

# Self Medication Patterns among Undergraduate Dental Students

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## ABSTRACT

**Introduction:** Currently, there has been increasing inclination towards self-medication with availability of over the counter drugs in pharmacies without any prescription. Self-medication has its own pros and cons, the data pertaining to the prevalence of self-medication in Pakistan is infrequent. The aim of this study was to assess awareness related to self-medication, self-medication practice, the common types of illnesses, identification of frequent utilization of drugs and determinants of self-medication

**Material and methods:** Descriptive cross sectional questionnaire study was conducted on 30 undergraduate dental students from 1<sup>st</sup> and 2<sup>nd</sup> year BDS among them 16 were in age group 17-20 and 14 were in age group of 20-23 years. Regarding sex of dental students, 9 were males and 21 were females. Hand delivery of questionnaires was done. All the forms were duly filled and returned and analyzed. Data analysis was done using SPSS software.

**Results:** A total of 8(26.7%) of students were indulged in self-medication. The most common drugs used for self-medication were analgesics 16(53.3%) and antibiotics 7(23.3%). Fever and headache were the most frequently reported cause of illness 12(40%), cough and common cold were the second most indication for self-medication 8(26.6%). The most common cause of not consulting a doctor among students was their prior experience of medications 43% and the second most reason became their mildness of illness 26%. The predominant source of information among 50% of dental students became the past experience of illness and 13% of dental students being suggested by family and friends.

**Conclusions:** Though only minority of dental students self-medicated themselves, measure should be adopted to completely reduce such type of practice by guiding the dental students about its advantages and disadvantages.

**Keywords:** Dental Students, Drug Therapy, Non Prescription Drugs, Self-Medication

## INTRODUCTION

Self-medication is defined as the use of drugs without consultation of medical practitioner by the patients to treat himself.<sup>1</sup> Self-medication is commonly practiced worldwide and it is an essential component of patient's behavior for coping illness, in which he believes he does not require to go to the doctor.<sup>2</sup> This practice is becoming common in many countries due to lack of access to healthcare, poor drug regulatory practices, easy availability of over the counter drugs, lack of seeing a doctor, inability to get quick appointments or unaffordable doctor's fees.<sup>3</sup> Recommendation of medicines may be from a family member, friend, or a pharmacist, or too much information from the internet, magazines makes people confident about

treating themselves. There are several side-effects of self-medication such as allergic reactions, habituation and it could be severe or even fatal. Consequently, for a doctor to reach to a diagnosis is difficult because of self-medication for example, drugs like NSAIDs increases the risk of stroke.<sup>4</sup> Being unaware of the appropriate drugs for the specific illnesses, their side-effects and doses, the misuse of medications recommended by anyone other than doctor, may lead to people play with their lives at their own mercy. But there is no stop to this due to illiteracy. On the contrary, the situation is completely different in case of medical/ dental students.<sup>5</sup> Various studies prove that self-medication can lead to interaction between drugs that can be prevented, it also can lead to delay in seeking care that is required due to delay in definitive diagnosis. Moreover, self-medication with antibiotics may lead to drug resistance which has a number of potential risks. Incorrect self-diagnosis, incorrect choice of drug therapy, severe side effects, risk of dependence and abuse might lead to dangerous outcomes.<sup>6</sup> A survey in Bahrain at Arabian Gulf University was conducted for first year medical students and the outcome suggested that students had poor knowledge related to self-medication and the knowledge of medication and adverse effects were adequate, although the practice among students was common and attitude was positive.<sup>7</sup>

The study of self-medication practice among university medical/dental undergraduates is very important as this segment of population is highly educated with well access of information in terms of their health and well exposed knowledge of drugs and disease. By looking at this practice among dental undergraduates will show the future generation prescribers and health educationalist information regarding self-medication. As the practice of self-medication is inevitable, health professionals need to

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educate the young dental undergraduates about the pros and cons of self-medication.<sup>8</sup> In this study, we have assessed the self-medication practice in dental students of Watim dental college, Rawalpindi Pakistan. The aim of this study was to assess awareness related to self-medication, self-medication practice, the common types of illnesses, identification of frequent utilization of drugs and determinants of self-medication.

