

**SELF-MEDICATION PROFILE OF DENTAL PATIENTS IN TUMKUR, SOUTH INDIA****DR. DARSHANA BENNADI**

Department of Public Health Dentistry, Sree Siddhartha Dental College and Hospital, SAHE University, Agalkote, Tumkur 572107, India.  
Email: darmadhu@yahoo.com

Received: 04 July 2013, Revised and Accepted: 03 Aug 2013

**ABSTRACT**

**Objective:** The rational use of drugs or medicines is an essential aspect of achieving good and effective health care delivery and this is an essential goal of the WHO. Since drug therapy is a very important aspect of healthcare management, it follows that if drugs are misused or abused, this may have considerable effect on the overall outcome of the health of the individual members of a community and by extension, the whole community with attendant socio-economic implications. Hence the study conducted to estimate the prevalence of self-medication among patients visiting the outpatient department of Sree Siddhartha Dental College and Hospital, Tumkur.

**Methodology:** This questionnaire based study was conducted among patients visiting to Siddhartha Dental College, Tumkur.

**Results:** The prevalence of self medication was 96.46% among dental patients. Study showed, 96% of graduates practiced self medication and common in town area. Analgesics were commonly used for self medication. Common reasons for self medications were time constraints, previous experience of treating a similar illness.

**Conclusion:** Health professionals have to spend some extra time in educating patients regarding the same. Improved knowledge and understanding about self-medication may result in rationale use and thus limit emerging microbial resistance issues.

**Keywords:** Self medication, Antibiotic resistance, Allopathic drugs, Self-care, Healthcare.

**INTRODUCTION**

Every day people throughout the world act on their own for their health; they practice self-care. In some instances, they do so through self-medication, which is now increasingly being considered as a component of self-care [1]. Self medication is defined as the use of medication by a patient on his own initiative or on the advice of a pharmacist or a lay person instead of consulting a medical practitioner [2].

Self-care can be defined as the primary public health resource in the health care system. It consists of the health activities and health-related decision-making of individuals, families, friends, colleagues at work, and so on. It includes self-medication, non-drug self-treatment, social support in illness, and first aid in everyday life. It has become widely accepted that self-medication has an important place in the health care system. Recognition of the responsibility of individuals for their own health and awareness that professional care for minor ailments is often unnecessary has contributed to this view. Improvements in people's general knowledge, level of education and socioeconomic status in many countries form a reasonable basis for successful self-medication. New drugs with specific pharmacological action, such as histamine H<sub>2</sub>-receptor antagonists, non-steroidal anti-inflammatory compounds (NSAID) and nicotine preparations for cessation of smoking, have been successfully reclassified from prescription to non-prescription status in many countries. Regulatory assessment of a change from prescription to non-prescription status should be based on medical and scientific data on safety and efficacy of the compound and rationality in terms of public health [2].

Studies done on self medication revealed that it is a fairly common practice, especially in economically deprived communities. It is a growing trend of 'self-care' which has its positive and negative aspects [3]. Major problems related to self medication is wastage of resources, increased antimicrobial drug resistance particularly in developing countries [4] and serious health hazards such as adverse reaction and prolonged suffering.

Unfortunately, especially in developing countries, professional health care is relatively expensive and in some cases not readily available thereby making self medication an obvious choice of healthcare service [5]. Furthermore, it has been noted that purchase of 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 counter free drugs that are in high demand for the treatment of highly prevalent diseases [6].

There is a lot of public and professional concern about the irrational use of drugs. In developing countries like India, easy availability of wide range of drugs coupled with inadequate health services result in increased proportions of drugs used as self-medication compared to prescribed drugs [7]. Rational use of drugs has drawn public health attention globally with the aim of maintaining quality health care at lower cost [8]. As dispensing medication in an appropriate way is a cornerstone of rational use, the dispenser should be regularly updated with information, tools and skills. Internationally, self-medication has been reported as being on the rise [9-11].

Self-medication is an area where governments and health authorities need to ensure that it is done in a responsible manner, ensuring that safe drugs are made available over the counter and the consumer is given adequate information about the use of drugs and when to consult a doctor [12].

**Aims and Objectives**

1. To estimate the prevalence of self-medication among patients visiting the outpatient department of Sree Siddhartha Dental College and Hospital, Tumkur
2. To know about the self medication profile among the same.

**METHODOLOGY**

This study was an anonymous, questionnaire-based survey, undertaken in the month of April 2012 (One month). A self-developed, pre-validated close-ended questionnaire was used which was translated in both Kannada and English language.

The study population comprised of patients visiting outpatient department of Sree Siddhartha Dental College and Hospital, Tumkur. The study enrolled patients who were 18yrs and above.

