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Assessment of Self - Medication among Dental Students

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Abstract: ***Introduction: In the recent years, there has been an increasing trend in self - medication with nonprescription drugs like antibiotics, analgesics are available in pharmacies and retail outlets. Self - medication is a component of self - care, and it is considered as primary public health resource in health care system. It can be defined as use of non - prescription medicines by people on their own initiative Though it is widely practiced globally, very few studies have evaluated its pattern and prevalence in dental students. Objective: The objective of this study is to study the prevalence and risk factors of self - medication practices among medical and dental undergraduate students. Materials and Methods: Descriptive cross - sectional questionnaire study was conducted on dental students from I BDS to IV BDS, interns, and postgraduate students. Results: A total of 84.1% % of respondents indulged in self - medication. Both male and female dental students equally had a habit of taking medicines on their own. The most common drugs used for self - medication were antibiotics (60.1%), followed by analgesics (65%), and cough syrups (49.7%). Most common reason not to see a doctor was that there is no need to see a doctor because of a minor problem (78%) followed by the lack of time (36%%). Conclusion: Most students indulged in the practice of self - medication though they had poor knowledge of the benefits and risks.***

Keywords: self-medication, dental students, non-prescription drugs, antibiotics, analgesics

1. Introduction

Self - medication can be defined as obtaining and consuming drugs without the advice of a physician either for diagnosis, treatment, or monitoring. In the recent years, there has been an increasing trend in self - medication with nonprescription (over - the - counter [OTC]) drugs like antibiotics, analgesics available in pharmacies and retail outlets. Self - medication is endemic in developing countries.

Some studies in India report a rising incidence. A major problem with self - medication with antimicrobials is the emergence of human pathogens resistance. Advertisements for OTC medicines are legal in many countries, including India.

The antibiotics are on top of the list of self - administered drugs in countries that do not control their commercialization. It is reported that easiness of obtaining drugs without a prescription can especially increase the inappropriate use of antibiotics. Although there have been many regulations in India to regularize sale of OTC, however, temporal trends and regional differences are important triggers for action and investigation, and benchmarking by comparisons between countries should be an important stimulus to quality improvement.

Dental students are future prescribers of drugs and so it is important to find out how rational their drug use is. They differ from the general population because they are exposed to knowledge about disease and drugs. Because of the existing knowledge of common medicines prescribed and the knowledge of pharmacology taught as a subject in II BDS, there are high chances that the dental students may indulge in self - medication practices.

So the research question arises whether dental students have a self - medication habit for common ailments. Also, data pertaining to the prevalence of self - medication among dental students in India is scarce. With this background, the aim of this study was to determine the level of self - medication among dental students.

2. Materials and Methods

This study was a cross - sectional questionnaire study, carried out at Krishna Vishwa Vidyapeeth, deemed to be University, Karad, Maharashtra, India.

The instrument to record responses was a self - designed pretested questionnaire. The questionnaire had two sections. Section I gathered socio demographic information about the study participants such as age, gender, year of education, distance to a medical store, and last visit to a physician. Section II had set of questions which were mainly closed ended but given an option other as open ended to fill up any information which was not covered in the options given for each question.

Sample size determination was done using single proportion formula as n = (z/m) ^2 × P (1 − P), where z is 1.96 (for 95% confidence level), and P stands for the prevalence of the dependent variable in the pilot study. Assuming 50% prevalence of self - medication in the study population, the minimum sample size was obtained as 151.

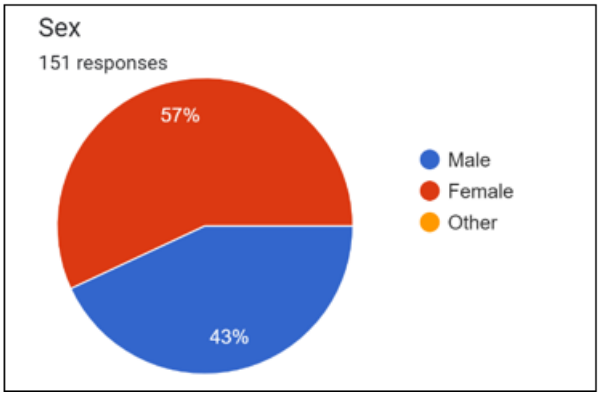
The distribution of questionnaire was done in a classroom setting for dental students classes I to IV BDS. All students in the classroom were explained the nature and purpose of the study. However, participation was kept anonymous and voluntary. Appropriate instructions about filling the questionnaire were given. A classroom session after college working hours was arranged for interns. For postgraduate students, the questionnaires were hand delivered. All filled questionnaires were collected back on the same day.