## MATERIAL AND METHODS

In this study descriptive cross sectional design was used. The population of this current study included dental students of Watim Dental College, Rawalpindi, Pakistan studying in 1<sup>st</sup> year and 2<sup>nd</sup> year BDS. 30 subjects were selected for the study, 15 dental students from each class. Semi structured self-administered questionnaire was developed for the collection of data. The questionnaire was made of four segments in which part 1 was related to demographic information, part 2 was related to the knowledge, awareness and attitude of self-medication among students, part 3 was related to common illnesses for which and specific medications were taken and part 4 was comprised of the common reasons of self-medication and the source of information of practicing self-medication. Ethical approval was taken from the institutional review board of Watim Dental College. Consent from was obtained from each respondent. Furthermore, researchers themselves collected the data, reviewed and organized for the consistency and authenticity.

## STATISTICAL ANALYSIS

The data was entered and analysed in statistical package for social science (SPSS) version 20 and interpreted through

Variable	Frequency	Percentage
Age (years)		
17-20	16	53.3
20-23	14	46.7
Sex		
Male	9	30
Female	21	70
Education Stream		
1 <sup>st</sup> year BDS	15	50
2 <sup>nd</sup> year BDS	15	50

**Table-1:** Demographic characteristics

descriptive statistics.

## RESULTS

The data was collected from 30 number of dental students from Watim Dental College, Rawalpindi, Pakistan. The data was analyzed by using descriptive statistics in term of frequency and presented below in tables.

Table 1 shows that out of 30 dental students concerning age, 16(53.3%) were in age group 17-20, 14(46.7%) were in age group of 20-23 years. Regarding sex of dental students, 9 (30%) were males and 21 (70%) were females. Concerning the stream of professional education, 15 (50%) dental students were equally selected from 1<sup>st</sup> year BDS and 2<sup>nd</sup> year BDS students.

Table 2 depicts the exact measures taken by dental students when they fall sick. Consultation to a doctor was mostly sought by students 20(66.7%). Self-medication was also practiced among 8(26.7%) of students. Whereas, only 1(3.3%) of students took advice from friends and in the same way 1(3.3%) of student waited for symptoms to subside on its own.

Table 3 shows the responses obtained from questionnaire regarding awareness and attitude of dental students towards self-medication. It was seen that 26(86.7%) of students were aware of side effects of self-medication, 25(83.3%) did also have awareness related to dosage of drugs. While only 2(6.7%) of students had no idea about expiry dates of drugs. Dental students had positive attitude towards self-medication usefulness 17(56.7%). On the contrary they were not positive 10(33.3%) about recommending self-medication to family and friends.

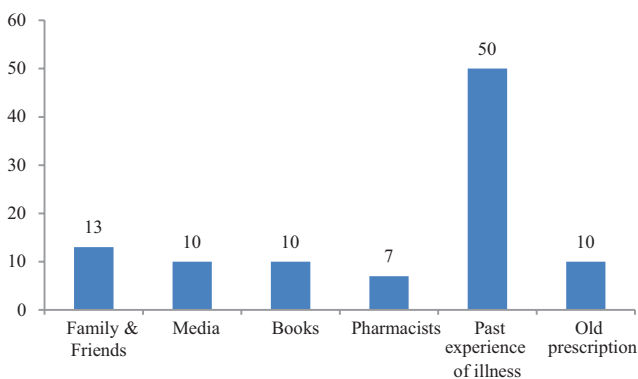
Fever and headache were the most frequently reported cause of illness 12(40%), cough and common cold were the second most common cause of morbidity 8(26.6%). However, diarrhea, nausea, vomiting and dysmenorrhea seemed to be third most common illness seen among students by having

