IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Assessment Of Self Medication Practice Among Undergraduate And Postgraduate Students Of Chhatrapati Shahu Maharaj Shikshan Sanstha [Csmss] Dental College And Hospital, Chh.Sambhajinagar.-A Questionnaire Based Cross Sectional Study.

Authors: [1]Syed Shadaan, [2]Shaikh Sabahat,[3] Shaikh Fariha, [4]Shaikh Mohd Saveed Ahmed

[1]BDS intern ,[2]BDS intern,[3]BDS intern, [4]MDS 1 year

[1]Department of Public Health Dentistry,

Chhatrapati Shahu Maharaj Shikshan Sanstha [Csmss] Dental College And Hospital, Chh.Sambhajinagar, India.

Abstract:

Introduction: Self-medication refers to the use of medications or herbal remedies to treat medical disorders without a doctor's advice regarding dosage, indication, method, and frequency. It also involves taking a previously prescribed drug consistently to treat a recurring sickness such as a headache, fever, cough, or stomachache **.Aim:** To assess the level self medication among undergraduate and postgraduate students of CSMSS dental college and hospital. **Objective:**1 assessing the extent of self-medication practices 2. Assessing the level of knowledge among dental students regarding appropriate medication use, indications for seeking professional healthcare **Material and method**: A cross-sectional questionnaire was administered to dental undergraduate and postgraduate students at Chhatrapati Shahu Maharaj Shikshan Sanstha (C.S.M.S.S) Dental College and Hospital, Chhatrapati Sambhajinagar, Maharashtra. The data was gathered on assessment of self-medication practice. The sample size of the study was 263 participants, each 100 from final year, interns and 63 from postgraduates. A validated questionnaire with 16 multiple choice questions about self-medication practice was used for the study. Descriptive statistics were calculated. **Result:** This study of 203 dental students found higher self-medication prevalence among females (149) than males (54) ($p = 0.026$). Key reasons included lack of doctor access (36.5%) and transportation issues (24.19%). Commonly treated conditions were coughs (37.64%) and fever (33.07%). Most students preferred branded medications (85.17%) and felt confident in managing their health, although non-compliance with dosage

guidelines was more prevalent among males (p = 0.0105) **Conclusion:** This survey highlights significant gender differences in self-medication practices among students, with females more likely to self-medicate and use family prescriptions due to barriers like access and transportation. While many students are confident in managing their health, reliance on self-medication—particularly with antibiotics and analgesics—raises concerns. High awareness of expiration checks and reading instructions contrasts with notable non-compliance in dosage, especially among males. These findings emphasize the need for targeted education on safe medication practices and the importance of consulting healthcare professionals to reduce health risks associated with self-medication.

Keywords : Self medication ,Antibiotics ,Analgesics ,dosage ,non-compliance.

I.Introduction:

Self-medication refers to a variety of health practices used to treat one with medications using knowledge from books, advice, websites, and software, advertisements for health products, radio, and television. Often referred to as over-the-counter (OTC) or non-prescription medications, self-medication can be purchased through pharmacies without a prescription from a physician. Self-medication among students is a widespread issue. According to Indian studies, the incidence is on the rise. Medical students are not like the general public in that they are exposed to information regarding medications and illnesses. The enhanced capacity for self-care in managing specific conditions, lifestyle choices, easy access to pharmaceuticals, socioeconomic considerations, and increased accessibility to medical items are all contributing factors to the recent rise in the incidence of self-medication .In addition to reducing the strain on medical services in situations where there is a shortage of medical personnel, responsible self-medication can help prevent and treat symptoms and ailments that do not require a doctor
However, there are a number of potential risks associated with self-medication practices, such as misdiagnosing oneself, delaying seeking medical attention when necessary, experiencing rare but severe adverse reactions, potentially harmful drug interactions, administering medication incorrectly in terms of dosage or therapy selection, concealing a serious illness, and the possibility of dependence and abuse. [1]

Even though India has implemented numerous restrictions to normalize the sale of over-the-counter medications, geographical variations and temporal trends serve as significant catalysts for inquiry and action, and benchmarking through cross-national comparisons need to be a major driver of quality improvement.[2]