The questionnaires were distributed in the classrooms and collected immediately after completion. The survey being descriptive, the data were summarized as the number and percentage and depicted in tables, graphs, and pie chart using

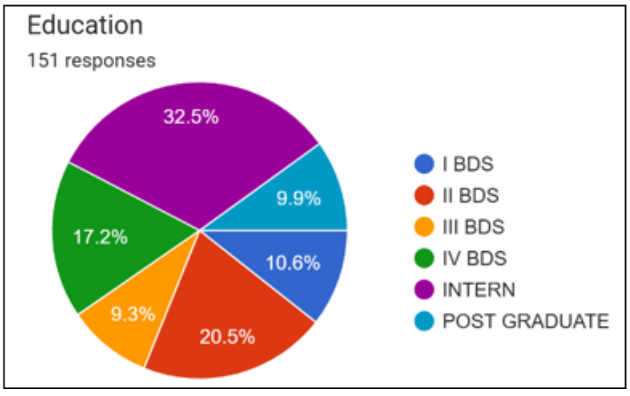
Google percentage calculator. The data were analyzed statistically using SPSS software version 19.

3. Result

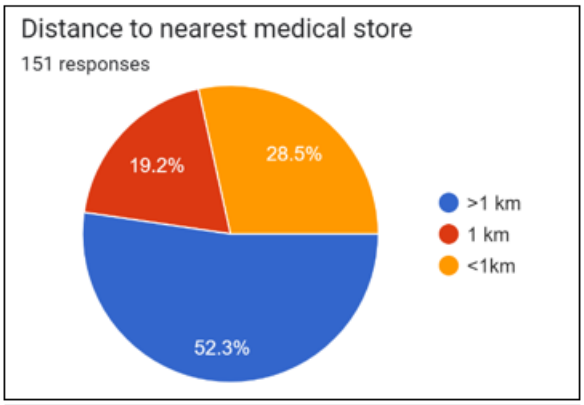
A total of 151 dental students participated in the study, The majority of the participants belonged to the age group of 18 - 26 years. There were 43%male students and 57% female students who participated in the survey.

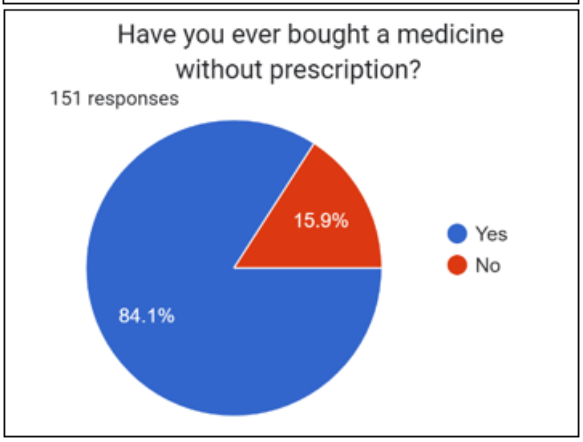


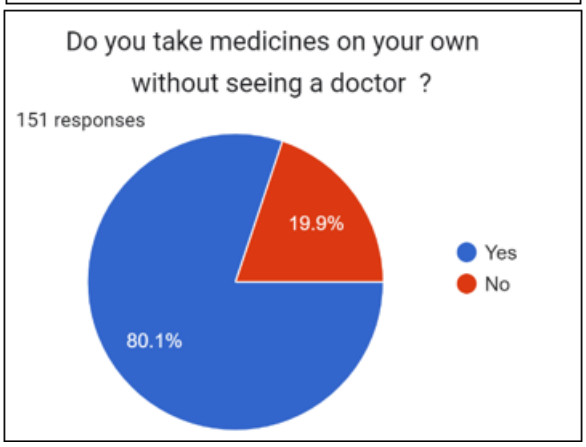
The study included 32.5% intern, 17.2% final year dental students, 9.9% post graduate, 9.3% third year students, 20.5% second year students, 10.6% first year student