Prior to the data collection, the questions were pre-tested among a group of 20 patients (pilot study) in order to ensure the level of validity and degree of repeatability (Cronbach's alpha=0.76). 317 patients (subjects) agreed to participate in the study. 6 were excluded in accordance with the exclusion criteria like incomplete

information (incompletely filled questionnaire) and not willing to participate. Convenience sampling method was used. MaCorr Inc. Sample size calculator was used for estimating the sample size at 95% confidence interval.

A briefing was given about the nature of the study, and the procedure of completing the questionnaire was explained. Consenting participants anonymously completed the questionnaire.

For the purpose of the study, certain operational terms were defined. Self-medication was defined as the use of over-the-counter or non prescription drugs, whether modern or traditional, for self-treatment, without prior consultation with a doctor. A doctor was defined as any person who is medically qualified to prescribe medications. It included practitioners of modern scientific medicine as well as practitioners of other healthcare systems. Medication was defined as any substance used for treatment or prevention of disease. It included modern scientific medications as well as medications from other healthcare systems.

The questionnaire consisted of demographic details, questions regarding the type of medication, illness for which the medication was used; reason for self medication 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 results are based upon the data obtained from 311. The prevalence of self medication was reported as percentages. The survey was descriptive and data was summarized as counts and percentages, some of the questions had multiple options to choose from.

## RESULTS

317 subjects agreed to participate in the study. 6 were excluded in accordance with the exclusion criteria like incomplete information.

**Table 1: Shows age distribution of the respondents**

Age	percentage (No. of respondents)	Percentage of self medication
18-30yr	32% (99)	99% (98)
31-40yr	45% (140)	98% (137)
41-50yr	15% (45)	93% (42)
Above 50 yrs	8% (27)	85% (23)

174 (56%) of the 311 respondents resided in an urban area while the rest were residing in villages. 199 (64%) were male and the rest were females.

**Table 2: Shows the distance of the respondents' houses from the nearest health care centre / clinic/medical store**

Distance from nearest health post/ medical store	percentage (No. of respondents)
Less than 1km	43%(134)
1-2km	34%(106)
More than 2km	23%(71)

300 respondents (96.46%) had taken some form of self-medication during the one year period preceding the study. 246(82%) respondents had taken self medication more than twice. A trend towards self medication was observed, which was high in educated population as compared to uneducated population. In our study 96% of graduates and 21 % of illiterate people practiced self medication. The prevalence of self medication as 56.6% in town areas and 43.3% in rural areas.

From the study it was observed that the most frequently class of drug used for self medication is Analgesics (mainly paracetamol, Nimusulide, Ibuprofen). As shown in Table 3, about 98% of the study population uses this class of drug for treatment of fever, body ache, head ache etc. About 35 % prefer to overcome nutritional loss by themselves by taking Bicusules, Calcium and Multivitamin. 81% treats cold and cough by themselves (corex, benedryl), 38% uses antacids and 17% of the study population prefers antimicrobials.

34% (102) respondents had knowledge regarding Allopathic, Homeopathic and ayurvedic medicines.

98% (294) respondents had taken self medicine through oral route, where as 4% (12) through injection, 40% (120) topically applied the drugs and 1% (3) respondents used all the above routes for self medication. 25% (75) respondents were completely satisfied with their self medication where as 2% (6) respondents were unsatisfied with it.

**Table 3: Shows drugs used for self medication among the study population:**

Drugs used	Percentage (No. of respondents)
Analgesics	98% (294)
Antibiotics	17% (51)
Antacids	38% (114)
Iron-vitamin	35% (105)
Cough suppressants	81% (243)
All of the above	54% (162)

**Table 4: Shows reasons for self medication.**

Reasons for self medication	Percentage (No. of respondents)
Economical constraints	43% (129)
Previous experience of treating a similar illness	65% (195)
Mild illness to consult a doctor	54% (162)
Unavailability of doctors	37% (111)
Time constraints	82% (246)

On asking for the reasons of the self medication most of the population (54%) agreed that there is no need of doctors visits in case of minor illness like cold, cough, fever, itching etc. 82% respondents said that they prefer self medication because of lack of time to visit doctors and 43% said that they are not capable of paying fees to doctors (Table 4).

When asked about the source of information 96% (266) agreed that they take medication in consultation with chemists rather than going for formal prescription from doctors, reason being lack of time and money. 89% (267) used their previous prescription and 47% (141) take medicines on the advice of relatives and friends. The trend of self medication has been increased as result of the advertisement; about 7% (21) agreed that they prefer medicines on the basis of advertisement. All the above data was found to be good enough to support the previous studies that the trend towards self medication is increasing day by day but coming to the part of knowledge regarding safety and efficacy results observed were disappointing as only 21% (63) had the knowledge regarding the dose of the drug. 7% (21) knows the side effect of the drug taken by them as self medication and only few reported adverse drug reaction like sedation, rashes, increased severity of their illness etc.