No industry within the healthcare community is immune to drug abuse or misuse, with doctors and pharmacists being among the worst offenders. Physicians frequently struggle to adopt the patient role for a variety of reasons, including time constraints, the severity of the sickness, privacy issues, a large ego, etc. Easy access to drugs and a high level of drug knowledge may both be factors in pharmacists' tendency to self-medicate.[3]

This practice is influenced by a number of variables, including the inclusion of a subject like pharmacy, the ease with which free samples can be obtained, the influence of the Internet, and new technologies. Self-medication is concerning common yet dangerous if not used appropriately. Although it's sometimes dismissed as a less expensive option, self-medication can lead to major issues in the long term. Dental students are a little different from the general public in that they have had more exposure to drug knowledge. As future dentists, they can assist patients by advising and counseling them on the advantages and disadvantages of self-medication. As a result, the purpose of the current study was to evaluate the self-medication patterns of dentistry students.[4]

In an effort to maintain high-quality healthcare at a lesser cost, rational drug usage has attracted attention from public health organizations worldwide. Since properly distributing medication is essential to responsible drug use, the dispenser needs to have knowledge, resources, and expertise updated on a regular basis.[5]

In reality, the World Health Organization (WHO) highlighted the importance of self-care in 1978 with its "Health for all by year 2000" project, which was put into effect in a number of nations.[6]

Antimicrobial self-medication carries the risk of harming both the patient and society as a whole. If antibiotics are among the medications that are freely accessible without a prescription, then this should worry policy makers. The public and professional communities are currently concerned about the rise in antibiotic resistance in developing nations since it leads to various resistant organisms that are challenging to treat. The use of pharmaceuticals to treat illnesses or symptoms that oneself diagnoses, as well as the intermittent or continuous use of a prescription medication for persistent or recurrent illnesses or symptoms, are examples of self-medication.1. Customers typically choose it for symptoms that they believe are bothersome enough to warrant medication therapy but not severe enough to warrant a doctor's visit. The majority of diseases in poor nations are managed through self-medication. The absence of a clinical examination of the disease by a qualified medical expert is a significant drawback of self-medication, as it may lead to missed diagnoses and delays in the administration of the necessary therapies.[7]

So the aim of our study is to assess the level self medication among undergraduate and postgraduate students of CSMSS dental college and hospital.

II.Material and method:

A cross sectional questionnaire based study was conducted on 200 Undergraduate dental students and 63 postgraduate students of C.S.M.S.S Dental College and Hospital. This study was conducted over a period of 3 months from July to September 2024, after an approval from the Ethical Committee of the Institute was obtained (CSMSS.DCH/R/UG/SS/2024:13).

The instrument to record responses was a self designed pretested questionnaire which had two sections. Section I included demographic data such as participants' name, age, gender, year of education, distance to the nearest medical store and last visit to the physician. Section II included a set of 16 questions. A majority of questions were dichotomous.

A pilot study was carried out on 10% of the sample size (which was not included in the study) to check the validity and flaws in the questionnaire. After thorough discussion with an expert a few questions were modified and the sequence of the questions was rearranged. After modifications the questions were more specific and valid. Included in the study were all students who consented to participate and were present on the study day.

The questionnaires for IV year BDS were distributed in a classroom setting. They were explained about the nature and purpose of the study. Appropriate instructions were given regarding filling the questionnaire. In case any participants needed help, the questionnaires were filled out in front of the research students.