Measure Taken	Frequency	Percentage
Consult a doctor	20	66.7
Self-medication	8	26.7
Take a suggestion from a friend	1	3.3
Wait until symptoms subsides	1	3.3

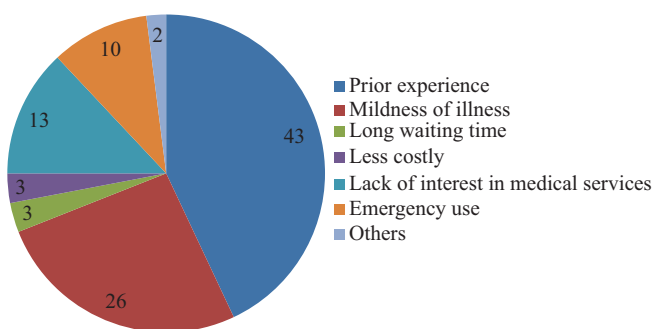
**Table-2:** Measures taken by students when they fall sick

Awareness and attitude of students	Options	Frequency and Percentage
Awareness regarding side effects of self-medication	Yes	26 (86.7%)
	No	4 (13.3%)
Awareness regarding dosage of drugs	Yes	25(83.3%)
	No	5(16.7%)
Awareness regarding expiry date of drugs	Yes	28(93.3%)
	No	2(6.7%)
Awareness regarding completion of course of drugs	Yes	25(83.3%)
	No	5(16.7%)
Attitude towards self-medication and its usefulness	Yes	17(56.7%)
	No	13(43.3%)
Attitude towards recommendation of self-medication to family and friends	Yes	10(33.3%)
	No	20(66.7%)

**Table-3:** Awareness and attitude among dental students towards self-medication



**Figure-1:** Source of information of self-medication by dental students



**Figure-2:** Reasons for self-medication by dental students

Types Of Illnesses	Frequency	Percentage
Fever and headache	12	40
Cough and common cold	8	26.6
Diarrhea	2	6.7
Constipation	1	3.3
Heartburn	1	3.3
Nausea/vomiting	2	6.7
Dysmenorrhea	2	6.7
Skin problems	1	3.3
Others(stress, fatigue, loss of appetite etc)	1	3.3

**Table-4:** Frequency of commonly reported illness among students

Drugs	Frequency	Percentage
Analgesics	16	53.3
NSAIDs	5	16.7
Antacids	0	0
Antibiotics	7	23.3
Steroids	0	0
Others	2	6.7

**Table-5:** Common drugs used by the students

the frequency of 2(6.7%) respectively. While, constipation, skin problem, heartburn and other factors like stress, fatigue, loss of appetite were the least common illness found among the students. (Table 4).

Drugs commonly used as self-medication among 30 dental students were shown in Table 5. The most common drugs used in self care were analgesics 16(53.3%), antibiotics were used by 7(23.3%) of students. Non steroidal anti inflammatory drugs NSAIDs were used by 5(16.7%) of students. Steroids

and antacids were not used by dental students at all whereas, other than all these drugs some drugs were used by dental students and accounts to be the least common among all other drugs.

Among the reasons given for self-medication, the major source of information for 50% of dental students became the past experience of illness of getting themselves self-medicated. 13% of dental students felt to treat themselves by getting suggestion from family and friends. Whereas, 10% of dental students decided not to consult a doctor due to having information from the old prescription, and collecting information from media, and books. While, only 7% of students practiced self-medication by pharmacist’s advice Figure 1.

Figure 2, the pie chart explains that dental students had self-medication chiefly because of their prior experience of medications 43%. Second most reason became their mildness of illness 26%. 13% of dental students had no interest in medical services and they prioritized treating themselves by their own. Additionally, 10% of dental students used medication in emergency cases only. While, cost effectiveness, long waiting time for doctors consultation and other factors remained the least reasons for dental students to take medicines on their own.

