

Self-medication awareness and practices for oral health problems among non-medical degree college students in Virajpet, India.

Dr. Nabeela Basha¹, Dr. Ananda S R.², Dr. Jithesh Jain³, Dr. Bhakti J Sadhu⁴

1. Post Graduate, Department of Public Health Dentistry, Coorg Institute of Dental Sciences, Virajpet, Karnataka-571218

2. Reader, Department of Public Health Dentistry, Coorg Institute of Dental Sciences, Virajpet, Karnataka 571218, India.

3. Professor and Head of Department, Department of Public Health Dentistry, Coorg Institute of Dental Sciences, Virajpet, Karnataka-571218, India

4. Senior Lecturer, Department of Public Health Dentistry, Coorg Institute of Dental Sciences, Virajpet, Karnataka-571218, India

Corresponding author

Nabeela Mahaboob Basha

Address: Department of Public Health Dentistry,

Coorg Institute of Dental Sciences, Virajpet, Karnataka-571218, India

Phone number: +91-7411621962

Email: nabeelabasha1234@gmail.com

ABSTRACT

Background/Objectives: As per World Health Organization, self-medication is defined as the selection and use of medicines by individual to treat self-recognized illness or symptoms. The irrational use of drugs has caused a lot of public and professional concern over the years since most the side effects developed frequently are more serious than the original disease itself. The present study was conducted to assess the self-medication awareness and practices for oral health problems among non-medical degree college students in Virajpet, India.

Methods: The study population included 363 participants aged 18-22 years old attending degree colleges who were selected randomly. A pre-tested self-administered questionnaire was distributed to assess the self-medication awareness and practices for oral health problems. Descriptive statistics was used to summarize the results. The data was statistically analysed using SPSS for windows version 23.0 software.

Results: Out of the 363 participants, 45.5% were males and 54.5% were females. The prevalence of self-medication practice was found to be 88.4% in this study. Toothache was opted as the most common reason for self-medication. The most common response after self-medication was found to be temporary relief from the problem (36.9%). The frequently used type for self-medication was salt and hot water (39.9%) followed by use of pain killers. Most of the respondents consulted pharmacist for basic treatment and only decided to consult a dentist if the problem persisted. Majority of respondents were unaware of the adverse effect of self-medication.

Conclusions: Self-medication prevalence was found to be quite high among the degree college students in Virajpet, India. There is a need for increasing awareness about the adverse effects of self-medication practices among the students.

Key words: *medications, awareness, practices, degree students, dental problems*

Why the article should be published: Very few studies have been published assessing self-medication awareness and practices among non-medical degree college students and the results of the current study highlights the need for increasing awareness about self-medication practices among the same.

INTRODUCTION

"The aim of medicine is to prevent disease and prolong life, the ideal of medicine is to eliminate the need of a physician" -William James Mayo.

This desire, however, can give rise to problems when man starts taking medicines on his own (i.e. self-medicating), ignoring the harmful drug reactions and drug toxicities that may occur under lack of medical supervision.¹

As per WHO, self-medication is defined as the selection and use of medicines by individual to treat self-recognized illness or symptoms. Medications being one of the important pillars of healthcare system, aid in relief and treatment of numerous illnesses. Their irrational use has caused a lot of public and professional concern over the years since much of the side effects developed frequently are more serious than the original disease itself.²

There are certain groups of medications available as 'over the counter' or 'non-prescription' medications which means medications available from the pharmacy without the prescription from a general physician. They are available easily and have a comparatively low profile of adverse effects when taken in appropriate dosages.³ In some countries, over the counter products are also available in supermarkets and other commercial outlets.