77% (231) of the respondents were addicted to alcohol or smoking, 100% (300) respondents were unaware of drug-drug/drug-alcohol/drug-smoking interaction. 37% of the respondents think that self medication is safe and good where as 7% (21) of the respondents with their experience think that it is not safe and good. 56% (168) were not sure about the safe and goodness of self medication.

## DISCUSSION

WHO (World Health Organization) 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. Self-medication can be defined as obtaining and consuming drugs without the advice of a physician either for diagnosis, prescription or surveillance of treatment.

In our study prevalence of self medication among dental patients was high (96.6%). Various studies carried out show a wide range of self-medication practices from between 15% to 75% [13-18].

In the present study, trend of self medication was found high in educated compared to uneducated population. Similar results were obtained in the study carried by Deshpande and Tiwari [19] and Shveta S, Jagmohan S [17].

Our study shows that urban respondents were more frequent users of self-medication. Similar findings were observed in study conducted in Indore [16] and Punjab [17].

In our study, analgesics (Paracetamol, Nimusulide and Ibuprofen) were the most commonly used class of drugs for self medication. Other studies [16-22] showed similar results. Followed by them are food supplements, drugs used for treatment of cold and cough and the antimicrobials. Another alarming observation was that Nimusulide and Ibuprofen were also used by respondents to treat headache and fever, while these medicines are considered under Umbrella of Analgesic. Most of the respondents used cough syrup for cold and cough treatment which is most potent drug in initial therapy it is not a safe drug of choice. Both should be taken only with prescriber's advice. Analgesics, home medicines like turmeric, clove etc were used for oral and dental problems. White patches in mouth, lesions in tongue, and nodes in mucosal sites of cheek may be considered as primary symptom of cancer that may delay the diagnosis, if patient had the tendency of self medicine.

Previous studies [16-23] showed chemists as prime source of drug information, similar trend was observed in the current study also. Drug advertisements were also an important source of information. Although patients use of advertised medicines could have important health benefits if used appropriately in the early stages of disease.

There are various factors that play important role in influencing this type of self-medication pattern among the population. These factors include patient satisfaction with the health care providers, cost of the drugs, education level, socioeconomic factors, age and gender.

Study shows the importance of health professionals and chemist in promoting proper usage of medicines. There are three key therapeutic aspects to our work as health professionals who deal with, and help to prevent, oral disease or oral disease with systemic repercussions: information, therapeutic advice and education. Applying these three elements in our daily practice constitutes the global perspective that is essential when prescribing drugs [24].

Pharmacist can play a key role in giving advice to consumers on the proper and safe use of medicinal products intended for self medication. Pharmacists have following functions as communicator, trainer and supervisor, quality drug supplier, health promoter [9, 25].

### Recommendations

To avoid or minimize the dangers of self medication

- The people should be educated about the dangers of indiscriminate use of drugs.
- The physician should be more judicious in prescribing, and must insist on drugs being supplied by the chemist only on a valid prescription.
- A proper statutory drug control must be implemented, rationally restricting the availability of drugs to the public.
- There is need to create awareness about existing oral health facilities so that patients will know where to go when the need arises thereby minimizing the potential resort to self medication.

These, measures would definitely reduce the incidence of drug-related mishaps and help in maintaining good health of the individual and society.

### Limitations of the study

Done on small sample. This study could also open up research possibilities for exploring the relationship between self-medication practices and emergence of antibiotic-resistant bacteria

### CONCLUSION

The prevalence of self medication practices is alarming in our study population. Fever, cough and cold were the most common reasons for

self medication. NSAIDs were the drugs most commonly used for self medication and food supplements were frequently taken without prescription. It would be safe, if the people who are using it, have sufficient knowledge about its dose, time of intake, side effect on over dose, but due to lack of information it can cause serious effects like antibiotic resistance, skin problem, hypersensitivity and allergy. So, developing country like India where we have poor economical status, education status as well as poor health care facilities. People have less knowledge regarding risks associated with their self medication. We are on the edge of sword whether to promote self medication or not. So it is recommended that holistic approach should be taken to prevent this problem, which includes proper awareness and education regarding the self medication and strictness regarding pharmaceutical advertising. Dispensing modes in the needs to be improved through proper education, strict regulatory and managerial strategies. Strategies to make healthcare easily accessible and cost-effective. Health professionals have to spend some extra time in educating patients regarding the same. Improved knowledge and understanding about self-medication may result in rationale use and thus limit emerging microbial resistance issues.