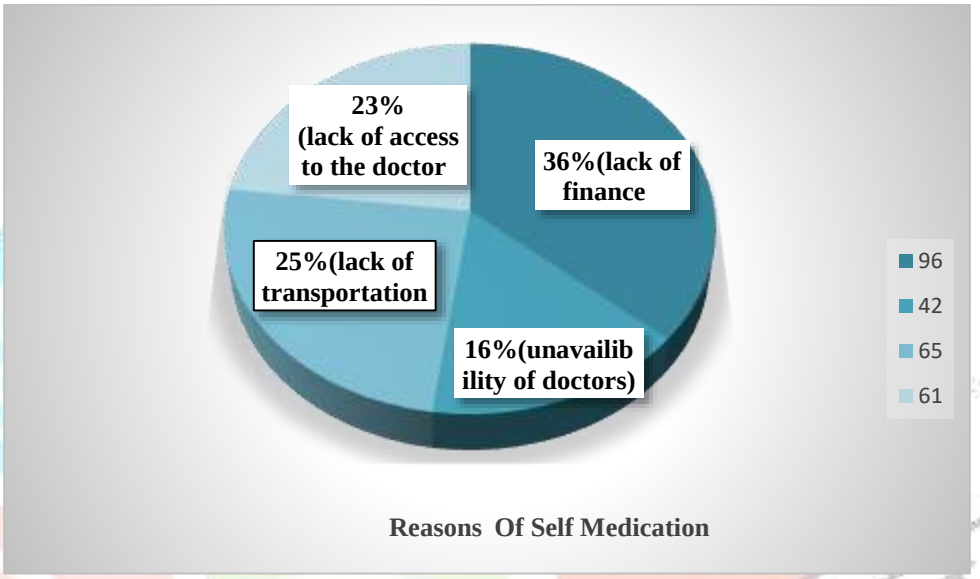
For interns the questionnaires were distributed during the lunch break and for postgraduates the questionnaires were hand delivered after the college hours. Filled questionnaires were collected back on the same day.

A Microsoft Excel sheet was created by compiling the acquired data. IBM's SPSS software, version 21.0, was used for data analysis. The responses, frequencies and percentages were computed. The Chi-square test was used to compare the answers to questions pertaining to independent factors such age, gender, year of schooling (IV year, internship, and post graduation), distance to a medical supply store, and last visit to a doctor'

III.Results:

A significant proportion of the respondents reported taking medications without consulting a doctor. Among the 203 individuals who admitted to self-medication, females 149 (79%) outnumbered males 54 (73%). Only 60 respondents (20 males and 40 females) reported that they do not self-medicate. This difference between males and females was statistically significant (p = 0.026), indicating a higher tendency for females to self-medicate.

The reasons for self-medication varied across the respondents. The most common reason cited was a lack of access to doctors (36.5%), followed by a lack of transportation (24.19%), unavailability of doctors (23.19%), and financial constraints (15.96%). Again, females were more likely to report barriers such as transportation and unavailability of doctors (p < 0.001).



A substantial number of respondents, 125 (47.52%), reported using prescriptions intended for family members, with a more frequent occurrence among females (99) compared to males (26). Those who refrained from this practice amounted to 138 (52.85%). This behavior also showed a statistically significant gender difference (p = 0.0006).

A large portion of students (72.24%) reported feeling confident in diagnosing their own conditions. This confidence was somewhat higher among females (138) than males (51), though the difference was not statistically significant (p = 0.656).

Students most commonly self-medicated for conditions like coughs and colds (37.64%), fever (33.07%), allergic reactions (19.39%), and muscle spasms (10.26%). While there were gender variations, the differences in responses between males and females for these conditions were not statistically significant (p = 0.238).See fig.1

The vast majority of students (85.17%) preferred branded medications over generic ones (15.2%). This trend was consistent across both genders, and no significant gender difference was noted in this aspect (p = 0.543).

Among the medications used, antibiotics were the most common (41.44%), followed by analgesics (35.6%), anti-allergic medications (12.92%), and vitamins (10.64%). Gender differences were not statistically significant in this category (p = 0.306).See fig.2