Self-medication includes the use of a wide variety of medicines including analgesics, antimalarial, antibiotics and cough syrups, among others nonprescription drugs and a range of alternative medicines are the herbal remedies and traditional products. Self-medication with antibiotics, has been widely reported, leading the WHO to call attention to the dangers of self-medication as a cause of antibiotic resistance.^{2,4} Studies have shown that the influence of self-medication practice is multi-factorial, such as education,

family, society, laws and legislations, easy availability of drugs and exposure to advertisements and media etc.^{2,5}

Self-medication can be seen as a two-sided sword. In several studies, it has been proven that injudicious practice of self-medication results in wastage of resources, increases resistance of microbes and poses serious health hazards such as adverse drug reactions, drug dependence, etc. On the other hand, if done with appropriate supervision and sufficient knowledge, self-medication can prove to be a game changer in acute medical problems, and can cut down long waiting doctor appointments, may be economical and can even save lives in acute emergency conditions.^[5]

In developing countries like India, inadequate health services coupled with easy accessibility to a wide range of over the counter drugs has contributed to the widespread practice of self-medication. In a study conducted among the youth in Karnataka it is found that the prevalence of self-medication was 88.6%, which is very high.⁶ In dental profession, apart from anxiety due to a fear of dental treatments, toothache is the most likely symptom that may lead patients to practice self-medication.⁷

As health care professionals, it is our responsibility to create awareness among the public about the serious health hazards that can develop due to self-medication. Very few studies have been published regarding usage of self-medication among degree college students, hence, we conducted this cross-sectional study to assess the awareness and practices of self-medication for dental problems among degree college students in Virajpet taluk, India.

The objectives of the study were:

To know the prevalence of self-medication

for oral health problems among degree college students in Virajpet taluk;

To know about the self-medication profile among the same

MATERIALS AND METHODS

This study was a descriptive cross-sectional survey designed to assess the self-medication awareness and practices for oral health problems among degree college students in Virajpet, India. In the current study, non-medical degree colleges included were B.Com, BBM and BA degree colleges. It was conducted in the month of June 2016. Ethical approval for the study was obtained from the Institutional Ethical Committee. Permission for conducting the study was obtained from the Principals of the respective Degree colleges.

Virajpet is one of the Taluks in Coorg District. The total number of degree colleges and total student population was collected from the Block Education Officer's (BEO) office. Among the 8 non-medical degree colleges in Virajpet taluk, 4 colleges were selected randomly using Lottery method. The study participants were selected using systematic sampling method.

Based on total number of students, sample size was determined using the formula

$$n = \frac{N}{1 + Ne^2}$$

Where,

n = sample size.

N = total student population.

e = error tolerance.

Total number of students were N = 4000, therefore sample size was: 363.

A specially prepared and pretested questionnaire consisting of fifteen questions was used in the survey. The first part of questionnaire consisted of questions on demographic details of the survey

participants. The second part of the questionnaire consisted of multiple choice questions regarding self-medication of drugs. The proforma contained only closed-ended questions. A pilot study was carried out on 10% of the desired population (who were not included in the main study) to check the feasibility and relevance of the prepared format (Cronbach's alpha=0.82). The format was designed in English and translated to Kannada (local language) and retranslated to English to check the validity of the translation (back translation method).

Participants aged 18-22 years, present on the day of survey and who were willing to participate were included in the study. The participants were elaborated about the study and written informed consent was obtained. Questionnaires were distributed to the students personally and they were given sufficient time to answer the questionnaire which were collected back on the same day. Participants who were mentally incapacitated to give a valid response to questions were excluded.

Statistical Analysis

The collected data was classified and tabulated in Microsoft Office excel. Statistical package SPSS (IBM version 17) software was employed for statistical analysis. Frequency distributions of responses to the questions were produced. In addition to Descriptive statistics, Chi-square test was used to explore the association between the variables.

RESULTS

This survey was conducted to assess the prevalence of self-medication practice for oral health problems among degree college students in Virajpet; and to know about the self-medication profile among the same. A total of 363 participants were included in the study. Out of which 45.5%

were males and 54.5% were females. The age of the respondents ranged between 18 and 22 years, with a mean age of 18.96 years. In the distribution of participants based on educational qualification 70.2% participants were B. Com students, 21.2% were BBM students and 8.5% were B.A students. (Table 1).

About 90% of the population had practice of the self-medication for oral health-related problems and among them majority had used same medicines as their family members. Majority of participants who practiced self-medication used it for few days till their oral health problem subsided (Table 2).

Among the respondents, 54.2% had opted toothache as their problem for self-medication which was found statistically significant ($p = 0.017$) and lack of time as the one of the main reasons for self-medicating (32.5%) (Table 3 & 4). Table 5 showed the responses after self-medication. The most common response after self-medication was temporary relief from the problem followed by being unsure about its effects ($p = 0.001$).