**DISCUSSION**

Self-medication is a predominant problem amongst healthcare students.<sup>9,10</sup> It has critical consequences as it can influence the future professional decisions of health care professionals.<sup>11</sup> Furthermore, it affects the student’s ability to counsel the patients. The present study was conducted on dental students regarding the self-medication. Concerning the demographic characteristics, the dental students were of age ranging from 17-23 years and were of 1<sup>st</sup> and 2<sup>nd</sup> year BDS with 30% of males and 70% of female students. The results of prevalence amongst dental students showed that it was not very widely 26.7% practiced among dental students of this institute. The high educational and literacy level may be the reason. This frequency among dental students is quite low when compared to studies carried out globally where higher level of self-medication practice was seen i.e. 98% in Palestine.<sup>12</sup>

Self-medication is practiced because of many local factors such as drugs dispensation with no prescription, legislative aspects, easy access and availability to over the counter drugs. Sawalha et al<sup>12</sup> suggested in their study that self-medication was very commonly practiced among An-Najah students. Similarly studies conducted by Shankar et al, Zafar et al, James et al, and Yousef et al<sup>13-16</sup> which depicted the same results. However, all these studies were carried out among medical students therefore, data for comparison among dental students is minimal.

There has been variation seen in the measures taken by students when they fall sick where majority of students consulted doctors and only 26.7% of students self-medicated themselves. In this study, the awareness and knowledge regarding self-medication, drugs side-effects, expiry date,

dosage and completion of drugs course was adequate among dental students. Thus, attitude of recommending self-medication to family and friends was not positive as well. As observed in this study, fever and headache 40% was the major indication for self-medication, followed by cold and cough 26.6% and 6.7% was diarrhea, dysmenorrhea, nausea and vomiting was the minor reason for self-medication. Dabney et al in their study revealed that high rate of easy availability of over the counter drugs 60% were the chief reason for self-medication.<sup>17</sup>

Furthermore, the most common drugs used by dental students were analgesics 53.3%, followed by NSAIDs 16.7%, and just 23.3% of students used antibiotics for their own treatment dental students used analgesics and NSAIDs due to the above mentioned common illnesses prevalent such as for fever, headache, common cold and cough. It is evident that These results are quite less when compared to the studies carried out in China, Palestine, ethopia, and north india which showed the frequency of antibiotic use was 47.8%, 19.9%, 17.20%, and 21.2% respectively.<sup>6,8,12,18</sup> Most common reason not to consult a doctor among students was prior experience of visiting a doctor 43%, and secondly due to mildness of the illness i.e. 26%.

Moreover, the predominant guiding source of information for dental students was past experience of illness 50%, 13% from a suggestion from a family member or friends, 10% of students followed the old prescription, and 10% information collected from media, and books. While, only 7% of students followed pharmacist's advice. In contrast to it, study in Gondar University major source of information among students was reading material 30.5%.<sup>8</sup> Besides all, self-medication must be based on authentic information, as irrational use of drugs causes wastage of resources, increase resistance to drugs, serious health hazards and prolonged morbidity. Although the past experience is the reason for self-medication but proper disease diagnosis is necessary in order to avoid any risk factors and adverse effects on health.

### Limitations

The limitation of our study includes the smaller sample size, therefore the results cannot be generalized. Features like the educational background of student's parents, urban/rural culture, socioeconomic standards, beliefs in medicine and gender based differences were not involved in our study. Nevertheless, such considerations will be helpful for future conduction of studies at a larger sample which will consequently give direction of designing several health strategies to educate population and community on self-medication.