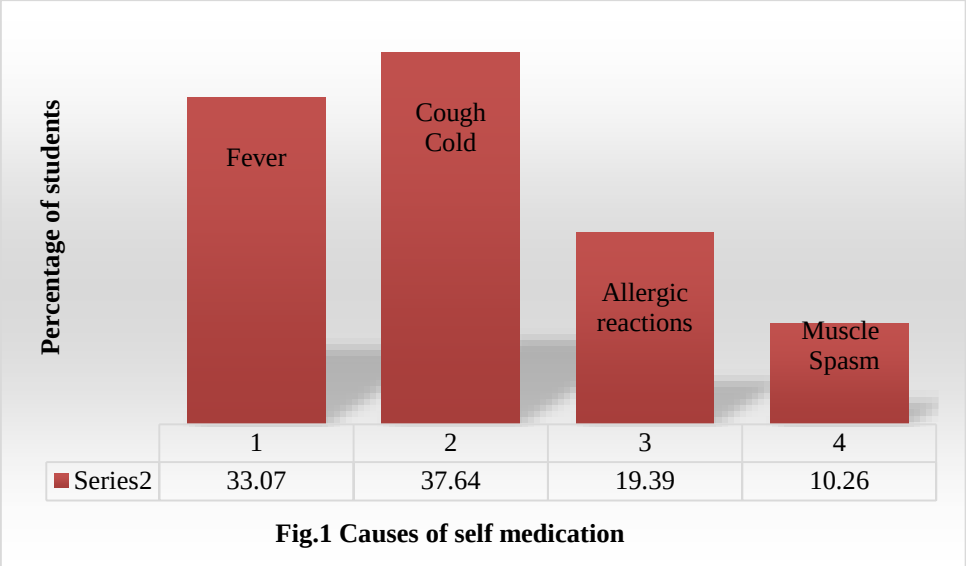


Fig.1 Causes of self medication

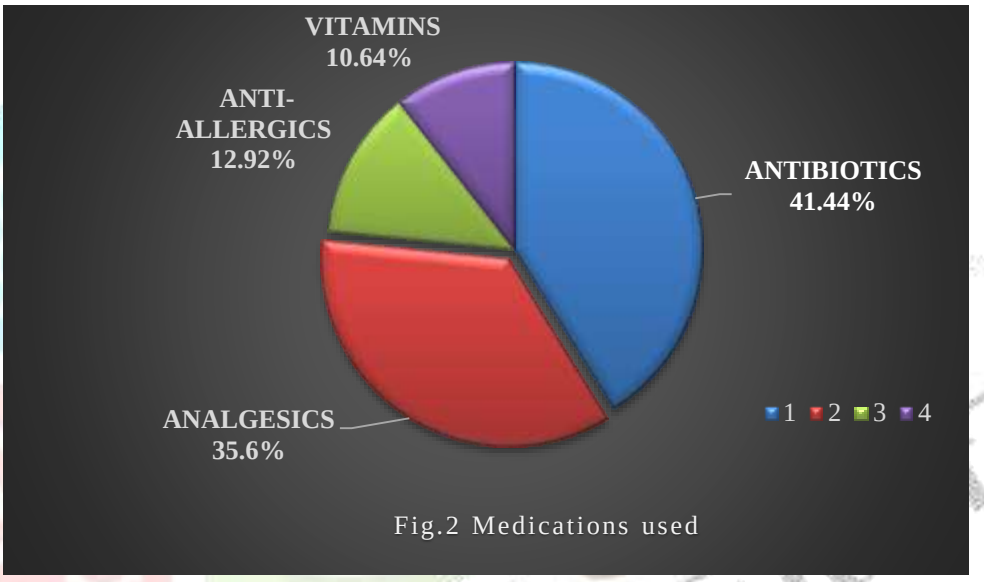


Fig.2 Medications used

Most of the respondents (59%) felt that self-medication provided temporary relief, while 30.79% found it effective. Only 8.36% used medication to manage stress, and 2.28% were unsure about the effects. There were no significant differences between males and females in their perceptions ($p = 0.463$).

A high percentage of students (88.97%) reported checking the expiry dates of their medications. This habit was more prevalent among females 163 (86.24%) than males 70 (94.5%), though the difference did not reach statistical significance ($p = 0.144$).

The majority of respondents (89.35%) reported reading the instructions provided with medications. This behavior was significantly more common among females (166) than males (68), with a statistically significant difference ($p = 0.038$).

A notable 91.63% of respondents indicated that they take the correct dosage for the appropriate duration. However, a small number (8.36%) admitted to not following proper guidelines. This behavior was more prevalent among males, and the difference was statistically significant ($p = 0.0105$).

A large percentage of respondents (87.83%) stated that they store medicines at home, with no significant gender difference observed ($p = 0.296$).

