SELF MEDICATION PROFILE AMONG DENTAL STUDENTS, TUMKUR, INDIA

DARSHANA BENNADI*[1], NANDITA K[2], MYTHRI H[3]

[1]*Senior Lecturer, Dept. Of Public Health Dentistry, Sree Siddhartha Dental College and Hospital, SAHE University, Tumkur, India, [2]Senior Lecturer, Dept. Of Public Health Dentistry, Bangalore Institution of dental Sciences Bangalore, India, [3]Senior Lecturer, Dept. Of Public Health Dentistry, Sree Siddhartha Dental College and Hospital, SAHE University, Tumkur, India. Email: darmadhu@yahoo.com

ABSTRACT

Back ground: The concept of self medication which encourages individuals to look after minor ailments with simple and effective remedies has been adopted worldwide[3-6]. Evidently, there has been an increasing interest to gauge the self medication trends in a developing country like India.

Methodology: A descriptive cross sectional survey includes dental students (UGs & PGs) of Sri Siddhartha Dental College and Hospital, Tumkur, India using a self administered structured questionnaire written in English and validated through a pilot survey was conducted.

Results: The study comprises of 180 students aged between 18-30years. 100% of the subjects accepted that they have used medicines of their own without consulting a doctor in the preceding one year to treat illness. And 94% of them said no adverse consequences by self medication.

Conclusion: High level of education and professional status were predictive factors for self-medication. This observation among Dental students is possibly due to their education on drug use and related pharmacology; however, as this knowledge is incomplete in certain aspects it may spell out dangerous outcomes.

Keywords: Self medication, Dental students, Drug use, Antibiotics and Analgesics.

INTRODUCTION

In most societies a person suffering from physical discomfort or emotional distress has a number of ways of helping himself or seeking help from other people. One of such means is by self medication [1]. Self medication is the taking of drugs, herbs or home remedies on one's own initiative or on the advice of another person without consulting a doctor [1].

The concept of self medication which encourages individuals to look after minor ailments with simple and effective remedies has been adopted worldwide [2-5]. Evidently, there has been an increasing interest to gauge the self medication trends in a developing country like India [6, 7] owing to the availability of a wide variety of over 7000 drugs at local chemist shops and a skewed doctor-population ratio of 0.6/1000 coupled with a lack of awareness and literacy on proper medicine use. In a bid to save time, and due to limited availability of financial resources, the concept of self-medication is quite rampant among adolescents and college-going students [8, 9] with drug use and abuse being promoted among peer groups [9-11]. There is a lot of public and professional concern about the self medication.

A major short fall of self-medication is the lack of clinical evaluation of the condition by a trained medical professional which could result in missed or delayed diagnosis, delays in appropriate and effective therapy, increase inorganic risks due to inadequate drug therapy or of unnecessary expense and drug interaction between prescription and non-prescription drugs [12-15]. This negates the principle of the rational use of antibiotics and herald danger for organisms developing resistant. Irrational drug combinations and indiscriminate use of drugs like antibiotics have led to the evolution of Multi-Drug resistant bacterial strains in India, a prime example of the recent New Delhi Beta Lactamase strain [16].

Health workers are societal role models. Self-medication by health workers could result in an extraordinarily negative impact in the society. Studies have shown many reasons for the increased likelihood of self medication among medical students [17]. These students have easy access to information from drug indices, literature, self-diagnose and self-medicate. In addition, they have easy access to the medication itself through physician samples provided by pharmaceutical representatives, and "The White Coat" guarantees trouble free access to drugs available in pharmacies [17].

Studies on self-medication have been conducted on university students, medical, pharmacy and other professional students [18-24]. There is a paucity of studies on self-medication among dental students. Hence this study had been undertaken to assess the prevalence of self medication and its profile among dental students.

MATERIALS AND METHODOLOGY

A descriptive cross sectional survey includes dental students (UGs & PGs) of Sri Siddhartha Dental College and Hospital, Tumkur, India between March and April 2012, using a self administered structured questionnaire written in English and validated through a pilot survey. Permission to conduct the survey was obtained from the Principal of the college. Students were requested to remain in the class at the end of a lecture and Inter Departmental Meet (Interns & PGs) to participate in the survey on a voluntary basis. No attempt was made to follow up with students who were absent on the day of the survey.

