south India. In this cross sectional study students were enrolled irrespective of who took self-medication after taking informed consent and ethical permission. They were given a questionnaire about self-medication. A total of 193 students participated in the study among them 106 students confessed that they are involved in taking self-medication hence filled questionnaire. Results were analysed using Microsoft excel software and tabulated in percentage format.

Results

106 (54.9%) students were involved in self-medication. Majority were male 154(79.9%) between 15 to 25 years of age with majority of 17 years 67 (34.7%), from rural cum tribal background. All were unmarried students. Average distance of hospital from their home was between 5 to 10 kilometers. 89 (46.1%) students took self-medication occasionally while rest regularly.

Fever (80.2%), cold (76.4%), headache (89.45%), bodyache (65%) and diarrhea 52.7%) were the common reasons for self-medication.

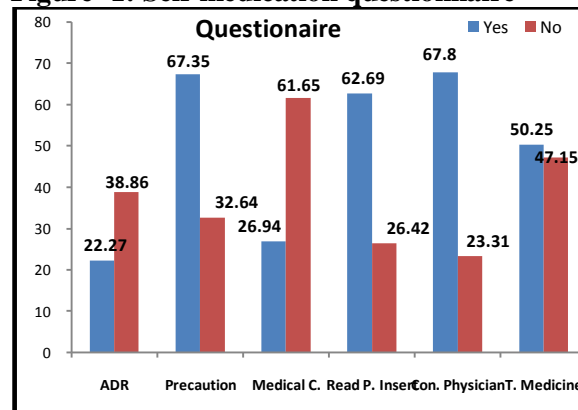
Most common drug used was Paracetamol (95.27%) with generic name followed by pain balm (91.31%) with brand name. 70% students took antihistamines while 3% took Dicylomine and Paracetamol combination. 1% students took cough syrup and Ranitidine and Proton pump inhibitors were also taken by 1% students.

Main source of information was parents (40.41%) followed by medical store (29.01%). 7.77% students took medicines by their own. Advertisements and newspapers (1.03% each) were the least influencing factors for their self-medication practice. Influence of previous prescription was also least on their self-medication habit as only 1.55% students took it after reading previous prescription (Table- 1).

Table-1: Source of Information

Sr. No.	Source	Number	Percentage
1	Advertisement	2	1.03
2	Brothers	5	2.59
3	Friends	13	6.73
4	Parents	78	40.41
5	Medical Store	56	29.01
6	Previous Prescription	3	1.55
7	Medical Representative	5	2.59
8	Newspaper	2	1.03
9	Own	15	7.77

Figure- 1: Self-medication questionnaire



22.27% students observed adverse drug reactions at least once after taking drugs of self-medication. 67.35% students mentioned that they observe precaution before taking the drugs and most of them (62.69%) mentioned that they read package insert and follow the instructions properly. 26.94 mentioned that they take medical consultation if adverse drug reactions

are observed due to self-medication. 67.8% students regularly consulted physicians if they didn't get relief from self-medication within few days of self-medication. 50.25% students mentioned that they have taken traditional medicine at least once in their life as self-medication (Figure- 1).

Table-2: Advantages & Disadvantages

Sr. No.	Advantages	Number	Percentage
1	Quick relief	23	11.91
2	Easily available	24	12.43
3	Emergency	82	42.48
4	Money saving	25	12.95
5	Time saving	9	4.66
Disadvantages			
1	Side effect	74	38.34
2	ADR	32	16.58
3	No relief	19	9.84
4	Costly	8	4.14

Self-medication as drug for emergency (42.48%) was the main advantage followed by money saving (12.95%) and easy availability (12.43%). Side effects (38.34%) were the main mentioned disadvantage of self-medication followed by adverse drug reactions (16.58%). Only 4.14% students mentioned that costly drugs are the disadvantage of self-medication (Table- 2).