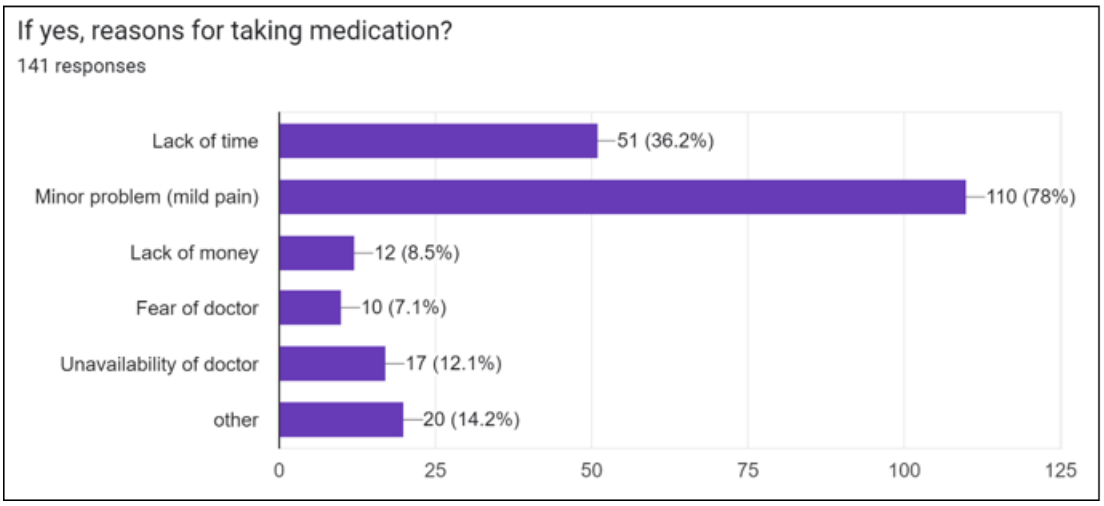
The distance between the homes of the majority of the participants and the nearest medical store was less than 1km.



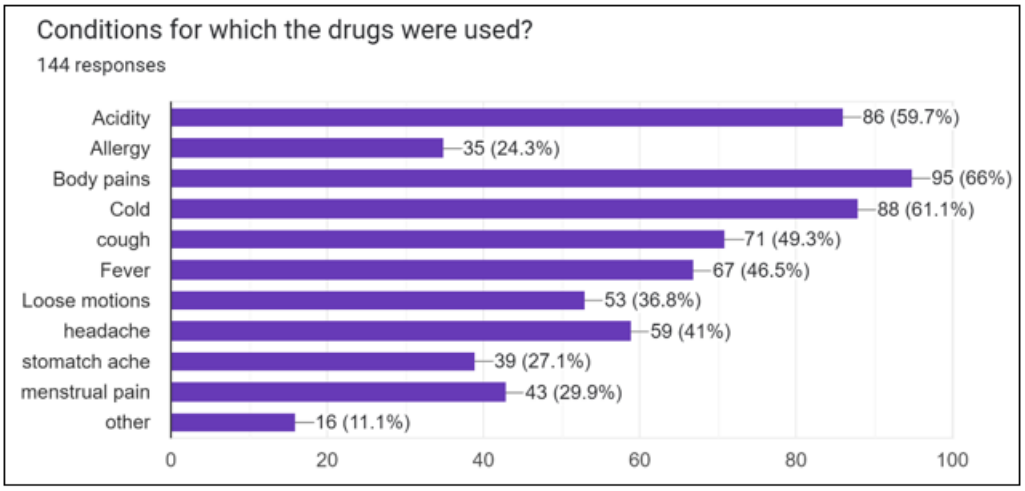




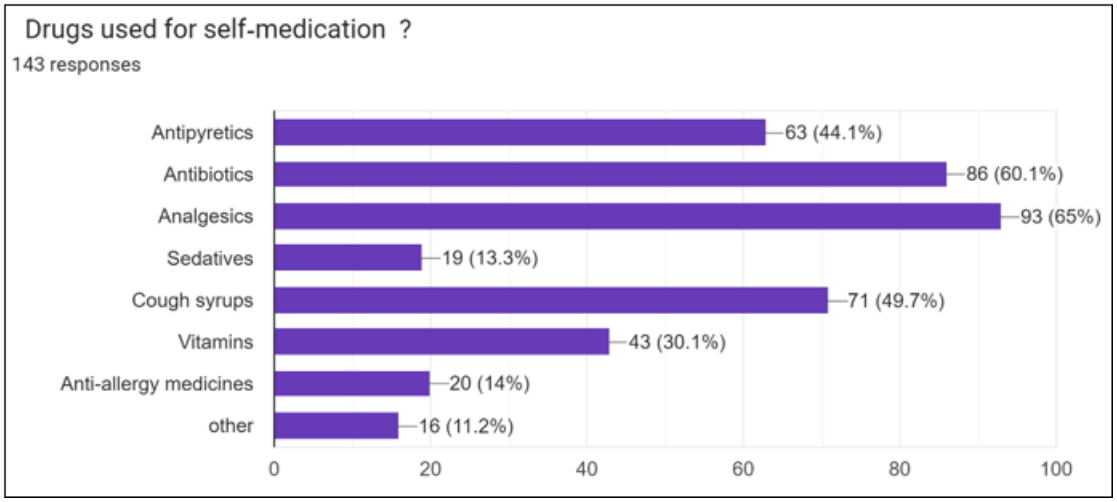
Above pie chart shows responses obtained from the questionnaire.84.1% of the respondents bought a medicine without a prescription. It is seen that almost 0.1% of respondents answered that they take medicines on their own without seeing a doctor.