The most common type of self-medication used was salt and hot water followed by pain killers. Among the sources of obtaining the medicines, the most frequent source found was the pharmacy shop/Hospital pharmacy followed by stock present at home (Table 6 & 7). Regarding the expiry date of the medicine, majority of the participants checked the expiry date of the medicines which was not found to be statistically significant. (Table 8).

Most of the participants have stated that they have known about self-medication through their relatives followed by having personal knowledge which was found to be statistically significant. (Table 9). It was observed that majority of the

participants believed that taking self-medication for dental problems was not harmful and have never received information about the harmful effects of self-medication for dental problems (Table 10).

Table 1: Demographic data obtained from Part I of the questionnaire

	Year	Mean
AGE Minimum Maximum	18	18.96
	22	
GENDER Female Male	N 198 165	FREQUENCY (%) 54.5 45.5
EDUCATION STATUS B.COM BBM B.A	255	70.2
	77	21.2
	31	8.5

Table 2: Practice of self-medication for oral health-related problems

	n	Percentage
Regular dental visits	166	45.7
Self-medication practice	321	88.4
Same medicines as family members	186	51.2
Self-medication till condition subsides	197	54.2

Table 3: Oral health-related problems triggering self-medication

	Gender (n)		Percentage
	Male (145)	Female (177)	
Toothache	77	120	54.2
Bleeding gums	15	07	6.06
Bad breath	10	06	4.4
Swelling	04	12	4.4
Shaking teeth	11	07	4.9
Others	28	25	14.6

*P-value = 0.017

Table 4: Reasons for self-medication for oral health-related problems

	N (322)	Percentage
Lack of time	118	32.5
Lack of money	24	6.6
Not so important	64	17.6
Traditional/Religious belief	70	19.2
Others	46	12.6

Table 5: Response after self-medication

	Gender (n)		Percentage
	Male (145)	Female (177)	
Temporary relief from problem	45	89	36.9
Effective	48	29	21.2
Unsure about effects	52	59	30.5

*P-value = 0.001

Table 6: Type of self-medication used for oral health-related problems

	N (322)	Percentage
Pain killers	106	29.2
Homemade/Ayurvedic	45	12.3
Antibiotics	09	2.4
Salt and Hot water	145	39.9
Ice pack	15	4.1
Others	2	1

Table 7: Sources of getting medicines without doctor's slip

	N (322)	Percentage
Pharmacy shop/ Hospital pharmacy	216	59.5
Friends	11	3.03
Present at home	54	14.8
Traditional home	30	8.2
Others	11	3.03

Table 8: Checking expiry date of the medicines

	N (322)	Percentage
Yes	287	79.06
No	08	2.2
Sometimes	27	7.4

Table 9: Source of knowledge about self-medication

	Gender (n)		Percentage
	Male (145)	Female (177)	
Relatives	61	63	34.15
Friends	14	11	6.8
Personal knowledge	35	34	19
Pharmacist	06	31	10.1
Media	17	19	9.9
Traditional healers	06	12	4.9
Others	06	07	3.5

*P-value = 0.020

Table 10: Awareness about harmful effects associated with self-medication and source of receiving the information about harmful effects of self-medication for dental problems

Effects	Gender (n)		Percentage
	Male	Female	
Not harmful	51	81	36.3
Worsening of existing illness	24	24	13.2
Damage of body organs	30	28	15.9
Mental illness	17	10	7.4
Addiction	26	43	19
Poisoning	08	10	4.9
Death	09	02	3.03
Total	165	198	100

*p-value = 0.023

Source of information

School/College	12	22	9.3
Hospital	27	26	14.6
Dentist	21	28	13.4
Family	30	31	16.8
Friends	18	28	12.6
Advertisements/ Brochure	27	27	14.8
Never received	30	36	18.1
Total	165	198	100

DISCUSSION

The present survey is one of the very few studies which has tried to assess awareness and practices for oral health problems among non-medical degree college students. The prevalence of self-medication practice was found to be 88.4% in this study. This result is similar to the results found in other studies by various authors globally in which the prevalence was in a range between 80% to 96%.^{1,8-12} On the contrary, some studies found lower prevalence of about 30%.¹⁶ In any case, a true comparison of percentages for resorting to self-medication for oral health problems cited by majority of the participants was due to is not possible because data for comparison from studies carried out among non-medical professional degree college students are very scarce.

