

Assessing Self Medication Patterns of Undergraduate Dental Students of North India

Shivakumar G.C.*, Akhilanand Chaurasia**

Abstract

Introduction: Self medication is selection and use of medicines by individuals to treat self recognized or self diagnosed conditions or symptoms. The study was done to assess the patterns of self medication in undergraduate dental students of North India. *Methods:* A descriptive cross sectional study was done on a sample of 122 dental students of second year. A prevalidated questionnaire was used to collect data regarding demographic characteristics and variables elaborating on self medication patterns. *Results:* The study revealed a prevalence of 80.23% of the students self medicating. The drug used in higher numbers was paracetamol, followed by analgesics, antibiotics and medicines for cold and cough. *Conclusion:* Our study reveals that self medication is widely practiced among dental students. The students and public need to be educated on this aspect to ensure safety of drugs.

Keywords: Dental Students; Self Medication; Drugs; Analgesics; Education.

Introduction

Self medication is defined as obtaining and consuming medication without professional supervision regarding indication, dosage and duration of treatment [1]. This does not limit to the use of modern medicine alone, but even includes alternative medicine [2]. Self medication has merged into self care today owing to the rapid technological advancements. Self care means measures taken to establish and maintain health, prevent and deal with illness. It encompasses hygiene, nutrition, lifestyle, environmental factors and socio-economic factors. This horizon is expanded to the use of non-prescription medicines by people on the basis of their own initiatives [3].

This practice is prevalent to reduce the direct and indirect costs of health care, like treatment cost,

travelling cost, time taken off work and school and to get away from the hospital environment. It is now a common practice to see self medication practice in India which has posed a challenge to health care professionals. But the problems with this practice are many. It results in wastage of resources, increased resistance of pathogens and potential risk of adverse reaction and if medications do not work – results in prolonged suffering. In countries where antibiotics are available without prescriptions, antimicrobial resistance is a major problem [4-7].

Self medication is prevalent even among the health care providers. In dentistry, students are exposed to pharmacology in the second year curriculum. This knowledge about drugs raises the incidence of self medication. Infact, the incidence is higher among the medical students in contrast to the non-medical counterparts (92% vs 59%) [8]. Although various studies are conducted on the medical students, no literature is available on dental students. Hence the study was conducted to assess the awareness level of dental undergraduate students about self medication in Lucknow, North India.

Methodology

A cross sectional study design was employed to assess the pattern of self medication. A pre-validated

Author's Affiliation: *Professor, Oral Medicine & Radiology, BBD College of Dental Sciences, BBD University, Lucknow. **Assistant Professor, Department of Oral Medicine & Radiology, Faculty of Dental Sciences, King George's Medical Unniversity, Lucknow.

Reprints Requests: Dr. Akhilanand Chaurasia, Assistant Professor, Department of Oral Medicine & Radiology, Faculty of Dental Sciences, King George's Medical Unniversity, Chowk, Lucknow, Uttar Pradesh 226003.

E-mail: chaurasiaakhilanand49@gmail.com

questionnaire comprising of both open and close ended questions was used for this purpose. Second year undergraduate students of dentistry formed the sampling frame. A total number of 148 dental students from two dental colleges formed the sample. Informed consent was taken from the students after explaining the purpose of the study. Permission from the Institutional ethics committee of the respective institutions was obtained prior to the start of the study. The examiner distributed the questionnaire in class rooms and explained the procedure of filling them. Self medication term was first described to the students as "the use of medicine for self treatment without the consultation of health care professionals".

The questionnaire elaborated demographic variables and variables eliciting on self medication like whether self medicated in the last 3 months, the illness or reason, name of the medicine used, drug group, which type of medicine system and the reason for not consulting an health care professional. Care was taken to not obtain any data leading to the identification of the participants. The completed questionnaires were taken back and subjected to statistical evaluation. Descriptive statistics were performed using the SPSS package.

Results

Out of the 148 questionnaires which were distributed, 122 were subjected for the analysis. 22 questionnaires were not completely filled giving the response rate of 82.43%. The mean age of the students was 20.34 ± 3.18 years. Of the total 122 respondents, 83 were females and 39 were males. None of them reported with any history of chronic diseases like diabetes or hypertension or were on regular prescription medicines.