### CONCLUSION

The findings of this study suggest that not majority of students self-medicate. The parents and teachers play an essential role in instructing best practices. As these dental students are future dental practitioners, their self-medication practice should be restricted at its maximum as their behavior could be influential to their patient's health. Regulations should be made for the check to sensitize the dental students of this ill

self-medication practice. The concerned healthcare agencies should also frame policies on monitoring of drug stores, and mandatory laws on purchasing drugs with authorized prescription only by the consumer.

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### REFERENCES

1. Badiger S, Kundapur R, Jain A, Kumar A, Pattanshetty S, Thakolkaran N, et al. Self-medication patterns among medical students in South India. *Australas Med J* 2012;5:217–20.
2. Guzmán AF, Caamano F, Gestal-Otero JJ. Sociodemographic factors related to self-medication in Spain. *Eur J Epidemiol.* 2000;16:19–26.
3. Gyawali S, Shankar PR, Poudel PP, Saha A. Knowledge, Attitude and Practice of Self-Medication Among Basic Science Undergraduate Medical Students in a Medical School in Western Nepal. *J Clin Diagn Res.* 2015;9:FC17-22.
4. Ruiz M. Risks of Self-Medication Practices. *Curr Drug Saf* 2010;5:315–23.
5. Belachew Gutema G, Alemayehu Gadisa D, Fikadu Berhe D, Hadgu Berhe A, Ghezu Hadera M, Solomon Hailu G, et al. Self-Medication Practices among Health Sciences Students: The Case of Mekelle University. *J Appl Pharm Sci.* 2011;1:183–9.
6. Banerjee I, Bhadury T. Self-medication practice among undergraduate medical students in a tertiary care medical college, West Bengal. *J Postgrad Med* 2012;58:127.
7. James H, Handu SS, Al Khaja K a J, Otoom S, Sequeira RP. Evaluation of the knowledge, attitude and practice of self-medication among first-year medical students. *Med Princ Pract* 2006;15:270–5.
8. Abay SM, Amelo W. Assessment of Self-Medication Practices Among Médical, Pharmacy, Health Science Students in Gondar University, Ethiopia. *J Young Pharm* 2010;2:306–10.
9. Hernandez-Juyol M, Job-Quesada JR. Dentistry and self-medication: a current challenge. *Med oral órgano Of la Soc Española Med Oral y la Acad Iberoam Patol y Med Bucal* 2002;7:344–7.
10. Klemenc-Ketis Z, Hladnik Z, Kersnik J. Self-medication among healthcare and non-healthcare students at university of Ljubljana, Slovenia. *Med Princ Pract* 2010;19:395–401.
11. Montgomery AJ, Bradley C, Rochfort A, Panagopoulou E. A review of self-medication in physicians and medical students. *Occupational Medicine.* 2011;61:490–7.
12. Ansam SF. Assessment of Self-Medication Practice among University Students in Palestine : Therapeutic and Toxicity Implications. *Islam Univ J (Series Nat Stud Eng* 2007;15:67–82.
13. 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;3:1–7.
14. Zafar SN, Syed R, Waqar S, Irani FA, Saleem S.

- Prescription of medicines by medical students of Karachi, Pakistan: A cross-sectional study. *BMC Public Health*. 2008;8.
15. James H, Handu SS, Al Khaja KAJ, Otoom S, Sequeira RP. Evaluation of the knowledge, attitude and practice of self-medication among first-year medical students. *Med Princ Pract*. 2006;15:270–5.
  16. Yousef AMM, Al-Bakri AG, Bustanji Y, Wazaify M. Self-medication patterns in Amman, Jordan. *Pharm World Sci*. 2008;30:24–30.
  17. Dabney DA, Hollinger RC. Illicit prescription drug use among pharmacists: Evidence of a paradox of familiarity. *Work Occup*. 1999;26:77–106.
  18. Pan H, Cui B, Zhang D, Farrar J, Law F, Ba-Thein W. Prior knowledge, older age, and higher allowance are risk factors for self-medication with antibiotics among University students in Southern China. *PLoS One*. 2012;7(7).

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