Discussion

In the present study self-medication practice was found to be common with male predominance. Majority were from tribal cum rural background and average distance from their home to nearest medical facility was 5 to 10 kilometers. But majority took it occasionally only. They practised it for common conditions like fever, cold and headache. Paracetamol, pain balm and antihistamines were the commonly used drugs. Their main source of drug information was their parents. They thought adverse drug reactions were the main disadvantage. In their opinion self-medication was best for emergency and easy availability and money saving were the main advantages. Previously many studies were conducted in various regions of the world and self-medication was found to be common practice in general population and various categories of students.

Verma et al¹³ in 2010 found 87% prevalence of self-medication practice in Uttar Pradesh state of India while Sharma et al observed 70% general population of Jammu, a north Indian city, using drugs as self-medication.¹⁴ Sontakke et al¹⁰ found 74.71% to 77.98% self-medication practice in central India. Grace et al¹⁵ reported prevalence of self-medication practice upto 94% in University students of Hong Kong. El Ezz et al¹⁶ in university students of Egypt found more prevalence in females while we found male students are involved more. In our study the different observation is probably due to tribal background of our study population.

Analgesic/antipyretics were more frequently used by our studied students for common conditions like fever and pain which reflects the global pattern of self-medication. Zafar et al¹⁷ in Pakistan, Abay et al¹⁸ in Ethiopia and Ghosh S¹⁹ in Uttar Pradesh also found use of analgesics as self-medication for common conditions like fever and pain in their respective regions. Sontakke et al¹⁰, Olayemi et al in Zaria²⁰ and Henry et al among undergraduate students²¹ found adverse drug reaction as main disadvantage.

As various studies indicate self-medication is prevalent throughout the world. It has various advantages if used appropriately. For health care providing machinery, it reduces prescribing cost as it has the potential to reduce the costs associated with publicly funded health programmes. It facilitates better use of clinical skills, increases access to medication and relief for the patient, the active role of the patient in his or her own health care which provides greater independence to patients in making decisions about management of minor illnesses, hence promotes empowerment. It also facilitates better use of physicians' and pharmacists' skills as they feel less patient burden.¹¹

Self-medication is also associated with various disadvantages if it is not used appropriately. It promotes polypharmacy, patients can take drugs in incorrect manner of administration and incorrect dosage. It may lead to misdiagnosis which is responsible for over or under use of medicines, delays in seeking medical advice when needed. It can also be responsible for infrequent but severe adverse reactions, dangerous drug interactions, incorrect choice of therapy, masking of a severe disease and risk of

dependence and abuse. Inappropriate antimicrobial use can lead to antimicrobial resistance.²² The present study population of students from tribal background also has the potential for getting those advantages and disadvantages of self-medication as many of them are exposed to self-medication.

Conclusion

Majority of students of tribal background are involved in self-medication although restricted to use of one or two drugs. They are searching for quick relief, time and money benefits but unaware of its serious consequences. There is urgent need to change such attitude. Proper education and information to the students of this tribal cum rural region about safe self-medication will increase the benefits and will minimize the risks of self-medication.