### REFERENCES

- Hughes CM, McElnay JC, Fleming GF: Benefits and risks of self medication. *Drug Safety*. 2001; 24: 1027-1037.
- WHO guidelines for the regulatory assessment of medicinal products for use in self medication, 2000. [cited2011APRIL21]; Available from [www.who.int/medicines/library/qsm/whoedm-qsm-2000-1/who-edm-qsm-00\\_1.htm](http://www.who.int/medicines/library/qsm/whoedm-qsm-2000-1/who-edm-qsm-00_1.htm).
- 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: 1771-1783.
- Pagane JA, Ross S, Yaw J, Polisky D. Self-medication and health insurance coverage in Mexico. *Health Policy* 2007; 75: 170-177.
- Chang F, Trivedi PK, Economics of self medication: theory and evidence. *Health Economics* 2003; 12: 721-739.
- Shakoor, O, Taylor RB, Behraus RH. Assessment of the incidence of substandard drugs in developing countries. *Tropical medicine and International health* 1997; 2: 839-845.
- Shankar PR, Partha P, Shenoy N. self-medication and non-doctor prescription Practices in Pokhara valley, Western Nepal; a questionnaire based study. *BMC Fam pract* 2002; 3: 17-23.
- Bazaldua O, Ables AZ, Dickerson LM, Hansen L, Harris I, Hoehns J et al. Suggested guidelines for pharmacotherapy curricula in family medicine residency training: recommendations from the society of teachers of family medicine group on pharmacotherapy. *Family medicine* 2005; 37: 99-104.
- World Health organization: The role of pharmacist in self care and self-medication. Report of the 4 WHO Consultative Group on the Role of the Pharmacist. The Hague, 1998[Online]. [cited2011APRIL21]; Available from: URL: [http://www.who.int/medicines/library/dap/who-da\\_p-98-13/who-dap-98-13.pdf](http://www.who.int/medicines/library/dap/who-da_p-98-13/who-dap-98-13.pdf)
- Blenkinsopp A, Bradley C. Over the counter drugs: patients. Society and the increase in self-medication. *BMJ* 1996; 312: 629-32.
- Bradley C, Blenkinsopp A. Over the counter drugs: The future for self-medication. *BMJ* 1996; 312: 835-37.
- World Health Organization: Report of the WHO Expert Committee on National Drug Policies 1995. [cited2011APRIL21]; <http://www.who.int/medicines/library/dap/who-dap-95-9/who-dap-95.9.html>.
- Saeed AA. Self-medication among primary care patients in Faradak clinic in Riyadh. *Soc Sci Med* 1988; 27: 287-9.
- Durgawale PM. Practice of self medication among slum dwellers. *Ind J Public Health* 1998; 42: 53-5.
- Phalke VD, Phalke DB, Durgawale PM. Self-medication practices in rural Maharashtra. *Indian J Community Med* 2006; 31: 34-5.
- Rajput MS, Mathur V, Yamini S, Nair V. Pharmacoepidemiological study of self-medication in Indore city. *Indian J. Pharm. Pract* 2010; 3: 25-31.

17. Shveta S, Jagmohan S. A study of self medication pattern in Punjab. *Indian J. Pharm. Pract.* 2011; Volume 4 Issue 2 Apr – Jun: 43-48
18. Joshi MC, Shalini, Sangeeta Agarwal. A Questionnaire Based Study of Self-Medication Practices among Young Population. *Res J. Pharm Biol Chem Sci* October – December 2011; Volume 2 Issue 4: 761-766.
19. Deshpande SG, Tiwari R. Self medication-a growing concern. *Indian J. Med Sci* 1997; 51: 93-96.
20. Wilbur K, Salam SE, Mohammadi E. Patient perceptions of pharmacist roles in guiding self-medication of over the counter therapy in Qatar. *J. Patient Preference and Adherence* 2010; 4: 87-93.
21. Verma RK, Mohan L, Pandey M. Evaluation of self medication among professional students in North India: proper statutory drug control must be implemented. *Asian J Pharma Clin Res.* 2010 : 3: 60-64.
22. Samuel, Suni Susan; Arul Prakasam, K. C.; Nandhakumar, N. Assesment of selfmedication among patients attending community pharmacises in Erode, India. *Int J. Pharm Pharm Sci* Jul 2011; Vol. 3, Supplement 4,: 258- 62
23. Lefterova A, Getov I. Study on consumer's preferences and habits for over the counter analgesics use. *Cent Eur J Public Health* 2004; 12: 43-45.
24. Miguel Hernández Juyol: Dentistry and self-medication: A current challenge. *Medicina Oral* 2002; 7: 344-7
25. Manik Chandra Shill, Asish Kumar Das. Medication practices in Bangladesh - Roles of pharmacists at current circumstances. *Int J. Pharm Pharm Sci* 2011; vol 3, suppl 4: 5-8 25.