The age group of the study population in the survey ranged from 18 to 22 years, and mean age group of the study participants was 18.96 years with no gender based differences observed in the practice of self-medication. These findings were in accordance with Kalra DD et al.³ The results of this study showed that 51.2% of the study participants used the same prescriptions as their family members' which was consistent with the results found in other studies.^{2,13,14} Toothache affects the diet, disturbs sleep, effects work performance and impairs overall health, ultimately driving individuals to seek immediate help. The findings of this study show that majority of the participants used self-medication for toothache (54.2%). This finding is similar in the studies conducted by Giriraju A et al,² Agbor MA et al,¹⁵ Anyanechi CE et al,¹⁰ Komalraj MR et al,¹³ Simon AK et al,¹⁶ and Chhabra S et al.¹⁴ Lack of time (32.5%). This is in line with studies conducted by Kalra DD et al,³ Giriraju A et al,² Rawlani SM et al,⁷ and Agbor MA et al.¹⁵ Achieving temporary relief

from the problem was the most common response experienced after self-medication in this survey. Similar response was seen in other studies.^{2,13,14} Salt and hot water was the most opted aid for dealing with dental problems (39.9%), followed by consumption of painkillers (29.2%). Majority of the other studies found the usage of painkillers quite frequently, followed by the use of antibiotics.^{1-3,7,8,10-13,15,17-19} Studies conducted by Agbor MA et al,¹⁵ Gutema GB et al,¹⁸ Anyanechi CE et al,¹⁰ and Chhabra S et al¹⁴ showed that the participants preferred antibiotics over other aids. This practice of consuming unprescribed antibiotics needs to be curbed as its consequence of antibiotic resistance is on a rise. There has also been evidence of usage of certain harmful adjuncts like substances like vinegar, petrol, tobacco, alum and other corrosive products.¹⁵ The most common source of getting medicines without a certified doctor's prescription was a pharmacy or a hospital pharmacy (59.5%). This was in line with many other studies.^{1,2,7,8,13-16,18} Study conducted by Agbor MA et al¹⁵ showed that the most common source of obtaining medicines were from the traditional healers and study done by Kalra DD et al³ showed 82.2% participants used medicines which were present at home. These findings did not match with this study. Most of the participants in this study had the habit of checking the expiry date of the medicines (79.06%). This was similar to the findings in the studies conducted by Giriraju A et al,² Komalraj MR et al,¹³ but the opposite case was shown in a done by Chhabra S et al¹⁴ where only 49.1% of the participants had the habit of checking the expiry date of the medicines. The common guiding source of knowledge about self-medication for the participants were their relatives (34.15%) followed by having personal knowledge (19%). This was in accordance with the studies

conducted by Giriraju A et al.² and Agbor MA et al.¹⁵ Majority of the participants had the impression that self-medicating was not harmful (36.3%) and have never received information about the harmful effects of self-medication, unlike in the result obtained in study conducted by Gutema GB et al.¹⁸ where 84.40% of the participants had knowledge about possible adverse effects of drugs they used.

However, a true comparison of percentages is not possible because most of the studies were carried out among medical students, health care professionals and care-seeking dental patients. There is a dearth in available data for comparison from studies carried out among non-medical degree college students.

CONCLUSION

It is common for people to experience sickness and health problems with an inherent tendency to act on their own health in the form of self-care. Governments of some countries encourage forms of self-care, which includes self-medication. This has the benefit of patients taking responsibility for their health, in turn promoting patient empowerment. On the other hand, inappropriate use has its own *perils* in the form of increased resistance to microbes, serious health hazards, wastage of resources etc. Prevalence of self-medication practice was found to be quite high in this present survey. Although self-medication is very difficult to eliminate, stringent steps are required to discourage unsupervised and injudicious practice and to reduce it to the barest minimum by adequate and consistent dental health education. The physician should be more judicious in prescribing medications. This study indicates the necessity to create awareness about normal and adverse drug reactions. Stricter policies and regulations with carefully planned

monitoring is needed from the Central Drugs Standard Control Organization, Government of India.

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