

Self Medication Practices in Medical Students of Nishtar Medical University; A Cross Sectional Study

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Abstract

Objective: This study aims to evaluate how medical students perceive and use self-medication. We also intend to find how the prevalence varies between the pre-clinical (MBBS Year 1 and 2) and clinical (MBBS Year 3,4 and 5) students.

Material and Method: The study was carried out in Nishtar Medical University from Aug 2022 to Oct 2022. A total of 400 students, 200 preclinical and 200 clinical, were chosen through non probability convenient sampling and were asked to fill a pre designed questionnaire form to complete this cross-sectional study.

Results: Comparison of the prevalence of self-medication in clinical and preclinical students exhibited a p value of 0.026, with 84.2 % clinical and 74.7% pre-clinical students practicing self-medications.

Conclusion: It has been observed that medical students frequently perform self-medication in both their pre-clinical and clinical groups.

Keywords: Self Medication, Clinical Students, Pre-clinical students,

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Introduction

Taking medication without doctor's prescription, using previously sought clinical advice or written prescription and administering available medication at hand without proper instruction, all come under the umbrella of Self Medication (SM).¹ Self-Medication is defined as use of over-the-counter medications to treat self-diagnosed symptoms and disorders or for the continuation and reuse of prescribed medication for recurrent diseases.² The most frequent causes of SM include prior disease experience, a lack of knowledge about the condition, financial limitations to seek medical care, lack of time, and easy availability to drugs parti-

cularly in developing nations.³ To prevent irrational drug usage, which can waste resources, develop pathogen resistance, and result in major health risks such extended pain, drug reactions, and drug dependence.⁴ Lack of access to the necessary medication for the underlying illness, which could delay the detection and treatment of the real disease condition, is another risky consequence of SM.^{5,6} Though responsible use of Self Medication may lessen the burden on governments and health-care systems by minimizing the time patients must wait to see doctors at the hospital and the total expense of medical services, when used improperly it can endanger human well-being and cause serious health-related consequences.^{7,8} The rising prevalence of SM among medical students can be attributed to a variety of factors. Label of a medical student is the main cause of medication access.⁹ The purpose of this study is to evaluate and compare the ratio of prevalence of SM in preclinical (1st and 2nd year) and clinical (3rd, 4th and final year) MBBS students of Public Medical University.

Material and Method

The study was conducted from August 2022 to October 2022 in Nishtar Medical University. Non probability convenient sampling was used to select the students to

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fill a pre designed questionnaire form to complete this cross-sectional study.¹⁰ The questionnaire was of Multiple-choice format and had questions related to demographics, concept of Self Medication, reasons and caused of self-medication. Total number of participants were 400 out of which 200 were pre-clinical students (1st year and 2nd year MBBS) and 200 were clinical students (3rd year, 4th year, Final year MBBS). Informed consent was obtained from each of them. Students who had doctor parents were considered as non-self-medicating students. Prior permission from the ethical committee of Nishtar Medical University was obtained for conducting the study.^{11,12} Inclusion criteria were Medical Students from MBBS Year 1 to Final year MBBS while Students of BDS and other allied disciplines were excluded. Data was analyzed using SPSS Version 25. Since it was quantified data, we used student t test.

Results

We had a total of 400 questionnaires distributed equally among preclinical and clinical students. Response was received from a total of 186 preclinical and 190 clinical students. Data of 6 students from the clinical group and data of 12 preclinical students was excluded as their questionnaires were incomplete. The total number of questionnaires analyzed for clinical and preclinical students were 184 and 174 respectively. Male participants were more from clinical years as compared to a majority of female responders from the preclinical stu-

Table 1: Comparison between demographics of preclinical and clinical students

Variable	Clinical		Preclinical		
	Self-medicating N (%)	Non-self-medicating N (%)	Self-medicating N (%)	Non-self-medicating N (%)	
Gender	Male	82 (44.6)	16 (8.7)	43 (24.7)	20 (11.5)
	Female	73 (39.7)	13 (7.1)	87 (50.0)	24 (13.8)
	Mean	22.1	21.9	19.7	19.6
Age (years)	17	-	-	1 (0.6)	-
	18	-	-	18 (10.3)	7 (4.0)
	19	-	-	30 (17.2)	15 (8.6)
	20	8 (4.3)	1 (0.5)	56 (32.2)	11 (6.3)
	21	44 (23.9)	10 (5.4)	20 (11.5)	11 (6.3)
	22	52 (28.3)	12 (6.5)	5 (2.9)	-
	23	32 (17.4)	2 (1.1)	-	-
	24	12 (6.5)	4 (2.2)	-	-
	25	6 (3.3)	-	-	-
	26	1 (0.5)	-	-	-

dents (Table 1). The mean age for self-medicating clinical students was 22.1 and the mean age of self-medicating preclinical students was 19.7. The major source of information for self-medication drugs for clinical students was previous prescription (54.3%), followed by textbook (13.6%), classroom teaching (9.2%) and advertisement