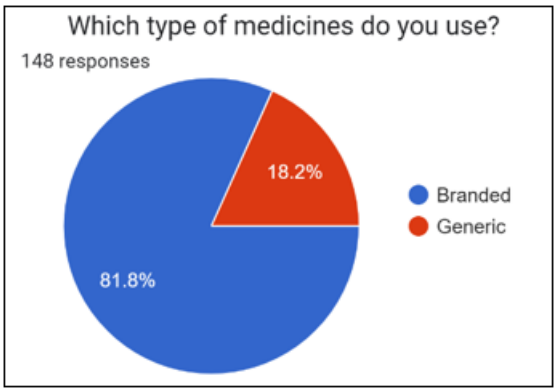
Most common reason not to see a doctor was that there is no need to see a doctor because of minor problem (mild pain) - 78% followed by lack of time (36.2%).

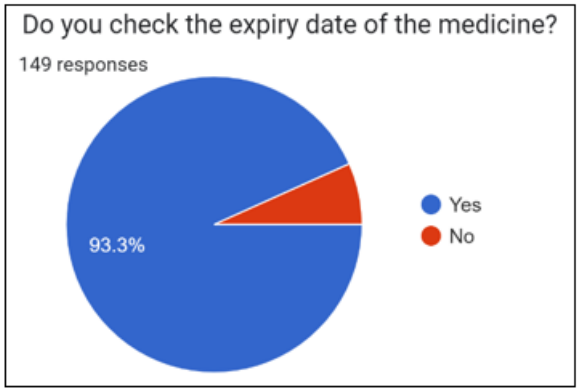


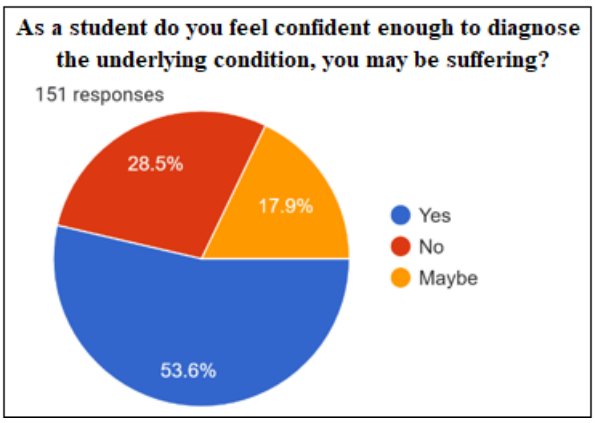
Above graph shows conditions where respondents take medicines on their own it is seen that most common condition, where self - medication was followed, is body pain, acidity, and cold.



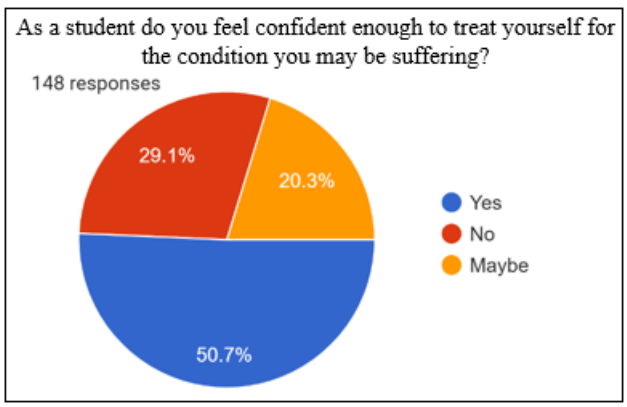
Most frequently used medicine was antibiotics (60.1%), followed by analgesics (65%), and cough syrups (49.7%).