The questionnaire included year of study, gender and questions regarding prevalence of self medication, reason and source, frequency etc. The students were asked to respond to each item according to the response format provided in the questionnaire. The students received a full explanation of how to fill in the questionnaire. Furthermore, the investigator was always available during the completion of the questionnaire and the participants were encouraged to approach the investigator whenever they needed clarification of any point. The students, who were asked to fill in the questionnaire without discussion with each other, took an average of 15 minutes to complete the procedure. Anonymity of the respondents was assured. Participation was voluntary and no incentive was offered. Informed consent was obtained from the students before commencement of the survey.

Dental students absent from classroom for any reason and those who did not give consent were excluded from the study. Ethical approval was obtained from ethical committee of the college.

Statistical package of social sciences was used for data analysis where descriptive statistics and chi square tests were used. $P < 0.05$ was considered significant. The results were presented in tabular and graphic forms.

RESULTS

The study comprises of 180 students out of which 65 students were in the age group range from 18-20years, 92 in 21-25years and 22 were in 26-30years group, out of which 104 were females and 76 were males (Table 1).

Table 1: Socio-demographic characteristics of study population

| Socio-demographic factors		No. of students N= 180	Percentages %
Gender	Male	76	42
	Female	104	58
Age group (years)	18–21	65	36
	22–25	92	51
	26-30	22	12
Year of study	First year	36	20
	Second year	32	18
	Third year	28	16
	Fourth year	13	7
	Interns and PGs	71	39

Among undergraduate study subjects, 36 were in first, 32 were in second, 28 and 13 were in third and final year respectively and 71 interns & postgraduates participated in the study. Out of them, 148 students accepted that the distance from the health post/clinic is less than 1km, where as 21 said 1-2km and 11 reported with health post/clinic more than 2 kms.

All the subjects accepted that they have used medicines of their own without consulting a doctor in the preceding one year to treat illness. And for the episodes of illness in the preceding one year, 65 reported once, 49 said twice and 66 said more than twice a year, the main symptoms for which self medicated being headache, fever & cough and cold in order. Allopathic medicines were the most commonly (88%) used for self medication, analgesic (35%), antibiotic (33%) & oral route (87%) being the common.

75% of subjects reported that they were aware of the dosages to be used and 48% were completely & 42% partially satisfied with self medication. 39% of the subjects felt the main reasons for not consulting a doctor being previous experience of treating similar illness (Graph 1) & 36% thinking it as a mild illness to consult, previous prescription being the major source of information (Graph 2).
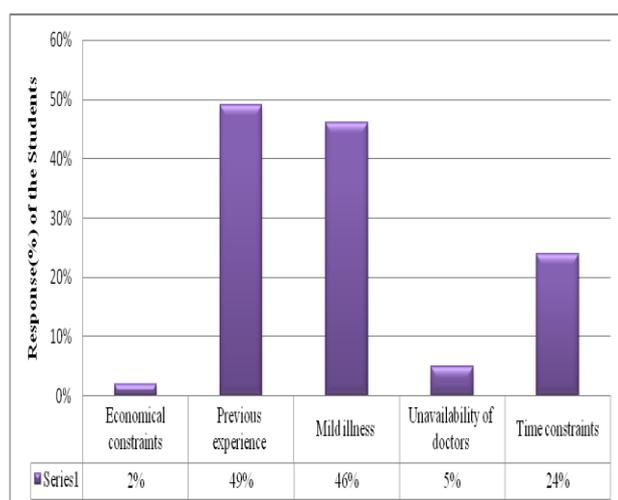
Graph 1: Main reasons for not consulting a doctor
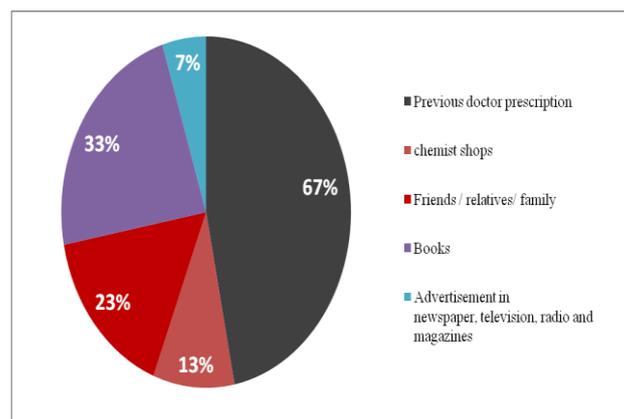
Graph 2: Information sources regarding the use of medications

94% reported with no adverse consequences by self medication & only 11% subjects were addicted to any drug, alcohol or smoking. But, 71% were aware of drug-drug/drug-alcohol/drug-smoking interaction. Even though 53% reported that they were not sure whether self medication is safe & good compared to 32% who said it's good and safe & will continue in future as well, 58% were still not sure to use it in future.