Table 2: Comparison between Preclinical and Clinical students

Variable	Clinical (%)	Preclinical (%)	P-Value	
Self-Medication	84.2	74.7	0.026	
Factors favouring Self Medication				
No need to visit doctor for minor illness	81.3	82.3	0.825	
Quick relief	56.1	45.4	0.071	
Time saving	65.2	57.7	0.199	
Confidence about your medical knowledge	34.2	29.2	0.373	
Economical	40.0	28.5	0.042	
Ease and Convenience	65.2	55.4	0.094	
Learning opportunity	14.8	14.6	0.958	
Crowd avoidance	29.0	25.4	0.493	
Drugs used				
Analgesics	89.7	64.8	<0.001	
Antimicrobials	47.7	50.0	0.803	
Multivitamins	56.8	57.0	0.917	
Antispasmodics	18.1	7.0	0.005	
Decongestants	27.1	6.3	<0.001	
Lozenges	24.5	24.2	0.896	
Antiallergics	0	1.6	0.122	
CNS (Antidepressants, Antianxiety)	1.3	2.3	0.516	
Factor Opposing use of Self Medication				
Lack of medical knowledge	57.1	57.5	0.811	
Risk of adverse effects	64.3	67.5	0.953	
Risk of using wrong drugs	67.9	70.0	0.872	
Risk of misdiagnosing	42.9	47.5	0.881	
Risk of drug dependence	42.9	32.5	0.304	
Strong Immune system/ Do not fall ill	10.7	0	0.083	
Frequency of self-medication	Always	4.5	38.5	0.143
	Sometimes	60.6	57.7	
	Rarely	34.8	3.8	
Visit to qualified medical practitioner	Always	17.4	20.0	0.033
	Sometimes	59.4	53.1	
	Rarely	23.2	26.9	

(7.1%). Self-medication was not practiced by 15.8% students were not self medicating among which (8.2%) had doctor parents. The major source of drug was medical store (64.7%) and home (19.6%). For preclinical students, previous prescription (64.9%) was also the major source of information for self-medication drugs, advertisement (6.3%) the second most major, textbook and classroom teaching being the most minor sources with (2.9%) and (0.6%) respectively. (25.3%) students did not self-medicate. The major drug sources for preclinical students were medical store (50.6%), home (24.1%) and doctor parents (12.6%). Students who did not self-medicate accounted for (12.6%) of the total preclinical responses. P values were obtained by doing individual t test on all variables except frequency of self-medication and visit to qualified medical practitioner which were analyzed through chi square test. Comparing p value, we can see that clinical students practiced self-medication more than their preclinical peers (Table 2). Clinical students were also more likely to visit a qualified medical practitioner. Further examining Table 2, we can see that the only reason for self-medication which showed significant differences between clinical students and preclinical students was self-medication being economical. Clinical students also used significantly higher analgesics, anti-spasmodics and decongestants for their general presentations.

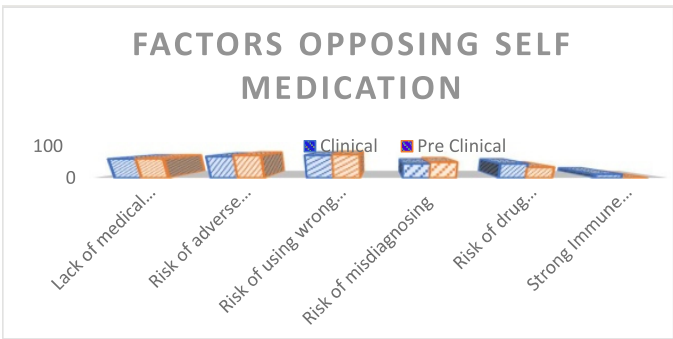


Fig-3: Comparison of factors favoring use of self-medication in pre-clinical and clinical students

Preclinical students also used more antimicrobials, anti-allergics and CNS drugs, but the differences between the two groups- clinical and preclinical- are not significant.