The above pie charts determines that 53.6% of respondents are confident in diagnosing underlying conditions and 50.7% of respondents are confident in treating the condition.



4. Discussion

Self - medication is a rising concern among health - care students, leading to serious health consequences. It influences professional decision - making for prescriptions, among future doctors. Indirectly, such attitude affects the right counselling of their patients.

The present study has been conducted exclusively on the dental students from 1st year to post graduate, pursuing degree from Krishna Vishwa Vidyapeeth.

The prevalence of SM (calculated using frequencies dialog window in SPSS version 19) is 73%, with a confidence interval of 99% ($P < 0.05$) in the present study. The result is statistically significant among the students of final year, irrespective of exposure to pharmacology subject. Globally, the prevalence of SM is as low as 38.2% (Ethiopia) to as high as 98% (Palestine).

A total of 151 dental students participated in the study.

This study shows a prevalence of self - medication among dental students, which accounts for almost 80%. The high educational and literacy level of the studied respondents may be the reason. This is quite low when compared to studies done globally where a higher level of self - medication practice was seen, maximum being 98% in Palestine. There has been a high variation in the level of self - medication practice as many local factors such as legislative aspects, drug dispensing without valid prescriptions, and availability of OTC drugs play a role.

Overall, many studies have shown a higher prevalence of the practice of self - medication among medical, dental, and paramedical students. Sawalha concluded that self - medication was very common among An - Najah students. Similar results were found in a study done by Shankar et al. where self - medication was found to be 59%. Similar results were found in studies done Zafar et al. James et al. Yousef et al. However, a true comparison of percentages is not possible because these studies were carried out among medical students and health care professionals. Data for comparison from studies carried out among dental students are very minimal.

Nirmal et al. studied 430 students from medical college. Females were slightly more than males. However, in the present study, females outnumbered males. The prevalence of self - medication reported by the author was very high, i. e.84% compared to 73.7% in the present study. The authors reported that convenience was the most common reason for self - medication in 46.9% of the cases. In their study, 57.3% used analgesics compared to 30.3% of paracetamol used in the present study. Banerjee and Bhadury included 468 students.

The prevalence of self - medication was 57.05% which is lower than that we found in the present study. About 35.21% of the students in their study used self - medication for cold and cough which is similar to the present study finding. In their study, antibiotics were commonly used while we found that the most commonly used drug was paracetamol. The

authors found that mild illness was the most common reason for self - medication in their study

Pal et al. found that the prevalence of self - medication among medical undergraduate students was 65% which is almost similar to what we found in the present study. Seventy - four percent of them were knowing what meant by self - medication was. Seventy - four percent of them got information on drugs from textbooks or from teachers. About 79.6% of them used self - medication for fever. We also found that fever was the most common indication of self – medication. About 81.2% of them used antacids while in the present study the most common drug used was paracetamol.

The predominant guiding sources of information for students was media (magazines and internet) (38.06%) and books (39.88%) followed by own decision (30.16%). In a study by Gutema et al. [24] guiding sources were self - decision (64%), family/friends (31.25%), media and reading material (14.1%), and pharmacist (9.40%). In contrast, reading material was the major information source (30.5%) in a study on Gondar University students.

The practice of self - medication must be based on the authentic medical information otherwise irrational use of drugs can cause wastage of resources, increased resistance of pathogens, and serious health hazards such as adverse drug reactions and prolonged morbidity. Though the use of media (television and internet) for gaining information about drugs was low in our study, strictness regarding pharmaceutical advertising that targets the youth is warranted. The presence of home pharmacy is associated with self - medication as storage of medication at home with free access, and easy visualization of the products is a risk factor for self - medication. In this study, 82.2% of students stored medicines at home.

5. Conclusions

The majority of students indulged in the practice of self - medication, although they had an inadequate knowledge about the benefits and risks. This practice is common for treating clinical conditions that are either simple or previously experienced.

Self - medication is prevalent in the karad region. Antibiotics and analgesics were the drugs most commonly used for self - medication, responses obtained from the questionnaire.84.1% of the respondents bought a medicine without a prescription It is seen that almost 80.1% of respondents answered that they take medicines on their own without seeing a doctor.

Education to help patients decide on the appropriateness of self - medication is required. Further studies on the factors influencing self and non - doctor prescribing are required.

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