Conflict of Interest: None declared

Source of Support: Nil

References

1. Al-Azzam SI, Al-Husein BA and Alzoubi F. Self-medication with antibiotics in Jordanian population. *International Journal of Occupational Medicine and Environmental Health*. 2007;20(4):273-80. [PubMed]
2. Mitsi G, Eleni J, Harry B, Arthanassios S and Charalambos G. Pattern of antibiotic use among adults and parents in the community: A questionnaire-based survey in a Greek Urban population. *International Journal of Antimicrobial Agents*. 2005;25(5):439-43.
3. Saradamma RD, Higginbotham N and Nichter M. Social factors influencing the acquisition of Antibiotics without prescription in Kerala State, south India. *Social Science and Medicine* 2000;50(6):891-903. [PubMed]
4. Phalke VD, Phalke DB and Durgawale PM. Self-medication practice in rural Maharashtra. *Indian Journal of Community Medicine*. 2006;31(1):34-35.
5. World Health Organization. The role of the pharmacist in self care and self medication. Report of the 4th WHO consultative group on the role of the pharmacist. The Hague. 1998. Available: <http://www.who.int/medicines/library/dap/whodap-98-13/who-dap-98-13.pdf>.
6. World Health Organization (2000). The Benefits and Risks of Self-Medication. WHO drug information. 2000;14(1):1-2.
7. Hussain S, Malik F, Ashfaq KM, Parveen G, Hameed A, Ahmad S, Riaz H, Shah PA and Saeed T. Prevalence of self-medication and health-seeking behavior in a developing country. *African Journal of Pharmacy and Pharmacology*. 2011;5(7) 972-978.
8. Ajay M Khade, M Shakeel M Bashir, S Ravi, Kiran Kumar Vadala. Evaluation of Self-Medication practice among Medical Students in AP. *International Journal of Basic and Applied Medical Sciences*. 2012; 2(2):254-259.
9. Bashir MSM, Kishor A Bansod, Ajay Khade, Malavika Konnoju, Usha Rani, Kiran K Vadala. Self-Medication - A Comparative Study Between 2nd and 3rd years Medical Students. *International Journal of Basic and Applied Medical Sciences*. 2013;3(2):1-7.
10. Sontakke SD, Bajait CS, Pimpalkhute SA, Jaiswal KM and Jaiswal SR. Comparative study of evaluation of self-medication practices in first and third year medical students. *International Journal of Biological and Medical Research*. 2011;2(2):561-564.
11. Hughes CM, McElnay JC and Fleming GF. Benefits and risks of self medication. *Drug Safety*. 2001;24(14):1027-1037. [PubMed]
12. National informatics centre Adilabad, Official website of Adilabad collectorate.mht, {accessed on 29/11/2014 at 8:31AM}. Available from: <http://adilabad.nic.in/population.html>
13. Verma RK, Mohan L and Pandey M. Evaluation of self-medication among professional students in North India: proper statutory drug control must be implemented. *Asian Journal of Pharmaceutical and Clinical Research*. 2010;3(1):60-64.
14. Sharma R, Verma U, Sharma CL, Kapoor B. Self-medication among urban population of Jammu city. *Indian Journal of Pharmacology*. 2005;37:40-43.
15. Grace SN Lau, Kenneth KC Lee, Mphil CT Luk. Self medication among university students of Hong Kong. *Asia Pacific Journal of Public Health*. 1995;8(3):153-157. [PubMed]
16. El Ezz NF and Ez-Elarab HS. Knowledge, attitude and practice of medical students towards self medication at Ain Shams University, Egypt. *Journal of Preventive Medicine and Hygiene*. 2011;52(4):196-200. [PubMed]
17. Zafar SN, Syed R, Waqar S, Zubairi AJ, Waqar T, Shaikh M, Yousaf W, Shahid S, Saleem S. Self-medication amongst University Students of Karachi: Prevalence, Knowledge and Attitudes. *J Pak Med Assoc*. 2008;58(4):214- 217. [PubMed]
18. Abay SM and Amelo W. Assessment of self-medication practices among medical and health science students in Gondar University, Ethiopia. *J of Young Pharmacists* 2010;2(3):306-310.
19. Sourav Ghosh, Vikas Vimal, Arvind Gupta, Rohit Chaudhary. Evaluation of the practice of self medication among college students in west Uttar Pradesh. *International journal of pharma professionals research*. 2010;1(1):14-18.
20. Olayemi OJ, Olayinka BO, Musa AI. Evaluation of Antibiotic Self-Medication Pattern amongst Undergraduate Students of Ahmadu Bello University (Main Campus), Zaria. *Research Journal of Applied Sciences Engineering and Technology*. 2010;2(1):35-38.
21. James H, Handu SS, Khalid AJ, Khaja ASO, Sequeira RP. Evaluation of the Knowledge, Attitude and Practice of Self-Medication among First-Year Medical Students. *Med Princ Pract*. 2006;15:270-275. [PubMed]
22. Ruiz ME. Risks of self-medication practices. *Curr Drug Saf*. 2010;5(4):315-23. [PubMed]