Most students (74.9%) reported knowing about drug interactions, while 25.05% were unaware. There was no statistically significant difference between males and females in this regard (p = 0.426).

Awareness of the hazards of overdose was relatively high, with 78.32% of students being aware of the risks, while 22.05% were not. No significant gender difference was found (p = 0.368).

A large percentage of students (76.8%) felt confident in treating themselves for their conditions, with more females (140) reporting this than males (61). The difference in confidence levels was not statistically significant (p = 0.185).

Table 1: Descriptive Statistics

Question	male	female	n and n%	p value
Q1. Do you take medicines on your own without seeing a doctor?				0.026
1)YES	54	149	203(77.56%)	
2)NO	20	40	60(22.81%)	
Q2. Why do you self-medicate?				0.0003
1)Lack of access to the doctor	41	54	95(36.5%)	
2)Lack of finance	9	33	42(15.96%)	
3) Lack of transportation	10	55	65(24.19%)	
4)Unavailability of doctors	14	47	61(23.19%)	
Q3. Do you use the same prescription of your family members?				0.0006
1) YES	26	99	125(47.52%)	
2) NO	48	90	138(52.85%)	
Q4. As a student do you feel confident enough to diagnose the underlying condition, you may be suffering?				0.656
1) YES	51	138	189(72.24%)	
2) NO	23	50	73(27.75%)	
Q5. For what problems do you self-medicate?				0.238
1)Fever	32	55	87(33.07%)	
2)Cough and cold	13	85	98(37.64%)	
3) Allergic reactions	16	35	51(19.39%)	
4) Muscle spasm.	13	14	27(10.26%)	
Q6. Which type of medicines do you use?				0.543
1) Branded	64	159	223(85.17%)	
2) Generic	10	30	40(15.2%)	
Q7. Which of these medications do you normally take?				0.306
1)Antibiotics	25	83	108(41.44%)	
2)Analgesics	21	72	93(35.6%)	
3)Anti-allergic	17	17	34(12.92%)	
4)Vitamins	11	17	28(10.64%)	
Q8. How do you feel after taking medications?				
1)Temporary relief	48	106	154(58.93%)	
2)Effective	21	60	81(30.79%)	

3)Useful in stressful situation	4	18	22(8.36%)	0.463
4)Unsure about the effect	1	5	6(2.28%)	
Q9. Do you check the expiry date of the medicines?				
1) YES	70	163	233(88.97)	0.144
2)NO	4	25	29(11.02)	
Q10. Do you read the Instructions provided with syrups/medicines?				0.038
1)YES	68	166	234(89.35%)	
2)NO	6	23	29(11.02%)	
Q11.Do you take proper dose for proper time duration?				
1) YES	72	168	240(91.63%)	0.010
2)NO	1	21	22(8.36%)	
Q12. Do you store medicines at home?				
1) YES	68	162	230(87.83%)	0.296
2)NO	6	162	33(12.54%)	
Q13. Do you know about drug interaction?				
1)YES	58	138	196(74.9%)	
2)NO	16	51	196(25.05%)	0.426
Q14. Do you know about hazards of overdose?				
1) YES	62	144	206(78.32%)	0.368
2) NO	12	45	57(22.05%)	
Q15. Have you ever encounter any adverse reaction because of self medication?				
1)YES	14	52	66(25.09%)	0.197
2)NO	60	137	197(75.28%)	
Q16. As a student do you feel confident enough to treat yourself for the condition you may be suffering?				
1)YES	61	140	201(76.8%)	0.185
2)NO	13	49	62(23.57%)	

IV.Discussion:

This study shows the prevalence of self medication among dental students which is 77.56%.

The study of Kalra et al [2] showed a prevalence of self-medication among dental students, which accounts for almost 40.9%.Numerous studies have demonstrated that among medical, dental, and paramedical students, self-medication is more common.

The gender distribution of the respondents in this study showed that 78.83% of them were women and 72.97% of men.
The respondent's gender breakdown revealed that 38.8% of them were women and 61.2% of them were men. Studies by Shankar et al [3] corroborated the results of this investigation, which showed that there was no significant relationship between gender and self-medication.