Discussion

Self-Medication (SM) is the practice of using drugs without properly seeking medical advice of physician. SM is emerging at an alarming rate in developing countries but is a general global issue. The purpose of this study was to evaluate the prevalence of SM and to compare the incidence between clinical and preclinical students of Nishtar medical university, Multan. Our findings were that 84.2% of clinical students practiced SM while the percentage was 74.7% for pre-clinical students. In similar national studies conducted in Abbottabad the prevalence of SM was 99%, 34.5% of which were 4th year medical students.⁵ Internationally study conducted in Alexandria faculty of medicine showed the prevalence to be much lower at an average of 52.7%, 67.3% reported in those who have completed their medical school and 40.4% in those in 2nd year; another study conducted in India showed the prevalence to be 65%.¹³ In Nepal, the prevalence was found to be 81.9%.¹⁴ The factor which influences students highest to practice SM in this study is that there is no need to visit doctor for minor illness, this thought is shared by both clinical – 81.3% and preclinical – 82.3% students. This is followed by students saving time clinical - 65.2%, pre-clinical 57.7%. However the study in Abbottabad and Ahmedabad showed that majority did it because it was time saving (19.7%) and (41.2%) respectively. 33.85 % of students from Faisalabad said that previous good experience of self-medication prompted them to use self-medication again. In a study from Saudi Arabia, the health problem not really being significant was the most common answer of students practicing SM (63.9%).¹⁵ A Serbian study showed SM was done by students because

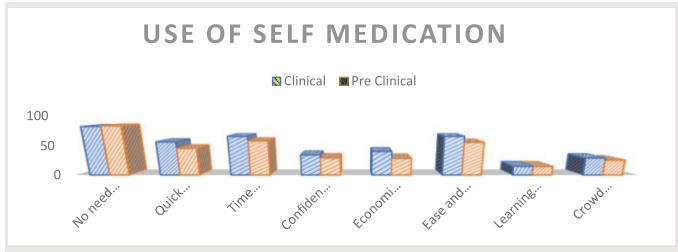


Figure 1: Comparison of factors favoring use of self-medication in pre-clinical and clinical students

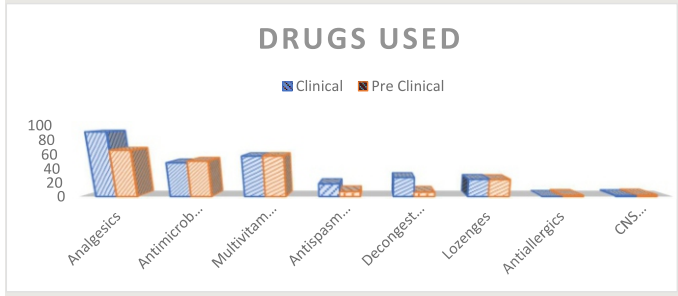


Figure 2: Drugs used for self-medication in pre-clinical and clinical students

the symptoms of their disease were not serious (60.1%). The most popular drug group used for self-medication by students in our study was Analgesics (89.7%) that was supported by Serbian study with the most common finding at 55.4% were students using Analgesics as SM¹⁶. Unlike the results from our study, Students from Gulbarga, India (63.91%) and West Bengal (31.09%) used Antibiotics most commonly. In Ethiopia, Antipyretics (46.3%) were used majorly.¹⁷ It was noted that previous prescriptions are the most widely cited resource for knowledge on self-medication, the same applied to both clinical (54.3%) and pre-clinical students (64.9%). However, it was followed by textbook (13.6%) for clinical students and advertisement (6.3%) for preclinical students. This is due to the fact that Pharmacology is a subject taught to clinical students and not to preclinical students.¹⁸ Clinical students can also confirm and rationalize previous prescriptions from their textbook based on their symptoms and this adds to the fact that lesser percentage of students use previous prescriptions as major source of information in clinical group as compared to pre-clinical group.¹⁹ Student's sources of drugs in the study, medical stores and homes accounted for 64.7% and 19.6%, respectively in clinical students and 50.6%, 24.1% respectively in pre-clinical students. This is in accordance to Saudi and Sri Lankan study where 94.3% and 83% students respectively got the medications from pharmacies.²⁰ When asked about the reason why the students preferred not to Self-Medicate, 67.9% Clinical and 70 % Pre-Clinical Students answered that they thought of the risk of using wrong medication. It was also concluded in Saudi Arabia that very few participants anticipated the side effects.^{13,21} The uniqueness of our study lies in the fact that participants had never before been equally split between the clinical and pre-clinical student groups and the results from the data analyzed has not been compared previously. The results are more trustworthy when the participation rates from both groups of pupils are under control. There were some limitations in the conduction of the study, because the study relied on self-reported information on self-medication, memory bias is a possibility and it was not completely possible to rule out the likelihood of student influence on one another while answering questionnaire.

Conclusion

It is a common tendency in medical students both in Pre-Clinical and Clinical group to practice Self-medication.

Conflict of Interest

None

Funding Source

None

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Authors Contribution

NI: Conceptualization of Project
MUI, M, KAM, NA: Data Collection
ZR, NA: Literature Search
HBM: Statistical Analysis
NI, M, MUI: Drafting, Revision
ZR, KAM: Writing of Manuscript