The prevalence of self medication was noted in 98 (80.32%) of the students in the last 3 months. (Table 1) depicts the gender wise distribution of students. It is noted that a clear female predominance (68%) was noted in the admission and hence self medication practice (73%). The most common reason for self medication was fever. (Table 2) shows the various ailments for which students chose self medication. The most common drug used was paracetamol followed by analgesics, antibiotics and antihistaminics and herbal medicines. The reasons for self medication as quoted by the students is summed in (Table 3).

Table 1: Gender wise distribution of students

Gender	Numbers (%)	Self medicated
Females	83 (68%)	72 (73%)
Males	39 (32%)	26 (27%)
Total	122 (100%)	98 (100%)

Table 2: Diseases for which self medication practiced

Reasons (ailments)	Numbers
Fever	38(39%)
Head ache	21 (22%)
Body ache	15 (15%)
Sore throat	14 (14%)
Common cold or cough	10 (8%)

Table 3: Reasons for self medication

Reasons	Frequency
Ease	32 (34%)
Less intensity of the disease	24 (24%)
Long waiting time in the doctor's office	21 (22%)
Lesser cost	13 (13%)
Learning opportunity	8 (8%)

The most common reported source of information regarding drugs was experience of prior prescription, influence from parents and friends, knowledge of books and others. A total of 53 % of the students were aware of any adverse effect of the drug while only 36% of them knew about drug interactions.

Discussion

The present study reported a prevalence rate of 80.32%, which is almost similar to the study conducted by Divya Goel et al [9]. This prevalence of self medication practice could be associated with the

professional course as it is seen that a high level of education and professional status are predictive factors for self medication [10]. With the literacy levels increasing, the demand of self medication is also on the rise.

The present study demonstrated greatest abuse of the paracetamol and analgesics followed by antibiotics which is similar to the study findings of Lucas R et al [11], Girma Belachew Gutema et al [12]. The Non Steroidal Anti Inflammatory Drugs (NSAID) are reported to be the common class of drugs used for self medication practices as they are used to treat common ailments like fever, headache and pain. But, the possibility of adverse effect when used, misused and abused should be borne in mind. Baruzai A reported hepatic dysfunction and renal failures with the NSAIDs overuse [13]. The increasing use of NSAIDs also pose Gastro-Intestinal complications.

The increasing use of Over The Counter (OTC) in India is proven by the findings of Sonam Jain et al [14]. According to which, the sale of analgesic has risen by 15.8% in 2009 from 10.7% in 2008. The sales of vitamins, minerals and other supplements are increased by 8.8% from 8.2%, Gastrointestinal drugs rises to 10.4% and other OTC drugs by 38.9%.

The use of antibiotics in the present study was noted in 14% students. This is in contrast to the study done by Abay SM et al in Ethiopia [15]. This could be because in India Antibiotics are available as OTC drugs without prescription. This escalates the development of resistance in micro-organisms. Darshana Bennadi [16] reported in his review that self medication in India is very common among educated population. Apart from antibiotic induced microbial resistance, costs and toxicity problems cannot be overlooked. Sometimes, people land up in antibiotic abuse by using them in wrong indications such as common cold infections and infections of the non-bacterial origin. Hence, regulatory interventions by the both the drug companies and government is called for to make the public realize about the consequences of self medication with antibiotics.

A total of 53% students were aware of adverse effects, which is similar to the study conducted by Divya Goel et al [9]. The major reasons for self medication were ease and less intensity mildness which is similar to the study results of Abay S et al and Girma et al [12,15]. Surprisingly and fortunately, none of the participants reported the practice of self medication in an emergency in the present study, while a good 15.8% of the respondents in a study conducted by Abhay S et al was reported [15].

However the authors would recommend the study

be conducted on a larger sample to generalise the results. An element of recall bias should not be overlooked as the response was based on self reported information based on three months. A follow up study will able to give specific results. Also, that the study findings can vary with different populations due to variation in socio-economic profiles and demographic characteristics and different methodologies adapted to find the prevalence of self medication.

Prevention of the self medication practice can be done by two players in the field of health sciences – Health care professional and the pharmacist. The health care provider should provide proper information about the drugs prescribed and the risk of using it either unprescribed or for a longer time. The pharmacist plays a key role in educating the customers as he is the one who dispenses them. He should be trained to identify when drugs are intended for self medication and educate them about the proper use of medicines.

Conclusion

Self medication has emerged as a global phenomenon today and is widely practiced in dental students. Consumers should have sufficient knowledge before using any OTC drugs. They should be educated about the dose, time of intake, side effect or overdose.

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