According to Venkataraman et al [4], 31.5% are male and 68.5% were females who practiced self medication. Conditions like coughs and colds (37.64%), fever (33.07%), allergic responses (19.39%), and muscle spasms (10.26%) were the most common reasons why students self-medicated. Although there were gender variances, there was no statistically significant difference in the responses from men and women under these situations.

In the study by S.A. Sallam [5] the most frequent complaints were common cold (9.2%) and headache (7.4%). A survey of self-medication in eastern France by Laure P [6] stated that the 3 most frequent symptoms were headache (46.9%), nose, throat or respiratory tract diseases (22.1%) and abdominal pain (7.3%) In a study of self-medication by Abdelmoneim et al [7] 13.9% of participants reported self-medicating for coughs, while 11.9% did so for common colds. Additionally, 10.5% self-medicated for genitourinary infections, 6.2% for coughs and sore throats, and 5.5% for malaria.

The most common symptoms, according to a telephone study conducted among 660 houses in Spain, were headaches (42.8%), lumbago (41.7%), and colds (34.4%). Self-medication, which included both home and physical treatments, was the most typical reaction.[8]

According to kalra et al [2] survey, antipyretics were the most often used medications for self-medication (46.56%), followed by analgesics (40.08%) and cough syrups (18.02%).

According to Namita Kumari Mandal's [9] study, the most often used antibiotic for self-medication was azithromycin (31.8%), followed by amoxicillin (21.1%).

One unique feature of Azithromycin is its low frequency of adverse effects. It can treat the majority of respiratory bacterial infections with a single oral dose taken once daily for at least three days.[10, 11]

When appropriate regulatory controls are not implemented over the over-the-counter selling of medicines, the prevalence of antibiotic use increases. According to study by Kalra et al [2] the most often used medications for self-medication were cough syrups (18.02%), analgesics (40.08%), and antipyretics (46.56%).

This is comparable to research by James et al [12] where paracetamol was the only medication administered.

The most often utilized drug for self-medication in Western Nepal was paracetamol (43%) and then some other analgesic (23%).[13]

The source from which pharmaceuticals are sourced determines their quality and effectiveness. The primary source of the medications used for self-medication in this study was a pharmacy. Many customers frequently visit the drugstore because they believe it is unlikely that they will st sell sub standards medications. This study suggests that using self-medication does not always mean sacrificing standards.[14]
A pharmacist plays a crucial role in assisting those who are seeking self medication to a significant extent. Self-medicators might not have the necessary information to decide on the best drug to take, how much to take, or how long to maintain therapy. So in such cases pharmacist come into play.[15]
According to a study by Deshpande, every third pharmacy customer receives medication without a prescription.[16]

V.Limitation:

The study's findings may be limited by its focus on a single institution's dental students, affecting generalizability. Reliance on self-reported data could introduce bias, and the cross-sectional design captures only a snapshot in time. Although a pilot study refined the questionnaire, its validity remains uncertain, and potential differences between respondents and non-respondents were not considered. Additionally, the study did not explore other socio-demographic factors or include clinical evaluations to verify self-diagnoses. Overall, these limitations highlight the need for further research to gain a comprehensive understanding of self-medication practices.

To overcome these limitations, future studies could employ larger, multi-institutional samples, longitudinal designs to track changes over time, and mixed-method approaches that incorporate qualitative interviews for deeper insights into self-medication practices.

VI. Conclusion:

The findings from this survey underscore significant gender differences in self-medication practices among students. Females exhibited a higher tendency to self-medicate, citing barriers such as lack of access and transportation issues. Additionally, the use of family members' prescriptions was notably more common among females. While many students expressed confidence in diagnosing their conditions and managing their health, there remains a concerning reliance on self-medication, particularly with antibiotics and analgesics.

Despite high awareness of the importance of checking expiration dates and reading medication instructions, non-compliance with proper dosage guidelines was more prevalent among males. These insights highlight the urgent need for targeted educational interventions that emphasize safe medication practices, the potential risks of self-medication, and the importance of seeking professional medical advice. Addressing these issues could help mitigate health risks associated with self-medication and promote safer healthcare behaviors among students.