DISCUSSION

Self-medication is becoming an increasingly important area within healthcare, and this study has shown that it is even more prevalent among dental students. All the subjects accepted that they have used medicines of their own without consulting a doctor in the preceding one year to treat illness. Similar finding were observed among other studies [25-28]. It is also noted that a high level of education and professional status are predictive factors for self-medication [17]. The trend was slightly more among Dental students group, possibly due to their increased education on drug use and related pharmacology. This knowledge is, however, incomplete in certain aspects and may spell out dangerous outcomes.

In our study it was found that there was no difference among male and female in practice of self medication. But other studies showed a greater prevalence among female students (45%) than male students (44%) [17].

Headache, fever, cough and cold were the common reasons for self medication where as among Nigerian dental students Diarrhoea, sore throat and cold were the reasons for self-medication [25].

Allopathic medicines were the most commonly (88%) used for self medication and 10% have used ayurvedic system of medicine. Similar findings were observed among Udaipur medical students [26].

Analgesics and antipyretics were the most commonly used class of drugs, which is similar to findings in other studies [25-28]. 6% of students faced adverse effects of self medication in the form of allergic reaction, nausea and vomiting. Similar finding was observed in a study conducted in South India [27]. Development of antimicrobial resistance should be kept in mind. Steroid use, even for cosmetic applications, is a dangerous trend as long- term complications and withdrawal reactions are unknown.

75% of students reported that they were aware of the dosages of drugs where as 25% students were not aware about this. This study shows unhealthy opinion of Self medication which can cause treatment failure, drug resistance and drug toxicity. Similar findings were observed among nigerian dental and medical students [28].

39% of the subjects felt the main reasons for not consulting a doctor being previous experience of treating similar illness similar findings were observed among Nigerian dental students, dental & medical

Nigerian students [25,28] & 36% thinking it as a mild illness to consult which was in consistent with studies conducted in South India [27] & Nigeria [25,28].

Previous prescription being the major source of information in the present study Udaipur students got information from friends and family [26], south Indian students from textbook [27]. In this study 7% students got information from television, magazines. So this is an unwelcome trend as increased commercialization of medicine sales may lead to indiscriminate use. Furthermore, the Media may be promoting more expensive drugs, which may not have any additional benefits as compared to their low cost counterparts.

An important disadvantage of self-medication practices is the fact that underlying aetiologies may go unnoticed unless a doctor is consulted. This study could also open up research possibilities for exploring the relationship between self-medication practices and emergence of antibiotic- resistant bacteria.

The limitations of this study included the absence of a comparative group, such as students from another field; the small sample size; and the absence of interventions, like providing information regarding hazards of self-medication.

CONCLUSION

High level of education and professional status were predictive factors for self-medication. This observation among Dental students is possibly due to their education on drug use and related pharmacology; however, as this knowledge is incomplete in certain aspects it may spell out dangerous outcomes.