VII.Financial support and sponsorship: NIL

VIII.Conflicts of interest: There are no conflicts of interest.

IX.Reference:

1.Volpato DE, de Souza BV, Dalla Rosa LG, Melo LH, Daudt CA, Deboni L. Use of antibiotics without medical prescription. *Brazilian Journal of Infectious Diseases* 2005; 9:288–91

2. Kalra, Dheeraj Deepak; Kini, Prajna V.1; Kalra, Rinku D.2; Jathanna, Vinod R.3. Assessment of self-medication among dental students in Pune city, Maharashtra: A cross-sectional survey. *Journal of Indian Association of Public Health Dentistry* 13(3):p 318-323, Jul–Sep 2015.

3. Ali, A. N., J. T. T. K. Kai, C. C. Keat, and S. Dhanaraj. "Self-Medication Practices Among Health Care Professionals in a Private University, Malaysia". *International Current Pharmaceutical Journal*, vol. 1, no. 10, Sept. 2012

4. Venkataraman, Gopikrishna; Gangadharappa, Sourabha K.; Jacob, Jeswin; Bhaskar, Nithin; Kulkarni, Smitha B.; Gupta, Ankita. Assessment of Self-Medication Practice among Students of A Dental College of Bangalore City: A Cross-Sectional Study. *Journal of Indian Association of Public Health Dentistry* 15(1): p 73-77, Jan–Mar 2017.

5. Sallam, S A et al. "Pharmacoepidemiological study of self-medication in adults attending pharmacies in Alexandria, Egypt." *Eastern Mediterranean health journal* vol. 15, 3 (2009): 683-91.

6. Laure P. Enquête sur les usagers de l'automédication: de la maladie à la performance [Investigation on self medication: from disease to performance]. *Therapie*, 1998, 53(2):127–35.

7 Awad Abdelmoneim et al. "Self-medication with antibiotics and antimalarials in the community of Khartoum State, Sudan." *Journal of pharmacy & pharmaceutical sciences : a publication of the Canadian Society for Pharmaceutical Sciences* vol. 8,2 326-31. 12 Aug. 2005

8. Nebot, M, and M A Llauger. "Autocuidado de los trastornos comunes de salud: resultados de una encuesta telefónica en la población general" [Self care of common health disorders: results of a telephone survey of the general population]. *Medicina clinica* vol. 99,11 (1992): 420-4.

9 Mandal NK, Rauniyar GP, Rai DS, Panday DR, Kushwaha R, Agrawal SK, Regmee P. Self-medication Practice of Antibiotics among Medical and Dental Undergraduate Students in a Medical College in Eastern Nepal: A Descriptive Cross-sectional Study. *Journal of Nepal Medical Association* 2020 May 30;58(225):328-332.

10. McMullan, Brendan J, and Mona Mostaghim. "Prescribing azithromycin." *Australian prescriber* vol. 38, 3 (2015): 87-9.

11. Chambers HF. New York: McGraw-Hill; 2006. General principles of antimicrobial therapy. Petri WA. Penicillins, cephalosporins, and other f3-Lactam Antibiotics. Brunton LL, Lazo JS, Parker KL, editors. *Goodman and Gillman's Pharmacological basis of Therapeutics*. 11th ed. pp. 1095–1110.

12. James, Henry et al. "Evaluation of the knowledge, attitude and practice of self-medication among first-year medical students." *Medical principles and practice: international journal of the Kuwait University, Health Science Centre* vol. 15,4 (2006): 270-5.

13. Shankar, P R et al. "Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire-based study." *BMC family practice* vol. 3 17. 17 Sep. 2002.

14.Ehigiator O, Azodo CC, Ehizele AO, Ezeja EB, Ehigiator L, Madukwe IU. Self-medication practices among dental, midwifery and nursing students. *European Journal of General Dentistry, 2, 54-57.*

15. Sawalha, Ansam F. "A descriptive study of self-medication practices among Palestinian medical and nonmedical university students." *Research in social & administrative pharmacy: RSAP* vol. 4,2 (2008): 164-72.

16. Deshpande SG, Tiwari R. Self medication: a growing concern. *Indian journal of medical science*, 1997, 51(3):93–6.