REFERENCES

1. Hernandez-Juyol M, Job-Quesada JR. Dentistry and self-medication: a current challenge. Med Oral. 2002; 7: 344-7
2. Awad A, Eltaved I, Matowe L, et al. Self-medication with antibiotics and anti-malarial in the community of Khartoum State. Sudan. J Pharm Sci. 2005; 8: 326-331.
3. Major C, Vincze Z, Mesko A, et al. Medicating outside the consulting room. Orv Hetil. 2007; 148: 291-298.
4. Segall A. A Community Survey of self-medication activities. Med Care. 1990; 28: 307-310.
5. Kamat VR, Nichter M. Pharmacies, self-medication and pharmaceutical marketing in Bombay, India. Soc Sci Med 1998; 47: 779-94.
6. Dinesh Kumar B, Raghuram TC, Radhaiah G, Krishnaswamy K.: Profile of drug use in urban and rural India. Pharmcoeconomics 1995 Apr; 7(4): 332-46.
7. Sharma R, Verma U, Sharma CL, Kapoor B. Self-medication among urban population of Jammu city. Indian J Pharmacol 2005; 37: 40-3.
8. Greenhalgh T. Drug prescription and self-medication in India: an explorative survey. Soc Sci Med 1987; 25: 307-18.
9. C.T. Chambers, G.J. Reid, P.J. McGrath, and G.A. Finley. Self-administration of Over-the-counter Medication for Pain among adolescents. Arch Pediatr Adolesc Med 1997; 151: 449 - 55.
10. G.S. Lau, K.K. Lee, and M.C. Luk. Self medication among university students in Hong Kong. Asia Pac J Public Health 1995 Jul 1; 8(3): 153-57.
11. Tse MH, Chung JT, Mungo JG. Self-Medication among secondary school pupils in Hong Kong: A descriptive study. Fam Pract. 1989; 6: 303-06.
12. Sawalha AF. Assessment of self-medication practice among university students in Palestine: Therapeutic and Toxicity Implications. The Islamic University Journal (Series of Natural Studies and Engineering) 2007; 15: 67-82.
13. Hounsa A, Kouadio L, De Mol P. Self-medication with antibiotics obtained from private pharmacies in Abidjan, Ivory Coast. Med Mal Infect. 2010; 40: 333-40.
14. Adu-Sarkodie YA. Antimicrobial self medication in patients attending a sexually transmitted diseases clinic. Int J STD AIDS. 1997; 8: 456-8.
15. Pankaj Gupta, Prateek S. Bobhate, Saurabh R. Shrivastava. Determinants of self medication practices in an urban slum community. Asian J Pharm Clin Res. 2011; 4(3): 54-57
16. Kumarasamy K.K., Toleman M.A., A.Walsh, et al. Emergence of a new antibiotic resistance mechanism in India, Pakistan, and the UK: a molecular, biological, and epidemiological study. Lancet Infect Dis. 2010 Sep; 10(9): 597-602.
17. James H, Handu SS, Khalid AJ, Khaja A, Otoom S, Sequeira RP. Evaluation of the knowledge, attitude and practice of self-medication among first-year medical students. Med Princ Pract. 2006; 15: 270–275.
18. Sawalha AF. Assessment of self-medication practice among university students in Palestine: Therapeutic and Toxicity Implications. The Islamic University Journal (Series of Natural Studies and Engineering) 2007; 15: 67-82.
19. Olayemi OJ, Olayinka BO, Musa AI. Evaluation of antibiotic self-medication pattern amongst undergraduate students of Ahmadu Bello University (Main Campus), Zaria. Research J Appl Sci Eng Technol 2010; 2: 35-38.
20. 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: 74-80.
21. Awad AI, Eltayeb IB. Self-medication practices with antibiotics and antimalarials among Sudanese undergraduate university students. Ann Pharmacother. 2007; 41: 1249-55.
22. Sawalha AF, Sweileh WM, Zyoud SH, Jabi SW. Self-therapy practices among university students in Palestine: Focus on herbal remedies. Complementary Therapies in Med 2008; 16: 343-349.
23. Sawalha AF. A descriptive study of self-medication practices among Palestinian medical and nonmedical university students. Res Social Adm Pharm. 2008; 4: 164-72.
24. Rohit K Verma, Lalit Mohan, Manisha Pandey. Evaluation of self medication among professional students in North India: proper statutory drug control must be implemented. Asian J Pharm Clin Res. 2010; 3 (1): 60-64
25. Ehigiator O, Azodo CC, Ehikhamenor EE. Self-medication with antibiotics among Nigerian dental students. Tanz Dent J 2010, 16(2): 48-54
26. Meena atray, Rupin Kumar. Self-medication pattern and its comparison amongst medical and non-medical college students of Udaipur, India. Int J Cur Res Rev, Jan 2013; 05 (01) : 36-43
27. Badiger S, Kundapur R, Jain A, Kumar A, Patanashetty S, Thakolkaran N, Bhat, Ullal N. Self medication patterns among medical students in South India. AMJ 2012; 5(4): 217-220.
28. Osarobo Ehigiator, Clement C.Azodo, Adebola O, Ehizele, Ejike B, Ezeja, Laura Ehigiator, Ikechukwu U. Madukwe. Self medication practices among dental, midwifery and nusing students. Eur J Gen Dent 2013; 2(1): 54-7